A Potential acquisition of Norwegian Air Shuttle by Ryanair

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Executive Summary

The objective of this thesis has been to obtain a stand-alone value of Norwegian Air Shuttles equity as of 04.03.2016, and the fair price per share in a potential acquisition by Ryanair. This is done by estimating the stand-alone value of equity of Norwegian Air Shuttle and the value of the potential synergies. Both companies are leading European low-cost carriers with strong historical growth, with Ryanair being the largest, carrying over 90 million passengers in 2015. Norwegian Air Shuttle is the third largest low-cost carrier in Europe, carrying over 25 million passengers in 2015.

The external analysis is conducted to obtain key value drivers and analyze the competitive environment in the industry, based on well-known strategical frameworks. The most prominent value drivers are found to be economic growth, oil price and the world's middle-class through a PESTEL-analysis. Rivalry in the airline industry is identified as intense, with a high threat of new entrants. At the same time, the P5F-framework discover differences in intensity in the different market segments. Norwegian Air Shuttle entered the historically profitable long-haul segment, as the only European low-cost carrier in 2013.

To be able to analyze Norwegian Air Shuttle on a stand-alone basis and assess the strategical fit between the two companies bearing in mind a potential acquisition, internal analyses are conducted. The key factors analyzed are industry measures, profitability and liquidity.

When analyzing Norwegian Air Shuttle on a stand-alone basis, theoretical enterprise value is estimated to be 33 702 NOKm, based on a cost of capital equal to 6.08 percent. This suggests a stand-alone value of equity of 14 919 NOKm corresponding to a share price of 417.21 as of 04.03.16.

Total value of synergies is estimated to 6 046 NOKm, based on a cost of capital equal to 6.35 percent and estimated cost of implementation equal to 10 953 NOKm. Maximum price to pay per share by Ryanair is found to be 586.29 NOK. However, this is not a fair price since 52.6 percent of total synergies are found to be attributable to Norwegian Air Shuttle. A fair price of Norwegian Air Shuttles equity per 04.03.2015 for Ryanair to pay in a potential acquisition is as a result estimated to 18 099 NOKm, corresponding to a price per share equal to 506.13 NOK.

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List of abbreviations

Abbreviation	Description
AOC	Air Operator Certificate
ASK	Available Seat Kilometer
CASK	Cost per Available Seat Kilometer/Unit Cost
CAGR	Compounded annual growth rate
FFP	Frequent Flyer Program
FSC	Full-service Carrier
FYE	Fiscal Year End
HS	Hub-and-spoke system
LCC	Low-cost Carrier
Pax	Passengers
PP	Point-to-point system
RASK	Revenue per Available Seat Kilometer
RPK	Revenue Passenger Kilometer
Yield	Revenue per passenger per Kilometer
YTM	Yield to Maturity

1. Introduction

Norwegian Air Shuttle ASA (NAS) is a Norwegian low-cost airline that has become the third largest low-cost carrier in Europe, carrying 25 million passengers in 2015. NAS entered, as the only European low-cost carrier, the long-haul market in 2013. Planned expansion and internationalization of their operations is part of their strategy, and will make NAS a significant player in the European aviation industry.

Ryanair Holdings PLC (RYA) is currently the biggest low-cost carrier in Europe, carrying over 90 million passengers in 2015. RYA is today only involved in the short-haul market. To satisfy investors expectation about further growth RYA may need to establish operations in the long-haul market as well.

The airline industry is known as a strictly regulated industry with intense rivalry and low profits. Consolidation and M&A activity is therefore a vital part of the industry, in addition to organic growth. During 2015, several equity analysts considered it as possible that RYA would acquire NAS throughout the next five years, as a result of their success in the long-haul market. A valuation of this case, is considered a fine opportunity to apply financial theory and empirical findings to a real-life acquisition case. We will therefore find a fair price of NAS´ equity for RYA to pay in a potential acquisition. As a result, the following problem statement is defined:

What is the stand-alone value of Norwegian Air Shuttles equity as of 04.03.2016, and what is the fair price per share in a potential acquisition by Ryanair?

To be able to answer this, we have to find both the stand-alone value and the value of synergies between the two airlines. This thesis may therefore function as a pre-merger due diligence for a potential acquisition. The following sub-questions are defined to answer the problem statement:

1.1. Sub-questions

External analysis	
What are the most important external factors and key value drivers in the aviation industry? How do we expect them to develop? How is the competitive environment in the industry? How do we expect it to be in the future?	39-40 48
Internal analysis:	
How does NAS and RYA perform compared to peers on key industry measures?	49-55
How are the benchmarked profitability and liquidity risk of NAS and RYA?	66 and 70
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What is the cost of capital for NAS and RYA?	90
What are the forecasted cash flows for NAS?	92
What is the stand-alone value of NAS and how sensitive is it to changes in the underlying assumptions?	96-97
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What are the synergies of: - Revenues - Costs - Financial	109
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Conclusion	
The stand-alone value of Norwegian Air Shuttles equity as of 04.03.2016 The fair price per share of NAS in a potential acquisition by Ryanair	113-114

2. Methodology, delimitations and theory

2.1. Theory and models

We have applied valuation theory based on three different sources which is Petersen & Plenborg (2012), Koller, Goedhart & Wessels (2010) and Damodaran (2005). All three sources agree to a large extent, and the different sources have been supplementary to each other. We have therefore tried to extract the best from each of them. Since an important part of this thesis is to value the potential synergies between the two companies´, both strategic and financial analyses become important. To be able to identify key value drivers for our forecast, well-known frameworks to describe important macro factors (PESTEL) and the companies' competitive environment (P5F) are applied. Thorough presentation of such models and tools are omitted, as they are assumed known by the reader.

Both present value valuation and relative valuation by selected multiples are applied. All present value models should yield identical results since they are derived from the dividend discount model (Petersen & Plenborg 2012, p. 212). The Discounted Cash Flow (DCF) model is applied to estimate the enterprise value (EV). The relative valuation is carried out to get a more nuanced picture of our DCF-valuation. Relative valuation is a sanity check and an effective way to stress test output from the PV model, its assumptions and the derived forecasts according to Petersen & Plenborg (2012, p. 226).

2.2. Data collection

This thesis is based solely on secondary data gathered from different public sources, mainly annual reports, industry reports and academic journals. Bloomberg, Datastream and Euromonitor are used as primary sources for financial and statistical data. In addition, industry specific data, statistical data and estimates have been gathered from Boeing, Airbus, industry organizations and European commission. The pros of gathering secondary data are that a lot of resources are saved while the main cons are that the data is collected for a different purpose and by other people. Since all data are secondary, we have tried to use the same sources when possible, and all data has been viewed critically. We have had in mind that data presented in annual reports may highlight the positive aspects of the company since it´s aimed at investors and potential customers and therefore affect the reliability and validity. With regards to textbooks and academic papers we assume they are unbiased since they have been published by well-known scientific

journals or publishing companies. The models applied are well-known in academic research and should contribute to reliable results.

2.3. Accounting practices and adjustments

All compared companies are listed and applies IFRS as accounting standard. Since IFRS is an EU adapted standard, we consider the reliability of financial data from annual reports to be very high. At the same time all companies apply different fiscal years, leaving comparison of financial ratios and key industry measures incomplete. This is adjusted for by normalizing different fiscal year to calendar year, which is further elaborated on in section 6.2.1.3. All companies also denominate their financial statements in different currencies which cause some challenges in comparison across the selected peer-group.

2.4. Delimitations

To be able to answer our problem statement, some limitations are necessary. It is expected that the reader have some knowledge about economic theory and is familiar with frameworks within strategy, finance and valuation. The description of some models and theory are therefore limited.

If RYA were considering an acquisition in real life, they would be able to perform a proper strategic, legal and financial due diligence before the transaction. This is not possible without privately held information and this thesis is based solely on publicly available information.

We have chosen to analyze five years of financial data. The airline industry has historically been a cyclical industry. One could therefore argue that ten years of data would have been better. However, we find five years of data sufficient due to reasons mentioned in section 3.4. NAS has also experienced a tremendous growth the last ten years, and we do not find data that is more than five years old relevant in predicting the future.

Our valuation is based on financial statements from Norwegian Air Shuttle ASA and its subsidiaries. We have focused solely on the airline business and therefore not analyzed other business areas such as Bank Norwegian and Arctic Aviation Asset (AAA), which is valuated to book value at cut-off date.

