Strategic analysis and evaluation of Norwegian Air Shuttle ASA

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Executive summary

During the recent decade, Norwegian Air Shuttle ASA (NAS) has managed to become a highly successful company, and is today the third largest European low-cost carrier and the second largest airline in Scandinavia. However, we believe that prior success is no guarantee for future success, as NAS is part of a highly dynamic industry characterized by low profit margins, fierce competition, unpredictable events, and emerging challenges which continuously keep changing the competitive environment.

The main purpose of this master thesis is to conduct a thorough strategic analysis and evaluation of NAS, aimed at providing a number of strategic options which might help the company secure its position as a leading European low-cost carrier in the future. This paper is highly pragmatic in nature and based on an inductive case study research approach, which is largely reflected by the broad range of sources utilized, the generic theories and frameworks applied as well as in the distinct set of scenarios developed.

The thesis primarily consists of three main parts, *Company overview*, *Strategic analysis* and *Scenario planning*. The first part, *Company overview*, intends to give the reader a descriptive overview of NAS' history, business strategy, competitors, and financial performance. The second part, *Strategic analysis*, involves an extensive examination of NAS at a macro-environmental, micro-economical and company level. Finally the last part, *Scenario planning*, utilizes consolidated information and key findings from the two preceding parts in order to construct four distinct, yet plausible future scenarios of the Scandinavian airline industry. In this way, NAS is better prepared to handle unforeseen events, thus ready to undertake selected strategic actions if these plausible scenarios should occur.

As a result, the main findings in the paper are highly scenario specific. In relation to the first scenario, Enemy at the gates, NAS should pursue the following key strategic options; increase its brand focus, enter a strategic alliance, and adapt its planned long-haul operations. In regards to the second scenario, Survival of the fittest, NAS should develop a pure LCC business model, exploit the high price sensitivity and improve its liquidity. Further, in the third scenario, Network heaven, NAS could either optimize its current LCC business model, or pursue a hybrid business model with several ticket classes. In addition, the company should aim to strengthen its leisure travelers' loyalty. Finally, in the last scenario, High-speed train utopia, NAS should pursue long-haul low-cost operations, improve its travel convenience, and adapt its route network accordingly.

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1. Introduction

Our interest in the airline industry stems all the way back to the early childhood, when the gigantic size, high speed and immense noise level of aircraft were subject to great fascination. In later years, our focus on aircraft has shifted towards a more business oriented perspective, enhanced by five years of business administration studies. More specifically, the emergence of the low-cost carriers has become an area we find particularly interesting.

The low-cost carrier business model originates from Southwest Airlines which introduced cheap flights in the 1970s in the US. In short, the business model involves keeping costs low by operating a single ticket class, one type of aircraft, and charging for extras such as food and luggage. In 1990, Ryanair adopted this revolutionary and successful concept, and quickly became the leading low-cost carrier in Europe. Norwegian Air Shuttle ASA, founded in 1993, entered the stage as an ambitious contender in Norway in 2002. Since then, the company has developed into a major player both domestically in Norway and in the Scandinavian market.

Norwegian Air Shuttle has been very successful and profitable during the last decade, but the road ahead seems to be more uncertain. We believe that the airline industry is both one of the most competitive and dynamic industries in the world; an industry where profitability margins are low, new challenges frequently arise, and no one is certain about what the next big trend is going to be. This makes us wonder how the company can sustain its growth and profitability in the future.

With this in mind, we were never in doubt about the topic for our master thesis; it had to be a strategic analysis and evaluation of Norwegian Air Shuttle. Since the company has a high degree of internationalization and competes in a truly international environment, the topic fits well with our academic background from the concentration Master of Science in International Business at Copenhagen Business School. In short, a master's degree in International Business is strategic in nature and involves to a large extent analysis of industries, business cases, and formulation of strategies.

This master thesis was written in the period March-September 2011, and gave us a unique opportunity to perform an in-depth analysis of a fascinating research subject. Further, we were able to practically apply selected theories and frameworks acquired through our studies by choosing a case study approach. Hence, as the final part of our master's degree, this paper aims to help bridge the gap between our education and future professional carriers.

2. Problem statement and structure

As pointed out in the introduction, Norwegian Air Shuttle (NAS) has been very successful during the last decade. However, the airline industry is a highly competitive and dynamic industry which raises several challenges related to the company's interest of expanding further into Scandinavia and Europe. This led us to the following problem statement:

What strategic options should Norwegian Air Shuttle undertake in order to ensure future growth and profitability, hence secure its position as a leading European low-cost carrier?

In order to provide a meaningful answer to the problem statement we need to introduce a carefully considered thesis structure with a selected number of supportive questions.



Fig. 1: Master thesis structure

Source: Own creation

As illustrated in Fig. 1, the thesis is divided into seven chapters, however the focus will primarily be centered on the three main chapters (4, 5 and 6); *Company overview*, *Strategic analysis* and *Scenario planning*.

First, in order to understand where NAS is going, we need to understand where NAS comes from, thus a *Company overview* is necessary. Moreover, it is important to review Norwegian Air Shuttle's history and its market environment to gain a better understanding of how the company has developed over time and responded to changes in the market. The *Company overview* chapter describes Norwegian Air Shuttle's historical background, business plan and strategy, conduct a peer group review as well as evaluate the company's financial performance.

Second, we conduct a comprehensive *Strategic analysis* which helps us identify a number of key business insights affecting Norwegian Air Shuttle and the industry it operates within. Furthermore, the chapter contains four extensive in-depth analyses; PESTLE analysis, Porter's five forces analysis, Airline metrics analysis and an Internal analysis, thus aiming to cover NAS from a macro-environmental, micro-economical and company level. At the end of the chapter, key findings from the four analyses are highlighted in a SWOT-summary.

Third, the key business insights identified in the *Strategic analysis* will act as building blocks for the subsequent chapter; *Scenario planning*. This chapter introduces the origin of scenario planning and explains the intension with such an approach. In addition, we classify the key external factors highlighted in the SWOT-summary according to likelihood and impact, as well as construct a set of distinct scenarios. In short, by consolidating information from the *Strategic analysis* and applying it to plan a set of plausible scenarios, we intend to provide a number of strategic recommendations in line with the problem statement.

After establishing a descriptive groundwork in Chapter 4; *Company overview*, we introduce a series of supportive questions which helps us shape the two subsequent chapters. More specifically, the selection of sub questions we are about to present, is not meant to be answered explicitly, but rather serve as guidelines and help us keep direction and focus.

With regards to Chapter 5; Strategic analysis, we ask ourselves the following four questions:

- What macro-environmental factors affect NAS?
- What micro-economical factors influence NAS and the profitability in the airline industry?

- How is NAS performing compared to its competitors in terms of financial airline metrics (e.g. ASK, RPK, load factor)?
- What are NAS' sources of competitive advantage?

Furthermore, in Chapter 6; *Scenario planning*, we create a set of plausible scenarios guided by the four questions:

- What macro-environmental and micro-economic factors are most likely to affect NAS and the airline industry now and in the future?
- What is the likelihood of these factors occurring and what degree of impact are they expected to have?
- How could shifts in these macro-environmental and micro-economic factors potentially change the current business climate of NAS and shape new realities?
- How do NAS' current business plan, strategy and competitive advantage align with these changes?

Arguably, this brings us full circle, and we believe that a systematic investigation of the supportive questions above, will allow us to answer the problem statement as introduced earlier:

What strategic options should Norwegian Air Shuttle undertake in order to ensure future growth and profitability, hence secure its position as a leading European low-cost carrier?

3. Scientific methodology

In this chapter we are going to introduce the reader to the methodology used in the paper, thus explain from a scientific view; the research method used, quality of research, delimitations as well as provide source criticism.

3.1 Research method

Research philosophy

Our overall research philosophy is twofold and influenced by both positivistic and interpretivistic characteristics. The positivistic view adheres to an observable social reality and focuses on science and scientific practices. A typical positivist theory involves generating facts that are measurable and generalizable, thus it leaves little room for common sense being unobservable and therefore unscientific. Moreover, the social phenomenon that is subject to research should be viewed from the outside, meaning without the researcher engaging or participating in the field of study (Johannessen et al., 2005). None of the authors of this thesis have any prior experience or relationships with Norwegian Air Shuttle and its industry, thus we are fulfilling this criteria.

However, we do realize that a positivistic view is not sufficient to describe our research philosophy. We believe that business strategy combined with market characteristics about the airline industry calls for more qualitative methods, at least compared to the quantitative data methods used by positivistic researchers. For this reason we are supplementing our positivistic view with an interpretivistic angle where we acknowledge that knowledge is based on perception. In other words it means that the world is viewed through different lenses, which depends on the individual and the perception of the subject (Saunders et al., 2009). In contrast to positivism, interpretivism distinguishes between social and natural science; because social science is not created by laws and theories, but rather by human beings who create meaning for what they believe is reality. According to Mehmetoglu (2004), the theories that people create to live out their everyday lives are based on their ideas of common sense. Furthermore, he argues that the job of the social scientist is to understand this thinking, thus interpret their meanings and actions from their point of view.

Based on the problem statement introduced earlier; "What strategic options should Norwegian Air Shuttle undertake in order to ensure future growth and profitability, hence secure its position as a leading European low cost carrier?", we find the combination of both a

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positivistic and an interpretivistic research philosophy to be a good fit. Because in order to provide a meaningful answer to our problem statement; we, the authors, as independent outsiders have to set ourselves in the shoes of the strategic decision makers at Norwegian Air Shuttle, thus trying to interpret their situation and understand their way of thinking.

Research approach

According to Saunders et al. (2009), there are two approaches which might be used when conducting research; deductive or inductive. The former; deductive research, is often called a top-down approach because it moves from a general law to a specific case. Moreover, deductive research refers to using existing theory (e.g. literature review), to derive logical conclusions from this theory, build hypotheses and empirically testing and scrutinizing these by accepting or rejecting them. Whereas the latter; inductive research, is characterized by a bottom-up approach where the research direction is moving from a specific case or observation to general law (e.g. from data and facts to theory). Furthermore, inductive research is often conducted without any theoretical starting point and it is not necessary to have any prior knowledge about a general framework or literature (Johannessen et al., 2005).

In this paper we have adopted an inductive research approach, as it is more open-ended and exploratory in nature compared to the deductive approach. This seems reasonable given the broad reach of our problem statement, as well as the fact that we are covering parts of a large and dynamic industry with a variety of trends and developments which we have to take into consideration.

Research strategy

Research strategy, or research design, is about applying a specific theoretical or empirical orientation to a research process. Johannessen et al. (2005) suggest that the researcher have to ask the questions; what and who is the subject of research, and how should the research be conducted? Moreover, there are several types of research strategies such as; experiment, survey, case study, grounded theory, action research and ethnographic design. According to Johannessen and colleagues, the type of research strategy the researcher should pursue depends on the purpose or the aim of the research. Yin (2003) argues that case study research is essentially about gathering as much information or data as possible regarding a limited phenomenon. Furthermore, case study as a research strategy is suitable in a research process

that has characteristics of being; explorative, descriptive, explaining, understanding and appraising.

In short, this paper aims to describe the history of Norwegian Air Shuttle; explore and understand the business environment and industry the company is competing in; plan certain future scenarios; and evaluate the company's attributes as well as provide grounds for strategic decision making. Thus, in line with our inductive research approach, we believe that a single case study is a suitable research strategy.

Data collection

In general, there are two types of research data; quantitative and qualitative. The two types involve different perspectives on how to analyze and register data. In short, quantitative methods refer to information that is measurable in numbers, while qualitative methods operate with text. Furthermore, the data could be classified as primary data gathered through interviews, experiments, observations, surveys and more, or as secondary data using existing sources such as articles, textbooks, academic journals, annual reports, business reports and internet articles (Johannessen et al., 2005).

In this paper we are exclusively using secondary data from the recently listed sources, and there are mainly two reasons for this.

First, as pointed out in the research philosophy section we are influenced by a positivistic view, which implies that we do not want to establish any forms of contact with respondents from Norwegian Air Shuttle or the airline industry, but rather stay independent. Thus, we hope to decrease the subjectivity of primary data and develop our own understanding of the research phenomenon.

Second, as stated with regards to our research approach and strategy we have little prior knowledge about the research subject. At the same time we are aiming to cover a wide area of expertise within a limited period of time, something we acknowledge to be quite ambitious and time consuming. We therefore believe that focusing on efficiently gathering as much data as possible proves crucial in order to succeed with providing a meaningful answer to the problem statement. Ultimately, it has led us to use a diverse collection of secondary sources, containing both quantitative and qualitative data in an attempt to reflect a research paper with a high degree of objectivity.

3.2 Quality of research

Saunders et al. (2009) point out that there are mainly two ways of assessing the quality of research; the first focus on research validity, whereas the second is concerned about the reliability of the research.

Validity

According to Saunders et al. (2009), validity is about: *"the extent to which research findings are really about what they profess to be about"*. In short, the researcher could distinguish between validity in quantitative studies and validity concerning qualitative studies. In quantitative research, validity is about whether one actually measures what one set out to measure (Ringdal, 2007). While in qualitative research, validity is related to the interpretation of results (Thagaard, 2003).

Moreover, there are three types of validity; construct, internal and external validity (Yin, 2003). The first type, construct validity, refers to the extent to which what was to be measured was actually measured. In other words, it is supposed to answer the question; are the operational set of measures that the researcher is using sufficient and appropriate for the purpose of the research?

When it comes to the financial or quantitative aspect of the thesis, we have chosen to distinguish traditional financial performance measures from industry specific financial metrics. The former mainly refers to profitability and liquidity measures, while the latter involves what we call a financial Airline metrics analysis, which is an evaluation of operational metrics such as ASK, RPK and load factor. By supplementing traditional financial performance measures with an Airline metrics analysis, we aim to extract valuable insights regarding NAS' operational situation. We believe that the two parts combined may yield results that will have strategic importance for NAS in the future.

Concerning the qualitative aspect of the paper and in an attempt to strengthen the construct validity, we have chosen to include a huge variety of secondary data sources. These includes; various airlines' annual reports and press releases; national and international institutions such as the Norwegian Institute of Transport Economics and IATA, academic journals such as Journal of Air Transport Management, and consultancy reports from The Boston Consulting Group, just to mention a few. Further, we acknowledge that it is important to be critical towards our own interpretations, and we have tried to ensure this by continuously asking questions with regards to the selection of data, and by constantly reviewing our

interpretations. Given the limited time frame of this project, we did not validate the thesis using what Kvale (1997) calls a validation community (e.g. fellow students, industry experts), to critically asses the analysis and interpretations. However, since we are two individuals writing the thesis, it becomes easier to test and discuss interpretations with each other. In addition, we sent preliminary pieces of work to our supervisor who offered to read and comment as well as provide guidance, which may have contributed to ensure a higher degree of construct validity.

The second type of validity, internal validity, refers to the extent the results obtained in the research study is true. More specifically internal validity could be defined as the approximate truth about inferences regarding cause-effect or causal relationships. Hence, internal validity is not relevant in most observational or descriptive studies, but only relevant in studies that try to establish a causal relationship (Socialresearchmethods, 2011).

The third type, external validity, is about whether the research findings can be generalized beyond the specific study (Yin, 2003). The fact that we have chosen Norwegian Air Shuttle as our case study subject implies that we consider it a unique business case worth investigating. Furthermore, the competitive advantages or critical success factors of NAS are not likely to be easily transferable to other contextual settings. However, we believe that certain key factors identified in the macro-environmental PESTLE analysis (e.g. GDP and jet-fuel prices), as well as some of the micro-economical factors discussed in the Porter's five forces analysis (e.g. emergence of high-speed trains) should be taken into consideration when examining other airlines within the region of Europe or Scandinavia.

Reliability

According to Saunders et al. (2009), reliability could be described as; *"the extent to which your data collection techniques or analysis procedures will yield consistent findings"*. Moreover, reliability could be explained by assessing whether other researchers would reach similar observations or results, and if there is transparency when it comes to how the raw data is collected and processed.

Johannessen et al. (2005) argue that reliability and reliability testing is crucial in quantitative studies, but less appropriate in qualitative studies. The reason for this is because qualitative research often use unstructured data collection methods and is context specific, which makes it difficult, if not impossible for another researcher to duplicate the research process.

Our research approach is inductive and explorative in nature, and our research strategy is case study based, which implies that the paper has an overweight of qualitative data supported by minor financial or quantitative elements where found necessary.

Johannessen et al. (2005) point out that the researcher could strengthen reliability by giving the reader a detailed and extensive description of the research process. We have aimed to accomplish this by introducing the reader to our problem statement and thesis structure in the previous chapter (Chapter 2: Fig. 1), as well as explain our methodology in the current chapter. By presenting the paper in an orderly manner we hope that the reader will be able to better understand how and why we have come to our conclusions.

3.3 Delimitations

This thesis is written from an external point of view, using only publicly available information in the analyses. Additionally, information released after 15th of August, 2011 has not been included in the paper.

Furthermore, the thesis has a strategic nature, as we, the authors have a strategic background from the MSc concentration International Business at Copenhagen Business School, and believe that the paper should reflect this. However, as pointed out in the previous section regarding validity, we do realize the importance of including a financial analysis. As a result we have included certain financial aspects where found appropriate, as well as performed a financial Airline metrics analysis (chapter 5.3) in order to support the overall strategic analysis.

The geographical area of interest will mainly cover the Scandinavian market; including Norway, Sweden, Denmark and Finland, but with somewhat increased focus on Norwegian Air Shuttle's domestic market in Norway. This seems reasonable as NAS during the last decade has become a significant Nordic actor, but at the same time it is a Norwegian company with a strong presence in Norway where a substantial part of its revenue is generated.

At last we acknowledge that Norwegian Air Shuttle is a diversified company with supporting businesses such as the mobile company; 'Call Norwegian', and the online bank; 'Bank Norwegian'. However, we are not going to analyze these branches as they are not considered part of the company's core competency and only account for a minor share of total revenues.

3.4 Source criticism

As emphasized in the section regarding our research method and data collection, we stressed that since we were aiming to cover a wide area of expertise within a limited period of time, we chose to focus exclusively on secondary data. The main reasons for this were to achieve time and cost efficiency, as Zikmund (2003) points out; *"The primary advantage of secondary data is that obtaining secondary data is almost always less expensive than acquiring primary data… In addition, secondary data can usually be obtained rapidly."* Furthermore, secondary data is both in an available and permanent form, meaning that the sources will be publicly open to scrutiny by others (Saunders et al., 2009).

However, we do acknowledge that using secondary data has several potential disadvantages. First, the secondary data collected might not be designed for the specific research question the researchers wanted to answer, thus the data might be inappropriate. Second, the data could be outdated, meaning that new developments in the field of study may have rendered the findings obsolete. Third, even though secondary data sources are reviewed and believed to be of high quality (e.g. government reports and data archives), unfortunately this is not always the case. Fourth, secondary sources such as company reports and newspaper articles often present information with a certain bias to support the interest of the source (Zigmund, 2003), (Saunders et al., 2009).

With these cautions in mind, it is clear that emphasizing on a critical evaluation of sources were an important part of the research process. As a result of exclusively using secondary data we were able to spend our time efficiently by collecting a vast number of sources, which allowed us to critically evaluate and cross-check information as sufficiently as possible.

4. Company overview

The following chapter intends to give the reader an overview of Norwegian Air Shuttle by reviewing its history, and presenting its strategic approach to the airline industry. In addition, we introduce NAS' key competitors, which will be used as a benchmark in order to evaluate NAS' financial situation. The chapter is divided into four parts; *Historical background*, *Business model and strategy*, *Peer group review*, and *Financial performance*.

4.1 Historical background

Norwegian Air Shuttle ASA was founded on 22nd of January 1993. The company started to run operations which had previously been carried out by a Braathens subsidiary called Busy Bee of Norway A/S. In the beginning, NAS had a small fleet consisting of only



three Fokker F-50 aircraft, which were flying regional routes on the west coast of Norway in close cooperation with Braathens S.A.F.E (South-American & Far East). During the next nine years NAS gradually expanded its production for Braathens. However, in 2002, SAS purchased Braathens S.A.F.E., which led to a termination of NAS' west coast operations. As a result, NAS decided to start competing directly with SAS Braathens on domestic flights.

By the fall of 2002, Norwegian Air Shuttle had acquired seven Boeing 737-300 aircraft, and started to challenge SAS Braathens' monopoly by offering low fares on four domestic routes; Oslo-Stavanger, Oslo-Bergen, Oslo-Trondheim and Oslo-Tromsø. This proved to be a successful maneuver, and in December 2003, NAS became listed on the Oslo Stock Exchange. In 2004, the company had a fleet of 12 aircraft and started a code-share agreement with FlyNordic and Sterling. NAS' delivered its first profitable year in 2005, an achievement that commenced the successful period of rapid expansion from 2005 and until today.

As part of the company's expansion plans, NAS established a Polish subsidiary with two planes stationed at the Warsaw base in 2006. In the following year, NAS acquired FlyNordic from Finnair, thereby strengthening its position in the Scandinavian market, as well as making Stockholm its Swedish base. The same year, NAS placed an order to buy 42 Boeing 737-800 aircraft to be delivered within 2014. Moreover, the company launched both a full scale online bank, 'Bank Norwegian', and its own frequent flyer program, 'Norwegian Reward'.

NAS' first new generation aircraft Boeing 737-800 was delivered in 2008, which was a significant first step in its plan to become a more cost effective and environmentally

friendly company. Compared to the older 737-300 model, the new 737-800 reduces fuel consumption and emissions by more than 20 percent, and enhances the passenger capacity from 148 to 186/189. In addition, two new bases were established during the year; one at Rygge outside of Oslo, and one at Copenhagen in Denmark. The year proved to be an eventful year for NAS, as the company also introduced 'Call Norwegian', a mobile phone subsidiary which offers in-flight mobile phone and wireless internet services.

2009 was truly a remarkable year for Norwegian Air Shuttle. Not only did the company win the prestigious Market Leadership Award from the international aviation magazine Air Transport World, NAS also presented its best year ever financially, by posting a result of earnings before tax of MEUR 71. Besides, NAS received its first brand new Boeing 737-800 aircraft from the factory in Seattle, and expanded further into Denmark by launching 39 new routes operated by a total of nine Copenhagen-based planes.

In 2010, Norwegian Air Shuttle was awarded silver and bronze in the Skytrax Airline Awards 2010 customer survey, where close to 18 million airline passengers from more than 100 different countries participated. The results proved NAS to be the second best airline in Northern Europe and the third best low cost airline in Europe. The same year, NAS decided to place an additional order of 15 Boeing 737-800 aircraft for delivery between 2014 and 2016. In addition, the company included Swedish and Danish heroes on its aircraft tails. The Swedish actress Greta Garbo and the Danish author Hans Christian Andersen were introduced as the company's first Non-Norwegian "tail heroes".

Norwegian Air Shuttle seems quite confident and continues its aggressive expansion plans, as a new decade of challenges and opportunities in the airline industry are about to unfold. During the first quarter of 2011, the company launched seven new international routes from Gothenburg in Sweden, and opened a new base in Finland at Helsinki Airport; serving two domestic and eleven international routes. In addition, NAS became the first European airline to offer its passengers in-flight high-speed broadband services.

Furthermore, in the second quarter of 2011, NAS entered into an agreement which grants the company the right to purchase three new aircraft of the type Boeing 787 Dreamliner. At last, the company placed an additional order of 15 new Boeing 737-800 for delivery between 2015 and 2018. Overall, NAS has a total order of 78 B737-800, where 19 have been delivered (NAS, 2011a), (NAS, 2011b), (NAS, 2011c).

Fig. 2: Historical events



Source: Own creation and NAS (2011a)

4.2 Business model and strategy

In this section we briefly introduce Norwegian Air Shuttle's underlying business principles, hence, describe the company's organizational chart and ownership, vision, values, business model and strategy.

Organization chart and ownership

The Norwegian Air Shuttle group consists of the parent company Norwegian Air Shuttle ASA, as well as six subsidiaries:



Fig. 3: Organizational chart

Source: www.norwegian.com

Norwegian Air Shuttle ASA fully owns the Swedish and Polish branches; Norwegian Air Shuttle Sweden AB and Norwegian Air Shuttle Polska SP.zo.o. In addition, the parent company owns 100 percent of the mobile phone company Call Norwegian AS. Further, Norwegian Air Shuttle ASA owns 100 percent of NAS Asset Management, where 99.9 percent is owned directly by the parent company and the remaining 0.1 percent is owned through NAS Asset Management Norway AS. At last, Norwegian Air Shuttle ASA controls 20 percent of Norwegian Finans Holding ASA (Bank Norwegian AS).

As pointed out in the previous section regarding the company's historical background, NAS is a publicly traded company and listed on the Oslo Stock Exchange (OSE). The ten largest shareholders as of December 31, 2010 were private institutions, where the largest owner was HBK Invest AS with 27.48 percent of the shares (Appendix 2). Moreover, the CEO of Norwegian Air Shuttle, Bjørn Kjos, owns 76.5 percent of HBK Invest AS (IO, 2011), meaning that he alone owns slightly above 20 percent of the company. In addition, it is worth noticing that one of NAS' competitors, Finnair, owns close to 5 percent of the company's shares.

Business model

Wensveen and Leick (2009) points out that the airline industry has been accustomed to the term low-cost carrier (LCC), and that industry experts use different terms for what is essentially the same, such as low-cost no-frills carrier (LCNF), low-fare high-value carrier (LFHV), less frills carrier and new generation carrier.

Furthermore, Wensveen and Leick (2009) divide airline business models into four distinct groups; low-cost model, legacy model, charter model and long-haul low-cost model (Appendix 3). According to NAS's website and annual reports, the company presents itself as a low-cost airline, and seems to possess most of the product features which characterizes the low-cost model. For instance, NAS has a high aircraft usage and frequency, ticketless and automated check-in systems, point-to-point connection, online distribution, a high degree of fleet commonality and passengers have to pay for amenities. However, the company does have some features which are considered to belong to the legacy model; NAS operates mainly from primary airports and has its own frequent flyer program Norwegian Reward, as well as optional seat assignments. Despite these differences we will consistently throughout this paper be using the two terms low-cost carrier (LCC) and low-cost airline, when referring to the business model of NAS and similar airlines.

Business strategy

Norwegian Air Shuttle is guided by its vision; *"Everyone should afford to fly"*. In short, the company's primary objective is to give as many people as possible the opportunity to travel by air, and to offer a high quality travel experience at low fares. Moreover, NAS' business and behavior is affected by three corporate values; simplicity, directness and relevance; as well as three operational priorities; safety, service and simplicity.

According to its website, Norwegian Air Shuttle's business strategy is twofold. The company aims to become the preferred supplier of air travel in its selected markets, and to generate excellent profitability and return to its shareholders. Furthermore, NAS believes this could be achieved by following a list of selected business principles.

First, NAS' employees need to adhere to the corporate values and priorities. Second, NAS aims to attract customers and stimulate markets by providing operational excellence, helpful friendly service, and low operating costs which results in low ticket prices. Third, by offering customers "freedom to choose", NAS is ensuring a broader market reach as several customers demand additional products and services and are willing to pay for it. Fourth, providing a comprehensive and attractive route network is crucial. Thus, NAS is constantly working to offer a route network consisting of both high frequency business destinations to primary airports within or outside of Scandinavia, as well as popular destinations for leisure travelers. Fifth, NAS continuously monitor and work to improve its cost base wherever possible; in addition, the company aims to maximize its revenue through the use of passenger revenue management. Sixth, NAS uses industry leading technology in order to develop high quality cost efficient products and services which could improve the level of convenience and comfort for travelers. At last, the company utilizes its strong brand name and efficient distribution channels to further increase ancillary revenue (NAS, 2011d).