We have chosen to analyze three companies in addition to NAS and RYA, which constitutes the peer-group. One could argue that there are several other low-cost carriers in Europe that should

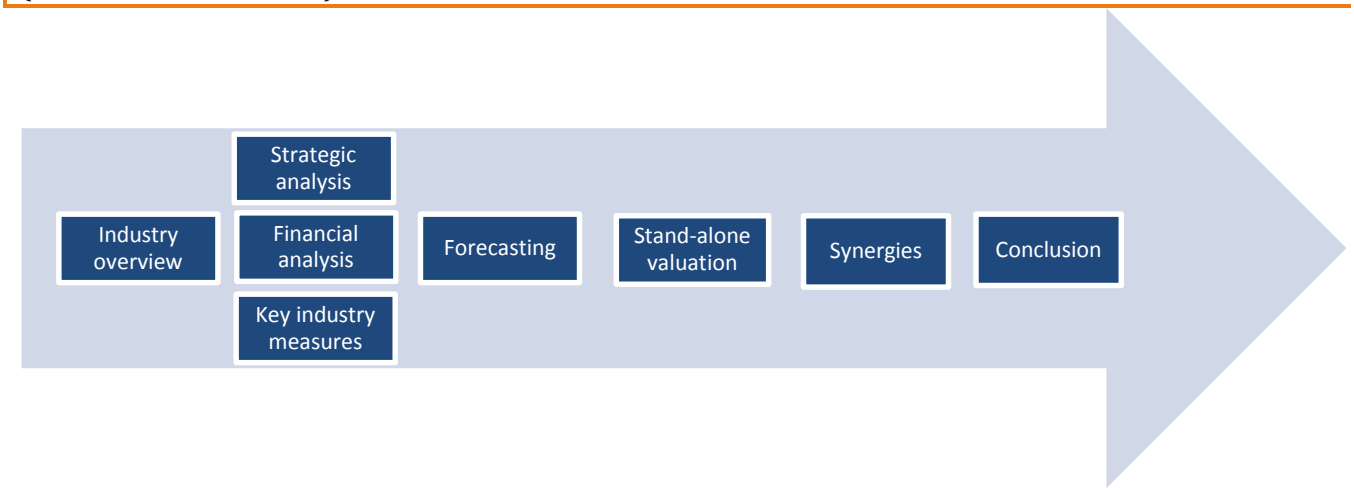
have been included. One example is Vueling, an IAG[1] subsidiary. Due to Vuelings position as a subsidiary no financial data is available, and they are excluded. These omissions are not thought to have significant impact on our results.

Cut-off date is set to 04.03.2015. No public information published after this date is included in this thesis. Due to the cut-off date, audited financial statements for 2015 are not available, and unaudited financial statements from interim reports are therefore used as proxy for the consolidated statements for 2015. See section 6.2.1. for more detailed information.

2.5. Structure of thesis

Figure 1 illustrate the structure of the thesis. The strategic and financial analysis, together with the key industry measures, creates the basis for the forecasting section. The valuation of synergies are conducted based on both empirical findings and traditional valuation methods.

Figure 1 – Structure of thesis
(Source: Own contribution)



[1] International Airline Group

3. Industry overview

The first scheduled air service was started in 1914. Today the industry carries over 3.54 billion passengers' annually on more than 50 000 routes (IATA 2015a, p. 55). This section gives a brief overview of the industry and how it has developed during the last decades.

People demand and pay for transportation by air, and the airline industry provides the supply, which is available seats to given destinations to satisfy demand. The market is defined as the market for transportation of people by air. This market has grown bigger for many years due to economic growth and increased globalization. The industry as a whole has always been characterized as an intensive industry where profitability has clear cyclical patterns (Cento 2009). This thesis focuses on the European airline industry, which has faced dramatic changes during the last 25 years. Low-cost carriers (LCCs) were established as a result of the liberalization process which began in EU in the 1990s[2] (Cento 2009). Until this point, the airline industry had been heavily regulated and dominated by national flag carriers which are characterized as full-service carriers (FSCs). In addition, the industry experienced technological developments during this time period. This resulted in increased competition and reduced costs which led to reduced fares. To understand the industry developments, we take a closer look at FSCs and LCCs, which have been the two competing business models in the airline industry the last decades.

3.1. Full-service carrier

The definition of a FSC used in this thesis is based on Centos´ definition (2009, p. 18-19). A FSC is defined as an airline company that aims to cover all market segments: Passenger, cargo and maintenance. FSCs target both leisure and business travelers. As a result, their ticket prices and service levels are differentiated. The pricing and yield management is sophisticated to maximize the network revenues. FSCs are typically member of an alliance to become a global player, often referred to as network carriers. Their network structure is known as a hub-and-spoke (HS) system. HS system focuses on maximizing the connectivity of the flights. To achieve this, FSCs use hubs where they try to synchronize the landing and take-off times. In case of missed flights for passengers due to delays, FSCs are obligated to provide new tickets. Thus, the HS system increases the turn-around time, which in turn leads to lower utilization of the fleet and higher unit cost per seat, compared to LCCs. To retain the most frequent flyers, all FSCs have a loyalty

[2] More on liberalization in section 5.1.1.

program called frequent flyer program (FFP) as a part of their customer relationship management.

3.2. Low-cost carrier

The definition of a LCC used in this thesis is based on Centos´ (2009, p. 19-20). A LCCs core business is defined as a company that aims to cover the segment of the most price sensitive customers for air transportation. These companies have a massive focus on cost reduction and do not offer services such as luggage, food and beverage free of charge. These are ancillary offers that are becoming a more important part of the LCC core business. In contrast to FSCs, LCCs use a network structure known as a point-to-point (PP) system. The PP system carries travelers from A to B directly without any transfers, often to secondary airports. This gives the benefits of better service for the customers with respect to reduced travel time. In contrast to FSCs, the possible increased cost due to delays are minimized, but at the same time this system affects the customer experience. The relief of costs related to delays provides a clear cost advantage for LCCs over FSCs. In addition, LCCs often chooses the cheapest slots at secondary airports to further reduce costs. This results in low connectivity for passengers, but reduces the unit cost per seat, turn-around time and increases the fleet utilization. LCCs has historically operated single aircraft fleets, with a continuous renewal of aircraft to maintain the desired cost level. The service differences between a typical FSC and LCC are illustrated in figure 2.

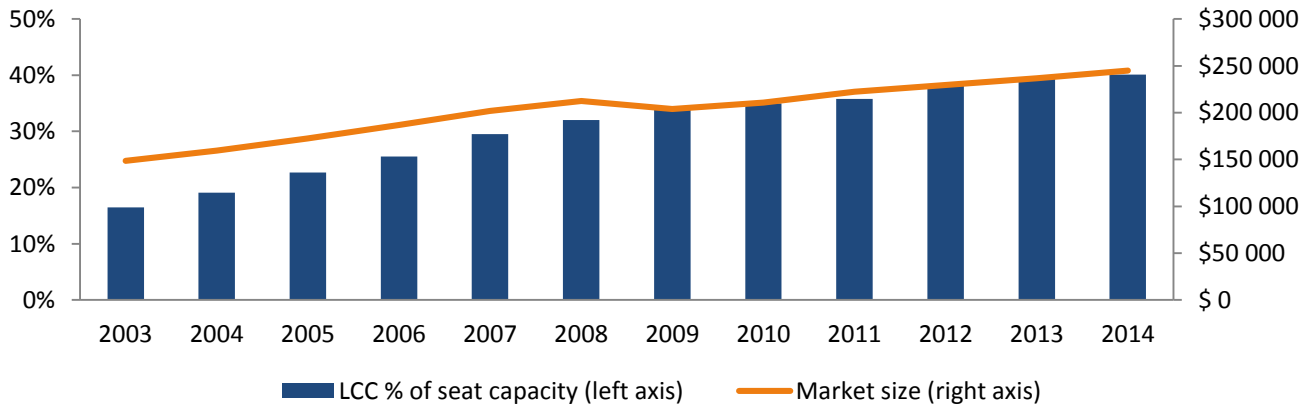
Figure 2 – Example of service differences between typical FSCs and LCCs
(Source: Own contribution)

	Service	Checked-in luggage	Extra hand luggage	Lounge access	Fast track	Priority boarding	Extra leg room	Empty middle seat	Reserved hand luggage compartment	Snack or meal
FSC	First class	o	o	o	o	o	o	o	o	o
	Economy class	o	-	$	$	-	$	-	-	o
LCC	Low fare	$	-	-	-	-	-	-	-	$

o Included
$ Offered at surcharge
- Not included or offered

Today the European airline industry consists of several LCCs due to their large growth the recent decades. This growth is illustrated by figure 3 which shows how many percent of total seats LCCs offer in Europe and the total market size in USDm. Some of the growth is due to market growth and some of it stems from market shares captured from FSCs, which makes LCCs growth approximately two times market growth. Figure 2 showed traditional differences between FSCs and LCCs, but the industry is continuously changing, and the two competing business models are developing as well. A late development has been towards a more tailor-made travel for both FSCs and LCCs. Of course, FSCs still offer a lot of services that LCCs do not, but many LCCs give the traveler the optionality to add more services at a surcharge, the mentioned ancillary offers. Many companies, that by definition are LCC, today call themselves ultra-low-cost carrier (ULCC). The reason why is that many traditional LCCs have increased their focus on customer service, and also try to attract business travelers that request services that LCCs earlier didn´t offer. To underscore that the companies´ main focus are on low cost base and low fares, they call themselves ULCCs. FSCs have also increased their focus on cost reduction and fleet utilization to stay competitive (Cento 2009, p. 25).

Figure 3 – LCC % of seat capacity and total market size Europe
(Source: Own contribution, CAPA and Euromonitor)



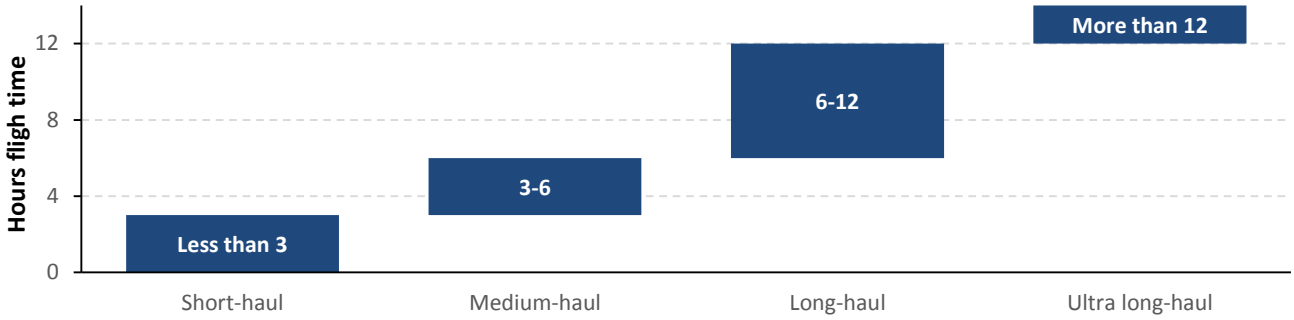
Intensive price competition has prompted FSCs to adapt their business model on short-haul travels (EU com 2015, p. 41). They have adopted several aspects from the LCC business model such as: Electronic ticketing and self-check-in, restrictions on checked baggage, targeted higher load factor, increased aircraft utilization, charges for food and drinks at economy class and attempts to reduce payroll costs. These examples illustrate an industry that is continuously

changing. Differences in offered services between the two business models also depend on travel length. FSCs service level is approaching LCCs at shorter flights.

3.3. Travel length

In this thesis the characterization of flights is defined by airborne time. There are four categories which are: Short, medium, long, and ultra-long-haul flights. The different categories are divided according to figure 4.

Figure 4 –Categories based on flight time
(Source: Own contribution)

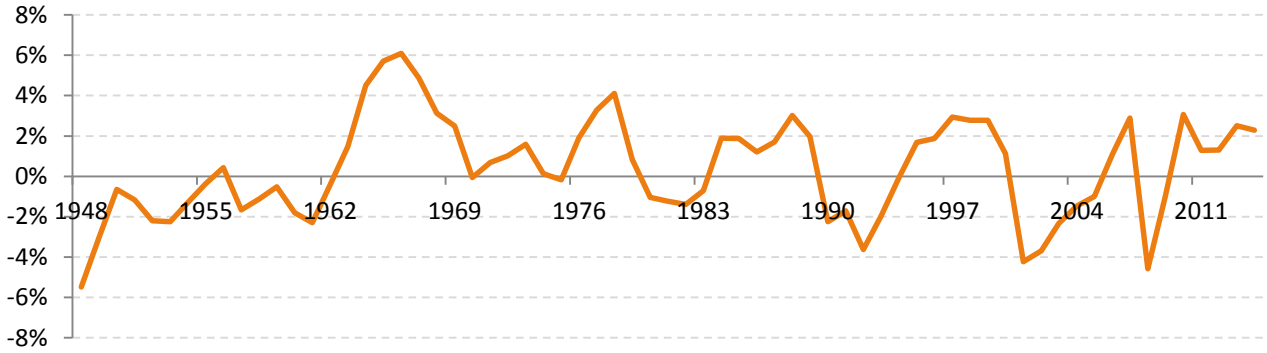


One important historical difference between LCCs and FSCs is that former LCCs have focused on short- and medium-haul flights, while FSCs often offer long-haul as well. Ultra-long-haul is rare compared to the other three categories, and only a few airlines offer this. We choose to characterize medium-haul as short-haul further in this thesis. It will be sufficient since airlines use the same type of aircraft on these travels and key value drivers are the sa. The size and price of aircraft usually increases with the travel length, and the largest aircraft are less flexible with regards to routes. The long- and ultra-long-hauls usually include more services such as food and drinks. Some of the latest development is that LCCs have begun to establish long-haul routes. In 2013, Norwegian Air Shuttle launched its first long-haul flight, and this is believed to have great impact on the long-haul industry. It is well known that margins in this segment are greater than in the short-haul market. Before we dig deeper into fragmentation in the industry, we will take a closer look at historical financial results for airlines operating worldwide.

3.4. Worldwide development in the industry

As mentioned in the introduction, Cento (2009) points out that the industry has clear cyclical patterns. Figure 5 shows the historical financial performance of airlines worldwide for the time period 1948 to 2014, and confirms the cyclicality. The observed pattern is strikingly clear with only a few deviations, such as the financial crisis in 2008. Financial performance in the industry and the cycles are affected by regulations. The airline industry is heavily regulated and profits tend to decrease after deregulations. This was observed after deregulations in the US market in 1978 and in the EU in early 1990.

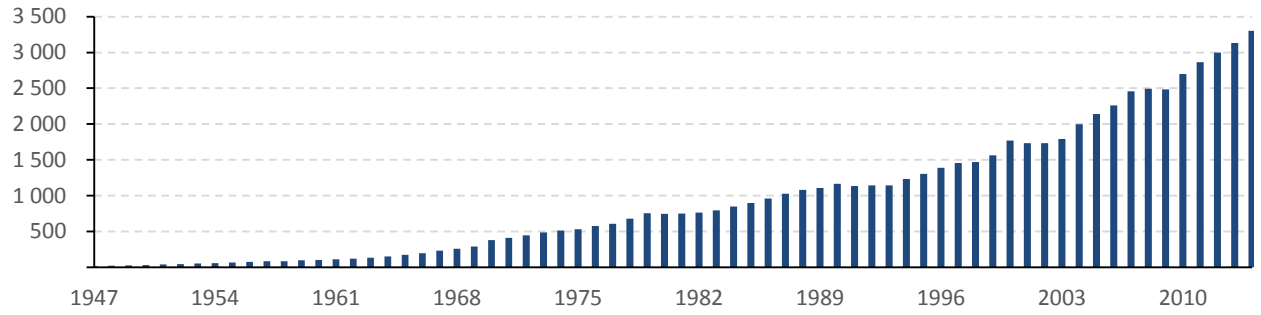
Figure 5 – Worldwide airlines net margin for both passengers and cargo ('48-'14)
(Source: Own contribution, Airlines for America)



The fundamental cycle period after the deregulation in 1978 was found by Hansman and Jiang (2005) to be 10.5 years with long run mean profits very close to zero for the world airlines. Cyclicality is however not taken into further consideration in this thesis due to the nature of LCCs and their increasing market share. In addition, their performance is better during economic downturns since people choose to travel with the cheapest alternative.

Low long run profits may be a result of mismatch between short term demand and supply. Despite of cyclicality in profits, the number of travelers has increased steadily during the same cycles. Figure 6 shows development in passengers worldwide during the time period from 1947 to 2014. In addition to demand, the financial performance of the airlines is affected by several factors. These factors will be investigated in section 5. For this thesis the markets in focus are the Norwegian, Nordic, European and the emerging LCC long-haul market.