4.3 Peer group review

After having examined NAS' historical background, business plan and strategy, we are now going to review the company's main competitors by establishing its relevant peer group. The peer group will serve as a benchmark to NAS in the following financial performance section, as well as in the extensive strategic analyses conducted in Chapter 5.

Preferably, the peer group includes companies that are similar to NAS in both scale and scope, so that they can be accurately compared. However, there are no easily comparable companies in terms of the same geographic market area, scale and business strategy. Instead, we have chosen the peer group based on market shares in the Nordic countries, thereby enabling us to evaluate how NAS is performing relative to its closest competitors.

The Nordic airline market is characterized by few airlines where each airline has a dominant presence in their home markets. SAS is a natural choice for a member of the peer group, as the company has large market shares in all of the four Nordic countries. Next, Cimber Sterling and Finnair are included in the peer group, since both are the leading airlines in their domestic markets; Denmark and Finland respectively. Lastly, to be able to compare NAS with a company with a similar low-cost business strategy, we have chosen to include the leading European low-cost carrier Ryanair.

SAS

The SAS Group (henceforth SAS) is the largest airline in Scandinavia, transporting 26.5 million passengers to 127 destinations across 35



countries in 2010. SAS consists of Scandinavian Airlines, Widerøe *Source: www.sasgroup.net* and Blue1, and the Nordic Region serves as its home market (SAS - annual report 2010).

Scandinavian Airlines System was founded in 1946 as a result of a merger between the original flag carriers from Denmark, Sweden and Norway. Since then, SAS has operated as the Scandinavian flag carrier, and currently the three Scandinavian governments own a combined share of 50 percent of the company. SAS has acquired several local airlines over the years, including Braathens and Widerøe in Norway. In the 1980s, the company started to focus comprehensively on the emerging business customer segment. This strategic move was aimed to distinguish itself from its competitors, a strategy that still prevails as a vital part of SAS' core strategy.

At present, the company's stated business concept is designed to offer value-for-money products and services to meet the needs of business travelers in the Nordic region (SAS - annual report 2010). Even though SAS and NAS follow quite different business strategies, they do compete fiercely on several Norwegian and Scandinavian routes. SAS can be characterized as a traditional network legacy carrier, since the company operates from hubs and have several ticket classes where baggage fees and on-board services are included in the

price. In addition, the company offers booking of tickets to destinations all over the world through SAS' membership in the Star Alliance. The previous decade has been challenging for SAS, starting off with a major negative demand shock caused by the 9/11 terrorist attacks closely followed by a terrible accident where two SAS aircraft collided in Italy. Since then, the company's results have not been able to recover.

Cimber Sterling

As the largest Danish airline, Cimber Sterling transported 2.5 million passengers through 6 domestic and 48 international routes in 2010 (Cimber Sterling - annual report 2010/11).



Source: www.cimber.com

The company originates from 1950 when the pilot Ingolf L. Nielsen acquired Sønderjyllands Flyveselskab, which later became known as Cimber Air. It was wholly owned by the Nielsen family until SAS acquired 26 percent of the shares in Cimber Air in 1998; however, Cimber Air bought the shares back five years later and returned to the 100 percent fully-owned family business it used to be. A major milestone was achieved in 2008, when Cimber Air acquired parts of the bankruptcy threatened airline Sterling, including brands, slot rights, customer databases and technical qualifications for the Boeing 737 models. In the following year, the company now called Cimber Sterling went through an initial public offering to become listed on the Copenhagen Stock Exchange (Cimber, 2011).

Cimber Sterling's current business model is based on serving three core market segments; domestic routes in Denmark for business and leisure travelers, flights to selected European destinations such as London and Paris for both business and leisure travelers, and air travel to preferred destinations by leisure passengers such as Mallorca and Gran Canaria. The business model is also covering supply of capacity to other airlines in order to achieve economies of scale by reducing unit costs (Cimber Sterling - annual report 2010/11). The strategic positioning of Cimber Sterling are somewhere between the typical LCC and the standard network legacy carrier. This can be seen as the company holds the title to both certain LCC characteristics such as sales of add-on services, and network-model features such as code-sharing and interline agreements.

Finnair

As one of the world's oldest airlines, Finnair was founded in 1923, and has since been the flag carrier of Finland. The Finnish



Source: www.finnair.com

government owns the majority of the company's shares with a 55.8 percent stake, but operates a policy of minimum financial interference. Finnair transported approximately 7 million passengers to 13 domestic and 50 international destinations in 2010, with Finland's capital Helsinki functioning as the company's main hub (Finnair - annual report 2010).

The company claims that its overall goals are to become the number one airline in the Nordic countries and to be among the top three largest operators in transit traffic between Europe and Asia. Finnair is currently focusing heavily on the Europe to Asia long-haul segment due to the beneficial location of their Helsinki hub. In terms of strategic positioning, Finnair can be characterized as a network legacy carrier, which is reflected by its membership in the global airline alliance Oneworld. Further, the main focus of the company's strategy is to deliver a high quality of service, punctuality, eco-efficiency and establishment of convenient connections to Asia's large hubs (Finnairgroup, 2011).

Ryanair

Since being founded in 1985 by the Irish family Ryan, Ryanair has grown at an impressive rate and set up routes all over Europe. The



extreme LCC business model adopted from the US-based Southwest ^{Source: www.ryanair.com} Airlines has worked wonders after applying it in the European market since 1990, and has led Ryanair to become the largest LCC in Europe. The 2010 figures speak for themselves; Ryanair transported 73.5 million passengers on more than 1300 routes with the company's aircraft fleet consisting exclusively of 272 Boeing 737-800's (Ryanair, 2011).

Ryanair's business model and strategy is built upon offering the lowest airfares on the markets the company competes on. By constantly focusing on cost reductions, Ryanair are able to offer lower prices than its competitors. Cost efficiency is achieved through features such as fleet commonality, single no-frills ticket types, extensive use of secondary airports, and high internet booking rates.

In Scandinavia, Ryanair operates from secondary airports and has its main hubs located in Oslo (Rygge) and Stockholm (Skavsta). It is worth notifying that the company mainly competes with the Nordic airlines on international routes, and has yet to establish its presence on domestically scheduled routes within the Scandinavian countries (Ryanair, 2011).

	Main market	Business model	Passengers	Fleet size	Employees
NAS	Norway	LCC	13 m	53	2 211
SAS Group	Scandinavia	Legacy	25.2 m	174	14 862
Cimber Sterling	Denmark	Mix	2.4 m	28	820
Finnair	Finland	Legacy	7 m	67	7 578
Ryanair	Europe	LCC	73.5 m	272	7 032

Table 1: Peer group summary (2010)

Source: Own creation & annual reports 2010

4.4 Financial performance

In the following sections, we are going to take a look at how NAS' financial performance has developed over the years. By reviewing several key financial figures of NAS and its peer group, we aim to gain a better understanding of which direction the company is moving, and how it performs in comparison to its main competitors.

When measuring airline performance, the main emphasis is often put on analyzing operational metrics such as ASK, RPK and load factor, while financial performance in terms of profitability and liquidity have a tendency to be given a lower priority. Yet, it is important to measure a company's ability to make profits, its short-term liquidity and long-term solvency, to be capable of understanding the factors that directly influences its survival (Feng and Wang, 2000). This section will mainly focus on the profitability and liquidity of NAS and its peer group, while the operational measures will be analyzed later in Chapter 5.3.

There exist certain limitations when comparing the financial performance of companies which are based in several different countries. In this case, some of the companies adhere to dissimilar forms of financial reporting years. On the one hand, NAS, SAS and Finnair operate with the standard financial year of 1st of January to 31st of December. On the other hand, Ryanair reports for the period of 1st of April to 31st of March, while Cimber Sterling sticks to reporting for the period of 1st of May to 31st of April. To be able to make a reasonably valid comparison, we decided to use Ryanair's latest reported financial data from the year ended at 31st of March 2011 and Cimber Sterling's data from year ended at 31st of April 2011. These data are then compared with the other companies' data for their full financial year of 2010. However, we do acknowledge the limitations of such an approach, since occurrences happening in the first quarter of 2010 will affect NAS, SAS and Finnair's financial performance for the year, but not Ryanair's and Cimber Sterling's. Likewise, occurrences

happening in the first quarter of 2011 will be present in Ryanair's and Cimber Sterling's financial performance for 2010, but not for the others'.

Moreover, another issue arises when comparing companies from a number of countries. As NAS and its peer group are not reporting their financial statements in the same currency, we have decided to convert the financial data to Euro to be able to perform a more accurate comparison. The reason for choosing Euro is because two out of five airlines report in this currency, as well as the fact that Cimber Sterling's currency (DKK) is pegged to the Euro at a fixed exchange rate. For the conversion of NOK and SEK to Euro, we have used yearly NOK/EUR and SEK/EUR averages based on weekly exchange rates (Appendix 4).

4.4.1 Financial performance of NAS

In this section we are going to examine NAS' financial performance over the past five years. By reviewing historical stock performance, profitability and liquidity, we aim to get a better understanding of how NAS is developing in financial terms.

NAS was first listed on the Oslo Stock Exchange in 2003 and has ever since been fluctuating severely in share value. After initially starting at NOK 34 per share in 2003, the share price fell as low as NOK 7.7 in Q3 2004 due to intense price competitive pressure from SAS Braathens. However, NAS had large enough cash reserves to avoid insolvency threats and managed to weather out the storm. The share price climbed relatively steady from then on, until the start of 2008 when fuel prices started to increase dramatically and made a huge negative impact on NAS' performance. In addition, the looming financial crisis brought a general trend of pessimism to the stock markets. In 2009, NAS' share price made a turnaround as a result of a dramatic fall in jet-fuel prices, which lead to its highest peak so far of NOK 163 in October 2009 (Fig. 4). Since then, the share price has decreased slightly, and currently fluctuates around the NOK 100 to NOK 120 level.





Source: Own creation & www.reuters.com/finance

NAS has shown tremendous growth over the past five years with a revenue growth of 193 percent and a passenger growth of 155 percent. As seen in Table 2, results in terms of earnings before tax (EBT) has turned out positive four years in a row. Earnings before interest and tax (EBIT) have been fairly volatile over the five year period, but have turned out solid for the past two years.

MEUR	2010	2009	2008	2007	2006
Revenue	1 073	837	759	527	366
Change (%)	28.2 %	10.3 %	43.9 %	44.3 %	48.5 %
Total operating expenses	1 047	771	800	511	370
Change (%)	35.7 %	-3.6 %	56.7%	38.1 %	52.2 %
EBIT	26	66	-41	16	-4
EBT	30	71	1	14	-4
Operating exp. ratio	0.98	0.92	1.05	0.97	1.01
EBT margin	2.8 %	8.5 %	0.1 %	2.7 %	-1.1 %
Basic earnings per share (€)	0.62	1.49	0.02	0.47	-0.14
Equity ratio	0.27	0.32	0.28	0.22	0.25
Current ratio	0.83	0.99	0.95	1.04	1.01
Passengers (million)	13.0	10.8	9.1	6.9	5.1
Change (%)	20.4 %	18.7 %	31.9 %	35.3 %	54.5 %

Table 2: Key figures, Norwegian Air Shuttle 200	06-2010
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Source: Own creation & NAS - annual reports 2006-2010 (Appendix 6)

The negative results seen in 2006 might be credited to heavy expansion costs (NAS - annual report 2006), while volatile fuel prices and the impact of the financial crisis affected the negative EBIT in 2008. Yet, the negative EBIT in 2008 was offset by a gain on sales of financial derivatives, which led to a positive EBT of MEUR 1 (NAS - annual report 2008).

2009 turned out to be NAS' best year in regards to financial results thus far,

Fig. 5: Revenue and total operating expenses, NAS



Source: Own creation & NAS - annual reports 2006-2010

achieving an EBT margin of 8.5 percent. A strong focus on reducing operating expenses combined with an almost 10 percent revenue growth fuelled by a new base in Copenhagen

(NAS - annual report 2008), allowed NAS to post a result of MEUR 71 in EBT, despite the downturn the global airline industry experienced during and after the financial crisis. Last year did also turn out to be a positive year for NAS, as total revenue grew by more than 20 percent and the EBIT ended at MEUR 26. However, it is worth to mention that MEUR 24 of the EBIT of MEUR 26 was paid from SAS to NAS as compensation for industrial espionage, which according to NAS' annual report 2010 helped to completely offset the incurred losses related to the volcanic ash cloud.

It is clear that both total revenues and total operating expenses has increased at a high rate over the past five years (Fig. 5), arguably as a consequence of NAS' rapid expansion through investments in new routes and aircraft (Fig. 6). In fact, NAS' fleet has increased from 14 aircraft in 2005 to 53 aircraft in 2010, while the number of routes increased from 54 to 244 over the same time period.



Fig. 6: NAS' passenger and fleet size growth

Source: NAS - annual report 2010

In order to measure the solvency and liquidity of NAS, we have selected and calculated two ratios; the equity ratio and the current ratio. The equity ratio is found by dividing total equity by total assets, and measures the long-term solvency of a company, in other words a company's ability to repay long-term creditors. The current ratio is the result of dividing current assets by current liabilities, and shows how a company is positioned in terms of short-term liquidity, which means its ability to convert current assets into cash to reduce current liabilities. The results of these ratios are best examined when compared to an industry standard or to similar companies, such as the airlines in NAS' peer group.

4.4.2 Peer group comparison

In the following, we will perform a financial analysis and compare NAS to its peer group; SAS, Cimber Sterling, Finnair and Ryanair. Profitability will be measured by calculating the EBT margin, operating expenses ratio and earnings per share (EPS), while liquidity will be assessed by using the equity ratio and the current ratio. Figure 7 illustrates the five airlines' total revenue for the past two years. Clearly, SAS is the largest in terms of revenue with a figure of MEUR 4 268 in 2010, while Cimber Sterling is the smallest with MEUR 261. NAS' total revenue increased 28.2 percent from MEUR 837 in 2009 to MEUR 1 073 in 2010, which makes NAS the largest in terms of percentage revenue growth in 2010.

However, with a revenue growth of 21.5 percent, Ryanair was not far behind, increasing its total revenue from MEUR 2 988 to MEUR 3 630. Finnair is positioned somewhat anonymously entitling the median total revenue value and close to zero revenue growth. Fig. 7: Total revenue by airline (MEUR)



Source: Own creation & Appendix 11





showed a total revenue growth of

Over the past five years, NAS

193 percent. Over the same period, Cimber Sterling's total revenue grew by 100 percent, Ryanair's by 62 percent, Finnair's by only 1.7 percent, while SAS experienced a negative five year revenue growth of 35 percent (Fig. 8).

Revenue figures describe the scale of a company's operations, while the revenue growth points out if a company is expanding its operations or not. It is clear that SAS and Ryanair are the largest in terms of yearly revenue, while NAS and Cimber Sterling have experienced the largest revenue growth over the past five years which indicates heavy expansion. However, the revenue figures do not explain the airlines' capability of turning revenue into profits, or the ability to avoid insolvency, two areas which we will explore next.

Source: Own creation & Appendix 11

Profitability

Profitability ratios are applied in order to evaluate the management's ability to monitor and control costs and earn a profit on the resources owned by the company. Firstly, we will measure the EBT margin, which is calculated by dividing earnings before tax with total revenue. Secondly, we will calculate what we have called the operating expenses ratio by dividing total operating expenses (including depreciation, amortization, impairment and other operating expenses) by total revenue. Lastly, the companies' earnings per share will be compared.

	2010	2009	2008	2007	2006	5y avg.
NAS	2.8 %	8.5 %	0.1 %	2.7 %	-1.1 %	2.6 %
SAS	-7.5 %	-7.6 %	-2.0 %	2.1 %	0.5 %	- 2.9 %
Cimber S.	-14.1 %	-19.9 %	-6.1 %	6.0 %	3.7 %	- 6.1 %
Finnair	-1.6 %	-6.8 %	-2.5 %	6.4 %	-0.8 %	-1.1 %
Ryanair	11.6 %	11.4 %	-6.1 %	16.2 %	20.2 %	10.6 %

Table 3: EBT margins

Source: Own creation & companies' annual reports 2006-2010

A positive EBT margin means that the company has a profit before tax for the year, whereas a negative EBT margin signifies a loss before tax for the year. As Table 3 shows, NAS and Ryanair seem to be the most profitable companies in terms of the EBT margin, while SAS, Cimber Sterling and Finnair all had negative EBT margins for the past three years. Both NAS and Ryanair posted positive EBT margins in four out of the last five years, however, Ryanair delivered the highest EBT margins every year except in 2008, which could help to explain the company's large amount of cash and cash equivalents of MEUR 2 028 (Ryanair - financial report March 2011). Cimber Sterling's EBT margins have turned out dangerously low over the past three years, a trend that hardly can be sustainable in order to stay solvent in the long run. Finnair and SAS have experienced a number of disappointing years as well. The target of SAS to reach an EBT margin of 7 percent in 2010 seems farfetched (SAS - annual report 2010), as its calculated EBT margin (including non-recurring items such as losses incurred from the volcanic ash cloud) proved to be -7.5 percent for 2010. When we look at the five year average EBT margin, Ryanair largely outperforms the rest with an average margin of 10.6 percent. In comparison, NAS' average EBT margin is 2.6 percent, whereas SAS, Cimber and Finnair all have negative averages.

The operating expenses ratio sets total operating expenses up against total revenues. It results in a value below 1 if total revenues exceed total operating expenses, and on the contrary, the ratio ends in a value above 1 if total operating expenses exceed total revenues. It is important to bear in mind that this ratio does not take financial costs or gains into account, which differentiates it from the EBT margin.

	2010	2009	2008	2007	2006	5y avg.
NAS	0.98	0.92	1.05	0.97	1.01	0.99
SAS	1.05	1.07	1.01	0.97	0.98	1.02
Cimber S.	1.10	1.15	1.00	0.97	0.94	1.03
Finnair	1.01	1.06	1.02	0.93	1.01	1.01
Ryanair	0.87	0.87	0.97	0.80	0.79	0.86

Source: Own creation & companies' annual reports 2006-2010

It is clear from Table 4 that Ryanair once again performs better than the peer group by achieving the best yearly results; in fact the company's ratio is below 1 every year. NAS' ratio fluctuated around the point of 1 during the period with results above 1 in 2006 and 2008, although the company experienced a ratio of 0.92 in its best year of 2009 which came close to Ryanair's 0.87. With operating expenses ratios of above 1 for three years in a row, neither of SAS, Cimber Sterling nor Finnair has been profitable since before the financial crisis.

In terms of Earnings per share (EPS), NAS has delivered positive values for the previous four years, and achieved the peer group's best result in every single year (Appendix 12). EPS provides a picture of the current net income in a specific period in relation to the number of outstanding shares, in other words, the higher the EPS value the better.

Table 5	5: Pr	ofitab	ility	ratios ·	- 5	year	averages
						•	

	NAS	SAS	Cimber S.	Finnair	Ryanair
EBT margin	2.60 %	-2.91 %	-6.08 %	-1.06 %	10.65 %
Operating expenses ratio	0.99	1.02	1.03	1.01	0.86
EPS (€)	0.49	-0.61	-0.25	-0.09	0.18

Source: Own creation

Table 5 represents the five year averages of the EBT margin, operating expenses ratio and EPS of the companies. The trend is apparent to see; Ryanair and NAS achieved the best results in all categories, while SAS, Cimber Sterling and Finnair performed worse with negative average yearly results. Arguably, Ryanair is the most profitable of the companies,

showing overall strong EBT margins and operating expenses ratios. However, NAS did also achieve decent results in terms of profitability over the past five years, in particular the two years 2009 and 2010 proved to be successful.

Liquidity

Liquidity performance measures are vital and fundamental for the general business assessment, but are given little attention in most airline industry analyses (Feng & Wang, 2000). Morrell (2011) argues that an assessment of liquidity and access to finance becomes increasingly prominent on airline management's agenda in periods of distress such as the aftermath of the 9/11 terrorist attacks and the financial crisis. Arguably, liquidity assessment should not be undermined as it is essential when determining the basic survivability as well the aircraft financing abilities of a company.

As noted earlier, we have decided to compare NAS' and its peer group's liquidity by calculating the current ratio and the equity ratio. Figure 9 represents the development in the five companies' current ratio. A high current ratio indicates a strong shortterm liquidity, while a low ratio means weak short-term liquidity. Ryanair's current ratio has continuously been higher than the others', fluctuating between 1.5 and 2 for the previous years.





Source: Own creation & Appendix 13

As for the other end of the scale, Cimber Sterling has experienced a falling ratio over the five year period, and ended at a result of only 0.34 for the latest year. NAS, Finnair and SAS are positioned somewhere in between, fluctuating around the 1.0 mark. In 2010, NAS achieved a current ratio of 0.83, which is the company's lowest result for the past five years.

When it comes to the equity ratio (total Fig. 10: Equity ratio by airline, 2006-2010 equity to total assets) which measures long-term liquidity, Ryanair is no longer superior to the rest of the companies. For the latest year, Ryanair, SAS and Finnair achieved an almost similar equity ratio of approximately 0.35 (Fig. 10). NAS showed a slightly weaker result with a ratio of 0.27 in 2010, while Cimber Sterling ended at a negative value which means the company had no equity at all at the end of its financial



Source: Own creation & Appendix 14

year. According to Cimber Sterling - annual report 2010/11, the company lost its equity due to a number of unfortunate circumstances over the past years, such as the volcanic ash cloud, high fuel costs and rough winter conditions. Cimber Sterling's critical situation meant that something needed to be done in order to avoid bankruptcy, and recently, the company announced that a share issue had been agreed with Mansvell Enterprises Ltd., who will inject new equity into Cimber Sterling and take the role as its majority shareholder (Cimber Sterling - annual report 2010/11).

The airline industry might be characterized as being debt intensive compared to other industries, mainly due to the large amounts of debt incurred in the financing of aircraft. Therefore, we often see airlines having substantially lower current and equity ratios than companies from other industries. When it comes to the current ratio, it arguably becomes considerably affected if a large number of aircraft leases or purchases take place, as these transactions affects the current liabilities account in a company's balance sheet. For instance, NAS is currently investing heavily in new aircraft in order to renew its aircraft fleet, which might help explain the recent dip in both NAS' equity and current ratio.

Certain possible limitations to the liquidity analysis are worth to keep in mind (Morrell, 2011). First, the financial data are historical and might have changed since the latest reports. Second, additional sources of credit that are not included in the balance sheet may be accessible to any of the companies. Third, the degree of 'liquidity' may vary between different current assets.

4.4.3 Conclusive remarks on Financial performance

In this section, we have assessed the financial performance of NAS in terms of historic share prices, revenue growth, profitability and liquidity. During the previous year, NAS' share price has been fairly stable, although the five year graph shows a quite volatile picture. The revenue growth of NAS has been higher compared to its peer group over the previous years, while the company still has a way to go in terms of total revenue to reach the level of Finnair, Ryanair and SAS. Our calculations with regards to profitability suggest that NAS has achieved fairly good results; on the one hand, the company performs well compared to SAS, Finnair and Cimber over the past years, but on the other hand Ryanair is rather superior to NAS. So far, 2009 and 2010 turned out to be two of NAS' best years with regards to profitability. Due to heavy investments in new routes and aircraft, NAS has attained a modest equity ratio and current ratio. Only Cimber Sterling, which in fact ran out of equity, had lower equity and current ratios than NAS. However, NAS' ratios are reasonably close to those of SAS and Finnair and have not shown any signs of volatility. Thus, even though NAS' liquidity figures is inferior to the peer group average, the company's heavy expansion and ability to create profits arguably justifies the modest ratios.

5. Strategic analysis

The preceding chapter provided a descriptive overview of NAS' business model, strategy, main competitors and financial performance; an overview which lays down the groundwork for the extensive strategic analysis performed in this chapter. The following strategic analysis is divided into four main parts; *PESTLE analysis, Porter's five forces analysis, Airline metrics analysis* and *Internal analysis*. By moving from a broad and macro-environmental analysis towards a micro-economical view at a company level, we gradually narrow down the perspective in order to gain a complete picture of both the company and the industry it operates within. The chapter will be concluded in a SWOT-summary where the most significant factors will be highlighted.

5.1 PESTLE analysis

In order to analyze the external environment, also called the macro-environment, we are going to apply the strategic framework called PESTLE. In short, the macro-environment includes all the external factors that might influence an organization or an industry, but are out of its direct control. Analyzing the macro-environment helps us to gain an understanding of which external factors and changes in the environment that directly or indirectly makes an impact on NAS' ways of doing business; now and in the future.



Fig. 11: The PESTLE framework

Source: Own creation

The framework sorts the macro-environmental factors into six categories; Political, Economical, Social, Technological, Environmental and Legal. These categories provide the broad data from which key drivers of change might be identified (Johnson et al., 2005).
Further, it is important to keep in mind that factors may be interchangeable and influence each other in various ways. Due to the close interplay between certain factors, we found it necessary to merge four of the factors into two couples, as seen in Fig. 11.

5.1.1 Political and Legal factors

The legal framework outlines how companies within a country or industry might adapt their business. Therefore, the frequency and degree of government intervention, new regulations and policy changes are important to take into consideration. In the following, we are first going to look at how deregulation has changed the airline industry in Norway. Next, the impact of Open Skies Agreements will be highlighted. At last, we will discuss certain issues concerning cabotage restrictions.

Deregulation

Traditionally, domestic airline industries have been strictly regulated by the respective governments worldwide. Global deregulation first commenced when the US government initiated liberating measures for its domestic airline industry in 1978. The US' deregulation steps quickly provided positive results which inspired governments in Europe, Latin America and Asia to follow in the US' footsteps. As in the rest of the world, the Norwegian airline industry was traditionally subject to heavy restrictions. The government possessed control of ticket pricing, and provided certain companies exclusive rights to serve specific routes, meaning that each route could only have a single airline operator. However, a breakthrough was made in 1987 when the Norwegian government decided to undertake deregulation measures in its domestic airline industry. The first step in the deregulation process involved providing both major domestic airlines, SAS and Braathens, permission to serve the three busiest domestic routes; Oslo to Bergen, Stavanger and Trondheim. The next step occurred in 1994, when nearly all domestic routes were deregulated (Randøy & Strandenes, 1997).

Even though the Norwegian airline industry was liberalized in 1994, no new entrants immediately entered the market. The incumbents, SAS and Braathens, withstood from entering price competition in order to maintain their initial market shares. Arguably, the two operators facilitated tacit collusion in order to avoid reduced ticket prices and lower margins (Randøy & Strandenes, 1997). Instead of price competition, SAS and Braathens started to compete on capacity in 1998, which resulted in critically low loading factors. Inevitably, the weaker of the two had to fail; the SAS Group acquired Braathens in 2001.

The acquisition created a clear shift the Norwegian airline industry, evolving from its former duopoly state to a near monopoly situation. Following the acquisition of Braathens in late 2001, SAS held almost the entire market share in the domestic airline market. The Norwegian government decided to act against the monopoly situation by preventing SAS from awarding frequent flyer points on domestic routes. This, combined with the removal of several entry barriers such as reduced airport charges, fuelled the emergence of a new LCC - NAS.

Open Skies Agreements

Open Skies Agreements are bilateral or multilateral agreements between two or more countries aiming to remove or reduce barriers to competition. Negotiations to achieve Open Skies



over the last three decades. The agreements often include the removal of protectionism and handle issues such as dispute settlement provisions and safety and security standards. Open Skies Agreements have been successful at removing competitive barriers which allows airlines to establish international routes from their home countries. In addition, the agreements assist airlines by allowing them to partner up with foreign companies (Econlib, 2008).