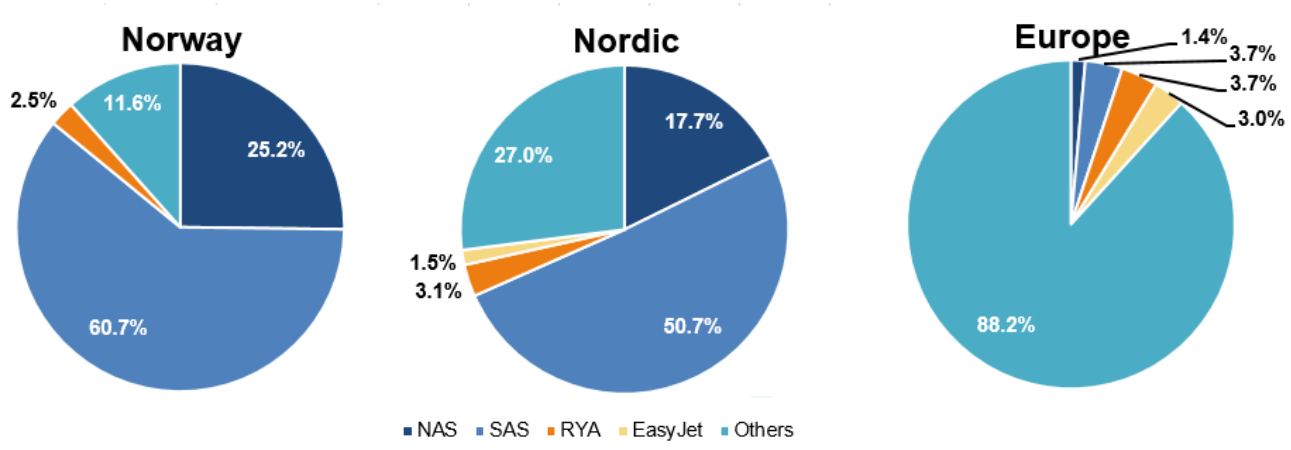
Figure 6 – Passengers traveled by air worldwide measured in millions ('47-'14)
(Source: Own contribution, Airlines for America)



3.5. Market fragmentation

We have chosen to divide the European market into three categories: Norway, Nordic and Europe. The Nordic category only includes Norway, Sweden and Denmark. Finland and Iceland are excluded since neither NAS nor RYA have significant operations there. Figure 7 shows the market share of NAS, SAS, and RYA in these markets measured in retail selling price. The three different markets clearly exhibit different fragmentation. The Norwegian and Nordic market exhibit a few, dominant players. In Norway NAS and SAS accounts for 85.9 percent of the total market in 2014. The European market appears much more fragmented, with NAS holding a 1.4 percent market share. The total fraction of the market held by the three largest LCCs in Europe is 8.1 percent, which underscores this fragmentation.

Figure 7 – Market fragmentation 14'
(Source: Own contribution, Euromonitor/Passport)



There are several other airlines that have a significant market shares, especially in the European market, but they are not considered relevant for this thesis as the majority are defined as FSCs. This is also the case in the long-haul segment, where NAS currently is the only European LCC present, that apply the PP system for long-haul travel.

4. Introduction to NAS, RYA and peer-group

In this chapter we present NAS, RYA, and the identified peer-group. NAS and RYA will be introduced in a more thorough manner than the peer-group and includes a brief overview and history, description of strategy and operations, as well as ownership.

4.1. Norwegian Air Shuttle

4.1.1. Overview and history

Norwegian Air Shuttle ASA is the parent company of the Norwegian Group, containing more than thirty subsidiaries in the Nordics, Ireland, UK and Singapore, which is shown in figure 9. NAS was founded in 1993 by Bjørn Kjos and two co-founders. Until 2003 NAS performed contractual flights for Braathens SAFE, shifting to exclusively low-fare operations in 2004 (NAS 2005). In 2007 NAS strengthened their position as Scandinavia's largest LCC by the acquisition of FlyNordic (Finnair 2007), by 2013 NAS had grown to be the second largest airline in Scandinavia and the third largest LCC in Europe (NAS 2013). During 2013 NAS also introduced their first long-haul transatlantic routes as well as long-haul routes from Europe to Asia. During July 2015, for the first time in history, NAS carried more passengers than SAS, which has been the largest airline in Scandinavia the last 70 years (Aftenposten 2015). Norwegian is listed at Oslo Stock Exchange under the ticker NAS.

4.1.2. Strategy, vision and mission

NASs strategy is to grow in major PP markets that have been overpriced or underserved, while at the same time maximize utilization both in terms of aircraft and crew. NAS is one of the fastest growing airlines in the world, but they state that "big is not necessarily good" (NAS 2014, p. 7). "We believe that growth must be profitable, whether it be less, equal to, or more than the market average". The vision of NAS is "affordable fares for all". The goal is to be the preferred airline in selected markets and generate profitability and return to its shareholders. To be able to realize their vision and goal NAS aims to improve and monitor its cost base. They offer traditional LCC-

products as well as more adapted products (see figure 2), and attract both business and leisure customers through high-frequency destinations to primary airports and a wide range of destinations and increasing the ancillary revenue. The optionality NAS offer their customers therefore distinguishes them to some extent from the traditional LCC model. The idea is to be able to offer low fares to the most price sensitive customers, but also give options to customers that want something extra. NAS has a higher service level compared to the majority of LCCs and ULCCs; one example is the free in-flight WIFI.

4.1.3. Operations

By year-end (YE) 2015 NAS' fleet comprised of 99 aircraft, more than 4 576 employees and 19 bases covering 447 scheduled routes to 138 destinations. They were carrying 25.8 million passengers, and generated 22 491 NOKm in operating revenues during 2015 (Norwegian 2016a).

As a LCC, continuous fleet renewal is an important part of NAS´ business model. In 2012 NAS executed the biggest aircraft order in European aviation history, containing 222 aircraft in addition to an option to expand the order by 150. YE 2015 NAS had 267 undelivered aircrafts, 100 from Airbus and the remaining from Boeing. The majority of aircrafts is set for delivery from 2018. YE 2015 the average age of the fleet were 3.6 years, which makes it one of the youngest fleets in Europe (Norwegian 2016a).

The introduction of long-haul operations affected the operating results negative and contributed to the first year with negative net profits in 2014, amounting to 1 069 NOKm (NAS, 2014). The loss of long-haul operations was due to Dreamliner teething problems and delayed approval of their EU subsidiary U.S. Foreign Air Carrier Permit (NAS 2014, p. 7). The performance of the Dreamliner has improved a lot since introduction and is currently performing well. The long-haul fleet comprised of seven 787-8 Dreamliners by YE 2014. October 2015, NAS released news about an agreement to purchase nineteen new Dreamliners with delivery in the period 2017-2020, with an option to expand with ten aircraft of the same type. This underscores that NAS still thinks the Dreamliner is a game changer in the long-haul market.

According to Bloomberg (2016a) they pursue one of the industry´s most ambitious growth plan, betting that its Dreamliners will enable them to thrive in a long-distance market where other no-

frills predecessors have failed. In the same article, CEO Bjørn Kjos stated that “long-haul is today a small operation for us, but it is profitable on a year-around basis” and “by 2020, long-haul as measured by available seat kilometers will be much larger than our short-haul operations”.

Today NAS serve Bangkok, several destinations in U.S. and Caribbean from Oslo, Stockholm, Copenhagen and London (Ch-aviation, 2015). During 2016 NAS plans to launch long-haul routes from Paris to New York, Los Angeles and Fort Lauderdale, Florida. They have also planned to launch a route in May 2016, from Cork in Ireland to Boston but this is delayed due to approval of their Irish subsidiary Air Operator Certificate (AOC) from the U.S. Transportation Department. While NAS has access to most regions from Norway through their AOC issued in Norway, they need an EU AOC to be able to get access to most Asian, African and South American destinations from multiple European countries. The EU AOC secures traffic rights from all EU countries (NAS 2014, p. 8).

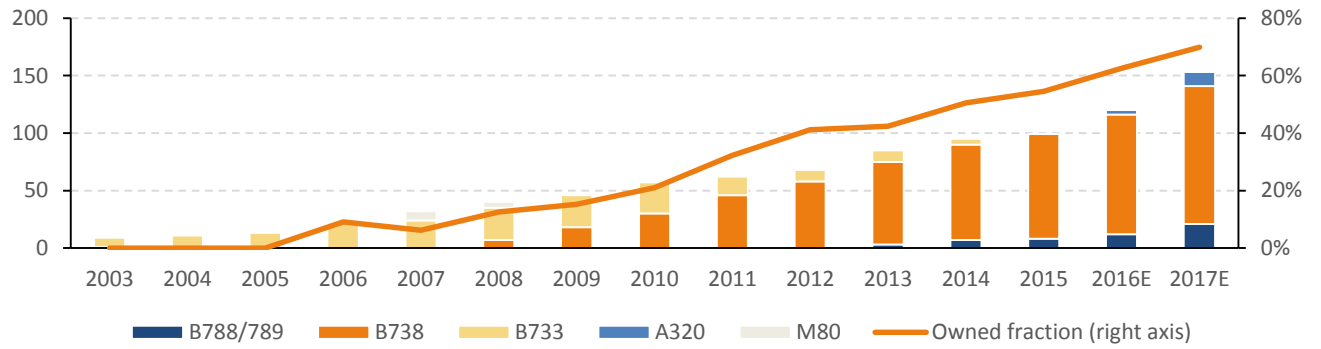
NAS applied for the Irish AOC in December 2013 (Bloomberg 2016b). The EU-U.S. “open-skies” agreement which took effect in 2008 should allow NAS´s Irish subsidiary to fly trans-Atlantic routes. Since NAS applied, there have been numerous articles in the press with allegations such like “flag of convenience”, “race to the bottom” and “social dumping” from the three major alliances dominating the long-haul market and their unions (NAS 2014, p. 8). Fear of competition is the obvious reason according to Bjørn Kjos, which respond to these allegations that they will always have to offer competitive wages and benefits to attract qualified crew. The two years’ stalemate has now resulted in pressure from the EU transport Chief Violeta Bulc to let NAS serve US destinations from Ireland. She stated “I hope that actions will rapidly be taken to ensure compliance with the EU-U.S. air-transport agreement” (Bloomberg, 2016b).