Source: www.tutor2u.net

Historically, a significant step was achieved in 1992 when the US signed an agreement with the Netherlands covering free pricing and market access for airlines. Several other EU countries followed soon after by signing bilateral agreements with the US, as Norway did in 1995 (Button, 2008). In 2008, agreements between the EU and the US were signed, consequently opening up the transatlantic area for all EU countries. The negotiations are still ongoing and works toward the new and enhanced agreement called the Open Skies II. Through its membership in the European Economic Area (EEA), Norway joined the EU-US agreement in 2009, resulting in Norwegian airlines being allowed to set up flights within the EU, as well as between the EU and the US (EU-Norge, 2009) (EU-Norge, 2010).

Cabotage

Airline cabotage is defined as "...*the carriage of air traffic that originates and terminates within the boundaries of a given country by an air carrier of another country*" (United States Department of Transportation). Cabotage traffic is generally heavily restricted or simply not allowed. The main purpose of cabotage restrictions is to deny airlines of traveling into a foreign country to pick up foreign citizens and then provide further transportation within

points in that foreign country. The EU-US Open Skies Agreements of 2008 allowed US-based airlines to permit cabotage within the EU area. On the contrary, EU-based airlines may not permit cabotage within the US (Chang et al., 2009).

5.1.2 Economic factors

In this section, we will review the economic factors we believe are most likely to affect the airline industry. There are multiple feasible factors to elaborate upon, however, since the global economy is a complex web of interwoven components, we have chosen to focus on the three issues we find to be most relevant. First, gross domestic product will be used as a measure to discuss the relationship between external economic conditions and the demand for air travel. Second, the history of the global airline industry indicates a cyclical nature in relation to performance, a phenomenon which will be briefly examined. Lastly, the underlying issues affecting the jet-fuel price will be discussed.

GDP and the demand for air travel

Gross domestic product (GDP) can be defined as the sum of the market values of all final goods and services produced in a country during a specific timeframe through usage of domestic resources. Domestic or foreign ownership of the resources is of no importance, as long as the resources are considered to origin from within the country. Calculating a nation's yearly GDP provides a measure of how well the nation has performed during that year. Thus, we might draw inferences about the direction a nation's economy is heading towards by looking at how the GDP has changed in the past (Yamarone, 2007). Even though GDP does not translate directly into the standard of living within a country, it may be used as an indicator based on the assumption that a country's population will benefit from a growing economy. GDP is measured on a frequent and regular basis; hence it is easy to spot new trends of how the country is performing compared to others.

Figure 12 shows historical real GDP growth rates for the Nordic countries over a ten year period. Arguably, the four countries have followed the same trend, however, Finland's GDP growth is slightly more volatile in nature than its neighbors', while Norway's GDP growth shows a more steady trend and does not fluctuate as much as the others'. During the recent recession, the four countries experienced negative growth rates, nevertheless, they returned to positive growth in 2010. The Nordic countries score very high in terms of GDP per capita compared to the global average.

Fig. 12: Real GDP growth, yearly figures



Source: Own creation & IMF

According to IMF (2010), Norway ranks at fourth, Sweden fourteenth, with Denmark and Finland following right thereafter. The GDP estimates are derived from purchasing power parity calculations, meaning that they take costs of living into account. Thus, the purchasing power of the Nordic countries' population appears to be high.

When it comes to GDP's correlation with air travel, BCG (2006) has found that demand for air travel historically tends to grow at a multiple of GDP growth. They have based their findings on historical data from 1975 to 2000 in Europe and the US. Yet, it is important to try and understand the underlying factors affecting growth in air travel. BCG (2006) distinguishes between two types of demand growth; underlying demand growth and induced demand growth. The former stems from external factors to the industry such as growth in GDP, in other words factors that happen naturally over time. The latter, however, take into account the decisions and actions undertaken by airlines and internal sources over time, such as changes in airline ticket prices. For instance, when an airline chooses to offer discounts on airline tickets in order to fill more seats, additional consumers are induced to travel even though they originally would not at the standard prices. Such incidents might distort the real historical demand figures which companies often base their demand forecasts on.

Figure 13 shows the relationship between passenger growth and real annual GDP growth in Norway, Sweden and Denmark combined in the time period of 2002-2010. Arguably, the figure shows a trend similar to BCG's findings of air travel demand growing at a multiple of GDP growth. However, deviations can also be found, since the data from 2002, 2003 and 2009 clearly does not follow the same trend as passenger growth was negative.



Fig. 13: Passenger growth and real annual GDP growth

Source: Own creation, IMF & Eurostat

According to Graham (2000), demand for air traffic shows signs of maturity when the demand growth rate is lower than the GDP growth rate. However, the declining number of air travel passengers in 2002 and 2003 is probably due to the external shocks of the IT-bubble, the 9/11 terrorist attacks, and the outbreak of SARS, while the massive decline in passenger growth in 2009 is most likely a result of the financial crisis.

Aviation cycles

Historically, the global air travel industry has proved to be very cyclical, as it shifts from periods of high growth rates to years of lower or declining rates on an almost regular basis. However, only on a few occasions has the global industry experienced negative growth. The first period was during the First Gulf War in 1991, the second occurred during the period of 2001-2003 as a consequence of the 9/11 terrorist attacks and SARS, while the third time was a result of the recent financial crisis. The bursting of the "dotcom bubble" in 2000 followed by the terrorist attacks and SARS created what is considered the worst airline crisis yet to be seen, as visualized in Figure 14 (Franke and John, 2011).

During global recessions and oil crises, the airline industry is usually affected severely. As we can see from Figure 14; growth in revenue passenger kilometers (RPK) declines heavily in times of economic downturns. In fact, the slope of the RPK growth line starts heading downward in advance of every recession and crises, then goes on to reach the bottom when the recession or crisis has come to full effect.





Source: Franke & John (2011)

The cyclical fall in demand for flight tickets can be caused by various sources; financial crises, epidemics, terrorist attacks, extreme weather, and more. Certain external shocks are caused by the forces of nature, such as earthquakes, tsunamis, and the volcanic ash cloud which affected most of Europe's airlines in 2010. These events are very unpredictable and can be devastating for the industry should they occur.

Historically, the downturns in the airline industry appear almost cyclically every five to ten years, and in many aspects resemble the theories of the business cycles. However, even though the aviation cycle might be handy to keep in mind for managers and companies, the time and scope of the downturns varies between every occurrence. In other words, it is a complex concept with a low level of predictability.

Fuel prices

According to IATA (2011a), the global airline industry's jet-fuel costs are forecasted to a total of \$166 billion in 2011, accounting for 29 percent of operating expenses, with an average price of \$96 per barrel of crude oil. Historically, these estimates indicate the airline industry's second highest jet-fuel price ever, only beaten by the record high 2008 level where the global jet-fuel bill amounted to \$189 billion or 33 percent of operating expenses, with an average price of \$99 per barrel of crude oil.

Aviation fuel represents the largest operating expense for low-cost airlines such as NAS. In 2010, jet-fuel accounted for 26 percent of NAS' total operating expenses (NAS - annual report 2010). However, aviation fuel costs' share of operating expenses varies greatly between airlines. On the one hand, legacy carrier SAS calculates fuel to represent only 16.3 percent of total operating expenses, while on the other hand, low-cost competitor Ryanair's aviation fuel costs correspond to as much as 34.6 percent of total operating expenses (SAS & Ryanair - annual reports 2010). This clearly points out low-cost airlines' vulnerability to fuel price volatility, as drastic changes in fuel prices will significantly alter their cost figures.

The fuel used by commercial aircraft is Kerosene jet-fuel which is created from crude oil. The historical prices of jet-fuel and crude oil are closely related as shown in Figure 15. Further, it is clear that the prices of both crude oil and jet-fuel have an upward trend, even though a major decline occurred during the recession in 2009. The trend of increasing jet-fuel prices is definitely a cause of concern for airlines, considering the large share of total operating expenses it represents.



Fig. 15: Jet-fuel and crude oil prices (\$/barrel) 2005-2011

Source: IATA (2011b)

The International Monetary Fund (IMF) (2011) points out that the increase in oil prices over the past decade might suggest that we have entered an era of oil scarcity, which means that oil supply has fallen short of a specific level of demand. When demand for oil increases more than supply over a time period, oil prices will necessarily increase. However, it is important to distinguish between oil scarcity and temporary supply shocks such as during the Gulf War in 1990-91. For instance, the domestic turbulence recently witnessed in the oil-producing countries Egypt and Libya is likely to have affected the oil price.

The context behind IMF's current concern for oil scarcity is originating from two trends in the oil market; a rapid growth in demand for oil in emerging markets, and the simultaneous

downshift in oil supply trend growth. On the demand side, Figure 16 shows the growth rate in energy consumption over the previous decade.





Source: IMF (2011)

While the growth in oil demand in most developed countries is modest, emerging markets and China especially shows a different story. China's energy consumption has indeed risen rapidly, which recently led China to become the largest energy consumer in the world. Further, the demand for oil is not expected to decrease in the near future, as the current GDP growth in emerging markets such as the BRIC-countries continues. In emerging market economies with low- and middle income levels, energy demand growth has been known to closely follow growth in per capita income. An increase of 1 percent in GDP can often be linked to an increase of 1 percent in energy consumption per capita; a pattern that China has shown strong signs of following so far (IMF, 2011).

When it comes to the supply side of crude oil, Fig. 17 illustrates signs of stagnation and a possible peak in the growth of global oil production. In present times, the growth in production of oil has been stagnant for half a decade, but it is difficult to predict if the stagnation is permanent or rather a temporary trend.

IMF (2011) argues that there are several factors which might have led to the current stagnation. Typically, stagnation is a sign of lower oil availability, which again often reflects technological and geological limitations or





Source: IMF (2011)

less than required investment in capacity. Several of the major oil producing economies has experienced oil fields who have reached the maturity stage. However, increased production in undeveloped oil fields and higher levels of investment in extracting equipment might offset the production loss from maturing fields (IMF, 2011).

Another factor which has the ability to cause periods of stagnation is the investment lag; in other words the lag between investment planning and delivery, stemming from the complexity of the oil industry. In fact, time-to-build lags might be as long as 10 years or more. As a result, a period of heavy investment in oil production might not be witnessed in terms of increased output for several years. Additionally, increases in oil production capacity are often constrained by government restrictions. Certain governments only permit national oil companies to participate in domestic oil fields, which in some cases prevent implementation of the necessary technology needed for exploration and development. (IMF, 2011).

In order to reduce the risk of increasing jet-fuel prices, airlines can choose to hedge the exposure. Hedging practices serve the purpose of gaining cost stability and knowledge of the airlines' fuel expenses in the near future. However, fuel hedging might be considered a speculative practice as it is often difficult to predict the future movement of the jet-fuel price (IATA, 2009).

5.1.3 Social factors

In the following, the social factors deemed most important for the airline industry will be discussed. First, we will take a look at the massive growth in e-commerce experienced over the previous decade. Then, focus will shift to a phenomenon observed during the recent recession, where business travelers switched from legacy carriers to LCCs in the US.

Growth in e-commerce

In the previous decade, we have witnessed an increasing trend in purchases of products and services on the internet. The Nordic countries that constitute NAS' most important market segment are characterized by having high internet penetration rates. All the Nordic countries have internet penetration rates above 85 percent, which is high compared to the European average of 58 percent (Internetworldstats, 2010). According to DIBS' e-commerce survey (2010), 95 percent of all internet users in Norway, Sweden and Denmark regularly make online purchases. In addition, the average Norwegian e-shopper spends twice as much on e-commerce than a Spanish or French e-shopper. Moreover, 47 percent of all e-commerce in

Norway is travel-related, while the respective figures in Denmark and Sweden are 43 and 38 percent. The higher willingness to purchase flight tickets over the internet on behalf of traditional methods might be attributed to lifestyle changes during the previous decade, combined with the emergence of LCCs' focus on internet sales as part of their sales strategy.

Consumer patterns during economic downturns

As discussed in the aviation cycles section, economic downturns occur almost cyclically every five to ten years. Within these cyclical downturns, consumer confidence often declines, resulting in less flight tickets sold. Arguably, not only leisure travelers change their consumer patterns in troubling times, also corporate customers alter their buying habits. When corporate budgets lessen, business passengers' price sensitivity increases, leading them to more closely resemble leisure passengers in their purchasing decisions.

Neal and Kassens-Noor (2011) have examined how the legacy and low-cost carriers' customer segments changed in the US during the recent financial crisis. After the emergence of the recession in 2007, the researchers observed a tendency where business passengers skipped legacy carriers on behalf of Southwest Airlines and LCCs. This represents a new trend, since business passengers have traditionally been loyal to the legacy carriers.

Figure 18 shows the 'business passengers to total passengers ratio' for legacy carriers and the low-cost carrier Southwest Airlines in the period from 2005 to 2009.



Fig. 18: Consumer patterns in the US during the financial crisis

Source: Neal and Kassens-Noor (2011)

There is next to no change until 2007 when the ratios suddenly start to converge. This is coincidental with the emergence of the financial crisis, and by 2009, Southwest's ratio has surpassed the ratio of the legacy carriers. Thus, Southwest transported a higher degree of business passengers than the legacy carriers in 2009.

It is difficult to say if these findings are applicable in the Nordic market, since the findings are based on a specific company in the US during a financial crisis. However, these findings indicate that when a recession drives down demand and profitability in the airline industry, legacy carriers who are trying to attract customers from the business segment will most likely lose passengers to low-cost carriers. This might create a double negative effect for legacy carriers such as SAS, while low-cost carriers such as NAS may capture new customers.

5.1.4 Technological and Environmental factors

This section will cover both technological and environmental factors, because developments in technology are often related to the increased focus on environmentally friendly and fuelefficient solutions. It will start off with discussing the developments in regards to internet and airport electronic services. Then, focus will shift to the effects of new aircraft models, the introduction of bio-fuels, and the airline industry's inclusion in the EU Emissions Trading Scheme.

Electronic developments in sales and check-in services

New breakthroughs in technology sometimes have the ability to drastically change the way of doing business within an industry, such as the invention and entry of the internet technologies. The emergence of the internet as common property has proven to be quite a revolution for both airlines and its customers. As discussed previously, the Nordic market is characterized for having high internet penetration rates and e-commerce activity. Through the use of search engines, customers are now able to better compare prices and find the cheapest tickets on any given route. LCCs can capitalize on this fact as leisure travelers often look for the cheapest option. In addition to online purchasing, customers have the opportunity to check in online and print their personal boarding cards. Another option is to use the self service machines present at the airports to check in, print boarding cards and baggage tags. Through electronic sales and self service machines, airlines are able to cut costs on sales and check-in personnel. Additionally, it is more time efficient for the customers since they can spend less time in queues at the airports waiting to check in, which strongly appeals to the business segment.

Aircraft upgrades

The airline industry is perceived as a high emitter of carbon dioxide (CO_2). Aviation represents about 2 percent of global CO_2 emissions, and is arguably responsible for 3 percent of man-made contributions to climate change (IATA, 2011c). In recent years, this has led airlines to focus increasingly on creating an image associated with environmental awareness.

Technological developments continuously make it possible to create upgraded aircraft models that operate more fuel-efficient, emit less CO₂, and create less noise than older versions. During the last 40 years, technological advancements have reduced fuel consumption and emissions by 70 percent as well as reduced the noise level by 30 decibel (Newairplane, 2011). Hoping to continue the trend, IATA claims that its goal is for airlines to further improve their fuel efficiency by 25 percent before 2020 (IATA, 2011c).

Arguably, it becomes increasingly important for airlines to send signals to their stakeholders that promises improved environmental sustainability aimed at reducing emissions. Thus, a state of the art aircraft fleet will provide such a signal, in addition to enhance a company's competitive edge in terms of costs and quality of service.

Bio-fuel

When aiming to reduce CO_2 emissions, the airline industry has identified the development of bio-fuels as a key factor for the future. The goal is that bio-fuels will be able to partially, and eventually fully, replace the traditional jet-fuel. First-generation bio-fuels, such as processed sugar cane or corn, are not suitable for aircraft use because they do not meet the necessary



Source: www.heatingoil.com

performance and safety requirements. Second-generation bio-fuels, however, are created from sustainable oil crops (e.g. jatropha, camelina, algae) or from wood as well as waste biomass, and have the ability to be used for aviation purposes. Such bio-fuel has the capacity to reduce total emissions compared to existing fuel by approximately 80 percent over the full product lifecycle. Moreover, it is anticipated that it will be less complex to supply bio-fuel for the airline industry than for other forms of transport such as for road vehicles, since there are significantly more petrol stations in the world compared to airports. The main challenge in developing second-generation bio-fuels is to create a version that is able to directly substitute traditional jet-fuel, as it might prove difficult to get manufacturers to redesign the aircraft

engines. Therefore, the industry is focusing on creating bio-fuels that can serve as a "drop-in" replacement, either as a blend or as a full substitute (Enviro, 2009).

Second-generation bio-fuel is not yet developed to the point where it is able to challenge traditional jet-fuel, but several airlines have tested it and demonstrated that it works and can be mixed with existing jet-fuel. According to Boeing (2010), preliminary results of several test flights fueled by a 50-50 mixture of kerosene and bio-fuel were positive, and the new fuel was either equal or better than the existing jet-fuel in terms of performance. Recently, the first commercial flight to cross the Atlantic Ocean powered by a blend of bio-fuel and traditional fuel was completed. The blend consisted of 15 percent camelina-based bio-fuel mixed with 85 percent traditional kerosene fuel (Boeing, 2011).

EU Emissions Trading Scheme

The EU Emissions Trading Scheme (EU ETS) was initiated in 2005 as a key pillar of the EU climate policy. As of now, EU ETS consists of 30 countries; the 27 EU member states plus Norway, Iceland and Liechtenstein. Its purpose is for large emitters of CO_2 to monitor and annually report their yearly emissions to their governments. Further, the system works with a "cap and trade" principle. This means that



Source: www.airliners.net

there is a limit to the amount of greenhouse gases that each actor in the area is allowed to emit, and that companies then may buy and sell emission allowances among themselves within this cap (European Commission, 2010).

In 2009, the European Union decided that the aviation industry was to be included in the EU ETS, coming into force in 2012. In other words, every airline with operations within or between the 30 EU ETS member countries will be affected by the new directive (IATA, 2011d). Anger (2010) discusses EU ETS' possible impact on the aviation industry, and found that changes in air transport output and the macroeconomic effects are likely to be small. Changes in CO_2 emissions from aviation are depending on how high the allowance prices will be; Anger (2010) suggests a decrease of up to 7.4 percent of CO_2 emissions if the highest allowance scenario becomes a reality. Overall, the air transport sector will most likely only represent 4 percent of total allowances in the EU ETS, thus the impact is expected to be small.

However, at a more micro-economical level, the directive will arguably affect both NAS and its closest competitors, due to the fact that the system covers all activity within or between

countries in the EU ETS zone, as well as favors airlines that are fuel-efficient in terms of emissions per passenger flown. Thus, if NAS is capable of withstanding its fuel-efficient profile, the company might prove to have an advantage over its main competitor SAS.

5.1.5 Conclusive remarks on the PESTLE analysis

Figure 19 below summarizes the factors discussed in the PESTLE analysis.



Fig. 19: PESTLE analysis - summary

The reviewed political and legal factors consist of; the history of the regulatory environment in the airline industry, the open skies agreements, and cabotage restrictions. Clearly, the airline industry in Norway has changed substantially over the past two decades, as the industry has developed from being heavily regulated by the government to becoming entirely deregulated and liberalized. In addition, Norway has signed Open Skies Agreements with several countries, and is also included in the Open Skies Agreements between the EU and the US. This enables airlines to set up routes across borders, and potentially to destinations in the US and countries in Asia where agreements are in place. However, there are still certain restrictions to keep in mind, such as the cabotage restrictions in the US which prevents European airlines to transport passengers between two points within the US.

When it comes to the economic factors; GDP, demand for air travel, aviation cycles and fuel prices have been elaborated upon. The four Scandinavian countries have experienced a generally similar trend in GDP growth rate over the previous decade. Further, the countries

Source: Own creation

score high in terms of GDP per capita compared to the rest of the world. Historically, the growth in demand for air travel has in periods followed the growth in GDP by a multiple. However, exceptions are seen in times of economic downturns or external crises such as terrorist attacks, oil price shocks and natural disasters. The airline industry is generally very exposed to fuel price volatility, since aviation fuel costs constitute a great share of total operating costs, especially for airlines with a low-cost profile. IMF (2011) argues that the currently high jet-fuel price is caused by oil scarcity; high demand from emerging markets coupled with stagnating supply of oil. However, civil wars and unrest in selected oil producing North-African countries have also affected the oil price over the past years.

Regarding the social factors, it is evident that the Scandinavian market is characterized by high internet penetration rates and considerable e-commerce activity. As a result, consumers become more price sensitive as they can easily compare prices on the internet. Neal and Kassens-Noor (2011) argue that business traveler's price sensitivity increases in times of economic distress, which might prove favorable for low-cost carriers.

Several factors have been reviewed in regards to technology and the environment. First, electronic developments such as online check-in and personal check-in machines at the airports have helped to increase efficiency in the industry, both for airlines and customers. Next, by upgrading aircraft, airlines are able to increase fuel efficiency and reduce emissions. When it comes to emissions; if the heavy investments in bio-fuels bear fruits and the end product becomes competitive in both price and performance compared to traditional fuel, it has the ability to impact the industry positively. Further, the EU ETS will include aviation in 2012, which will affect all airlines operating in or between countries in the EU area; however, Anger (2010) argues that no large impacts on the industry will be seen.

Certain macro-environmental factors are very difficult to predict. Thus, sometimes it is easy for the management of an airline to blame bad results on external shocks such as a hard winter conditions, financial crises, fuel price shocks, and so on. However, by examining the past, it becomes clear that such external disrupting events have occurred almost on a regular basis. Therefore, we argue that airline management should treat such events as part of their business. In our opinion, companies should not underestimate the true value gained from analyzing macro-environmental factors. Although the airlines' have little or no possibility of influencing such factors, we believe that knowledge of the surroundings is important in order to strategically position a company in a way that minimize external risks.

5.2 Porter's five forces analysis

The PESTLE analysis examined the macro-environmental factors and how they affect the airline industry. This provided a broad overview of the key external factors which Norwegian Air Shuttle has to take into consideration. Moreover, these macro-environmental factors are affecting the landscape of NAS, and the company must adapt to the given environment by minimizing potential negative impacts or take advantage of opportunities that arise. NAS has little or no possibility of influencing these macro-environmental factors, and that is why we have chosen to introduce Michael Porter's five forces framework. Arguably, supplementing the PESTLE analysis with an examination of selected micro-economic factors creates a more holistic picture of the airline industry and the competitive situation faced by NAS.





Source: Own creation and Porter (2008)

By analyzing Porter's five forces; the threat of new entrants, bargaining power of suppliers and buyers, threat of substitute products or services, and rivalry among existing competitors, we are aiming to identify the most significant factors within these forces, thus, get a better understanding of what influences profitability in the industry (Porter, 2008).

There are several ways to define NAS' competitive environment; one way could be to assess the European market as a whole, another could be to exclusively look at the low-cost carrier segment as a distinct market. However, this section aims to examine the Scandinavian market with particular interest on Norway. This seems reasonable as NAS has become a significant Scandinavian actor, but at the same time the company is after all Norwegian, and has a strong presence in Norway where passengers are generating a substantial part of its revenue.

5.2.1 Threat of new entrants

According to Porter (2008), the threat of entry is determined by the degree of entry barriers. Entry barriers can be defined as advantages held by incumbents relative to new entrants. Besanko et al. (2007) argue that new entrants distort the incumbent's profits in two ways. First, entrants increase the total number of sellers which means that the market demand will have to be divided among more sellers. Second, entrants decrease market concentration and tend to heat up internal rivalry. In the following we will discuss some of the most significant entry barriers and how they affect the threat of new entrants. However, we will start off by looking at one important factor besides entry barriers which might affect the threat of new entrants, namely the industry's profitability.

Industry profitability

Historically, the global airline industry's profitability has been rather poor for a long time. Data from the International Air Transport Association (IATA) in Table 6 shows that the net profit margin has been negative in seven out of the last ten years:

Table 6: Airline industry - Net profit margin

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Net profit margin										
in <i>\$ billion</i>	-13.0	-11.3	-7.5	-5.6	-4.1	5.0	14.7	-16.0	-9.9	18.0
% margin	-4.2	-3.7	-2.3	-1.5	-1.0	1.1	2.9	-2.8	-2.1	3.2

Source: IATA Fact Sheet (2011)

IATA predicts that there will be a wide variation in airline performance regionally for 2011, where Europe seems to be the least profitable of the major regions with a forecasted net profit of only \$0.5 billion. In comparison, the Asia-Pacific region is expected to deliver a net profit of \$2.1 billion, whereas the North American region will produce a net profit of \$1.2 billion (IATA Fact Sheet, 2011). The CEO and Director General of IATA, Giovanni Bisignani, puts it like this: *"The financial story is less impressive. Airline revenues nearly doubled from \$307 billion in 2001 to an expected \$594 billion this year. But even in the best year of the decade - 2010 - profitability was only \$18 billion. That's equal to a pathetic net margin of just 3.2%, and far less than the 7-8% needed to cover our cost of capital" (IATA, 2011e).*

The Nordic markets seem to follow the global trend and statistics reveal a similar pattern. Table 7 shows the market value in terms of sales revenue for Norway, Sweden and Denmark in the period 2005-2009:

	NORWAY		SWE	DEN	DENMARK		
Year	\$ billion	% growth	\$ billion	% growth	\$ billion	% growth	
2005	4.2		2,3		2.8		
2006	3.9	-6.6 %	2,4	5.2 %	3.0	9.1 %	
2007	4.4	12.6 %	2,6	7.1 %	3.3	7.8 %	
2008	5.0	13.9 %	2,9	12.3 %	3.7	12.2 %	
2009	4.3	-15.5 %	2,3	-21.5 %	2.7	-26.0 %	
CAGR: 2005-	2009	0.3 %		-0.2 %		-0.6 %	

Table 7: Market value of the Nordic markets

Source: Datamonitor (2010)

In line with the global airline industry, the Nordic markets experienced a sharp decline in 2009 as a result of the financial crisis. Despite a strong double digit growth in 2008, the compounded annual growth rate (CAGR) for the five year period 2005-2009 was limited across the region. Sweden and Denmark showed a slightly negative CAGR at respectively -0.2 percent and -0.6 percent, whereas Norway delivered a CAGR responding to 0.3 percent (Datamonitor, 2010).

Furthermore, the negative trend is to a large degree reflected by the disappointing results of the Nordic airlines. As witnessed in Chapter 4.4, SAS, Finnair and Cimber Sterling all delivered negative results in terms of profitability measures for the past three years; exemplified by the EBT margin, operating expenses ratio and earnings per share. In other words, the recent performance of the Nordic airlines in NAS' peer group can be characterized as poor, and the industry profitability in itself is therefore unlikely to attract new entrants.

Economies of scale, density and scope

Porter (2008) argues that scale economies can be found in almost every activity across the value chain. These economies occur when companies produce at larger volumes and therefore benefits from lower unit costs because they can spread the fixed costs over more units. Historically, the scale economies in the airline industry used to be significant due to the large aircraft orders and investments in maintenance and ground handling services. Today, many airlines are leasing aircraft as well as outsourcing most of their supporting activity, which over time has diminished economies of scale. However, there still seems to be a few

advantages left when it comes to areas such as administration and marketing. In addition, having a well established "hub-and-spoke network" could prove to be very cost efficient.

In short, a hub-and-spoke network consist of several "spoke" cities which circles around a central "hub" city. The idea is that an airline transports passengers from a set of spoke cities through a hub city, and then from the hub to outbound destinations. By serving different sets of connected city pairs, airlines could benefit from what is called economies of density. Economies of density are basically economies of scale along a given route; as the traffic volume increases, the average cost decreases. The reason for this is because the fixed flight-specific costs (e.g. fuel, cabin crew and aircraft servicing) is higher than the traffic-sensitive costs (e.g. food and ticket handling) (Besanko et al., 2007).