It is not given that NASs long-haul operations are going to be profitable. LCCs have historically proven unsuccessful on profitable transatlantic long-haul routes. Examples of failures are Lofleidir/Iceland Air, Skytrain, People express and Oasis Hong Kong. Reasons for their failure are among others identified as recessions, weak financial situations, peak of oil price and bad operations. However, we think that NAS are going to succeed since they will obtain the load factor needed through their existing network and a future possible feeder agreement with other LCCs such as RYA and EasyJet.

Competition on some short-haul routes in Norway is hard and the overall market is influenced by slowdown in the economy. NAS therefore focuses on Europe to expand their short-haul operations. Today NAS has fourteen short-haul bases whereas seven are in Spain and UK, which have been important growth markets the last years. During 2016 they open a new base in Rome – the first in Italy (NAS Q4 2015, p. 7).

Decomposition of today's fleet and the forecasted fleet is illustrated in figure 8. It clearly shows that NAS plans to grow significantly over the next years. NAS has an increasing share of owned aircraft, with a forecasted owned fraction of its fleet in YE 2017 amounting to 69.9 percent.

Figure 8 – NAS' fleet decomposition, forecasted fleet and owned fraction
(Source: Own contribution, Annual Reports NAS)



NAS has a loyalty program called Norwegian Reward which was launched together with Bank Norwegian in 2007. The loyalty program gives the travelers "CashPoints" when they buy tickets which can be used on tickets or other services later. Norwegian Reward got a total makeover in the end of 2015 which enable travelers to earn "rewards" such as "CashPoint boost", fast-track check-in and check-in luggage (NorwegianReward 2015), which illustrates a drift away from the traditional LCC business model presented in section 3.2.

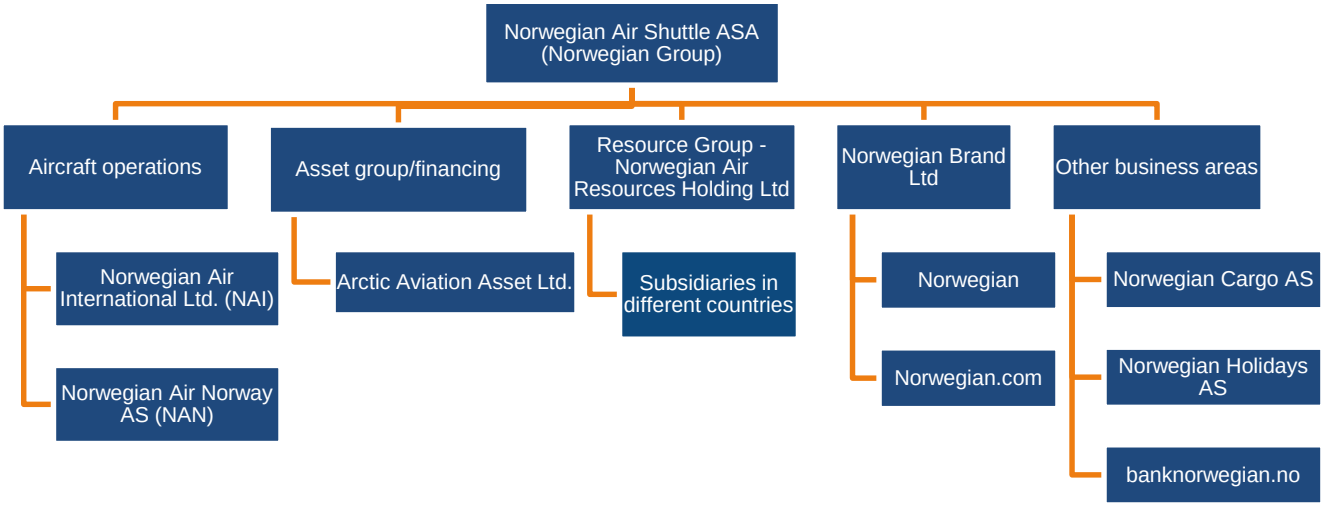
4.1.4. Legal structure

Due to a more international operation and to ensure flexibility and flexibility in future growth, Norwegian Group did considerable reorganizations in 2014. The operations are divided into a commercial airline group, an asset company, a resource group in addition to other activities including brand and marketing (Norwegian 2016b), while NAS still being the parent company headquartered in Oslo. During 2014 they transferred all aircrafts and leases to a newly

established asset management company, Arctic Aviation Asset Ltd (AAA), which is fully owned by NAS. AAA in turn controls several subsidiaries and is registered in Ireland to balance out currency risk related to debt exposure in foreign currencies (NAS, 2014). This is also done to maintain flexibility regarding the large amount of undelivered aircrafts. 18.12.2015 AAA published a press release confirming a lease out of 12 aircraft to airline HK Express, aircraft set for delivery between 2016 and 2018 (AAA, 2015).

NAS has a 20 percent ownership interest in Bank Norwegian AS, through the associated company Norwegian Finans Holding ASA. Bank Norwegian AS is an online bank targeting the retail market with standardized deposit- and lending products through the web (Bank Norwegian 2016). In addition to standardized bank products, Bank Norwegian AS also administrate NAS' loyalty program Norwegian Reward. As of YE 2015 this position amounts to 330 NOKm. As mentioned in the delimitations, the ownership of these stocks is treated as a financial like any other security holding and not as operational. The legal structure of NAS is illustrated in figure 9:

Figure 9 - Legal structure NAS
(Source: Own contribution, Annual Reports)



4.1.5. Ownership

NAS largest shareholder is HBK Invest AS, with 24.6 percent of outstanding shares as of YE 2015. HBK Invest is controlled by CEO Bjørn Kjos and Chair Bjørn Kise by 84.1 percent and 8.2 percent, respectively. Bjørn Kjos controls in total 20.81 percent of total outstanding shares of NAS. The second largest shareholder is Folketrygdfondet with 8.45 percent of outstanding

shares. Folketrygdfondet is the largest institutional investor on Oslo Stock Exchange, owning approximately 5 percent of the market capitalization, aiming to achieve high financial returns over time through long-term investments in equities and fixed income in Norway and the Nordics. The fund has mandate to manage the Government Pension Fund Norway on behalf of the Ministry of Finance (Folketrygdfondet 2015). The twenty largest shareholders of NAS control 62.36 percent of the outstanding shares, and comprises of the two mentioned in addition to banks, investment banks and different funds. The fact that Bjørn Kjos controls 20.81 percent of the outstanding shares is worth notice in the light of a potential merger between NAS and another company.

4.2. Ryanair Holdings PLC

4.2.1. Overview and history

Ryanair Holdings PLC (RYA) is an Irish airline company, established in 1985. The first years of operation RYA covered the route Dublin-London on license to create competition between British Airways and Aer Lingus. After suffering losses due to price competition, RYA restructured and re-launched itself as the first European LCC in 1990. After the European deregulation in 1997[3], which made any airline able to set up and fly anywhere in the union, RYA launched its first European routes. From carrying 3.73 million passengers in 1997, they carried 91 million passengers in 2015. This makes RYA the largest European LCC both in terms passengers, revenues and net profits (FlightGlobal 2014), and the second largest airline measured in passengers in Europe when including FSCs as well. Today RYA is considered an ULCC serving short-haul PP routes, mainly across Europe. RYA is listed at the Irish Stock Exchange under the ticker RY4B and the London Stock Exchange under the ticker RYA. In addition, ADRs[4] of Ryanair are traded on NASDAQ under the ticker RYAAY, where each ADR represents five ordinary shares (RYA 2014).

4.2.2. Strategy, vision and mission

RYA has a goal to be the biggest scheduled passenger airline in Europe. To achieve their goal RYA aims to keep low fares, better customer service than peers and frequent point-to-point flights on short-haul routes to primary, secondary and regional airports. In their passenger charter they commit to offer the lowest price at all time on all routes. The following statement from their

[3] See chapter 5.1.1. for more information about deregulations
[4] American depositary receipt. This is a stock traded in the US, which represents a specified number of shares in a foreign corporation

webpage clearly illustrate their strategy: “But let’s face it, at the end of the day, the only number that really matters is the fare price and one thing’s for certain, Ryanair will always be the lowest out there” (Ryanair 2016). To be able to commit to this and still be profitable, they must have the lowest cost base among competitors.

RYA launched the customer experience program “Always Getting Better” (AGB) in September 2013. This strategy committed the entire business from their board, management team and over 9500 aviation professionals to listen to their customers, fix the things they don´t like, improve inflight experience, transform their digital platform, and introduce new services, but without compromising their low fares and on time flights (RYA 2015, p. 6). After AGB was introduced, RYA has changed policies which have been “tablets of stone” for over two decades. Examples of changes are allocated seating and a second free carry-on hand luggage. This indicates that RYA is developing from a company that has low costs as their absolute number one priority, towards a company that priorities customer service to a greater extent.

4.2.3. Operations

By fiscal year-end (FYE) 2015, RYAs fleet comprised of 308 aircrafts, more than 9 393 employees and 72 bases with approximately 1 800 daily flights, carrying 90.6 million passengers and generating 5 654 EURm in operating revenues (RYA 2015).

As a traditional LCC, RYA operates a single-aircraft fleet consisting of more than 300 Boeing 737-800. During 2014 an order of 200 aircrafts were executed set for delivery 2019-2023, making the total delivery during the period of 372 aircraft. RYA estimates their fleet to comprise of 520 B737 in 2024 depending on leases returns and disposals. By FYE 2015 average age of the fleet was 6.3 years. Average age of the fleet will decrease over the next years due to large deliveries of new aircraft. This will contribute to lower fuel consumption and therefore lower their cost base.

RYA has traditionally preferred underutilized secondary and regional airports which reduces taxing time, fuel burn and costs. However, RYA reports an increasing number of primary airports which they operate from, as they incentivize to open new routes to maintain traffic growth. RYA plans to grow further over the next years, and aims for 160 million passengers in 2023 (RYA 2015, p. 4). In 2006 RYA bought 29.8percent of Aer Lingus during the partially privatization of the company, a former Irish national flight carrier. After several attempts of acquiring the whole

company, but repeatedly being blocked by the European commission (EU com) on competition grounds, the board accepted an offer for their shares in Aer Lingus from IAG the summer of 2015. Today RYA is very small in Scandinavia despite their position in Europe. They experience growth in the Danish market which they expect to continue the next years. They only got a few routes in Norway, all international. The Scandinavian market has large growth potential for RYA the next years. Besides Scandinavia there are also other untapped potential in Eastern Europe.

RYA has had a strong focus on its core activities since the airline was founded and do not engage in other businesses such as banking and travel agencies. Up to this date, RYA has focused on short-haul travels and has not presented any plans of entering the long-haul business. This may be related to the risk related to launching such operations, and it may lead to negative profits. They have focused more on potential feeder agreements with other long-haul airlines. Before they engage in long-haul they might want to see if other LCCs succeed in that market as well. If RYA decides to get involved in long-haul, they need to order aircraft which will take several years due to large orders from other airlines.

4.2.4. Ownership

As of 31.03.2015, RYAs largest shareholder is Capital Research and Management Company (CRMC), with 15.4 percent of the outstanding shares. CRMC is a privately owned investment manager, which managed assets for more than 1.35 trillion USD as of YE 2014 (The Capital Group 2016). The second and third largest shareholders in RYA are HSBC Holding PLC and Baillie Gifford with 6.2 percent and 6.0 percent, respectively. The fifth largest shareholder is Michael O'Leary, CEO of RYA, holding 3.7 percent of the outstanding shares. In October 2014, O´Leary signed a five year contract which commits him to RYA until September 2019. This replaced a rolling 12 month contract O´Leary has worked under since the company first floated in 1997 (RYA 2015, p. 12). The strong concentration of investment manager ownership indicates that RYA is an attractive and solid company. These kinds of owners always allocate their funds where they expect the highest return.

4.3. Peers

To obtain a benchmark for the strategic and financial analysis we need comparable companies for NAS and RYA. Ideally these companies are similar with regard to size, business model and markets they operate. Such companies are impossible to obtain, the chosen peers are therefore

a selection of the main competitors and the most similar companies in the Nordic and European aviation industry. This means that both LCCs and a FSC are represented in the peer-group, all offer short-haul travels while some also offer long-haul travels. Figure 10 gives a brief overview over the selected peers identified as EasyJet, SAS and WizzAir. Figure 10 also shows indexed stock prices versus primary exchanges from cut-off date, trailing twelve months.

Figure 10 - Overview NAS, RYA and peers
(Source: Own contribution, Bloomberg, Annual Reports*)

Summary NAS	
Primary Exchange	Oslo SE
Currency	NOK
Price at cut-off (NOK)	309.2
Ticker	NAS NO
Fiscal year-end	31/12
Key figures	
No. of employees *	4 570
Pax. FY 15'	25.80
Revenue (NOKm)	22 484
ASK*	49 028
RPK*	42 284
Capital structure FYE 15	
No. of shares outstanding	35.76
Market cap. (NOKm)	11 576
NIBD (NOKm)	17 048
Enterprise value (NOKm)	28 623
Key financials	
Revenue (NOKm)	22 484
EBITDA (NOKm)	1 481.1
ROIC	3.57%
Basic EPS (NOK)	6.99
Five biggest shareholders	
KJOS BJOERN	20.69%
HBK INVEST AS	20.41%
FOLKETRYGDFONDET	8.67%
DNB ASA	5.59%
SKAGEN AS	5.31%

Summary RYA	
Primary Exchange	Irish SE
Currency	EUR
Price at cut-off (EUR)	14.135
Ticker	RYA ID
Fiscal year-end	31/03
Key figures	
No. of employees *	10 000
Pax. FY 15'	90.60
Revenue (NOKm)	5 654
ASK*	128 249
RPK*	113 187
Capital structure FYE 15	
No. of shares outstanding	1 375.90
Market cap. (EURm)	15 713
NIBD (EURm)	(757)
Enterprise value (EURm)	14 956
Key financials	
Revenue (EURm)	5 654
EBITDA (EURm)	1420.6
ROIC	11.79%
Basic EPS (EUR)	0.63
Five biggest shareholders	
HSBC	7.15%
BAILLIE GIFFORD	2.53%
HSBC GROUP	5.60%
FMR LLC	5.75%
BLACKROCK	4.06%

Summary EasyJet	
Primary Exchange	London SE
Currency	GBP
Price at cut-off (GBP)	15.52
Ticker	EZJ LN
Fiscal year-end	30/09
Key figures	
No. of employees *	10 105
Pax. FY 15'*	68.60
Revenue (GBPm)	4 686
ASK*	83 846
RPK*	77 619
Capital structure FYE 15	
No. of shares outstanding	397.21
Market cap. (GBPm)	7 058
NIBD (GBPm)	(435)
Enterprise value (GBPm)	6 623
Key financials	
Revenue (GBPm)	4 686
EBITDA (GBPm)	826.0
ROIC	20.27%
Basic EPS (GBP)	1.39
Five biggest shareholders	
EASYGROUP HOLDINGS LTD	22.71%
INVESCO LTD	4.93%
BLACKROCK	3.63%
CAPITAL GROUP COMPANIES	3.63%
LEGAL & GENERAL GROUP PL	2.64%

Summary SAS	
Primary Exchange	Stockholm OMX
Currency	SEK
Price at cut-off (SEK)	24.3
Ticker	SAS AB
Fiscal year-end	31/10
Key figures	
No. of employees *	11 288
Pax. FY 15'*	28.10
Revenue (NOKm)	39 650
ASK*	44 289
RPK*	33 781
Capital structure FYE 15	
No. of shares outstanding	329.00
Market cap. (SEKm)	5 429
NIBD (SEKm)	5 065
Enterprise value (SEKm)	10 494
Key financials	
Revenue (SEKm)	39 650
EBITDA (SEKm)	3 621.0
ROIC	8.39%
Basic EPS (SEK)	1.84
Five biggest shareholders	
SWEDISH GOVT	21.43%
NORWEGIAN GOVT	14.29%
DANISH GOVT	14.29%
ATENS ADM. FSC	14.29%
WALLENBERG FOUND.	7.57%