The Nordic competition authorities (2002) argue that the hub-and-spoke system may have strong anti-competitive effects. Their view is that hub-and-spoke airlines have a considerable amount of market power at and around its hub. Moreover, a few large individual airlines have chosen to establish hubs strategically at different airports, thus in practice they have divided the market between them. Even though many networks have overlapping routes, few origin-destination pairs, if any at all, exhibit more than two airlines operating non-stop flights.

Government intervention

Historically, the airline industry has been highly regulated and characterized by state-owned airlines known as flag carriers. These flag carriers occurred because of the high capital costs of establishing and operating airlines, as well as the governments' desire to control the market and protect incumbents. During the last decades the deregulation of markets have led several flag carriers to give up their state ownership and become public companies or completely privatized. In the Nordic region, the two airlines SAS and Finnair can be characterized as state -owned. As described in Chapter 4.3, SAS is currently owned by the governments of Sweden, Denmark and Norway who accounts for a combined share of 50 percent of the company, whereas the Finnish government constitutes an ownership share of 55.8 percent of Finnair.

Despite Finnair having the Finnish government as its largest shareholder, the company does not receive any financial aid. In relation to the recent Icelandic ash crisis, Finnair opposed the idea of EU commission-approved subsidies as compensation for the airlines' losses. In a press release Finnair's CEO, Mika Vehviläinen, commented: *"Companies in a weaker economic condition are making strong demands for help. A subsidy stampede would distort competition,*

because the risk of airlines using the system for wider support would be great. We are already seeing support that contravenes the EU's state-aid rules" (Finnair - press release, 2010).

Moreover, Finnair, NAS and other competitors are criticizing the financial support that is frequently given to SAS by the Nordic governments. In 2009, the Norwegian government contributed MNOK 800 to SAS in a share issue (Dagsavisen, 2009), and only about a year later in 2010, the Swedish and Norwegian government injected about MNOK 1 500 in another share issue to save the company from a potential bankruptcy (Nordensnyheter, 2010).

Airport capacity

The Scandinavian market differs when it comes to airport capacity and the availability of runway slots. In Norway, Oslo Airport Gardermoen (OSL) has been running at close to full capacity for quite some time.

The airport was originally built in 1998 to accommodate 17 million passengers annually, but has since then gradually expanded and currently it can handle about 23 million passengers each year. However, passenger traffic is estimated to reach that number already in 2016. OSL is therefore expanding its facilities in order to serve as many as 28 million passengers annually in 2017 (OSL, 2011). The fact that OSL is running at close to full capacity makes it difficult for new entrants to get established in the Norwegian market.

In contrast, the Swedish main airport, Stockholm Arlanda Airport (ARN) seems to have excess capacity and is gladly welcoming new airlines to its airport. It currently has a capacity of 25 million passengers annually, but only served 16.1 million passengers in 2009 (ARN, 2011).

In addition, the Helsinki Airport (HEL) in Finland has a capacity of 16 million passengers annually, while it only served 12.9 million passengers in 2010 (HEL, 2011). As with ARN, the Finnish Source: www.helsinki-vantaa.fi airport HEL also has excess capacity. In the beginning of 2011,

NAS established a new base at HEL existing of three planes serving nine domestic and international routes.

Furthermore, Denmark's main airport CPH recently launched a new low-cost facility called 'CPH Go'. The terminal is the first European low-cost facility and it is built specifically to service the growth in low-cost traffic. Moreover, CPH Go is aiming to reflect a cheaper and

Source: www.arlanda.se

Stockholm

rlanda Airpor







more efficient way of travelling, supporting both low-cost passengers and low-cost carriers. With six new gates and a capacity of 6 million passengers annually, CPH Go will enable



Source: www.cph.dk

Copenhagen Airport to utilize its total capacity better. As long as the airlines meet the requirements of a maximum of 30 minutes turnaround time, they are welcome to use the new low-cost pier. By utilizing its five new stands, the airport could potentially double its total passenger capacity (CPH, 2010).

As described above, most of the main airports in Scandinavia have the capacity to handle both additional passengers and airlines. However, there are still a limited number of attractive runway slots available at the different airports. These runway slots determine at what time the airlines are given permission to take-off and landing. Moreover, these runway slots are regulated by the European Union and based on rules established by IATA. The slot system clearly favors established actors and implies the principle of grandfather rights. Meaning that an airline holding and using a slot one year, has first claim on that slot in the next year or in the foreseeable future, as long as the slot is used for a minimum of 80 percent of the period for which it is being held (Parliament UK, 2010). In Scandinavia, SAS is currently holding several of the most attractive slots, making it difficult for new entrants to get established and to challenge SAS on the most popular routes.

5.2.2 Bargaining power of suppliers

Porter (2008) argues that powerful suppliers have the ability to capture more value for themselves by raising prices, limiting the quality of the product or service, and shifting costs to industry participants. Moreover, a supplier group could be characterized as powerful if it is more concentrated than the industry it is serving, if the supplier group is not dependent on the industry in order to generate revenues, and if industry participants face switching costs when changing suppliers. In the following we are going to examine a number of selected supplier groups, which we believe are of high importance to the industry.

Aircraft manufacturers

Historically, the market for commercial aircraft manufacturers has been dominated by a few large players. Since Lockheed pulled out of the market in 1986 and Boeing acquired McDonnell Douglas in 1997, the market has basically been a duopoly between Airbus Industries and the Boeing Company. Due to the pro-cyclical nature of airline profits, an

economic downturn might hurt the airline industry with multi-billion dollar losses which leads to cancellation of aircraft orders, hence damaging the profits of the aircraft manufacturers. However, during healthy economic times both Airbus and Boeing have large backlog orders which could take several years to complete, thus limiting the competition between the two. Despite there being little product



Source: The Seattle Times

differentiation between the two aircraft manufacturers, airlines tend to be loyal and stick to the same producer (Besanko et al., 2007). In the Nordic market, Norwegian Air Shuttle is an example of an airline that is running a fleet exclusively consisting of Boeing 737s. Streamlining the airlines fleet to achieve cost savings in areas such as maintenance and personnel training is a common strategy, especially amongst the low-cost carriers.

In the near future Boeing and Airbus could expect increased competition and lower margins, with new entrants challenging their current duopoly. The Canadian manufacturer Bombardier and the Brazilian manufacturer Embraer has for a long period dominated the regional and private jet market with 50-90 seat capacity airplanes. However, Bombardier has announced that it is planning to launch its new CSeries in 2013; an aircraft with a capacity of 100-149 seats, ready to compete directly with Boeing and Airbus on short-haul routes (Bombardier, 2011). In addition, Embraer currently offers its E-195 airplanes with a seat capacity of 108-122 and capable of flying 2200 nautical miles (Embraer, 2011).

Another serious contender in the industry of aircraft manufacturers is the Commercial Aircraft Corporation of China (COMAC), which is planning to release its new C919 commercial jet in 2014. The C919 is being developed with western technology provided by companies such as GE and Honeywell, and is expected to challenge the duopoly of Boeing and Airbus competing directly with their most popular models, the A320 and the B737 (Businessweek, 2010).

Arguably, the increased competition in the aircraft manufacturing industry is most likely not going to affect the competitive environment of the Scandinavian airline industry. First, it would take several years for the new entrants to build a worthy reputation and gain market acceptance, as airlines are reluctant to purchase from start-ups. Second, SAS is currently restructuring and optimizing its fleet by cutting the number of models, and is therefore less willing to buy new models. At the same time Norwegian Air Shuttle has a pending order of 59 new aircraft and seems to be very satisfied in its current relationship with Boeing.

Labor unions

The airline industry is highly labor intensive and salary for employees such as pilots, cabin crew, ground personnel, and gate agents have historically been accounting for the largest share of an airline's expenses (Avjobs, 2011). Furthermore, many employees in the airline industry are well organized in different types of labor unions, thus strengthening their bargaining power. Due to the recent economic slowdown, airlines have been forced to initiate cost cutting procedures which involve looking towards low-cost countries for cheap labor.

One example of that is the recent labor dispute regarding NAS and its Estonian pilots operating in Finland. NAS has been accused of social dumping by its own pilots supported by the Norwegian labor union Parat. The pilots in NAS do not accept that their Estonian colleagues would have to work under poorer conditions and claims that the company is violating the terms of an earlier work agreement. Bjørn Kjos, the CEO of Norwegian Air Shuttle claims that his company has not violated one single rule, and states that the pilots are receiving a competitive salary since they have been hired in Estonia as well as the fact that they are living in a low-cost country (Dagens Næringsliv, 2011a).

Another example of a labor dispute involves the Finnish Cabin Crew Union (SLSY). In December 2010, the union demanded a longer recovery time between long-haul flights, and went on a strike for 10 days as the negotiations broke down. This largely affected Finnair, which could only operate 30-50 percent of its flights during the strike, and the incident cost the airline more than MEUR 20 (ABTN, 2010).

The leading European low-cost carrier Ryanair has been heavily criticized for prohibiting its workers to get organized in labor unions. The company has a zero tolerance for negotiating with labor unions, and clearly showed it when firing a pilot who was handing out union leaflets to crew members. However, opposing the labor unions could prove costly, as Ryanair was forced to pay a settlement of \$65 500 for firing the pilot (Bloomberg, 2011).

These examples clearly show that organized airline employees have high bargaining power and are capable of using it in order to extract industry profits. However, this is not always the case, and despite being organized, many pilots lost their jobs in the aftermath of the financial crisis. In turn, this created excess supply in the labor market, which substantially decreased the pilots bargaining power. In 2009, SAS fired a total of 152 pilots; while several of the pilots got new jobs outside of Scandinavia, over 30 of them got hired by Norwegian Air Shuttle and had to accept a lower salary (Dagens Næringsliv, 2010).

Jet-fuel suppliers

As witnessed in Chapter 5.1 (Fig. 15), the kerosene jet-fuel used by commercial aircraft is made of crude oil and the prices of the two are highly correlated. Thus, the airlines have little possibility of influencing the price of crude oil, which means that the jet-fuel suppliers are in a favorable bargaining position. The steep climb in oil prices we have witnessed during the last couple of years has increased pressure on airline budgets worldwide. In Scandinavia; Norwegian Air Shuttle, SAS, Cimber Sterling and Finnair raised ticket prices by adding a fuel surcharge during the first quarter of 2011 to cope with the higher jet-fuel costs.

In order to reduce the bargaining power of jet-fuel suppliers, airlines could hedge the jet-fuel prices by using financial derivatives or develop and use bio-fuel. Among these, NAS is currently only involved in the former, however, the company hedges a smaller share of its total jet-fuel costs than SAS (NAS- annual report 2010). As opposed to NAS, SAS is currently active in both hedging practices and bio-fuel development. SAS has hedged 54 percent of its jet-fuel requirements for 2011 using swap options. In addition, the company is a member of the Sustainable Aviation Fuel User Group (SAFUG), which primary goal is to develop and help commercialize sustainable types of bio-fuels. Currently the challenge is to get a certification for the use of bio-fuels as well as establishing suppliers (SAS - annual report 2010). As pointed out in the bio-fuel section in Chapter 5.1.4, test flights fueled by a 50-50 mixture of kerosene and bio-fuel has already provided positive results; additionally, the first ever commercial flight partially powered by bio-fuel recently crossed the Atlantic Ocean.

5.2.3 Bargaining power of buyers

The bargaining power of buyers can be interpreted as the opposite of the bargaining power of suppliers. Instead of raising prices and lowering product or service quality, buyers want to capture more value by demanding higher quality at lower prices. Moreover, a buyer group could be considered powerful if there are few buyers, the industry products are standardized or undifferentiated, buyers face few switching costs, or if buyers can threaten to integrate backwards (Porter, 2008). The airline industry distinguishes between two types of buyers; leisure or business travelers.

Leisure travelers

We define leisure travelers as anyone traveling by airplane in a way that is not related to work. Given this broad definition it is clear that leisure travelers include a huge number of

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unique individuals with different preferences. Moreover, each customer has little bargaining power and is unable to push the airlines to deliver a higher quality service at lower prices. However, seen as a group, the leisure travelers do possess a certain amount of bargaining power which is reflected by their extremely low switching costs. Furthermore, the internet has given buyers increased power in terms of information, where customers shop around for the best price regardless of an airline's brand name. Additionally, in 2002 the Norwegian Competition Authority prohibited frequent flier programs on domestic routes in Norway, thus contributing to a lower brand loyalty among leisure travelers as well as reduced switching costs (Norwegian Competition Authority, 2010).

In sum, the leisure travelers are price sensitive, face low switching costs and consider air travel to be a standardized or undifferentiated service. Consequently, this intensifies competition and draws profits away from the traditional network carriers towards the LCCs and the customers themselves. Moreover, the leisure traveler's support of the low-cost carriers proves that as long as minimum requirements for service are undertaken, price is the only variable that matters. Arguably, this has changed the dynamics of the industry and put pressure on the traditional network carriers to cut costs in order to offer cheaper flights.

Business travelers

Business travelers are defined as customers traveling on behalf of a company in work related matters. Many businesses are frequent travelers and often account for a significant volume of an airline's traffic; this leaves them in a strong bargaining position which they will utilize in order to obtain volume discounts. Furthermore, airlines consider business travelers valuable because they generate a stable flow of revenue and provide a high degree of certainty as they are often locked into long term contracts. One example of this is Norwegian Air Shuttle and their current business relationship with its largest customer, the Norwegian military. The deal amounted to about 1 billion NOK and according to NAS; the Norwegian military has reduced its traveling costs by a three-digit million amount (NOK) since the agreement was signed in 2008 (NAS - press release, 2010).

Compared to leisure travelers, business travelers are less focused on ticket prices and place more emphasize on airline punctuality, high route frequency and effortless ticket service handling. As businesses have become increasingly globalized during the last two decades, the demand for corporate agreements has increased as well. This has led Nordic airlines to establish a high frequency on the most popular routes in order to attract business travelers.

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In Norway the battle for business clients has been very intense over the last decade, and as a result certain businesses could achieve discounts in the 40-60 percent range. In order to compensate for the losses from these corporate discount tickets, airlines usually raise prices on regular tickets. In the end, the losers are businesses that are too small to achieve discounts as well as leisure travelers (TØI, 2002).

5.2.4 Threat of substitute products or services

According to Porter (2008), the threat of a substitute is high if it offers an attractive priceperformance trade-off to the industry's product, or if the buyer's cost of switching to the substitute is low. Additionally, Besanko et al. (2007) argue that substitutes erode profits in the same way as entrants by capturing market shares, thus intensifying the internal rivalry. The following section examines the two potential substitutes; high-speed trains and videoconferences.

High-speed trains

According to an extensive European survey on transportation modes conducted by the Boston Consulting Group (2009), the conclusion is clear; by 2020, passengers will be able to travel faster from point to point by high-speed rail than by plane on nearly half of the densest air travel routes in Europe.



Source: The Telegraph

An example of how fast high-speed trains (HSTs) can capture market share from airlines is demonstrated by the route London-Brussels, where the leading European train operator Eurostar increased its market share from 44 to 75 percent in the period 2002-2008 (BCG, 2009). Another example which proves the travel efficiency of HSTs is the Spanish train operator Renfe's route between Madrid and Valencia. With a top speed of over 300 kilometers per hour it completes the trip in only 1 hour and 35 minutes, and due to security hassles at airports as well as the travel distance to and from the city center, even airlines are having trouble competing with that. Consequently, the CEO of Ryanair, Michael O'Leary, recently announced that the company had to shut down its Madrid-Valencia route. Further, he argued that it would be impossible for airlines to compete with high-speed trains on short distances in the future (Aftenposten, 2011).

It is clear that Scandinavian countries are lagging behind the rest of Europe and Asia when it comes to HST developments and there are several reasons for that. First, critiques claims that

few cities in the region have the urban density needed to generate enough traffic to justify the expensive construction of high-speed trains. Second, even though high-speed train as a mode of transportation is relatively environmentally friendly, building it would still require major interventions on nature itself. Third, building high-speed rails is a political process and essentially about allocation of money within a given budget. It implies that someone will lose, and in this case the losers are the commuters who are living in small or medium sized cities. These commuters are excluded from the benefits of high-speed trains and would prefer that governments spent money on improving existing railways instead of building new ones.

Despite this general skepticism, politicians in Scandinavia have become increasingly open minded towards the idea of HSTs. In 2009, the last phase of a detailed statement regarding high-speed trains was completed in Sweden, and the government gave a green light to start working on the project. The establishment includes new double tracks on the routes Stockholm-Gothenburg and Stockholm-Malmö, and is estimated to be ready for use in 2025 at a total cost of 125 billion SEK (TV2, 2009).

A recently conducted survey shows that 7 out of 10 Norwegian citizens would prefer HSTs as opposed to airplanes if the ticket prices and traveling times were similar. Moreover, Norway is currently halfway through a detailed statement process, and at this stage the Norwegian government has hired several consultancy firms in order to assess the socio-economic consequences of high-speed trains on selected routes. The Norwegian statement report should be completed in the beginning of 2012, and if approved by the politicians, high-speed trains in Norway could become a reality in 2023 (Jernbaneverket, 2011).

For Denmark the situation regarding HSTs is also progressing. In 2009 the Danish government approved the "one-hour model", where the goal is to reduce the travel time to one hour on three specific routes; Copenhagen-Odense, Aarhus-Aalborg, and Aarhus-Odense. To achieve this goal, Denmark is currently upgrading its existing railway system to accommodate speeds of up to 200 kilometers per hour. The first two stretches are planning to open in 2018 and 2020, whereas the last stretch, Aarhus-Odense, is put on hold until 2013 due to disagreements regarding development costs (Aarhusportalen, 2010). Per Homann Jespersen, a Danish transportation expert at Roskilde University, claims that within ten years domestic aviation in Denmark could seize to exist as a result of the introduction of high-speed trains (Børsen, 2008).

Videoconferences

A development which has pushed the technological limits and affects airline profits directly is the introduction of videoconferences. Wainhouse Research (2005) points out that there are several benefits for companies using videoconference equipment. First, businesses could achieve enormous cost savings and at the same time be more environmentally friendly by eliminating unnecessary travel expenses



Source: Polycom

such as plane tickets, hotels, taxis, and car rentals. Second, it provides faster decision making which in turn leads to a shorter time-to-market for new products and services. Third, videoconferences increases productivity and efficiency, by moving away from scheduled meetings and towards a more flexible solution where employees are free to use visual communications and conferencing on demand whenever it is called for. In addition, videoconferences has proved to be more focused and have a higher impact than audio-only meetings, and compared to in-person meetings; videoconferences are shorter, thus wasting less time.

The pan-Scandinavian insurance firm TrygVesta, is an example of a company which clearly sees the benefits of videoconference equipment. According to public relations officer Roald Stigum Olsen, the company has saved more than 110 million NOK since they started using videoconferences in 2003. More specifically, estimates shows that videoconferencing replaced 18 percent of all air travels at TrygVesta in 2007, 24 percent in the first half of 2008, and the cost savings for 2009 alone accounted for 30 million NOK (Bergens Tidende, 2010).

A study conducted by the Norwegian Institute of Transport Economics indicates that the use of information and communication technology (ICT) at work is likely to increase in the future. Furthermore, the majority of the business respondents in the survey agreed that ICT tools such as tele- and videoconferencing is a good alternative to traveling, and 4 out of 10 believed that ICT would replace parts of their travel schedule in the future. However, the report also concluded that in certain business relationships, videoconferences are less likely to become a viable substitute for travel. Especially in those which emphasize on entirely new encounters or that involve strengthening existing relationships. In addition, in-person meetings are expected to be the preferred choice in negotiations and sales related activities (TØI, 2008).

5.2.5 Rivalry among existing competitors

Rivalry among existing competitors could be described as the constant battle for market share by firms within the industry. Porter (2008) argues that the degree of intensity of competition could drive down profits. Moreover, the intensity could be characterized as high if competitors are numerous or roughly equal in size and power, industry growth is slow, or exit barriers are high.

The Nordic markets consist of few competitors, where each airline has a dominating position in their domestic home countries. SAS is the overall market leader with an estimated market share of 50 percent in Norway, 33 percent in Sweden, 40 percent in Denmark and 16 percent in Finland (SAS - annual report 2010). Norwegian Air Shuttle, the second largest airline in Scandinavia and the largest low-cost carrier in the region holds a 45 percent market share in Norway (NAS - annual report 2010). Cimber Sterling which is the leading Danish airline has a 50 percent market share in Denmark (Cimber Sterling - annual report 2010/11). While the regional private carrier Finncomm which is partly owned by Finnair, holds 50 percent of the market in Finland (Finncomm, 2010).

Moreover, we would argue that the degree of domestic rivalry within each national market could be characterized as medium. Factors such as maturing markets and high airline capacity on the most popular routes intensify competition. In addition, the buyers' switching costs are extremely low as the majority of travelers consider air travel to be a standardized service. In turn, this leaves airlines with price as the only competing variable left, which often leads to unprofitable price wars. However, the fact that each country has one or a few dominating airlines, holding attractive airport slots as well as having established route networks, limits the direct competition. Furthermore, the Scandinavian governments' financial backing of SAS distorts the competitive environment and discourages new entrants.

If we look at the Nordic market from an international perspective, the level of competitive rivalry could be considered high. The same factors as in the domestic markets prevail, except that the number of competitors is higher which results in a more fragmented market. The deregulation of the airline industry in combination with the rise of the low-cost carriers has led to intensified competition during the last two decades. Both European legacy carriers and low-cost carriers have entered the Nordic region and captured a significant amount of market share on international flights in the recent years.

Fig. 21 shows the market shares for the five largest airlines on international scheduled routes to and from Norway in the period 2003-2009. As illustrated, Norwegian Air Shuttle has rapidly expanded and captured a substantial amount of market share from its main rival SAS.





In 2009, the two companies had a combined market share of 57 percent, which implies that the remaining 43 percent of international flights to and from Norway was handled by foreign competitors (TØI, 2010). Moreover, as domestic markets in Europe are maturing, airlines are looking abroad for growth opportunities and might consider the Nordic market an attractive alternative. The main reasons for that are as discussed in the PESTLE analysis; a solid economy reflected by the region's high GDP per capita in combination with a strong demand for air travel. According to the environmental organization The Future In Our Hands (2010), the average Norwegian citizen traveled by air 2.8 times in 2008, implying that Norway beats Sweden, Denmark and Finland when it comes to domestic air travel (Fig. 22). In terms of population, this is not only the highest in Scandinavia, but proves to be the highest in Europe.



Fig. 22: The number of domestic flights in terms of population for Europe in 2008

Source: Own creation and The Future In Our Hands (2010)

5.2.6 Conclusive remarks on the Porter's five forces analysis

Figure 23 summarizes the Porter's five forces industry analysis by pointing out what we believe are the most significant micro-economic factors, and Table 8 shows how the forces are expected to affect industry profits today and in the future:



Fig. 23: Porter's five forces analysis - summary

Source: Own creation

The threat of new entrants is classified as medium, both now and in the future. A well established hub-and-spoke network combined with holding attractive runway slots clearly gives the incumbents certain advantages. At the same time, the Scandinavian government's financial backing of SAS is distorting competition and might scare potential entrants away.

Despite these challenging entry barriers and the poor historical returns, the industry's high profile, glamorous image and huge amounts of cash involved continue to tempt both investors and entrepreneurs. For instance, Feel Air; a newly started Norwegian low-cost long-haul airline is

Table 8: Porter's five forces - conclusion

PORTER'S FIVE FORCES ANALYSIS OF THE NORDIC AIRLINE INDUSTRY					
	THREAT TO PROFITS				
FORCE	TODAY	2015 - 2025			
Threat of new entrants	Medium	Medium			
Bargaining power of suppliers	High	Medium			
Bargaining power of buyers	Medium	Medium			
Threat of substitute products or services	Low	Medium/High			
Rivalry among existing competitors	Medium/High	High			

Source: Own creation

planning to launch its operations during 2011. The CEO of Feel Air, Kai Holmberg, claims that the Scandinavian long-haul market is underserved and that there is room for another player in the industry (Feelair, 2011). In addition, the Nordic airports either have excess capacity or are currently in the process of expanding their facilities, something which might ease the establishment of new entrants.

The next force, bargaining power of suppliers, is classified as high, but is expected to gradually decline in the future. The current duopoly between Airbus and Boeing seems solid, where long term contracts and the airlines' brand loyalty limits the direct competition as well as hindering new aircraft manufacturers from entering the market. Although, in the longer run it is not unlikely that Bombardier, Embraer and COMAC could get market acceptance and challenge the duopoly. Furthermore, the labor unions have shown that they are capable of using their strong bargaining power if treated unfairly, and are likely to remain powerful in the future. In addition, the ongoing bio-fuel evolution might prove valuable for the airlines. Over the coming decade, we expect to see huge improvements in the field of alternative jetfuel, and once a commercial system is in place, the airlines would have an alternative to kerosene jet-fuel, thus limiting the current jet-fuel suppliers bargaining power.

Overall the bargaining power of buyers can be characterized as medium. The fact that leisure travelers have blessed the welcoming of the low-cost carriers proves that they are willing to choose the cheapest provider due to the extremely low switching costs. In addition, the business segment is expected to continue playing a crucial part in the airlines' struggle for survival, where large corporations in the future will continue utilizing their strong bargaining positions to extract industry profits.

When it comes to the threat of substitute products or services, this force is currently considered to be low. At the same time, we believe it has the potential to increase significantly in the future. High-speed-trains which are the closest substitute for air travel is still at an early planning stage in Scandinavia. According to estimates, it would take somewhere between 10-15 years before the first high-speed rails are introduced in the Nordic region. However, when the high-speed trains finally do arrive they are expected to follow the European trend, and pose a serious threat to industry profits by capturing a substantial amount of airlines' market shares. Regarding videoconferences, the use of such equipment is anticipated to increase in the future as broadband speeds and technology improves.

Yet, evidence indicates that it would still play more of a supplementary role than being a direct substitute due to the fact that certain business relationships require in-person meetings.

At last, rivalry among existing competitors is classified as medium to high in today's markets, and this force is expected to increase as the Nordic carriers will face tougher and more direct competition both domestically and internationally in the future. The leading European low-cost carrier Ryanair is currently present in all Scandinavian countries and poses a serious threat to incumbents. Especially Norwegian Air Shuttle has experienced the pressure from head-on competition with Ryanair at Rygge Airport in Norway, where the battle between the two ultimately led NAS to withdraw its two base planes, and instead chose to operate the routes from Oslo Airport Gardermoen (E24, 2011). In addition, Emirates and Qatar Airways, two highly successful Middle Eastern airlines are planning to establish Nordic intercontinental routes, which might further increase the international competition (Dagens Næringsliv, 2011b).

5.3 Airline metrics analysis

In Chapter 4.4, we reviewed the recent financial performance of Norwegian Air Shuttle and its peer group, which gave us an overview of the companies' overall profitability and liquidity. However, the financial data reviewed arguably has limited strategic importance since it does not provide any information about the underlying operational drivers. For this reason we have introduced the term *Airline metrics analysis*, thus aiming to create a comparable financial analysis which might yield valuable insights of strategic interest.

In the following, we will first present a series of common airline efficiency metrics such as ASK, RPK, load factor and yield. Second, we are briefly going to compare the profitability of the airlines through an assessment of RASK and CASK. Third, we will discuss the productivity of the airlines by examining the relationship between the number of passengers per employee and the number of employees per ASK. At last, we investigate the airlines' cost effectiveness by measuring selected operational items of expenditure in terms of ASK.

Available seat kilometers (ASK)

ASK is a measure of an airline's total passenger production capacity, and is defined as the number of available seats (occupied or not) multiplied by the distance flown. As illustrated in Fig. 24, there are large differences between the airlines production capacity.

NAS, Ryanair and Cimber Sterling have all expanded rapidly during the last five years. NAS has increased its capacity by 231.5 percent; moving from a production of 5 371 million ASK in 2006 to a production of 17 808 million ASK in 2010. As pointed out in Chapter 4.1, NAS has a positive outlook for the future, and its production capacity is expected to increase as the company has a pending order of 59 B737-800 to be delivered within 2018.



Fig. 24: Available seat kilometers (ASK) in millions

Source: Own creation & Appendix 17

Furthermore, Ryanair went from producing 51 568 million ASK in 2006 to 86 051 million ASK in 2009, corresponding to an increase of 66.9 percent. Although Cimber Sterling is nowhere near the other airlines in terms of total passenger production capacity, the company should not be underestimated as its capacity has increased rapidly from 723 million ASK in 2006 to 3 017 million ASK in 2010, which equals a growth of more than 300 percent. On the contrary, SAS has decreased its production capacity by 29.2 percent, from 54 907 million ASK in 2006 to 38 851 million ASK in 2010. The decrease in capacity is a result of the Core SAS strategy, which aims to divest and outsource subsidiaries not being a part of SAS' core operations, as well as run a more cost efficient fleet by reducing the number of different aircraft models (SAS - annual report 2010). At last, Finnair has more or less remained on status quo, with a small increase in million ASK by 5.4 percent for the five year period.

Revenue passenger kilometers (RPK)

In contrast to ASK which measures an airline's total production capacity regardless of passengers, RPK is a measure of actual production because it contains the number of passengers. Further, RPK could be defined as the number of occupied seats multiplied by the distance flown.

For this reason the graphs depicted in Figure 25 look quite similar to those in Figure 24. However, the values' starting points on the Y-axis differs slightly as RPK reveals the airlines' actual production indicating the revenue generated by seated passengers. In line with the developments in ASK; NAS, Ryanair and Cimber Sterling have all had a remarkable increase

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in RPK during the five year period. NAS increased its RPK by 226.1 percent, Ryanair by 66.4 percent and Cimber Sterling by 350.0 percent.

Furthermore, Finnair had a growth in RPK of 7.2 percent, whereas SAS due to divestments, outsourcing and streamlining of its aircraft fleet decreased its RPK by 25.1 percent over the period. The fact that SAS' reduction in RPK has been smaller than the



Source: Own creation & Appendix 17

company's reduction in ASK indicates improvements in seat capacity utilization or load factor, an area which we will turn next.

Load factor

The load factor is defined as RPK divided by ASK, and describes how effective an airline is to fill its seats, thus it measures an airline's seat capacity utilization. Moreover, the load factor is an important indicator of efficiency because it does not include flight length. This makes it possible to compare the load factor of an airline flying only short-haul routes such as NAS, to an airline operating long-haul flights such as Finnair.

Fig. 26 shows the development of the companies' load factors for the recent five years. Ryanair is on top with a superior load factor of 83-84 percent for the period. In second place is NAS with a load factor of 77 percent, down 2 percentage points from 2006 which is possibly due to its rapid expansion in ASK. Third, we have Finnair with a load factor ranging between 75-76 percent. At fourth, we find SAS which has increased its load factor from 71 percent in 2006 to 76 percent in 2010,



Source: Own creation & Appendix 17

as a result of the implemented changes in relation to the Core SAS strategy. At last, despite its large increase in ASK, Cimber Sterling managed to improve its load factor by 4 percentage points, from 62 percent in 2006 to 66 percent in 2010.

Revenue/RPK (Yield)

Although the load factor is an important measure in determining an airlines' effectiveness, it does not reveal information concerning the price of the tickets or revenue generated. Moreover, we need to examine the airlines' yield, hence compare the companies' traffic revenue per RPK flown. By 'traffic revenue' we mean revenue directly linked to transporting passengers (Appendix 16).

Figure 27 shows that SAS had the highest yield in 2010, thus indicating that the company charged the highest ticket prices of all the airlines in the peer group; yielding EUR 0.126 per flown RPK. Followed by Cimber Sterling, which in the same year charged the second highest ticket prices with a yield of EUR 0.117. Further, Finnair and NAS generated yields corresponding to EUR 0.083 and EUR 0.075 in 2010. As expected, the leading European low-cost airline Ryanair



Fig. 27: Revenue/RPK (Yield) in EUR

delivered by far the lowest yield, equal to EUR 0.041 in 2009. It is worth notifying that NAS and Finnair have approximately the same yield levels even though the airlines have quite distinct business models. This is partly explained by Finnair's ability to generate high numbers of RPK, owing to the fact that a central element of its business strategy is operating long-haul flights between Europe and Asia (Finnair - annual report 2010). Although airline yield is a common measure in the industry, it clearly has its limitations as comparing yields across markets and airlines could vary significantly by flight length. Another problem is that of defining traffic revenue, since revenues are not always clearly distinguished in the annual reports. As a result, we acknowledge that the graphs in Fig. 27 could be somewhat misleading because several of the airlines might have classified revenue stemming from other activities as part of passenger or traffic revenue.

Source: Own creation & Appendix 17
Revenue per ASK (RASK) and Cost per ASK (CASK)

Contrary to yield, RASK incorporates the load factor which makes it a more appropriate measurement for comparing airlines across different markets and business models. RASK is often referred to as unit revenue and defined as traffic revenue per ASK, which is equivalent to the product of load factor and yield.

However, in order to examine the airlines' profitability we need to introduce the cost side as well. CASK refers to an airline's unit cost and is defined as operational expenses divided by ASK. By 'operational expenses' we mean all costs related to passenger transport such as personnel, jet fuel and handling charges (Appendix 16). Moreover, by calculating and comparing RASK and CASK we aim to measure the profitability of the business segment involving transportation of passengers. Thus, the results illustrated in Fig. 28 should not be compared to the conclusions drawn in Chapter 4.4, which concerns the airlines' overall degree of profitability regardless of business segment.

The difference between RASK and CASK amounts to the profit per produced seat kilometer, and as depicted in Fig. 28, SAS generated a negative premium in 2010 and lost respectively EUR 0.007 per produced seat kilometer. Furthermore, Cimber Sterling was close to break even and showed a slightly negative difference of EUR 0.0004 for the same year. Finnair had a positive difference between RASK and CASK corresponding to EUR 0.008. At last and as expected; the two low-cost carriers





Source: Own creation & Appendix 17

NAS and Ryanair showed both the lowest unit revenues and unit costs of the peer group. NAS had a positive premium of EUR 0.003 in 2010, whereas Ryanair earned EUR 0.005 per ASK in 2009.

Passengers per employee and Employees per ASK

In order to compare the airlines' level of productivity we have chosen to present two common measures; the number of passengers per employee and the number of employees per million

ASK. The former indicates the overall level of employee productivity, whereas the latter shows how many employees it takes to produce one million seat kilometers.







Source: Own creation & Appendix 17

Source: Own creation & Appendix 17

Figure 29 and 30 shows that the leading European low-cost carrier Ryanair is superior on both measures. The company had 9 457 passengers per employee in 2009 and it took only 0.08 employees to produce one million seat kilometers. NAS follows on second place with a total of 5 880 passenger per employee and with 0.12 employees per million ASK for 2010. Further, Cimber Sterling showed a number of 3 034 passengers per employee in 2010 with a corresponding ratio of 0.28 employees per million ASK. The dramatic improvement in Cimber Sterling's employee per million ASK ratio could partially be explained by the airlines' aggressive expansion in ASK. Another reason is the company's supporting business segment which aims to lend a significant portion of its aircraft capacity to other operators (Cimber Sterling - annual report 2009/10), hence increasing its total production of ASK while keeping the number of employees constant. In the recent years and in line with the implementations of the Core SAS program, SAS has gradually decreased its number of employees. This has resulted in a higher level of productivity where the company has moved from a ratio of 0.63 passengers per million ASK in 2007 to 0.38 in 2010. Additionally, SAS had 1 696 passengers per employee in 2010 which is the second lowest number in the peer group only beaten by Finnair's number of 942 passengers per employee. However, SAS and Finnair's relatively poor performance in employee productivity should not be overly emphasized. In contrast to low-cost carriers, running a traditional legacy carrier involves a

higher number of personnel due to a more complex organization, with additional in-house activities and factors such as a diverse aircraft fleet and different ticket classes.

Operational items of expenditure per ASK

At last we are going to examine a selected group of operational expenses, and measure them in terms of ASK.

	NAS	SAS	Cimber S.	Finnair	Ryanair (09)
Personnel/ASK	0.011	0.034	0.020	0.018	0.004
Jet-fuel/ASK	0.015	0.018	0.015	0.017	0.010
Handling and catering					
charges/ASK	0.006	0.007	0.015	0.007	-
Maintenance/ASK	0.005	0.007	0.009	0.002	0.001
Airport charges/ASK	0.009	0.011	0.018	-	0.005
Total percentage of CASK	82.7 %	75.1 %	98.6 %	79.5 %	68.6 %

 Table 9: Operational items of expenditure per ASK (2010) in EUR

Source: Own creation & Appendix 17

Table 9 reveals that SAS as expected had the highest personnel expenditure of EUR 0.034 per available seat kilometer, followed by Cimber Sterling (EUR 0.020), Finnair (EUR 0.018), NAS (EUR 0.011) and Ryanair (EUR 0.004).

When it comes to jet-fuel expenses per ASK, the figures does not vary substantially. As discussed in the Porter's five forces analysis (Chapter 5.2.2), the jet-fuel suppliers are in a strong bargaining position and the airlines have limited possibility to influence the jet-fuel prices. However, the differences between NAS' (EUR 0.015) and SAS' (EUR 0.018) jet-fuel expenses per ASK could be explained by fuel hedging positions and the fact that NAS' fleet consisting exclusively of B737s is simply more fuel-efficient. Further, Cimber Sterling has managed to keep its fuel expenses per ASK at a level similar to NAS at EUR 0.015. This is possibly due to the company's fleet composition where 22 of 28 aircraft is smaller regional jets such as the ATR 42-500 and Bombardier CRJ 200LR with a maximum seat capacity of 50-60 seats, making the fuel expenses per passenger lower than competing aircraft (Cimber Sterling - annual rapport 2010/11). Ryanair's figure regarding jet-fuel per ASK of EUR 0.010 should be ignored as the number is from 2009 and therefore does not include the significant 2010 price increase in jet-fuel.

If we look at the handling and catering charges per ASK, it appears that SAS and Finnair has slightly higher figures than NAS. A possible explanation for this is that the two full service

network carriers operate their own handling and catering services as an integrated part of their businesses. Whereas NAS has minimized its costs related to handling and catering by outsourcing these services (companies' annual reports 2010). Furthermore, as a likely result of having an old and diversified aircraft fleet; Cimber Sterling generated both the highest handling and catering charges per ASK, and the highest maintenance expenses per ASK in the peer group corresponding to EUR 0.015 and EUR 0.009 respectively.

There are few surprises when comparing the airlines' airport charges, and as we would expect; Ryanair which focuses on secondary airports, shows by far the lowest airport charges per ASK corresponding to EUR 0.005.

Final remarks on the Airline metrics analysis

The financial Airline metrics analysis reveals Norwegian Air Shuttle's operational performance in relation to its peer group. First, it becomes clear that despite of NAS' remarkable expansion in both aircraft fleet and production of ASK during the last five years; the company has successfully managed to attract passengers and fill its planes, thus sustain a high load factor. Second, NAS' level of unit revenue (RASK) in relation to its level of unit cost (CASK) is highly competitive, and reflects the company's strategic positioning as a profitable low-cost carrier. Third, in terms of employee productivity, represented by the two metrics passengers per employee and employees per million ASK, NAS delivers good results and is only beaten by Ryanair. Finally, our calculations suggests that NAS has a highly efficient cost structure, something which makes the company better positioned for meeting future external risks such as ash cloud implications or rough winter conditions as well as potential price wars waged by competitors.

5.4 Internal analysis

By performing an internal analysis we are aiming to identify strengths and weaknesses within Norwegian Air Shuttle at a company level. According to the resource based view (RBV), the differences in companies' degree of competitiveness could be explained by their resources. Furthermore, a company's ability to develop and sustain a competitive advantage is not only a function of its environmental factors, but is largely dependent on the resources at its disposal and how they are utilized (Roos et al., 2007). In line with the RBV, we are going to examine what we believe are NAS' most valuable resources and how they contribute to shaping the company's competitive advantage. The internal analysis is divided into two parts. The first part identifies NAS' sources of competitive advantage by analyzing the four building

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blocks; superior efficiency, quality, innovation, and customer responsiveness. Whereas the second part, involves applying the RIIMA-framework (equivalent to the SVIMA-framework by Jacobsen & Lien, 2001) in order to assess to what degree the different resources are contributing to building a sustainable competitive advantage.

5.4.1 Competitive advantage

According to Hill & Jones (2009), a company has a competitive advantage when its profits exceed the average profitability in the industry. At the same time, a company has a sustained competitive advantage if it manages to generate superior profitability for a longer time period. To achieve a competitive advantage, a company has to identify its distinctive competencies, which in turn are driven by its resources and capabilities as illustrated in Fig. 31.





Source: Hill & Jones (2009)

Resources refer to a company's assets and can be divided into two groups; tangible and intangible assets. Capabilities are defined as a company's ability to coordinate its resources and utilize them in a productive way.

In sum, each of the four building blocks presented in Fig. 32 is a product of the company's distinctive competencies.

Fig. 32: Building blocks of competitive advantage



Source: Hill & Jones (2009)

By focusing on its core competencies a company could; differentiate its product offering, and lower its cost structure, which in turn leads to increased customer value and superior profitability (Hill & Jones, 2009). Although the four factors are discussed separately below, they are highly interrelated and are likely to affect each other.

Efficiency and cost structure

Efficiency is often measured in relation to a company's cost structure and could simply be defined as the amount of input it takes to produce a given output (Hill & Jones, 2009).

A high level of efficiency is crucial for an airline that wants to reduce its costs, and as concluded in the airline metrics analysis; Norwegian Air Shuttle performs quite well in terms of efficiency metrics such as ASK, RPK and load factor. At the same time, the company has a lean cost structure and achieved good results in terms of employee productivity. Furthermore, our calculations suggest that NAS' level of unit cost (CASK) is highly competitive in relation to its peer group (Chapter 5.3: Fig. 28). Although NAS has a long way to go before they can challenge the European low-cost leader Ryanair, they certainly are more cost effective than their main rival SAS. We identify several potential sources of competitive advantage in relation to Norwegian Air Shuttle's cost efficient structure.

First, NAS is aiming to have only one type of aircraft. Currently, the company has a total fleet of 59 aircraft; 17 Boeing 737-300 and 42 Boeing 737-800. Moreover, NAS is planning to phase out the older B737-300 in the near future and have a fleet consisting exclusively of 63 B737-800 within 2012. A new B737-800 reduces the cost per seat by 20 percent compared to the B737-300 due to lower fuel consumption and reduced training costs for pilots, cabin crew and technicians (NAS - annual report 2010). In addition, operating a single type of aircraft facilitates cost savings through synergies in areas such as maintenance and administration (NAS In-flight magazine, #02, 2011).

Second, the majority of Norwegian Air Shuttle's ticket sales are distributed online; statistics for 2010 shows that 87 percent of all ticket sales occurred through their internet website. In comparison, only 40 percent of SAS' tickets were purchased online (NAS & SAS - annual reports 2010). Having a well established online distribution channel is beneficial for NAS as they are avoiding expensive commissions charged by travel agencies. Moreover, online sales imply that NAS collects payment when the ticket is purchased, which lowers working capital

requirements. In contrast, it could take several months before SAS receives payment for tickets distributed through intermediaries (TNI, 2007).

Third, NAS' IT-system was upgraded in 2005, which resulted in cost savings for both the company and its customers. Through the SAP platform (Systems, Applications, and Products in Data Processing), employees get access to real time information with regards to sales and profitability on each individual flight (SAP, 2005). Additionally, the IT-system makes the distribution channel more efficient by eliminating production of physical paper tickets as well as simplifying the ticket reservation system; all the way from internet purchasing at home, to self service check-in terminals at the airports. In turn, this reduces labor costs in areas such as sales, customer service and accounting (NAS - annual report 2006).

At last, NAS outsources all ground handling services at all destinations as well as its catering services. NAS' philosophy is that all activities not strategically relevant to its business will be outsourced, which provides the company with a greater degree of flexibility with regards to changes in its route network (NAS - annual report 2009).

Quality

Customers define the quality of a product or service along two dimensions; reliability and excellence. Reliability refers to a product or service which consistently does the job it was designed to do without any problems. Excellence is related to attributes such as design, features and functions as well as the level of service which is provided when delivering a product or service. In sum, companies producing a product or service that is perceived to have a high degree of reliability and excellence compared to rivals could charge a higher price (Hill & Jones, 2009).



Fig. 33: Punctuality rate for Norwegian Air Shuttle (2008-2010)

Source: NAS - annual report 2010

For airline travelers it is important that their flights departure and arrive as scheduled, thus the airline's punctuality becomes a suitable measure of reliability. Figure 33 illustrates Norwegian Air Shuttle's punctuality rate for the recent years. Overall, the trend seems encouraging, where NAS has managed to gradually increase its punctuality rate; from about 77 percent in 2008 to slightly above 80 percent in 2010. However, there is still work left to be done before the company reaches its target of 90 percent, and the results are inferior compared to several of its competitors. In 2010, Ryanair had a punctuality rate of 88 percent, followed by SAS and Cimber Sterling at 87 percent and 85 percent respectively, whereas Finnair showed a punctuality rate of 82 percent. Based on data from Flightstats, SAS proved to be the most punctual airline in Europe, and won the prestigious 2010 Flightstats On-time Performance Service Awards (companies' annual reports, 2010).

With regards to the second dimension of quality, excellence, it becomes clear that a low-cost carrier such as NAS has a business model which directly conflicts with several of its characteristics. Arguably, running a low cost airline implies making certain compromises when it comes to the level of service that customers can expect. For instance, Ryanair is an example of a low-cost carrier with an extremely low level of excellence and do not offer anything for free. The company operates primarily from secondary airports, and passengers are only allowed to bring one small item of hand luggage weighing a maximum of 22 pounds. Moreover, Ryanair's seat arrangements are tighter than most airlines, and the seats are without neck rests. In addition, there are usually no in-flight meals or entertainment (Compare

Airline Fees, 2010). NAS offers a level of service that is higher than Ryanair's, with in-flight entertainment on television screens, seat arrangements with more leg space, as well as adjustable seatbacks with neck support (E24, 2011). Furthermore, NAS offers its customers the opportunity to buy food and drinks on all flights. However, NAS is after all a low-cost carrier and as a result its level of perceived quality of excellence is arguably lower compared with legacy network carriers. For instance, both SAS and Finnair offer





Source: Own creation and Hill & Jones (2009)

different ticket classes with more comfortable seat arrangements, where personal in-flight entertainment screens and foods and drinks often are included in the ticket price, thus free of additional charge. Fig. 34 displays a quality map for NAS and its closest competitors.

Innovation

Innovation is essentially about creating new products or processes, either through product innovation or process innovation. The former refers to developing new products that are new to the world or posses attributes that are superior to existing products. The latter involves inventing a new process of producing and delivering products to customers (Hill & Jones, 2009).

In a broad sense we would argue that the very creation of Norwegian Air Shuttle as a company could be characterized as a process innovation. Even though the North American low-cost carrier Southwest Airlines revolutionized the low-cost concept, and Ryanair is currently the dominating low-cost carrier in Europe, NAS was the first company which saw the enormous market potential for cheap flights in Scandinavia and acted on it. Moreover, NAS was also the first provider of ticketless point-to-point travel in Scandinavia. In short, we would argue that NAS has changed the industry dynamics of the Nordic airline industry by creating new markets and a demand for air travel which previously did not exist. Another possible development in relation to process innovation is the idea of cheap long-haul flights. NAS has for some time considered the option of establishing a subsidiary which could utilize its lean cost structure on a long distance scale by offering its customers low-cost long-haul flights. Initially, NAS was planning flights on the routes Oslo-New York and Oslo-Bangkok in 2010 with two leased aircraft of the new model Boeing 787 Dreamliner. However, due to delays in the manufacturing process of the aircraft, the operations are postponed until at least 2013 (StockLink iMarkedet, 2011).

When it comes to product related innovation, NAS is considered to be among the leading European airlines. In 2004, NAS became the first company in the world to introduce the sale of airline tickets through SMS in collaboration with the Norwegian telecom operator Telenor. In the same year, NAS entered into an agreement with the Norwegian convenience store chain Narvesen, which allowed NAS to sell tickets through more than 440 Narvesen kiosks in Norway (NAS - annual report 2004). Furthermore, in February 2011, NAS became the first European airline to offer in-flight high-speed internet broadband services to its passengers. The company is planning to have WiFi onboard 21 aircraft within 2011, and in 2012 the goal is to have broadband installed throughout the entire fleet (NAS - press release, 2011). The fact that NAS is currently renewing its aircraft fleet to consist entirely of B737-800 aircraft not only gives NAS one of the most modern, environmentally friendly and cost effective fleets operating from primary airports in Europe, but also benefits the passengers who get more convenient flights. Compared to the older B737-300, the new B737-800 are delivered with the new Dreamliner interior "Boeing Sky", which includes more leg space, additional storage capacity in the overhead bins, and comfortable LED-lighting in combination with a rounded cabin architecture providing a more spacious feel. Further, the new window frames offer a better outside view, and a new ventilation system with better isolation reduces the level of noise inside the cabin by 2 decibel. Overall, these improvements increase the level of quality and comfort, which in turn are likely to increase customer value (NAS - annual report 2010).

Customer responsiveness

Customer responsiveness is simply about identifying and satisfying customer needs. A company can obtain superior customer responsiveness by knowing what the customers want and by offering a higher level of utility compared to rivals. Furthermore, customer responsiveness is highly related to the other building blocks of competitive advantage, which means that having a high degree of efficiency, quality and innovation could lead to superior customer responsiveness (Hill & Jones, 2009).

NAS is a cost-efficient airline with a competitive low-cost structure which allows the company to offer its customers lower ticket prices than most rivals. In addition, NAS' innovative capabilities differentiate the company from its competitors and contribute to raising quality. Over time this has led NAS to establish a strong brand across Scandinavia, where people associate the company with affordable low prices and good value for money. Already in the beginning of 2004 after barely two years of operations, NAS was recognized by the Norwegian economic magazine 'Økonomisk Rapport' and appointed the company of the year 2003 (ORAPP, 2004). Moreover, NAS has also been internationally recognized as described in chapter 4.1. In 2009 the company won the prestigious Market Leadership Award from the global aviation magazine Air Transport World. Whereas in 2010, Norwegian Air Shuttle was awarded silver and bronze in the Skytrax Airline Awards 2010 customer survey.

As concluded in the Porter's five force analysis; leisure travelers have extremely low switching costs and are often looking for the cheapest option regardless of carrier. In an attempt to respond to this trend and build a loyal customer base, NAS has developed a diversified business model with additional branches such as the online bank 'Bank Norwegian' and a mobile phone company 'Call Norwegian'. The idea is that customers who use the credit card from Bank Norwegian, or talks and sends SMS through Call Norwegian, continuously generate cash points. These cash points are directly integrated with NAS' bonus reward program 'Norwegian Reward', and allow customers to spend them on airline tickets.

Another example of how NAS is trying to lock in customers is by exploiting its concept of 'Scandinavian Masters'. Each aircraft in NAS's fleet have a tail which is decorated by the face of an historical and influential national hero. In the beginning, NAS only displayed Norwegian icons such as Henrik Ibsen or Edvard Munch, but as the company expanded throughout Scandinavia, the concept was extended to include Swedish and Danish heroes as well. Arguably, by honoring national heroes NAS is appealing to the general population, and overall the concept is likely to build a stronger brand image across the Nordic region.

5.4.2 RIIMA-analysis

NAS' competitive advantage derives from the internal conditions we revealed through the analysis of the four building blocks above. However, if the company is going to maintain a competitive advantage in the long run, its resources have to be sustainable. This section aims to identify resources of a sustainable character by performing a RIIMA-analysis.

RIIMA stands for **R**are, **I**mportant, Inimitable, **M**obilized and **A**ppropriated. A resource is considered rare if it is not widely possessed by other competitors. An important resource affects the customer's willingness to pay or the company's costs by handling it. Inimitable refers to a resource that cannot be copied or substituted by competitors. Further, if a resource is





Source: Own creation and Jacobsen & Lien (2001)

mobilized, it has been utilized in such a way that it generates economic value. At last, if a resource is appropriated, the company has succeeded to retain the majority of the economic value as opposed to sharing with other stakeholders. Figure 35 illustrates the cumulative effect of each criterion, while Table 10 shows a series of possible RIIMA outcomes. According to Jacobsen & Lien (2001), resources passing all five criteria create the basis of a company's sustainable competitive advantage. In the following we will classify a selected number of NAS' resources according to the RIIMA-framework.

Rare	Important	Inimitable	Mobilized	Appropriated	Outcome
No	Yes	Yes	Yes	Yes	Parity
Yes	No	Yes	Yes	Yes	Trivial competitive advantage
Yes	Yes	No	Yes	Yes	Temporary competitive advantage
Yes	Yes	Yes	No	Yes	Potential sustainable competitive advantage
Yes	Yes	Yes	Yes	No	Sustainable non retained competitive advantage
Yes	Yes	Yes	Yes	Yes	Sustainable competitive advantage

Table 10: RIIMA outcomes

Source: Jacobsen & Lien (2001)

Aircraft fleet

As discussed in the efficiency and cost structure section, operating a single type of aircraft proves to be very cost efficient. Brüggen & Klose (2010) support this view and in an empirical study compromising 28 low-cost carriers, results show that fleet commonality is positively associated with operating performance. Moreover, the relationship is expected to become stronger, the larger the size of the aircraft fleet. Within 2012, NAS will have 63 Boeing 737-800, which gives the company one of the most cost effective and modern fleets in Europe. The resource is therefore classified as both important and mobilized. Furthermore, if we consider the Nordic airline industry, having a fleet consisting of only one aircraft model is found to be rare. In 2010, SAS operated 19 different aircraft models, whereas Finnair and Cimber Sterling used respectively 8 and 4 different models. However, there is an ongoing trend amongst network carriers to optimize their fleets and to reduce the number of different aircraft models. Both SAS and Finnair have implemented programs aiming to phase out older aircraft in order to run a more streamlined and cost-efficient fleet. (SAS, Finnair & Cimber Sterling - annual report 2010). As a result, the aircraft fleet could be characterized as an imitable resource. At last, the economical value generated from having a modern and cost efficient fleet is retained by NAS, thus making the resource appropriated.

Sales and distribution channel

Norwegian Air Shuttle's ability to maintain a relatively high rate of internet ticket sales is considered to be an important and mobilized resource because it contributes to lowering the

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distribution costs. Moreover, in 2010, NAS proved to be superior in terms of online ticket sales with 87 percent of all tickets sold through its website. In comparison, SAS and Finnair had internet ticket sales rates of 40 percent and 30 percent respectively for the same year, which indicates that the resource is rare (SAS & Finnair - annual report 2010). Furthermore, since the economic value generated through internet sales cannot be captured by other stakeholders the resource is classified as appropriated.

There are several reasons why NAS is dominating the internet sales arena. First, they have invested heavily in a sophisticated IT-system which supports internet sales and makes it an effortless experience for customers. Moreover, the website is well arranged and offers an advanced low-fare calendar which makes it convenient to compare prices and find the cheapest fares (NAS - annual report 2004). Second, NAS has since the establishment focused extensively on promoting its web portal and getting customers to understand that ordering tickets online is simple, cheap and safe. Further, this is to a large degree reflected in NAS' advertising campaigns as well as in the company's logo decorating various aircraft.