Summary WizzAir	
Primary Exchange	London SE
Currency	EUR
Price at cut-off (EUR)	18.8
Ticker	WIZZ LN
Fiscal year-end	31/12
Key figures	
No. of employees *	2 040
Pax. FY 15'	16.48
Revenue (EURm)	1 227
ASK*	44 289
RPK*	33 781
Capital structure YE 15	
No. of shares outstanding	52.26
Market cap. (EURm)	1 004
NIBD (EURm)	(418)
Enterprise value (EURm)	586
Key financials	
Revenue (EURm)	1 227.3
EBITDA (EURm)	201.2
ROIC	45.77%
Basic EPS (EUR)	14.4
OLD MUTUAL	13.20%
INDIGO HUNGURY LP	9.95%
FMR LLC	7.08%
VARADI FAMILY TRUST	4.59%
CAPITAL GROUP CO.	3.06%

4.3.1. SAS

SAS was established in 1946 as the national flag carrier of the three Scandinavian countries Norway, Sweden and Denmark. These three governments are still the biggest shareholders controlling 50 percent of the shares outstanding (SAS 2015, p. 91). SAS is a FSC and their vision is “to make life easier for Scandinavia´s frequent flyers” (SAS 2016). SAS is Scandinavia´s leading airline carrying over 28.1 million passengers to Europe, Asia and the US. They have 152 aircraft in service, 261 routes and reach 119 destinations (SAS 2015, p. 1). SAS is one of the founding members of Star Alliance, which is the largest network alliance in the world. The Star

Alliance network reaches a total of 1330 destinations. SAS is offering both short- and long-haul travels. One difference from NAS is that they use a HS system, not the PP system that LCCs operate. SAS is listed on Stockholm OMX under the ticker SAS AB.

4.3.2. EasyJet

EasyJet was founded in 1995 as a British LCC. Their ambition is “To be Europe´s preferred short-haul airline, delivering market leading returns to their shareholders” (EasyJet 2015, p. 1). In 2015 EasyJet carried over 68.6 million passengers (EasyJet 2015, p. 6) making it the second largest airline in Europe measured in passengers, behind RYA. Today they operate over 735 routes across more than 30 countries with a fleet of over 240 airbus aircraft. They have 26 bases across UK and Europe, none of these located in Scandinavia (EasyJet 2016). EasyJet is not member of any alliance, and they state that “We are a low-cost European point-to-point short-haul airline (EasyJet 2015, p. 6). This may indicate that they have no immediately plans to launch long-haul flights. EasyJet is very similar to their main competitor which is RYA. EasyJet is listed on London SE under the ticker EZI LN.

4.3.3. Wizz Air

Wizz Air is a Hungarian LCC established in 2003. Their ambition is to make safe, reliable and affordable air travel available to everyone in central Eastern Europe (Wizz 2015, p. 12). Their first flight took off 19th of May 2004. In 2015 they carried 16.5 million passengers, offered 410 routes from 22 bases with main focus on Central and Eastern Europe (Wizz 2015, p. 6). Wizz Air has a single aircraft fleet, consisting of 55 aircraft, which is the youngest fleet of any European airline (Wizz 2015, p. 9). The company is very similar to what NAS was a few years back, before NAS launched their long-haul travels, but with a stronger low-cost focus. On 25th of February 2015 they completed their IPO on the London Stock Exchange, and are listed under the ticker WIZZ LN (WizzAir 2016). Wizz Air is therefore excluded from benchmarking due to lack of financial data. They are included as a peer in the relative valuation which is forward looking.

5. External strategic analysis

In this chapter different strategic frameworks will be applied to shed light on external factors that affect the airlines value creation. NAS and RYA are in the same industry, and the analysis is therefore conducted on behalf of both companies. Findings in this section are important for the upcoming forecasting and valuation, and will also be important to identify potential synergies. First we perform a PESTEL-analysis to examine the macro factors affecting the airline. Next we apply Porter´s five forces framework to analyze the competitive environment in the airline industry.

5.1. PESTEL-Analysis

The PESTEL-framework categorizes the environmental influences to an industry related to political, economical, socio-cultural, technological, environment and legal factors (Johnson, Whittington and Scholes 2011, p. 50). The goal of this analysis is to identify key value drivers for change and future issues related to these factors. History and past performance is important to identify trends and understand the mechanisms in the industry, but the main objective is to isolate and quantify key value drivers that will affect the industry in the future. Some value drivers may be difficult to quantify because of the soft nature of the factors, liberalization is one example of this. Due to the close connection between political and legal factors in the aviation industry, these factors are dealt with simultaneously. The identified factors will serve as a basis for our forecasts in section 8.

Questions to be answered in this section:

> *What are the most important external factors and key value drivers in the aviation industry? How do we expect them to develop?*

5.1.1. Political and legal factors

Mainly three regulatory acts have led to a more deregulated market in European aviation. First, the Single European Act of 1986 completed the internal market and ensured further European integration which has led to shift from a market characterized by monopolistic national carriers and FSCs, into a more competitive single market. In 1992, the *Regulation (EC) No 1008/2008* removed the remaining commercial restrictions for European airlines operating within the EU, and led to the European Single Aviation Market (European Parliament 2015a). The last act, The Single European Sky (SES) was launched in 1999 as a response to increased delays in the

industry because of air navigation. The initiative was intended to reduce fragmentation in the airspace, increase capacity and efficiency of air traffic management (European parliament 2015b). Despite the liberalization in the industry the last three decades, the European aviation industry remains restricted compared to other industries.

Deregulations in the industry led to the establishment of LCCs, whereas FSCs responded with their own LCC subsidiaries. The continuous deregulation has also led to an increasingly consolidated industry with waves of alliances and M&A activities (Németh and Niemeier 2012), which on general basis should lead to a reduction in competition, increased prices and a shift of power from customers to suppliers. The European legislation on state aid and competition is therefore an important part of the airline industry, where each individual merger or alliance is decided on a case by case basis by the EU com. The European Competition Authorities (ECA) sat up an own group to improve the enforcement of competition law in the field of air transport in 2004. This was a result of the ongoing consolidation and new developments in the industry. When a potential merger is announced the EU COM defines the market by origin and destination, and assesses the market share of each airline and the entry barriers. This means that each route is defined as an own market. If the conclusion is a dominant position on a given route, remedies or prohibition of the merger is initiated (Németh and Niemeier 2012). Potential remedies are surrender of slots, reduction or freeze of frequencies and pricing remedies. RYAs several attempts to acquire Aer Lingus were prohibited due to a resulting monopoly on 28 routes (EU com 2013), which is one of many mergers that are prohibited.

The deregulation of the industry in general, in addition to the continuous enforcement and remedies related to M&A, may be seen as key drivers to the potential increased competition from carriers situated in Asia and Middle-East, possessing clear cost benefits compared to European carriers. Strict regulatory acts and regulations of the market may also be seen as a possible cause of the financial difficulties some airlines and secondary airports have experienced. In addition, the legal structure of the companies tends to complicate the overview of carriers operating in several member states, with numerous of different subsidiaries. This is a result of carriers attempt to minimize the financial consequences of legislation.

As the demand of transportation by air has grown faster than airport capacity, the available airport real estate, resources and slots have become scarcer. This has made slot trading among airlines

a growing market, with more than ten times the number of trades in 2012 compared to 2000 at Heathrow, London. An airport slot is defined as permission to use the full range of airport infrastructure necessary to operate an air service on a specific date and time for landing and take-off (EU com 2016a). In relation to scarcer resources, The Grandfather Right states that airlines must use 80 percent of their allocated slots, or risk losing them the coming years. This is known as the “use it or lose it” rule. SAS received 60 million USD for a slot pair in 2015, and this is a market expected to be further formalized in the future (McKinsey 2015).

In addition to international legal and political rules, national rules affect flight carriers. Especially international carriers’ presence in some markets can be affected by national governmental regulations. In example, the Norwegian government currently suggests to introduce an airline seat tariff to meet climate goals. RYA state they will pull out of the Norwegian market in 2016 as a result of the seat tariff (Dagbladet 2016).

Concerning long-haul there are also regulations related to different regions. An airline needs an Air Operator Certificate (AOC) to be able to operate in given regions. If a company obtains an EU AOC they get approval to operate from all EU countries to most destinations in Asia, Africa and South America. Transatlantic flights are regulated by the EU-U.S. “open skies” agreement. The agreement makes any EU or U.S. airline able to fly between any point in the European Union and any point in the United States (EU com 2007).