Source: www.norwegian.com

However, the resource is imitable as NAS' competitors in the near future are expected to increase its share of tickets purchased online. Both SAS and Finnair have realized the cost advantages of having a well established internet distribution channel and are constantly improving their websites. In 2009, Finnair upgraded its website to support Polish, Norwegian and Danish languages (Finnair - press release, 2009), whereas SAS introduced a new low-fare calendar in 2010 (DinSide, 2010).

Brand name

In the early days of Norwegian Air Shuttle's history, the company accumulated lots of goodwill from the general population for challenging the monopoly of SAS in Norway. Guided by its vision; "everyone should afford to fly"; NAS introduced cheap flights on the most popular domestic routes and rapidly increased in popularity. Arguably, the company's red nosed planes and tail fins decorated with the face of national heroes make the airline quite distinct and recognizable. In addition, NAS' logo is designed as an internet web address and the company is pronounced "Norwegian" by the general population. Overall, this has led Norwegian Air Shuttle to become one of the most popular brands in Norway, and already in 2003, a market survey conducted by Interra Market Research showed that 58 percent of the population in Norway associated the brand with low price. In the same year, NAS placed second after the Salvation Army as the most trusted brand in Norway (NAS - road show, 2003). These positive remarks in combination with international awards, contributes to making the brand name stronger which in turn generates additional sales and revenue.

According to Yoo & Donthu (2001), brand image can affect a company's future profits, long term cash flow, and consumers' willingness to pay premium prices, as well as contributing to building a sustainable competitive advantage. Chen & Chang (2008) support this view and argue that; *"Brand equity refers to the incremental utility or value added to a product from its brand name. It is often believed to contribute to a company's long-term profitability"*. Overall the resource could therefore be classified as rare, important and mobilized. Arguably, since the resource is a result of history shaping the company's reputation over time, it becomes extremely difficult for others to imitate. However, it is not unlikely that competitors could build an equivalent brand name over time, but it would be both very costly and time consuming. Finally, the resource is considered to be appropriated as no other stakeholders can capture the economic value generated.

Innovative capabilities

During the recent decades, strategists and authors have stressed the importance of businesses developing innovative capabilities. According to Paul Sloane, a recognized expert on innovation, the biggest innovation-related challenge that organizations face today is that they do not innovate fast enough. In his view, the problem is that innovation in itself is not sufficient; instead a company has to innovate faster than its competitors in order to survive (Innovationtools, 2006). This statement seems to hold true, especially in a rapidly changing business environment such as the airline industry. For instance, when the low-cost carriers emerged with its new business model, several traditional legacy carriers were still stuck with the old ways of doing business. Because they were unable to innovate and adapt to the new business environment, some lost ground while others went out of business.

We would argue that despite its brief history, Norwegian Air Shuttle has numerous times proved its innovative capabilities. As discussed in the innovation section, the company is considered to be among the leading European airlines when it comes to both product and process innovation. NAS was the first airline to provide ticketless point-to-point travel in Scandinavia, as well as the first airline in the world to introduce ticket ordering via SMS. In addition, the company was the first in Europe to offer in-flight broadband internet service to its passengers. Furthermore, NAS is currently renewing its entire fleet faster than initially planned, which results in a higher level of convenience for passengers compared to other European airlines.

However, not every invention has been successful; the mobile company 'Call Norwegian' and the online bank 'Bank Norwegian' have been struggling with attracting customers. However, what is crucial is NAS' drive to continuously keep innovating in order to stay ahead of its competitors. Although other airlines clearly have its own innovative capabilities, we would argue that the ideas generated by NAS differentiates the company (e.g. the Scandinavian Masters concept), thus making the resource both rare and important. Furthermore, the resource is considered to be imitable because other competitors could over time imitate and copy NAS' inventions. For instance, after NAS introduced in-flight internet broadband services to its passengers in February 2011, SAS was quick to respond and launched a similar service in April the same year. In addition, the resource is mobilized as many of NAS' inventions are generating economic value. At last, we classify the resource as appropriated, but not in the long term because the economic rent generated is only retained by NAS until the inventions are imitated by competitors.

The following table summarizes the RIIMA-analysis by displaying how Norwegian Air Shuttle's resources are classified, and what their respective outcomes are:

Resource	Rare	Important	Inimitable	Mobilized	Appropriated	Outcome
Aircraft fleet	Yes	Yes	No	Yes	Yes	Temporary competitive advantage
Sales and distribution channel	Yes	Yes	No	Yes	Yes	Temporary competitive advantage
Brand name	Yes	Yes	Yes	Yes	Yes	Sustainable competitive advantage
Innovative capabilities	Yes	Yes	No	Yes	Partly	Temporary competitive advantage

Table 11: Classification of Norwegian Air Shuttle's resources

Source: Own creation

Table 11 shows that the three resources; Aircraft fleet, Sales and distribution channel, and Innovative capabilities, all generate temporary competitive advantages. Further, it could be reasonable to conclude that NAS' most valuable resource is its brand name, because it is the only resource generating a sustainable competitive advantage. However, as emphasized by Porter (1996) while describing Southwest Airlines and the concept of 'strategic fit: *"Everything matters. Southwest's strategy involves a whole system of activities, not a collection of parts. Its competitive advantage comes from the way its activities fit and reinforce one another."*

Arguably, Porter's concept of 'strategic fit' is applicable to NAS, and the company's various resources in combination with its supporting activities is what contribute to shaping its competitive advantage. In the near future, NAS will be in the possession of a uniform Boeing 737-800 fleet with Dreamliner interior and in-flight internet service. As a result, this will not only improve the company's level of cost efficiency, but offer passengers cheaper ticket prices as well as a higher level of convenience compared to its competitors. Further, it strengthens NAS' strategic position as a leading LCC as well as its brand name. Eventually a stronger brand name generates additional sales through NAS' efficient distribution channels. In sum, no single resource makes up NAS' competitive advantage, but rather the interplay between all of the company's resources is what shapes its competitive advantage.

5.5 SWOT-summary

This brief section aims to consolidate all the key business insights we have discovered in the different parts of the Strategic analysis chapter. Moreover, to get a holistic overview of NAS and the industry it operates within, we have chosen to categorize the factors we find most relevant in line with a SWOT-analysis. However, what we are about to present should be considered more of a summary, rather than an analysis, hence the term SWOT-summary.

A SWOT-analysis consists of four main components; strengths, weaknesses, opportunities and threats. The former two represents the internal characteristics of a company, while the latter two involves the external forces that might influence a company now and in the future (Roos et al., 2007).





Source: Own creation

Table 12: SWOT - summary

Strengths	Weaknesses
• Efficient cost structure; low CASK	• Modest liquidity at best
Strong brand name	Poor punctuality rate
• High profitability; RASK > CASK, positive EBT margins	Inferior cost structure compared to Ryanair
Innovative capabilities	Competitive advantages imitable
Uniform aircraft fleet	 More exposed to fuel price volatility than
Efficient sales and distribution channels	competitors
• High load factor	Possible risk of over-expansion
High employee productivity	
Opportunities	Threats
Consider the aviation cycles when making decisions	Persistent high jet-fuel prices
GDP and demand growth	High-speed trains in Scandinavia
• Exploitation of the low-cost long-haul segment	 Increased competition at home and abroad
Capture additional passengers on behalf of legacy	Uncertain global economic conditions
carriers	• Extreme weather, natural catastrophes, terrorism
• Further deregulation, Open Skies Agreements	Government intervention and financial distortion
Bio-fuel commercialized	Inclusion in the EU Emissions Trading Scheme

Source: Own creation

The findings presented in Table 12 have previously been discussed extensively, thus, the factors in the SWOT-summary will only be briefly commented in this section.

Strengths & Weaknesses

In the *Airline metrics analysis* we discovered that Norwegian Air Shuttle has an efficient cost structure as it operates with a low CASK compared to its peer group. Additionally, the company has relatively high load factors and high levels of employee productivity. We believe that the combination of NAS' strong brand name, uniform aircraft fleet, innovative capabilities, and efficient sales and distribution channels contribute to shaping the company's competitive advantage, as concluded in the *Internal analysis*.

At the same time, the majority of NAS' competitive advantages are imitable, and the company has a cost structure that is inferior to the leading European LCC Ryanair. As a result of the company's heavy investments and rapid expansion over the previous years, its liquidity figures is not as optimal as they could be, and the punctuality rate is poor

compared to its peer group. Further, we argue that the company is more exposed to jet-fuel price volatility than its competitors.

Opportunities & Threats

As we identified in the *PESTLE analysis*, the airline industry is very cyclical in nature, and we will therefore argue that timing and awareness is crucial when making important decisions. We consider the aviation cycles to represent both opportunities and threats, and believe that NAS might gain an advantage relative to its competitors if it manages to carefully time its investments and strategic actions.

As a result of Norway agreeing to the EU-US Open Skies Agreements in 2009, NAS gained the opportunity to explore and establish new routes. The low-cost long-haul segment is currently unexplored in the Nordic markets, and we believe that the combination of a high GDP per capita and a high demand for air travel indicates that this segment might be an attractive option.

However, the Open Skies Agreements, the underserved low-cost long-haul market and the high demand for air travel all might contribute to increased competition, both domestically and internationally. In addition, NAS' main rival, SAS, receives financial aid from the Scandinavian governments which slightly distorts competition. Moreover, a historically high crude oil price leads to high and volatile jet-fuel costs. Jet-fuel costs account for a large share of NAS' total operating expenses, thus persistent high crude oil prices directly affect NAS' profits severely. As discussed in the *Porter's five forces analysis*, estimates suggest that high-speed trains might become a reality in Scandinavia in 10-15 years time, and is expected to capture a substantial share of the airlines' short-distance market. At last, we want to point out that the airline industry's inclusion in the EU Emissions Trading Scheme comes into effect in 2012, which will require NAS' to monitor and report its CO₂ emissions.

6. Scenario planning

At the end of the previous chapter we summarized all external and internal factors of importance in a SWOT-summary, thus creating a solid foundation for the purpose of the following chapter; *Scenario planning*.

In this chapter, we first introduce the history and application of scenario planning, as well as explain the intention with such an approach. Second, we classify the key business insights from the SWOT-summary according to likelihood, impact and degree of interdependence. Third, we develop and present a set of distinct scenarios. At last, we provide a number of strategic recommendations to each scenario. The chapter is divided into four parts; *Developing future scenarios, Classification of key external factors, Future scenarios* and *Strategic recommendations*.

6.1 Developing future scenarios

Scenario planning stems all the way back to World War II and the Manhattan Project when scientists worked on computer simulations in order to predict the impact of exploding an atomic bomb. After World War II, scenario planning was adopted by the U.S. military, who sought to devise defence strategies against actions and reactions from their enemies. Further, Rand Corporation as well as the two research institutions, the Stanford Research Institute and the Hudson Institute, adapted the concept for commercial use. In the 1970s, scenario planning was popularized by Royal Dutch Shell. The company successfully developed profitable scenarios by exploiting volatile oil prices and anticipating the effect the fall of the Soviet Union would have on natural gas prices. The interest in scenario planning declined during the 1980s, but has risen in popularity in the past two decades mainly due to managers' perception of an increasingly complex and uncertain business environment (Miller & Waller, 2003).

The two Royal Dutch Shell economists, Cornelius and Romani, in collaboration with Van De Putte, director at the World Economic Forum, emphasize the importance of not treating scenarios as projections, predictions, or preferences. Rather, they argue that scenario planning involves developing plausible and logical alternative stories about the future; to challenge assumptions, think "outside the box", and develop strategies accordingly (Cornelius et al., 2005). Figure 37 aims to illustrate the difference between forecasts and scenarios. Forecasts are anchored on the assumptions that the world of tomorrow will closely resemble the world of today, and therefore they do not take into consideration radical shifts in the business environment. An analyst trying to estimate the oil price and finds it to be \$100-\$120 per barrel



Fig. 37: Scenarios vs. Forecasts

Source: Own creation & Cornelius et al. (2005)

in 2014 is an example of a typical forecast. In other words, forecasts and predictions cut the tails of the distribution curves and do not account for highly unlikely events. Arguably, as long as there are no critical discontinuities, forecasts and predictions seem to work reasonably well. However, as history has proved, sooner or later "black swans" occur and change the world in major ways, leaving forecasts useless when they are needed the most (Cornelius et al., 2005).

Whereas forecasts and predictions tries to avoid uncertainty by staking out one path that is considered most likely to occur, scenarios and scenario planning embraces uncertainty and tries to understand and reason with it. Moreover, scenarios challenge conventional wisdom by helping to prepare a set of multiple paths towards alternative probable futures. By presenting fundamentally different stories or outlooks about the future, scenario planning works as an early warning system, which might help companies position their strategies and act accordingly if the scenarios becomes a reality. Further, scenarios focus on causal processes and decision points, meaning they are built on a dynamic sequence of interacting events, conditions and changes (Cornelius et al., 2005).

Miller & Waller (2003) point out several advantages by using scenario planning as a tool for decision making. First, the process is participative, which relates to the fact that insights are drawn from a variety of sources, thus enhances learning and enriches the details of envisioned futures. Second, as a result of scenario planning being rich on details, it moves beyond traditional forecasting techniques by incorporating contingencies that are hard to quantify. Third, with its narrative and broad scope, scenarios have the ability to produce a series of

stories covering multiple plausible outcomes and perspectives, which helps reveal blind spots. Fourth, the systemic thinking encourages learning about how different environmental factors are interrelated. Finally, scenario planning is a framework that envisions long term opportunities and uncertainties in a company's environment.

However, Miller & Waller (2003) also acknowledge that there are certain disadvantages with scenario planning. For instance, a key shortcoming with the concept is that it fails to directly determine when investments in strategic flexibility contribute to adding company value. Another potential flaw is that scenario planning could be quite unwieldy, and without logical consistency and rigorous examination, it could all boil down to imaginative speculations at best. In addition, input used in scenario planning is often not quantifiable, which means that neither is output. At last, the process could be influenced by group thinking which might limit the number of possibilities, and lead to lack of consensus as participants might have conflicting views.

Despite the limitations of scenario planning, we believe that the advantages outweigh the disadvantages, and that the concept is undervalued as a strategic tool. As argued in the introductory chapter of the thesis; the airline industry is a very competitive and dynamic industry where profit margins are low, new challenges frequently arise, and no one really knows what the next major development is likely to be.

Hence, we find the application of scenario planning to be highly relevant when analyzing Norwegian Air Shuttle and the industry it operates within. Furthermore, as concluded in the PESTLE analysis; airline managers tend to blame bad results on external shocks such as hard winter conditions or financial crises. Instead of complaining, we argued that mangers should treat such events as part of their business while shifting their focus on how to minimize those risks. Hence, the main purpose of the current chapter is to apply scenario planning in an attempt to minimize such risks.

Arguably, scenario planning is a relatively loose term and its definition varies between writers. Becker (1989) defines scenario planning as; "*plausible descriptions of future conditions with which the organization could be faced*", whereas Schwartz (1998) describes the phenomenon as; "*a tool for ordering one's perceptions about alternative future environments in which one's decisions might be played out*".

In this paper we define scenario planning as; "The development of several different and probable futures, which aims to provide grounds for strategic decision-making based on a company's key external factors".

6.2 Classification of key external factors

After having established what scenario planning is and where it comes from, the following section serves as a groundwork which we are going to build the scenarios upon. To start with, the key external factors highlighted in the SWOT-summary as opportunities and threats will be classified according to likelihood and impact. Next, we are going to plot the various factors into a chart covering two time periods; short and long term. Then, we introduce an influence matrix which helps us determine the interdependencies between the factors.

In line with the framework of Andersen & Schrøder (2010), we have chosen to classify the factors qualitatively according to two dimensions; likelihood and impact. The former refers to the probability of an event occurring, whereas the latter

Table 13: Rating criteria



Source: Own creation

describes to what degree an event might affect the company. Table 13 describes how the two dimensions are rated using a five point scale.

Furthermore, in Table 14 we have chosen to classify the key external factors according to likelihood (L) and impact (I) while covering two time periods; short term and long term. The purpose of this classification is to try and evaluate how the factors are likely to change over time, thus specifically identify the factors we believe are of the highest importance to Norwegian Air Shuttle now and in the future. Factors 1-4 are interpreted to have a positive economic impact on NAS, whereas the factors 5-15 are considered to affect the company in a negative way. As witnessed in Table 14, the factor; *Further deregulation, Open Skies Agreements (4),* are classified as a positive contributor. This is because we believe that the opportunities from an increasingly liberalized international market will more than offset the increased competition caused by further deregulation.

			term	Long term		
			-2013	2014-2021		
ID	Factors	L	I	L	I	
1	GDP growth in Scandinavia	3	3	4	3	
2	Demand growth in Scandinavia	3	3	3	3	
3	Further deregulation, Open Skies Agreements	2	1	3	2	
4	Bio-fuel commercialized	1	4	3	4	
5	Jet-fuel prices	3	-5	3	-4	
6	High-speed trains in Scandinavia	1	-3	5	-4	
7	Increased competition within Scandinavia	1	-4	3	-5	
8	Increased competition to/from Scandinavia	2	-4	4	-5	
9	Economic crisis in the global economy	4	-4	3	-4	
10	Economic crisis in Scandinavia	2	-5	2	-5	
11	Extreme weather and catastrophes	2	-4	2	-4	
12	Terrorism, epidemics, wars, etc.	2	-5	2	-5	
13	Government financial distortion (SAS)		-2	3	-3	
14	Effect of EU ETS	5	-3	2	-2	
15	Labor union disruptions	3	-3	3	-3	

Table 14: Classification of key external factors

Source: Own creation

After having evaluated and rated the key external factors, the next step is to illustrate how they are likely to change from the short term (2011-2013) to the long term (2014-2021). The various factors' ID from Table 14 is used to represent them in the likelihood and impact chart below (Fig. 38).





Source: Own creation

The semicircle in Fig. 38 helps us distinguish the high likelihood, high impact events from the lower likelihood and impact events. The factors positioned in the north-east and south-east corners of the map, such as *Economic crisis in the global economy (9)*, should be considered of high importance and requires close monitoring. Further, it is worth to notice how the two factors; GDP growth in Scandinavia (1) and Bio-fuel commercialized (4), shifts from inside the semicircle in the short term chart, to be positioned far north-east, outside the semicircle in the long term chart. Likewise, the three factors; High-speed trains in Scandinavia (6), Increased competition within Scandinavia (7) and Increased competition to/from Scandinavia (8), moves from within the semicircle towards the far south-east area of the chart. This implies that even though the threat of high-speed trains is currently non-existent in Scandinavia, it might affect the airline industry substantially in the future. Although the high likelihood, high impact events are deemed to receive most attention; low likelihood, high impact events known as 'wild cards' should not be neglected. For instance, the factors; Economic crisis in Scandinavia (10), Extreme weather and catastrophes (11) and Terrorism, epidemics and wars (12), have proven to cause severe damage to NAS and the industry when occurring.

Andersen & Schrøder (2010) point out that while the classification of the key external factors shows the likelihood of occurrence and the degree of impact, it does not say anything about how the various factors relate to one and another. We therefore introduce an influence matrix to identify the differing interdependencies of the respective factors.

Facto	ors	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
1	GDP growth in Scandinavia		2	0	0	0	1	2	1	0	1	0	0	1	0	1	9
2	Demand growth in Scandinavia	1		0	0	0	1	2	1	0	0	0	0	0	0	1	6
3	Further deregulation, Open Skies Agreements	0	1		0	0	0	0	1	0	0	0	0	0	0	0	2
4	Bio-fuel commercialized	0	0	0		2	0	0	0	0	0	0	0	0	1	0	3
5	Jet-fuel prices	1	1	0	2		1	1	1	0	0	0	0	1	1	0	9
6	High-speed trains in Scandinavia	1	1	0	0	0		2	0	0	0	0	0	0	0	0	4
7	Increased competition within Scandinavia	0	0	0	0	0	0		1	0	0	0	0	1	0	1	3
8	Increased competition to/from Scandinavia	0	0	0	0	0	0	1		0	0	0	0	1	0	1	3
9	Economic crisis in the global economy	2	2	0	0	2	0	1	1		1	0	0	1	0	0	10
10	Economic crisis in Scandinavia	2	2	0	0	1	0	2	2	1		0	0	2	0	0	12
11	Extreme weather and catastrophes	1	2	0	0	1	0	0	0	0	0		0	1	0	0	5
12	Terrorism, epidemics, wars, etc.	2	2	0	0	2	0	1	1	1	1	0		1	0	0	11
13	Government financial distortion (SAS)	0	0	0	0	0	0	2	1	0	0	0	0		0	1	4
14	Effect of EU ETS	0	0	0	2	1	1	0	0	0	0	0	0	0		0	4
15	Labor union disruptions	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	Total	10	13	0	4	9	4	14	10	2	3	0	0	9	2	5	85

Table 15: Influence matrix

Source: Own creation and Andersen & Schrøder (2010)

Table 15 is a qualitative assessment of how the various factors influence each other, where 0 represents 'no or insignificant impact', 1 represents 'some impact', and 2 represents 'high impact'. For instance, the factor *Economic crisis in the global economy (9)* is given a horizontal total score of 10 points, which means that it has an overall high potential impact on the other factors. However, *Economic crisis in the global economy (9)* only scores a total of 2 points vertically, which implies that the factor is not influenced much by other factors.

In short, on the one hand, we find that *GDP* growth in Scandinavia (1), Jet-fuel prices (5), Economic crisis in the global economy and Scandinavia (9, 10), and Terrorism, epidemics and wars (12) have the ability to affect the other factors the most. On the other hand, *GDP* and Demand growth in Scandinavia (1, 2), and Increased competition within and to/from Scandinavia (7, 8) are most likely to be highly influenced by other factors.

6.3 Future scenarios

We are now prepared to present a set of distinct scenarios based on the strategic analyses and the key external factors classified in the previous section. In order to construct the scenarios, a two-dimensional scenario framework known as 'the matrix approach' has been adapted. Van der Heijden (2005) argues that the matrix approach provides users with logical relationships which are both very useful and easy to understand, however usability or convenience is not its main purpose. The method usually results in three or four stories that are both quite different from each other and within the limits of what the users would consider credible. Thus, it helps managers or scenario planners to explore more of their business environment than they would otherwise do. Further, he states that; *"If a good causal story can be told on how we got there, the outcome will be plausible. The matrix approach is designed to maximize the spread of the scenarios in the set within this plausible space."*

Ralston & Wilson (2006) support the view of Van der Heijden (2005) and claim that a scenario framework should consist of at least two critical axes of uncertainty. Further, the objectives of the two axes are; to encompass a substantial part of the high likelihood and impact events, distinctively differentiate the scenarios from each other, present logical consequences of the key external factors, and challenge conventional wisdom by providing surprising, yet plausible results.

Figure 39 presents the two axes of the scenario matrix; the horizontal axis describes the future economic conditions, whereas the vertical axis represents industry specific developments that might influence the Scandinavian airline industry either positively or negatively. Economic conditions include events that affect the overall economic environment such as GDP growth, economic crises, and natural distortions. Industry

developments refer to changes that more

Fig. 39: Scenario matrix axes



Source: Own creation

directly influence the Scandinavian airline industry such as the emergence of high-speed trains and commercialization of bio-fuel.

We have deliberately chosen to apply axes that are general in nature, thus covering a wider spectrum of key external factors and developments than if the respective axes had a highly specific nature. For instance, a scenario matrix consisting of the two axes; 'jet-fuel prices' and 'deregulation', would limit the primary scenario themes and neglect certain high likelihood and impact factors. By introducing a more general matrix with less specific axes labels, we are able to retain a higher degree of flexibility which allows us to maximize the spread of credible and plausible scenarios, in line with the statement of Van der Heijden (2005).

Charles Roxburgh, director at McKinsey & Company, largely agrees with this view, and argues that scenario planners should not rely on a too narrow set of scenario outcomes by completely ignoring unlikely occurrences. Further, he states that it is not ideal to develop less than four scenarios, since two are too few, and three scenarios often leads to a worst case, neutral, and best case situation, where people tend to excessively focus on the middle one. In addition, he recommends using short, catchy and memorable scenario names, as too long and descriptive titles are easily forgotten (McKinsey, 2009).

The scenarios we are about to present are based on the external environment and the key factors classified in the previous section. The chosen scenarios will cover a ten year period chronologically, stretching from present day towards 2021, and have its main focus centered

on events that influence the Scandinavian airline industry. Figure 40 below illustrates the scenario matrix consisting of the four scenarios; *Enemy at the gates*, *Survival of the fittest*, *Network heaven*, and *High-speed train utopia*.





6.3.1 Enemy at the gates

The first scenario, *Enemy at the gates*, is positioned in the upper left quadrant of the scenario matrix. This scenario refers to a world where the economic conditions are poor, and positive industry developments gradually occur. In short, the main theme of this scenario describes a situation where new entrants from Middle-Eastern and Asian countries are emerging, and rapidly expanding their business into Europe and Scandinavia.

The economic uncertainties witnessed during the financial crisis in 2008/2009 continued, and the PIIGS-countries; Portugal, Ireland, Italy, Greece and Spain, came under heavy pressure caused by the markets' low confidence in their ability to handle their increasing debt levels. The Scandinavian region, however, experienced a stable economic climate where businesses in most sectors ran as usual throughout 2011.

The market pessimism which occurred during the subsequent years of the 2008/2009 crisis continued in 2012, as the PIIGS-countries' attempt to resolve their issues by restructuring

Source: Own creation

their economy and public sector yielded small results. In addition, the European giant, France, followed the same fate as the US when the country's credit worthiness got downgraded by the rating company Standard & Poor's. Further, the GDP growth in several EU countries stagnated and Italy and Greece entered recession. Affected by the negative developments in the EU-zone, the Scandinavian region experienced only modest GDP growth at 1-2 percent, resulting in low demand growth for the airline industry. In the same year, the Norwegian government completed its statement report regarding high-speed trains (HSTs), and came to the conclusion to delay the process due to socio-economical and geographic implications.

A couple of years characterized by increased investment in the oil industry, especially by the OPEC countries, led to new discoveries of oil fields, thus significantly increased global oil reserves. As a result of the increased supply of oil, jet-fuel prices began to decline steadily in 2014, despite increased demand from emerging markets. While the US and several EU countries entered recession and Scandinavian growth rates was further depressed, China and the Middle-Eastern region flourished with double digit GDP growth rates. The depressed economic climate led European and Scandinavian consumers to become more price sensitive, which negatively affected the demand for air travel. As a consequence, LCCs exploited the increased price sensitivity and was able to capture passengers on behalf of network carriers.

In the years leading up to 2015, a higher number of airlines participated in testing and development of bio-fuels. As the testing provided positive results and suppliers were able to offer a price competitive version compared to traditional jet-fuel, several airlines adopted a 50-50 bio-fuel mixture as its primary fuel type by 2015. By the same year, the EU-zone had become increasingly dependent on the prosperous economies of Asia and the Middle-East to buy European exports. A major breakthrough occurred when the emerging economies used their increased power to force the EU to deregulate several industries, among them the airline industry. New open skies agreements and deregulation directives gave non-EU airlines the opportunity to exploit European traffic and ownership rights.

Fuelled by the flourishing domestic economies, Chinese and Middle-Eastern airlines experienced tremendous growth in their home regions. However, as domestic markets gradually became saturated and competition intensified, international expansion was considered a natural choice. Following the new airline directives in 2015, Middle-Eastern and Asian airlines exploited their cost-efficiency and world class service, and captured a substantial share of the long-haul market between their respective home markets and Europe. The Chinese aircraft manufacturer, COMAC, did also thrive in the booming emerging economy, with aircraft standards closing in on those of Airbus and Boeing.

The EU-zone continued to struggle economically, but another set of restructuring measures agreed on by the governments at a G20 summit in 2017 showed successful results in the PIIGS-countries. Combined with high demand for European exports from emerging markets, the restructuring measures helped to gradually increase economic activity in the region. Certain Middle-Eastern and Asian airlines saw the opportunity to exploit a prolonged depressed European economy and acquired selected struggling European network carriers, while others established strategic alliances.

In 2019, HSTs in Denmark was introduced. However, as the critical route between Aarhus and Odense was found to be too expensive and was not materialized, HSTs failed to threaten the domestic airline industry. At the same time, bio-fuel became the industry standard amongst airline companies, as more than half of the global airlines adopted a 50-50 blend consisting of bio-fuel and kerosene. The commercialization of bio-fuel combined with a high degree of oil-related investment and output, caused the jet-fuel price to remain fairly low throughout the ten year period. This development proved to be beneficial for the LCCs, as jet-fuel costs constitutes a higher share of their total operating expenses compared to network carriers.

By 2021, several major European and Scandinavian network carriers struggled despite the favorable jet-fuel prices, as the economic downturn caused parts of both the business and leisure segments to favor LCCs above network carriers. In addition, the entry of the Asian and Middle-Eastern airlines increased competition in the European market, as well as in the long-haul market. A Scandinavian aviation expert stated; *"We have witnessed a major new trend over the past years, where foreign airlines, particularly from Asia, have utilized their lean cost structure and exceptional level of service to acquire and outcompete European carriers. It seems that the next phase in their aggressive expansion plan is to conquer the Nordic markets. By entering the Scandinavian markets sooner rather than later, foreign entrants stand ready to utilize the region's high purchasing power and demand for air travel once the economic tide turns positive." Indeed, after a decade of poor performance, Cimber Sterling was acquired by a major Chinese actor in 2021, thus obtaining Cimber Sterling's local knowledge, brand name, slot rights and route network.*

6.3.2 Survival of the fittest

Survival of the fittest is the second scenario, and is located in the lower left quadrant of the scenario matrix. In brief, this scenario describes a world where the global economic climate is very poor for a long period, and where one negative industry development is followed by another, leading to weak demand for air travel and consolidation in the Scandinavian airline industry.

The second half of 2011 was characterized by low market confidence and volatility in the global stock markets, as the fear of a double dip of the 2008/2009 financial crisis increased. Driven by the high uncertainties surrounding the debt situation of the US and the PIIGS-countries, the G20 summit in Cannes emphasized the need for implementing major restructuring and financial regulatory measures to ensure recovery of the global economy.

By 2012, the unrest in Libya and Syria persisted, which combined with a stagnating trend in the global oil supply led to sustained high jet-fuel prices. As the year continued, it became evident that the PIIGS-countries had failed to make the necessary changes which were proposed at the G20 summit. As a result, the market confidence fell dramatically, investors fled the financial markets, and few were willing to buy government bonds from the PIIGS-countries. Consequently, Italy defaulted on its debt as neither the IMF or the EU-zone could afford to bail out the country. Eventually, Italy was set under administration by the IMF and was forced to quit the EU and return to its former currency which was instantly devaluated. This caused ripple-effects through the global economy, as several banks were affected, stock markets plummeted, and analysts feared that more PIIGS-countries would soon follow Italy's fate; the double dip and a new financial crisis was a fact. In line with the global economy, the Scandinavian region was severely affected, resulting in low GDP growth rates between 0-2 percent for the year. In the same year, the Norwegian government approved the statement report regarding HSTs, and began developing the two routes, Oslo-Bergen and Oslo-Trondheim, estimated to be ready for use in 2025.

In the aftermath of the new global crisis, consumer confidence weakened and price sensitivity increased drastically, which caused demand for air travel to decline in the European and Scandinavian markets. In addition, the airline industry's recent inclusion in the EU Emissions Trading Scheme proved to have an impact on the least fuel-efficient airlines. These developments led passengers to favor LCCs over network carriers. Both the EU-area and the Scandinavian region continued to struggle and entered recession along with the US during

2013, while several emerging economies experienced declines in their previously high GDP growth rates, caused by a depressed world economy and unstable domestic economic conditions. After another year of economic turmoil, several minor European banks went bankrupt, and a major bank was bailed out by the EU. As a consequence of the extensive crisis, Greece was unable to handle its debt and defaulted in late 2014.

As 2015 commenced, the European Central Bank forced the remaining EU-members to implement strict financial measures in an attempt to avoid the European Union from a total collapse, which was quickly backed by a general consensus among the Union's member governments. In the airline industry, several major European and Scandinavian companies struggled with negative results and liquidity problems. To make matters even worse, an unusually hard winter made its toll on the industry, causing massive delays and cancelled flights due to vast amounts of snow on the airports' runways and restricted visibility in the air. In Scandinavia, SAS received financial aid by the Scandinavian governments to cover several years of bad results, while Cimber Sterling filed for bankruptcy.

The following years showed increased signs of airline industry consolidation in the European and Scandinavian markets, characterized by a wave of mergers, acquisitions and bankruptcies. Demand for air travel continued to be low as the bad economic conditions prevailed. This was enhanced by fears of losing jobs affecting leisure traveler spending, and corporate cut-backs influencing the business segment negatively. Another factor adversely affecting the airline industry was a sustained high jet-fuel price, caused by a struggling oil industry characterized by maturing oil fields and few significant discoveries. Despite numerous years of testing and development of bio-fuels resulting in positive performance results, no type of bio-fuel was found worthy to be commercialized due to too high production costs.

By 2017, the financial measures implemented in several struggling EU countries after the default of Greece had shown positive signs, as yearly public deficits decreased and market confidence slightly improved. Regardless of the signs of slight recovery, both the EU zone and Scandinavia was still in recession when entering 2018. At the same time, HSTs was successfully introduced in Denmark and quickly captured a substantial share of the travel market on behalf of domestic flights.

In the second half of 2019, a major volcanic eruption occurred on Iceland, sending thick layers of ash across Northern Europe, paralyzing airlines for nearly a month. The ash cloud caused airline stocks to immediately plummet and inflicted the airlines with heavy losses for the subsequent year. In Scandinavia, especially the network carrier SAS suffered, and after ten years of negative results, the Norwegian and Swedish governments were tired of providing the company with financial aid. Thus, when a major European network carrier showed interest in acquiring SAS in 2021, the Scandinavian governments agreed to sell the company.

6.3.3 Network Heaven

The third scenario, *Network heaven*, is located in the upper right corner of the scenario matrix. The world in this scenario is characterized by good economic conditions combined with a series of positive industry developments. In this plausible future the Scandinavian airline industry performs exceptionally well, where network carriers have become increasingly dominant as a result of successful restructuring measures.

Following the uncertainties in the EU-zone regarding doubts about the PIIGS-countries' ability to handle their unsustainable debt levels, 2011 proved to be a year of low economic growth for the region. Driven by the fear of a double dip recession in the EU-zone and the US, the main agenda at the G20 meeting in Cannes was to ensure global economic recovery by addressing the underlying reasons for the unsustainable debt levels. At the end of the year, the unrest in Libya and Syria had calmed down, stabilizing the oil price volatility. GDP growth for 2011 equaled about 1 percent for the EU-zone as a whole, while Scandinavia experienced higher growth in the 3-4 percent range.

Market confidence increased in 2012 as the PIIGS-countries implemented strict measures in their home economies in an attempt to reduce their yearly deficits. In addition, a higher degree of political decisiveness in the US helped to raise optimism in the global economy. Despite remaining uncertainties in the EU-zone, the economic activity remained stable throughout the year. In the same year, the Norwegian government found the development costs to be too high relative to the estimated demand for HSTs in Norway, thus the plans were dismissed.

The strict financial efforts undertaken by the EU-zone members yielded positive results which boosted confidence in the financial markets and economic activity for the region in 2013. The Scandinavian countries continued its solid growth which positively affected demand for air travel. As a result of heavy restructuring during the financial crisis in 2008/2009, network carriers had become more cost-efficient and achieved higher load factors, which helped increase their competitiveness and profitability. In line with the Scandinavian region returning

to growth after the set-back of the financial crisis, network carriers became the preferred option for business travelers on behalf of LCCs yet again.

The period of 2014-2015 contained several distinctive positive developments for the Scandinavian airline industry. First, global oil supply increased due to new oil field discoveries and technological advancements in improved extraction equipment. In addition, selected OPEC countries exceeded their production quotas which further increased the global oil supply. As a consequence of the higher level of global oil reserves, the jet-fuel prices declined. Second, technological breakthroughs related to bio-fuels showed promising signs and a higher number of airlines participated in development and testing. Third, new open skies agreements were signed between EU and a set of non-EU countries, which created new market opportunities for both Scandinavian and European airlines. Fourth, the date of completion of HSTs in Sweden was delayed by five years due to unseen complications. In the same period, a major oil field discovery was made in Norway, which further enhanced the activity in the Norwegian economy. Following a positive GDP growth in the EU-zone of 3 percent, the Scandinavian economies continued to grow with GDP growth rates of 4-7 percent in 2015.

In the following years, economic conditions in both the EU-zone and Scandinavia prospered with high economic activity and stable markets, leading to favorable conditions in the airline industry as demand for air travel rose to historically high levels. As a result of the lasting economic upturn, a shift in consumer behavior occurred; price sensitivity decreased and a higher number of consumers required good service and high quality on their travels. Consequently, network carriers became increasingly dominant on the long-haul market, and also captured market shares on behalf of the least cost-efficient LCCs. In addition, network carriers attracted a higher share of the talented labor pool by offering better conditions than LCCs. However, cost-efficient LCCs were able to appeal to the still large low-cost consumer segment by offering substantially lower prices than their quality-minded rivals. LCCs ability to keep cutting costs was supported by low traditional jet-fuel prices which in 2018 fluctuated around the \$40 per barrel mark, and the commercialization of a price-competitive blend of bio-fuel and traditional fuel. In 2019, Denmark introduced two high-speed train routes, but the HSTs had limited impact on the domestic airline industry as the crucial route between Aarhus and Odense failed to materialize.

By 2021, network carrier stocks performed at all-time high levels in both Europe and Scandinavia after a ten-year period of growth and high profitability. The underlying economic conditions were a major driver in the renewed dominance of the network carriers, as well as their improved cost-bases and efficiencies. As domestic markets in Europe and Scandinavia gradually matured, network carriers desperately looked for new ways to expand their businesses. Despite the failure of SAS' low-cost initiative 'Snowflake' in 2004, the company launched a new pure LCC subsidiary called 'Crystal air' in late 2021, aimed at conquering the Scandinavian low-cost market.

6.3.4 High-speed train utopia

The last scenario, *High-speed train utopia*, is positioned in the lower right corner of the scenario matrix. This scenario describes a world where the economic conditions are decent, and negative industry developments continuously occur. In this plausible future the Scandinavian airline industry performs well, however, a major threat is emerging in the form of intra-Scandinavian high-speed trains (HSTs).

At the end of 2011, Europe's leaders gathered at a European summit in Brussels. Several concrete steps to reach the goal of a closer political and economic union were proposed. The 27 EU-member countries agreed to work toward balanced budgets and debt reduction, and to establish regular summit meetings in order to ensure a greater economic integration for the region. In Libya and Syria the tension continued to prevail, and experts feared that Algeria was going to become the next victim of political unrest.

As a consequence of the prevailing unrest in oil producing countries, the jet-fuel price remained high when entering 2012. In addition, increased demand for oil from emerging economies combined with stagnation in the global oil output strengthened the pressure on an already high jet-fuel price. In the same year, the report on high-speed trains was revised and approved by the government in Norway. The new plan was to construct intra-Scandinavian HST-routes connecting Oslo with multiple cities; Trondheim, Bergen, Stavanger, Gothenburg Stockholm and Copenhagen. Further, the routes were estimated to be ready for use in 2018, reducing the initial construction period by five years through the hiring of Chinese consultants and entrepreneurs.

By mid 2013, the effects of the proposed measures at the EU summit in Brussels began to bear fruits, as several PIIGS-countries had managed to reduce and stabilize their debt levels.

As a result, the EU-zone experienced increased market confidence and higher economic activity. Scandinavia was not particularly affected by the uncertainties surrounding the debt situation in the EU, and most sectors had been running as usual since recovering from the 2008/2009 financial crisis. In line with the solid Scandinavian economies, demand for air travel had increased steadily with an average passenger growth of 6 percent for the region over the past three years. In turn, this affected the Scandinavian airline industry positively where the majority of the airlines had delivered decent results for three years in a row despite the high jet-fuel prices. At the end of 2013, the Danish government decided to commence construction of the controversial Aarhus-Odense HST-route, connecting Copenhagen and Odense with mainland Denmark.

In 2014, two years after the airlines were included in the EU Emissions Trading Scheme, it became evident that the directives affected the airline industry more than previously anticipated. The least fuel-efficient airlines suffered as they were forced to pay high CO_2 allowance fees. As a consequence of the airlines' gradually improved financial performance, several Norway-based pilots demanded higher wages. The Norwegian labor union representing pilots' rights in Norway, Norsk Flygerforbund, initiated a strike for eight consecutive days in 2015, resulting in heavy losses for the domestic airline sector.

As 2016 progressed, jet-fuel prices reached a five year high caused by complete stagnation of global oil supply and rapid growth in emerging markets. At the same time, the ongoing development of bio-fuel did not yield any convincing results, as commercializing a viable product proved too expensive. In Sweden, the government hastened the introduction of HSTs, and the first route between Stockholm and Gothenburg was estimated to be completed in 2020. Despite the economic uncertainties which characterized the first few years of the decade, the European and Scandinavian regions achieved solid average GDP growth rates in the period of 2013-2017; 3 percent and 4 percent respectively. The airline industry enjoyed the favorable economic conditions, as most LCCs and network carriers performed well financially.

A breakthrough was made in the Scandinavian travel industry in 2018, as several new HSTroutes opened for use. In Norway, high-speed train routes connected Oslo with Bergen, Stavanger and Trondheim, while Danish HSTs connected Copenhagen with Aalborg through Odense and Aarhus. Two years later, three additional intra-Scandinavian routes were opened; Oslo-Gothenburg, Gothenburg-Stockholm, and Stockholm-Oslo. As prior surveys and market intelligence suggested, the Scandinavian governments' ambitious HST-effort proved to be a success. By 2021, a number of the short-haul high density routes within Scandinavia had become dominated by high-speed trains. On the two Norwegian routes, Oslo-Bergen and Oslo-Trondheim, the airline operators lost half of their market shares in less than three years. The positive HST-results, combined with increased focus on environmentally friendly modes of transportation, led travel experts to believe that a fully interlinked and compatible HST-network from Scandinavia across Europe would be the next step in the HST-evolution.

Scenario Description	Enemy at the gates	Survival of the fittest
Economic conditions	Poor conditions in the EU and Scandingvia	 Double dip recession in the EU and Scandinavia
	High growth in the Asian and Middle Factors accommiss	Debt crisis in the EU. Declining domand for air travel
Industry developments	 Further deregulation. Low jet-fuel prices. Bio-fuel commercialized. 	Consolidation. High jet-fuel prices. HSTs introduced.
V	 Foreign market entry. 	 Impact of the EU ETS inclusion.
Key challenges for Norwegian Air Shuttle	Major threat from foreign airlines entering the European and Scandinavian markets.	Major threat from terrible economic conditions and low demand for air travel.
Sconario		
Scenario		

scenarios -	summary
	e scenarios -

Scenario	Network heaven	High-speed train utopia
Economic conditions	 Global economic growth. Booming Scandinavian economy. Very high demand for air travel. 	 Economic recovery in the EU. Decent growth in Scandinavia. Solid demand for air travel.
Industry developments	 Network carrier dominance. Low jet-fuel prices. Bio-fuel commercialized. New open skies agreements. 	 Hastened introduction of HSTs. High jet-fuel prices. Labor union disruptions. Impact of the EU ETS inclusion.
Key challenges for Norwegian Air Shuttle	Major threat from restructured and cost-efficient network carriers.	Major threat from HSTs on several key intra-Scandinavian routes.

Source: Own creation

6.4 Strategic recommendations

As emphasized in Chapter 6.1, scenario planning is not aiming to predict the future. Thus, the four scenarios should not be interpreted as forecasts, but rather as attempts to describe plausible future worlds. In the following, by assuming that these alternative realities actually
occur, we will present a number of strategic recommendations which Norwegian Air Shuttle might initiate.

We have divided the strategic recommendations into two groups; key strategic options and other strategic options. The former refers to the measures we believe are crucial for NAS to undertake in order to ensure future success in each specific scenario, whereas the latter covers initiatives that we find important, but less crucial. Table 17 displays the two types of strategic recommendations in relation to the four scenarios.

	Enemy at the gates	Survival of the fittest
Key strategic	 Increase brand focus 	 Develop a pure LCC business model
options	 Enter a strategic alliance 	 Exploit high price sensitivity
	 Adapt the planned long-haul operations 	 Improve liquidity
Other strategic	 Exploit high price sensitivity 	 Reduce risk of over-expansion
options	 Adopt bio-fuel 	 Increase brand focus
	 Exploit low jet-fuel prices 	 Reduce jet-fuel price exposure

Table 17: Strategic recommendations

	Network heaven	High-speed train utopia
Key strategic	 Optimize its current business model 	 Pursue long-haul low-cost operations
options	 Pursue a hybrid business model 	 Improve travel convenience
	 Strengthen leisure travelers' loyalty 	 Adapt route network in regards to HSTs
Other strategic	 Pursue long-haul low-cost operations 	 Offer cheap tickets relative to HSTs
options	 Exploit low jet-fuel prices 	 Improve punctuality rate
	 Adopt bio-fuel 	 Reduce jet-fuel price exposure

Source: Own creation

Enemy at the gates: To counter the emerging threat from Middle-Eastern and Asian airlines entering the European an Scandinavian markets, we recommend that Norwegian Air Shuttle initiates the following three key strategic options; increase brand focus, enter a strategic alliance, and adapt the planned long-haul operations.

First, we argue that an increased brand focus becomes a high priority for NAS due to the imminent threat of foreign market entrants. We believe that Scandinavian travelers would prefer to choose a well-known local carrier on behalf of foreign airlines if prices and services were similar. By additionally strengthening its strong brand name, NAS should be able to achieve a higher degree of customer loyalty in Scandinavia. For instance, the company could further exploit its promising 'Scandinavian Masters' concept by introducing additional Swedish, Danish and Finnish tail heroes.

Second, by entering a strategic alliance with a highly successful emerging Asian or Middle-Eastern airline, NAS could gain a valuable partner for knowledge sharing and technology transfer, which potentially could lead to code-share agreements. Further, by offering a foreign partner access to local industry and consumer knowledge, NAS could in turn receive information about how to operate a lean, high-quality business model with world class service. Eventually, this could give NAS a competitive edge over its Nordic rivals.

Third, Norwegian Air Shuttle should carefully plan its current long-haul operations, as the most popular high density Europe-Asia routes are dominated by Asian and Middle-Eastern carriers. We recommend that NAS choose one out of two paths. The first path is to pursue an aggressive long-haul expansion plan from the beginning, aimed at capturing a sustainable share of the Scandinavian-Asian and Middle-Eastern long-haul market. Whereas the second path, is to give up the Asian and Middle Eastern long-haul segment, and instead focus on alternative long-haul destinations such as the South and North-American markets as well as the African region.

Survival of the fittest: In order to survive the terrible economic conditions and a low demand for air travel, we advise Norwegian Air Shuttle to take into account the following key strategic options; develop a pure LCC business model, exploit high price sensitivity, and improve liquidity.

As a consequence of very poor economic conditions, we recommend that NAS develops a pure LCC business model. By adapting its low-cost business model to reflect that of Ryanair, NAS can offer even lower ticket prices which will help them exploit the high price sensitivity. In turn, this could allow NAS to steal market shares from its Nordic rivals, and be better prepared to battle the emerging HSTs. For instance, NAS could cut costs by operating flights with tighter seat arrangements, thus increasing the number of total seats per aircraft. In addition, the company could start handling flights from a higher number of secondary airports. At the same time, NAS could increase its revenues by offering advertisements both inside the aircraft cabins and on the aircraft body.

To survive in the bad economic climate, NAS should aim to improve both its short-term and long-term liquidity, in order to withstand unforeseen external shocks such as a new volcanic ash cloud and extreme winters. By securing a financial buffer, the company will be wellequipped in times of crisis as well as be able to take advantage of arising investment opportunities. For instance, when Cimber Sterling files for bankruptcy, NAS could seize the most profitable of the vacant routes. However, investments and further expansion should be planned with caution, as wrong decisions in regards to unprofitable investments could prove fatal in a poor economic climate.

Network heaven: To be able to respond to the increasing threat from restructured and costefficient network carriers, we recommend that Norwegian Air Shuttle considers implementing one or more of the following key strategic options; optimize its current business model, pursue a hybrid business model, and strengthen leisure travelers' loyalty.

Evidently, the booming economic conditions leave NAS with a higher number of options than in times of economic distress, and we have identified two distinct main directions the company should engage. On the one hand, NAS could continue running its business as usual with minor adjustments in order to optimize its current LCC business model. To stay competitive, we argue that it is important to focus on strengthening customer loyalty, in order to avoid the increasing number of passengers with low price sensitivity from switching to network carrier rivals. On the other hand, NAS could pursue a hybrid business model by offering several ticket classes with a higher level of service and quality, thus aiming to directly challenge the Scandinavian network carriers. In this way, the company could retain its current low-cost customer base and simultaneously capture a share of the growing qualityminded customer segment.

High-speed train utopia: In order to cope with the emerging threat from HSTs on several key intra-Scandinavian routes, we recommend that Norwegian Air Shuttle undertakes the following three key strategic options; pursue low-cost long-haul operations, improve travel convenience, and adapt route network in regards to HSTs.

First, since high-speed trains have developed into a viable substitute for intra-Scandinavian flights, NAS should aim to diversify its business to counter the local threat from HSTs. Arguably, by establishing long-haul low-cost operations to US and Asian destinations, NAS reduces its reliance on the HST-competing routes. Moreover, we believe that favorable economic conditions combined with the introduction of cheap long-haul flights will generate a higher demand for long-haul travel in Scandinavia which NAS should further exploit.

Second, Norwegian Air Shuttle should implement measures to improve its overall level of travel convenience. Arguably, issues such as queues and security hassles at airports, travel distance to and from the airports, tight leg space and aircraft turbulence, makes air travel less

convenient compared to HSTs. For these reasons, NAS should aim to create a better travel experience for its customer both in-flight and at airports, by further exploiting its innovative capabilities. For instance, NAS could introduce a barcode mobile phone application in collaboration with airports, thus reduce the passenger time spent on check-in terminals.

Third, in line with the HSTs imminent market dominance on several key intra-Scandinavian routes, Norwegian Air Shuttle should adapt its route network and plan new routes accordingly. Arguably, NAS has two main choices in relation to the impending HST threat; either stay and compete on prices and punctuality, or withdraw from potential high impact routes such as Oslo-Bergen and Oslo-Trondheim.

Other strategic options: As a supplement to the key strategic options, we argue that Norwegian Air Shuttle should take into account the following recommendations.

By participating in the development and testing of bio-fuel, NAS can enhance its environmentally friendly image, and reduce its exposure to the EU ETS directives as an early adopter. Further, NAS' current fuel hedging practices leaves the company more exposed to jet-fuel price volatility than its main competitors. In uncertain times, a more comprehensive hedging strategy would help NAS stabilize its jet-fuel expenses, which makes it easier to predict future cash flows and profits. However, when indications strongly suggest a declining trend in fuel prices, NAS will profit from its current hedging strategy compared to its competitors. Thus, we stress the importance of monitoring the indicators affecting the future trend of jet-fuel prices in order to choose the right strategy given the circumstances.

Furthermore, Norwegian Air Shuttle should obviously continue cultivating its internal strengths such as improving its sales and distribution channel, unit costs, load factors and employee productivity. In addition, the company has room for improvement in regards to its punctuality rate. Although NAS' punctuality rate has increased over the past years, it is still inferior to its competitors'. As identified in the *Internal analysis* chapter (5.4), NAS' brand name is currently its only non-imitable competitive advantage. We therefore strongly advise NAS to keep strengthening its brand as well as continue its ambitious innovative drive. By innovating faster than its competitors, the company might positively differentiate themselves from other airlines in what is considered a highly transparent industry.

7. Conclusions

Norwegian Air Shuttle ASA (NAS) has performed exceptionally well over the previous decade, and the company has managed to deliver solid financial results while expanding rapidly in both Scandinavia and Europe. However, the airline industry which NAS operates within is highly dynamic and characterized by fierce competition, low profitability margins and unpredictable events. The economic environment is currently very uncertain due to the debt situation in the EU and the US. This made us question how the company can manage to sustain its growth and profitability in the future and resulted in the following problem statement:

"What strategic options should Norwegian Air Shuttle undertake in order to ensure future growth and profitability, hence secure its position as a leading European low-cost carrier?"

In order to provide a meaningful answer to the problem statement, we chose to create four distinct scenarios representing plausible futures of the Scandinavian airline industry, and provide a number of strategic recommendations that NAS might undertake. As a foundation for the scenarios, two essential pieces were necessary; Chapter 4; *Company overview* and Chapter 5; *Strategic analysis*.

The *Company overview* assessed NAS' history, business strategy, competitors, and financial performance. It became clear that NAS has performed well in terms of profitability over the past five years, while the company's liquidity is rather modest compared to its main rivals.

With regards to the *Strategic analysis*, several extensive analyses were undertaken. First, the PESTLE-analysis was used to analyze NAS' macro-environment to identify key external factors. Second, the Porter's five forces analysis examined micro-economic factors influencing profitability in the Scandinavian airline industry. Third, the Airline metrics analysis evaluated how NAS performed in terms of operational drivers. Fourth, the Internal analysis identified NAS' resources and competitive advantage. At last, key findings from the *Strategic analysis* were consolidated into a SWOT-summary.

It became evident that persistent high jet-fuel prices and uncertain global economic conditions are among the most vital external factors with the ability to impact NAS negatively. Moreover, external shocks such as extreme weather, natural catastrophes and terrorism might distort the airline industry severely should they occur. Inclusion in the EU ETS in 2012 might affect the airline industry negatively, especially the least fuel-efficient airlines. On the contrary, if a viable bio-fuel product were to be commercialized in the future, the EU ETS effect may be offset due to reduced fuel emissions. It is clear that the airline industry is highly cyclical in nature where demand for air travel is closely linked to GDP growth. Thus, airlines should keep this in mind when planning new expansions and investments. Further, the Scandinavian airline industry is severely affected by; strong labor unions, increased competition and government intervention which are contributing to lower industry profits. In addition, the emergence of Scandinavian high-speed trains could prove to be a game-changing driver in the longer term.

NAS has a competitive cost-structure and has performed well in terms of operational metrics during the past five years, reflecting the company's strategic positioning as a profitable low-cost carrier. Supporting the findings in the financial performance section in regards to profitability, the company has achieved relatively high unit revenues (RASK) compared to unit costs (CASK). Moreover, NAS has managed to fill its aircraft, thus been able to sustain an overall high load factor, only second to Ryanair. Likewise, in terms of employee productivity, NAS is only inferior to Ryanair. In addition, the company's uniform aircraft fleet, efficient sales and distribution channels, strong brand name and innovative capabilities are identified as its competitive advantages. However, out of the four resources, only NAS' strong brand name is found to generate a sustained competitive advantage, while the other resources generate temporary competitive advantages as they are imitable by other airlines.

The findings from the *Strategic analysis* chapter served as groundwork when creating the future scenarios in Chapter 6; *Scenario planning*. The classification of key external factors according to likelihood, impact and degree of interdependence, helped determine potential drivers of change in the Scandinavian airline industry. Further, the most significant factors were consolidated into two main axes representing the economic conditions and the industry developments, thus constituting the backbone of the scenario matrix. Four distinct scenarios were created; Enemy at the gates, Survival of the fittest, Network heaven, and High-speed train utopia. These scenarios aimed to reflect four plausible versions of the future Scandinavian airline industry, allowing us to provide a number of strategic options in line with the problem statement.

In the first scenario, Enemy at the gates, the major threat is represented by foreign airlines entering the European and Scandinavian markets. The key strategic options which NAS

should undertake are to further increase its brand focus, enter a strategic alliance, and adapt its planned long-haul operations.

The major threat in the second scenario, Survival of the fittest, is the terrible economic conditions and the resulting low demand for air travel. Arguably, NAS should develop a pure LCC business model, and exploit the high price sensitivity present in this scenario. Moreover, by improving its liquidity, the company will be better positioned to survive external shocks, as well as be able to take advantage of emerging investment opportunities.

The third scenario, Network heaven, is characterized by flourishing economic conditions and market dominance by restructured network carriers. In relation to this scenario, NAS could either optimize its current LCC business model, or pursue a hybrid business model with several ticket classes. Further, the company should aim to strengthen its leisure travelers' loyalty in order to avoid passengers switching to network carriers.

Finally, in the last scenario, High-speed train utopia, high-speed trains are introduced on several key intra-Scandinavian routes, posing as a direct substitute for air travel. To counter the imminent threat of HSTs, NAS should pursue long-haul low-cost operations, improve its travel convenience, and adapt its route network accordingly.

In sum, the application of selected theories and frameworks allowed us to perform an extensive strategic analysis and evaluation of Norwegian Air Shuttle ASA. Thus, a thorough investigation of the company at a macro-environmental, micro-economic and company level served as essential building blocks for identifying future directions of the Scandinavian airline industry. By planning four distinct scenarios covering a broad range of plausible futures, we were able to provide a set of key strategic options, hence enabling us to answer the problem statement of the thesis.

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Appendices

Appendix 1: Abbreviations and acronyms

ASK: Available Seat Kilometers. Number of available seats multiplied by the distance flown.

CASK: Cost per ASK. Operational expenses/ASK. CASK is an indicator of cost efficiency.

EBITDA: Earnings Before Interest, Taxes, Depreciation and Amortization.

EBIT: Earnings Before Interest and Taxes. Commonly referred to as operating result.

EBT: Earnings Before Taxes.

EU ETS: European Union Emissions Trading Scheme.

HST: High-speed train.

IATA: International Air Transport Association.

LCC: Low-cost carrier/low-cost airline/no-frills carrier.

Load factor: RPK/ASK. Describes the utilization of the available seats.

NAS: Norwegian Air Shuttle.

Network carrier: Traditional carrier/full service airline/legacy carrier

Nordic/Scandinavian countries: Norway, Sweden, Denmark and Finland.

RASK: Traffic revenue/ASK. A measure of how much ticket revenue one single seat generates on average per kilometer flown.

RPK: Revenue Passenger Kilometers. Number of occupied seats multiplied by the distance flown.

Yield: Traffic revenue/RPK.

Appendix 2: NAS - share ownership

Name	Shareholding
HBK INVEST AS	27.48 %
AWILCO INVEST AS	6.47 %
SKAGEN KON-TIKI	4.81 %
FINNAIR PLC	4.77 %
VITAL FORSIKRING ASA	4.34 %
SKAGEN VEKST	3.83 %
JPMORGAN CHASE BANK	2.70 %
DNB NOR NORGE (IV) V	2.41 %
STATE STREET BANK AN	2.02 %
GOLDMAN SACHS INT	1.64 %
Total	60.47 %
Updated: December 31, 2010	

Source: Norwegian.com (2011)

Appendix 3: Airline business models

Product Feature	Low-Cost Model	Legacy Model	Charter Model	Long-Haul Low-Cost Model
Aircraft Usage	High	Moderate to high: union contracts	Lower usage but larger aircraft than low-cost carriers	Will be achieved because of longer sector lengths
Airport	Secondary (mainly)	Primary	Secondary (mainly)	Primary and secondary depending on individual airport facilities
Brand	One brand (low pricing)	Extended brand (price and service)	Low price for leisure traffic	One brand (low pricing), but clear about service
Check-in	Ticketless	Ticket, IATA ticket contract	Paper ticket	Ticketless
Class Segmentation	Single class	Multiple classes	Single class (sometimes multiple)	Multiple classes (usually two)
Connection	Point-to-point, no interlining, no baggage transfer	Interlining, code-share, global alliances	Point-to-point	Point-to-point, no interlining, no baggage transfer, self-connecting
Customer Service	Generally underperforming	Full service, offers reliability	Via tour operator	Unknown
Distribution	Online, direct booking	Online, direct booking, travel agent	Via tour operator	Online, direct booking
Fare	Simplified fare structure:	Complex: structure + yield	Fares are part of holiday packages,	Simplified fare structure: the earlier
	peak and off-peak. Time of	management	including accommodation and	you book, the cheaper the fare.
	booking also important: the		sometimes car hire, etc.	Low price (20-25% cost advantage
	earlier, the cheaper. Low price (60% or more below legacy			to legacy carriers likely)
	carriers).			
Fleet	Young, single type	Multiple types	Multiple types	Young, single type but one aircraft type may not be suitable for all routes (range and capacity issues)
Frequency	High	Moderate	Depending on demand (usually higher during summer)	Low to moderate (currently about once per day)
Frequent Flyer Programme	No (mainly)	Yes	No	Maybe more valuable
In-flight	Pay for amenities, onboard selling	Complementary extras	Complementary extras, but not as luxury as with legacy carriers	Longer-haul passengers are likely to value this more highly
Operational Activities	Focus on core (flying)	Extensions (i.e., maintenance, cargo)	Passengers + cargo (sometimes)	Focus on core (flying). Sometimes cargo
Seating	Small pitch, no assignment	Generous pitch, seat assignment	Seat assignments, pre-bookable	Comfort more important the further you fly. Pre-allocation might be demanded
Target Group	Leisure, time and price sensitive business travelers	Leisure and business	Leisure	Leisure, time and price sensitive business travelers
Tumaround Time	25 min	Low; congestion and labor	Low	Less important since aircraft spend more hours in the air. Also depending on work/rest periods

Source: Wensveen and Leick (2009)

Appendix 4: Exchange rates* 2006-2010

	2010	2009	2008	2007	2006	2005
NOK/EUR	0.1248	0.1145	0.1219	0.1248	0.1243	0.1248
SEK/EUR	0.1048	0.0942	0.1041	0.1081	0.1081	0.1078
DKK/EUR	0.1343	0.1343	0.1341	0.1342	0.1341	0.1342
Source: www	w.oanda.con	1				

* Yearly averages based on daily figures, midpoint prices.

Appendix 5: Formulas from the Financial Performance part

EBT margin = EBT / Revenue

Operating expenses ratio = Total operating expenses / Revenue

Equity ratio = Total equity / Total assets

Current ratio = Current assets / Current liabilities

Appendix 6: Key figures NAS, 2006-2010

МNOК	2010	2009	2008	2007	2006	2005
Revenue	8 598	7 309	6 226	4 226	2 941	1 972
Change (%)	17.6 %	17.4 %	47.3 %	43.7 %	49.1 %	
Total operating expenses	8 388	6 737	6 564	4 092	2 975	1 947
Change (%)	24.5 %	2.6 %	60.4 %	37.5 %	52.8 %	
EBIT	210	572	-338	134	-34	
EBT	243	623	5	113	-32	
Operating expenses ratio	0.98	0.92	1.05	0.97	1.01	
EBT margin	2.8 %	8.5 %	0.1 %	2.7 %	-1.1 %	
Basic earnings per share	4.98	13.01	0.15	3.77	-1.14	
Equity ratio	27 %	32 %	28 %	22 %	25 %	
Current ratio	0.83	0.99	0.95	1.04	1.01	
Passengers (million)	13.0	10.8	9.1	6.9	5.1	3.3
Change (%)	20.4 %	18.7 %	31.9 %	35.3 %	54.5 %	

Source: NAS - annual reports 2006-2010

MEUR	2010	2009	2008	2007	2006	2005
Revenue	1 073	837	759	527	366	246
Change (%)	28.2 %	10.3 %	43.9 %	44.3 %	48.5 %	
Total operating expenses	1 047	771	800	511	370	243
Change (%)	35.7 %	-3.6 %	56.7%	38.1 %	52.2 %	
EBIT	26	66	-41	16	-4	
EBT	30	71	1	14	-4	
Operating expenses ratio	0.98	0.92	1.05	0.97	1.01	
EBT margin	2.8 %	8.5 %	0.1 %	2.7 %	-1.1 %	
Basic earnings per share (€)	0.62	1.49	0.02	0.47	-0.14	
Equity ratio	0.27	0.32	0.28	0.22	0.25	
Current ratio	0.83	0.99	0.95	1.04	1.01	
Passengers (million)	13.0	10.8	9.1	6.9	5.1	3.3
Change (%)	20.4 %	18.7 %	31.9 %	35.3 %	54.5 %	

Appendix 7: Key figures SAS, 2006-2010

MSEK	2010	2009	2008	2007	2006	2005
Revenue	40 723	44 918	53 195	50 598	60 777	55 501
Change (%)	-9.3 %	-15.6 %	5.1 %	-16.7 %	9.5 %	
Total operating expenses	42 665	48 000	53 960	49 305	59 504	54 824
Change (%)	-11.1 %	-11.0 %	9.4 %	-17.1 %	8.5 %	
EBIT	-1942	-3082	-765	1293	1273	
EBT	-3 060	-3 423	-1044	1044	292	
Operating expenses ratio	1.05	1.07	1.01	0.97	0.98	
EBT margin	-7.5 %	-7.6 %	-2.0 %	2.1 %	0.5 %	
Basic earnings per share (SEK)	-7.79	-18.20	-38.08	3.87	28.10	
Equity ratio	0.35	0.27	0.20	0.35	0.32	
Current ratio	0.84	0.71	0.98	1.09	1.18	
Passengers (million)	25.2	24.9	29.0	29.2	38.6	36.3
Change (%)	1.2 %	-14.1 %	-0.7 %	-24.4 %	6.3 %	

Source: SAS - annual reports 2006-2010

MEUR	2010	2009	2008	2007	2006	2005
Revenue	4 268	4 231	5 538	5 470	6 570	5 983
Change (%)	0.9 %	-23.6 %	1.2 %	-16.7 %	9.8 %	
Total operating expenses	4 471	4 522	5 617	5 330	6 432	5 910
Change (%)	-1.1 %	-19.5 %	5.4 %	-17.1 %	8.8 %	
EBIT	-204	-290	-80	140	138	
EBT	-321	-322	-109	113	32	
Operating expenses ratio	1.05	1.07	1.01	0.97	0.98	
EBT margin	-7.5 %	-7.6 %	-2.0 %	2.1 %	0.5 %	
Basic earnings per share (€)	-0.82	-1.71	-3.96	0.42	3.04	
Equity ratio	0.35	0.27	0.20	0.35	0.32	
Current ratio	0.84	0.71	0.98	1.09	1.18	
Passengers (million)	5,2	4,9	29,0	29,2	38,6	36,3
Change (%)	1.2 %	-14.1 %	-0.7 %	-24.4 %	6.3 %	

Appendix 8: Key figures Cimber Sterling, 2006-2010

MDKK	10-11	09-10	08-09	07-08	06-07	05-06
Revenue	1 941	1 551	1 298	1 148	971	830
Change (%)	25.1 %	19.5 %	13.1 %	18.2 %	17.0 %	
Total operating expenses	2 141	1 779	1 300	1 119	917	818
Change (%)	20.3 %	36.8 %	16.2 %	22.0 %	12.1 %	
EBIT						
EBT	-274	-309	-79	69	36	
Operating expenses ratio	1.10	1.15	1.00	0.97	0.94	
EBT margin	-14.1 %	-19.9 %	-6.1 %	6.0 %	3.7 %	
Basic earnings per share	-4.7	-5	-1.3	1.2	0.6	
Equity ratio	-0.03	0.17	0.15	0.19	0.23	
Current ratio	0.34	0.55	0.60	0.63	0.88	
Passengers (million)	2.5	2.3	1.8	1.5	1.1	0.9
Change (%)	8.7 %	27.8 %	20.0 %	36.4 %	22.2 %	

Source: Cimber Sterling - annual reports 08/09, 09/10 & 10/11

MEUR	10-11	09-10	08-09	07-08	06-07	05-06
Revenue	261	208	174	154	130	111
Change (%)	25.1 %	19.5 %	13.2 %	18.1 %	17.1 %	
Total operating expenses	288	239	175	150	123	110
Change (%)	20.3 %	36.8 %	16.3 %	21.9 %	12.2 %	
EBIT	-27	-31	0	4	7	
EBT	-37	-41	-11	9	5	
Operating expenses ratio	1,10	1,15	1,00	0,97	0,94	
EBT margin	-14.1 %	-19.9 %	-6.1 %	6.0 %	3.7 %	
Basic earnings per share	-0.63	-0.67	-0.17	0.16	0.08	
Equity ratio	-0.03	0.17	0.15	0.19	0.23	
Current ratio	0.34	0.55	0.60	0.63	0.88	
Passengers (million)	2.5	2.3	1.8	1.5	1.1	0.9
Change (%)	8.7 %	27.8 %	20.0 %	36.4 %	22.2 %	

Appendix 9: Key figures Finnair, 2006-2010

MEUR	2010	2009	2008	2007	2006	2005
Revenue	2 023	1 838	2 263	2 181	1 990	1 871
Change (%)	10.1 %	-18.8 %	3.8 %	9.6 %	6.4 %	
Total operating expenses	2 037	1 953	2 315	2 039	2 000	1 789
Change (%)	4.3 %	-15.6 %	13.5 %	2.0 %	11.8 %	
EBIT	-14	-115	-52	142	-10	
EBT	-33	-125	-56	139	-15	
Operating expenses ratio	1.01	1.06	1.02	0.93	1.01	
EBT margin	-1.6 %	-6.8 %	-2.5 %	6.4 %	-0.8 %	
Basic earnings per	-0.24	-0.76	-0.33	1.04	-0.16	
Equity ratio	0.35	0.34	0.37	0.46	0.36	
Current	1.18	1.01	0.72	1.19	0.84	
Passengers (million)	7.1	7.4	8.3	8.7	8.8	8.5
Change (%)	-4.1 %	-10.8 %	-4.6 %	-1.1 %	3.5 %	

Source: Finnair - financial reports 2006-2010

Appendix 10: Key figures Ryanair, 2006-2010

MEUR	2010	2009	2008	2007	2006	2005
Revenue	3 630	2 988	2 942	2 714	2 237	1 693
Change (%)	21.5 %	1.6 %	8.4 %	21.3 %	32.1 %	
Total operating expenses	3 141	2 586	2 849	2 177	1 765	1 318
Change (%)	21.5 %	-9.2 %	30.9 %	23.3 %	33.9 %	
EBIT	489	402	93	537	472	
EBT	421	341	-180	439	451	
Operating expenses ratio	0.87	0.87	0.97	0.80	0.79	
EBT margin	11.6 %	11.4 %	-6.1 %	16.2 %	20.2 %	
Basic earnings per share	0.25	0.21	-0.11	0.26	0.28	
Equity ratio	0.34	0.38	0.38	0.40	0.43	
Current	1.90	1.98	1.84	1.53	2.43	
Passengers (million)	73.6	66.5	58.6	50.9	42.5	34.8
Change (%)	10.7 %	13.5 %	15.1 %	19.8 %	22.1 %	

Source: Ryanair - annual reports 2006-2010 & financial report March 2011

Appendix 11: Revenue figures

		Revenue growth								
	2010	2010 2009 2008 2007 2006 5y avg 5y grow								
NAS	28.2 %	10.3 %	43.9 %	44.3 %	48.5 %	35.0 %	193.5 %			
Cimber S.	25.1 %	19.5 %	13.2 %	18.1 %	17.1 %	18.6 %	100.0 %			
Ryanair	21.5 %	1.6 %	8.4 %	21.3 %	32.1 %	17.0 %	62.3 %			
Finnair	10.1 %	-18.8 %	3.8 %	9.6 %	6.4 %	2.2 %	1.7 %			
SAS	0.9 %	-23.6 %	1.2 %	-16.7 %	9.8 %	-5.7 %	-35.0 %			

MELLD	Revenue 2009-2010				
IVIEUR	2010	2009			
SAS	4268	4231			
Ryanair	3630	2988			
Finnair	2023	1838			
NAS	1073	837			
Cimber S.	261	208			

Source: Companies' annual reports 2006-2010

Appendix 12: Earnings per share (€)

	2010	2009	2008	2007	2006	5y avg
NAS	0.62	1.49	0.02	0.47	-0.14	0.49
SAS	-0.82	-1.71	-3.96	0.42	3.04	-0.61
Cimber S.	-0.63	-0.67	-0.17	0.16	0.08	-0.25
Finnair	-0.24	-0.76	-0.33	1.04	-0.16	-0.09
Ryanair	0.25	0.21	-0.11	0.26	0.28	0.18

Source: Companies' annual reports 2006-2010

Appendix 13: Current ratios

	2010	2009	2008	2007	2006	5y avg
NAS	0.83	0.99	0.95	1.04	1.01	0.96
SAS	0.84	0.71	0.98	1.09	1.18	0.96
Cimber S.	0.34	0.55	0.60	0.63	0.88	0.60
Finnair	1.18	1.01	0.72	1.19	0.84	0.99
Ryanair	1.9	1.98	1.84	1.53	2.43	1.94

Source: Companies' annual reports 2006-2010

Appendix 14: Equity ratios

	2010	2009	2008	2007	2006	5y avg
NAS	0.27	0.32	0.28	0.22	0.25	0.27
SAS	0.35	0.27	0.20	0.35	0.32	0.30
Cimber S.	-0.03	0.17	0.15	0.19	0.23	0.14
Finnair	0.35	0.34	0.37	0.46	0.36	0.38
Ryanair	0.34	0.38	0.38	0.40	0.43	0.39

Source: Companies' annual reports 2006-2010

Appendix 15: Airline metrics analysis - Raw data

	NAS (MNOK) SAS		SAS (N	ЛSEK)	Cimber S. (MDKK)	
	2010	2010 2009 2010 2009		2009	2010	2009
Operational revenue (Traffic revenue)	8 244	7 178	35 338	38 187	1 749	1 436
Passenger transport	7 210	6 389	35 308	37 730	1 749	1 436
Ancillary	1 034	789	30	457		
Number of passengers ('000 000)	13,0	10,8	25,2	24,9	2,5	2,3
Number of employees	2 211	1 852	14 862	17 371	840	820
ASK ('000 000)	17 804	13 555	38 851	39 934	3 017	2 625
RPK ('000 000)	13 774	10 602	29 391	29 025	2 004	1 733
Load factor	77 %	78 %	76 %	73 %	66 %	66 %
Revenue/RPK (Yield)	0.60	0.68	1.20	1.32	0.87	0.83
Revenue per ASK (RASK)	0.46	0.53	0.91	0.96	0.58	0.55
Cost per ASK (CASK)	0.44	0.46	0.97	1.08	0.58	0.57
Operational expenses (OE+personnel)	7 833	6 242	37 844	43 137	1 758	1 485
Selected comparable posts:						
Personnel	1 531	1 303	12 634	17 225	457	443
Sales and distribution	168	149	465	597	-	-
Jet fuel	2 093	1 423	6 601	7 685	339	204
Handling and catering charges	864	723	2 581	2 954	342	179
Maintenance	697	660	2 410	2 938	198	179
Airport charges	1 296	1 038	4 198	4 399	399	324

	Finnair	(MEUR)	Ryanair	(MEUR)
	2010	2009	2010	2009
Operational revenue (Traffic revenue)	1 595	1 387	3 630	2 988
Passenger transport	1 595	1 387	2 828	2 325
Ancillary			802	664
Number of passengers ('000 000)	7.1	7.4	-	66.5
Number of employees	7 578	8 797	-	7 032
ASK ('000 000)	25 127	26 260	-	86 051
RPK <i>('000 000)</i>	19 222	19 935	-	72 165
Load factor	76 %	76 %	-	84 %
Revenue/RPK (Yield)	0.083	0.070	-	0.041
Revenue per ASK (RASK)	0.063	0.053	-	0.035
Cost per ASK (CASK)	0.055	0.053	-	0.030
Operational expenses (OE+personnel)	1 387	1 400	3 141	2 586
Selected comparable posts:				
Personnel	446	488	376	335
Sales and distribution	-	-	155	145
Jet fuel	432	450	1 227	894
Handling and catering charges	173	130	-	-
Maintenance	52	42	94	86
Airport charges	-	-	492	459

Source: Companies' annual reports

Appendix	16:	Airline	metrics	analysis	-	Data	in	Euros
				•				

	NAS (N	/IEUR)	SAS (MEUR)		Cimber	S. (MEUR)
	2010	2009	2010	2009	2010	2009
Operational revenue (Traffic revenue)	1 029	822	3 703	3 597	235	193
Passenger transport	900	732	3 700	3 554	235	193
Ancillary	129	90	3	43		
Number of passengers ('000 000)	13.0	10.8	25.2	24.9	2.,5	2.3
Number of employees	2 211	1 852	14 862	17 371	840	820
ASK ('000 000)	17 804	13 555	38 851	39 934	3 017	2 625
RPK ('000 000)	13 774	10 602	29 391	29 025	2 004	1 733
Load factor	77 %	78 %	76 %	73 %	66 %	66 %
Revenue/RPK (Yield)	0.075	0.078	0.126	0.124	0.117	0.111
Revenue per ASK (RASK)	0.058	0.061	0.095	0.090	0.078	0.073
Cost per ASK (CASK)	0.055	0.053	0.102	0.102	0.078	0.076
Operational expenses (OE+personnel)	978	715	3966	4064	236	199
Selected comparable posts:						
Personnel	191	149	1 324	1 623	61	59
Sales and distribution	21	17	49	56	-	-
Jet fuel	261	163	692	724	46	27
Handling and catering charges	108	83	270	278	46	24
Maintenance	87	76	253	277	27	24
Airport charges	162	119	440	414	54	43
Exchange rates used - Yearly average	NOK/	/EUR	SEK/	EUR	DK	
(www.oanda.com)	0.1248	0.1145	0.1048	0.0942	0.1343	0.1343

	Finnair	(MEUR)	Ryanair	(MEUR)
	2010	2009	2010	2009
Operational revenue (Traffic revenue)	8 244	7 178	3 630	2 988
Passenger transport	7 210	6 389	2 828	2 325
Ancillary			802	664
Number of passengers ('000 000)	7.1	7.4	72.1	66.5
Number of employees	7 578	8 797	8 069	7 032
ASK ('000 000)	25 127	26 260	-	86 051
RPK ('000 000)	19 222	19 935	-	72 165
Load factor	76 %	76 %	-	84 %
Revenue/RPK (Yield)	0.429	0.360	-	0.041
Revenue per ASK (RASK)	0.328	0.273	-	0.035
Cost per ASK (CASK)	0.055	0.053	-	0.030
Operational expenses (OE+personnel)	1387	1400	3141	2586
Selected comparable posts:				
Personnel	446	488	376	335
Sales and distribution	-	-	155	145
Jet fuel	432	450	1 227	894
Handling and catering charges	173	130	see airport charg	see airport charg
Maintenance	52	42	94	86
Airport charges	-	-	492	459
Exchange rates used - Yearly average	EUR	/EUR	EUR	/EUR

Note: In order to strengthen the validity of our calculations, we have only used "Traffic revenue" (e.g. revenue directly linked to transporting passengers such as ticket revenue and ancillary revenue). However, we do acknowledge that there are limitations to such an approach as revenues are not always clearly distinguished in the airlines' annual reports.

For the same reason we have defined "Operational expenses" as operating expenses + personnel expenses. Moreover, Operational expenses include posts such as; sales and distribution, jet fuel, handling and catering charges, maintenance and airport charges.

Please be noted that the listed selection of comparable posts, does not sum up to be equal to "Operational expenses", thus we have only chosen to sort out the types of operational expenses we believe is meaningful to compare.

	Available seat kilometers (ASK) in millions									
	2010	2010 2009 2008 2007 2006								
NAS	17 804	13 555	11 530	7 561	5 371					
SAS	38 851	39 934	41 933	40 019	54 907					
Cimber S.	3 017	2 623	1 380	974	723					
Finnair	25 127	26 260	29 101	26 878	23 846					
Ryanair	-	86 051	75 804	66 534	51 568					

Appendix 17: Airline metrics benchmark

 $\mathbf{ASK} = \text{Number of available}$

seats X the distance flown

	Revenue passenger kilometers (RPK) in millions							
	2010 2009 2008 2007 2006							
NAS	13 774	10 602	9 074	6 059	4 223			
SAS	29 391	29 025	29 916	29 365	39 247			
Cimber S.	2 004	1 733	860	638	445			
Finnair	19 222	19 935	21 896	20 304	17 923			
Ryanair	-	72 165	63 090	55 446	43 362			

RPK = Number of occupied seats X the

	Load factor						
	2010 2009 2008 2007 20						
NAS	77 %	78 %	79 %	80 %	79 %		
SAS	76 %	73 %	71 %	73 %	71 %		
Cimber S.	66 %	66 %	62 %	66 %	62 %		
Finnair	76 %	76 %	75 %	76 %	75 %		
Ryanair	-	84 %	83 %	83 %	84 %		

	Number of passengers per employee						
	2010 2009 2008 2007 20						
NAS	5 880	5 832	5 702	4 869	6 343		
SAS	1 696	1 433	1 137	1 153	1 454		
Cimber S.	3 034	2 812	2 411	2 294	2 054		
Finnair	942	845	862	913	916		
Ryanair	8 935	9 457	9 201	9 673	13 155		

Load factor = RPK / ASK

	Number of employees per million ASK								
	2010 2009 2008 2007 2006								
NAS	0.12	0.14	0.14	0.19	0.15				
SAS	0.38	0.43	0.61	0.63	0.48				
Cimber S.	0.28	0.31	0.55	0.65	0.75				
Finnair	0.30	0.33	0.33	0.35	0.40				
Ryanair	-	0.08	0.08	0.08	0.08				

	Revenue/RPK (Yield) EUR				
	2010	2009			
SAS	0.126	0.124			
Cimber S.	0.117	0.111			
Finnair	0.083	0.070			
NAS	0.075	0.078			
Ryanair	-	0.041			

Revenue per ASK (RASK) EUR 2010 2009 0.095 SAS 0.090 Cimber S. 0.078 0.073 Finnair 0.063 0.053 NAS 0.058 0.061 Ryanair (09) 0.035 0.035

	Cost per ASK (CASK) EUR				
	2010	2009			
SAS	0.102	0.102			
Cimber S.	0.078	0.076			
Finnair	0.055	0.053			
NAS	0.055	0.053			
Ryanair (09)	0.030	0.030			

Yield = Traffic revenue / RPK

RASK = Traffic revenue / ASK

= Load factor X Yield

CASK = Operational expenses / ASK

	2010 - Operational expenses per ASK in EUR					
	NAS SAS Cimber S. Finnair Ryanair (09)					
Personnel/ASK	0.011	0.034	0.020	0.018	0.004	
Jet fuel/ASK	0.015	0.018	0.015	0.017	0.010	
Handling and catering charges/ASK	0.006	0.007	0.015	0.007	-	
Maintenance/ASK	0.005	0.007	0.009	0.002	0.001	
Airport charges/ASK	0.009	0.011	0.018	-	0.005	
Total percentage of CASK	82.7 %	75.1 %	98.6 %	79.5 %	68.6 %	

Source: Data derived and calculated from Appendix 16: Airline metrics analysis - Data in Euros