5.1.2. Economical factors

Economic growth

Growth in gross domestic product (GDP) is an indicator of general economic and industrial growth. GDP is also considered a strong driver in the airline industry. Historical data indicates that the revenue passenger kilometer (RPK) growth is a multiple of GDP growth, especially world-wide, as shown in figure 11. At the same time there are regional differences both by nation and region. In emerging markets where an increasing share of consumers join the global middle class, air travel is one of the first discretionary expenditures to be added. This makes growth in GDP important in understanding and forecasting demand in such markets. In developed markets this demand is already met, and other factors such as vacation days, cost of travel, consumer confidence and service quality have greater impact (Boeing 2015, p. 22).

Figure 11 - Growth in RPK and real GDP world-wide (70-15)
(Source: Own contribution, Airbus 2015)

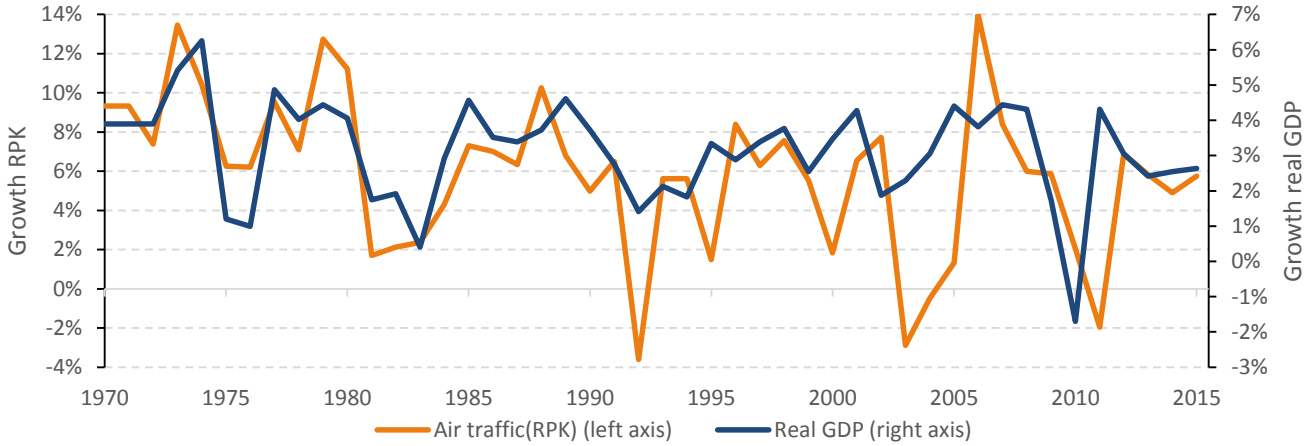


Figure 11 illustrates the correlation between growth in RPK and real GDP on a global level. The figure clearly illustrates that the growth of demand for air transportation (RPK) has been more volatile than growth in real GDP during the time period. The average multiple over the period is 1.95x, which supports the rule of thumb in the industry that “demand for air travel grows twice as fast as gross GDP” (BCG 2006). At the same time the multiple had a decreasing trend from the 70s to the millennium, where the ratio started increasing again. This may be related to the commercialization of the LCCs on a more global scale, helping the overall aviation industry take more advantage of global economic growth.

Boeing (2015) anticipates that world GDP will grow at an annual rate of 3.1 percent until 2034, whereas passenger growth is estimated to 4.9 percent per annum during the same period. The annual growth in Europe over the period is forecasted to 1.8 percent. Airbus (2015) projects an annual growth in real GDP of 3.2 percent during the same period, a growth of 4.6 percent in RPK during the period with 5.2 percent the first ten years and 4.0 percent from 2024-2034. Airbus (2015) forecast a growth of 70 percent over the next twenty years for the flow from Western Europe to the US. The international long-haul market is expected to grow at an annual rate of 4.7 percent, stronger growth than both domestic and short-haul markets.

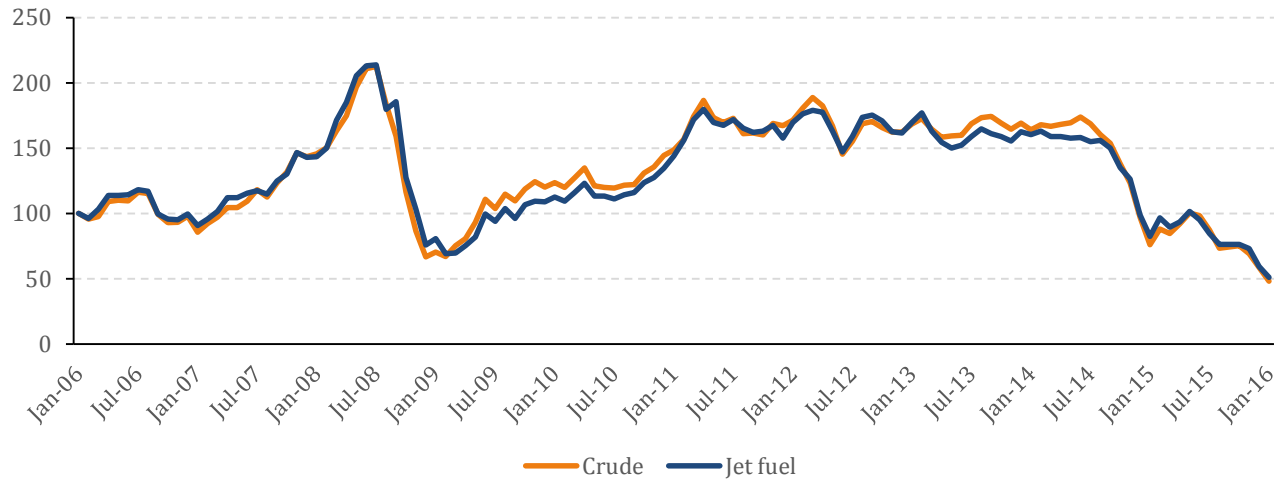
BCG (2006) finds that distinguishing underlying demand from induced demand is a key factor when estimating demand. Underlying demand is defined as increase in future demand at current real-price levels. Possible factors to such demand are increased population, income, trade and

change in taste. Induced demand may be described as the excess seat capacity in the market due to airlines overinvesting in capacity, which leads to reduced fares. Price elasticity needs to be taken into account for estimating such demand. As a result, using historic demand to forecast future growth may bias the forecasts upward. BCG (2006) also finds an S-curve effect in demand for long-haul and GDP per capita. Long-haul travel may be described as non-existing for low income levels. There is an increasing trend when income grows. The trend is expected to cap out at certain levels of income as available time and benefit of travelling becomes restrictive. Distinguishing between induced and underlying demand is considered beyond the scope of this thesis.

Fuel prices

Jet fuel is the largest operational cost in the industry (IATA, 2015e), representing 32.3 percent of total operating costs in the industry worldwide in 2014 (IATA, 2015). In Q4 2015 the fuel cost represented only 24 percent of operating expenses due to the drop in fuel prices (NAS Q4 2015, p.11). Jet fuel is a specialized petroleum-based fuel, containing additives to reduce risks associated with icing and explosions. As shown in figure 12, indexed jet fuel is closely correlated with Crude oil with a correlation of 0.982 during the period 2006-2016.

Figure 12 - Indexed price development Crude and Jet Fuel in USD (04-YTD)
(Source: Own contribution, Indexmundi)



After the steep drop in oil prices during and after the financial crisis, there has been a steady development until mid-2014. The continuous drop since then has resulted in prices fluctuating

around 30$ per barrel primo 2016. The recent drop in oil prices may be described as a result of weaker demand from China, increased production of shale oil in the US and the decision to not cut production by OPEC to increase their market share and power. The steep drop in prices is therefore assumed related to political decisions and unnatural high supply mainly driven by OPEC - not because of underlying shifts in demand. This makes it natural to believe that the current price level is not a good proxy for the long term price. At the same time the recent development in US has decreased the world average break-even considerably. It has made future prices capped at levels below historically. This is also supported by the crude oil forward curve, which shows a price today of delivery in June 2023 of 50.64 USD.

Reduced oil price affects the airlines mainly in two different ways: Decreased operational costs related to jet fuel and increased demand. The current reduction in oil prices is by Airbus (2015, p. 19) expected to support acceleration in global economic growth, which again is a key value driver for demand in the industry. On a more regional basis, oil producing countries are expected to see slowdown in GDP which may reduce demand in these regions.

Due to the great impact on operational expenses from fluctuations in jet-fuel prices, big increases and sudden movements are normally hedged away using relevant fuel derivatives. As an example NAS by YE 2014 held forward contracts on approximately 300 000 tons of jet fuel, which amounted to 27 percent of fuel consumption in 2015 (NAS 2014).

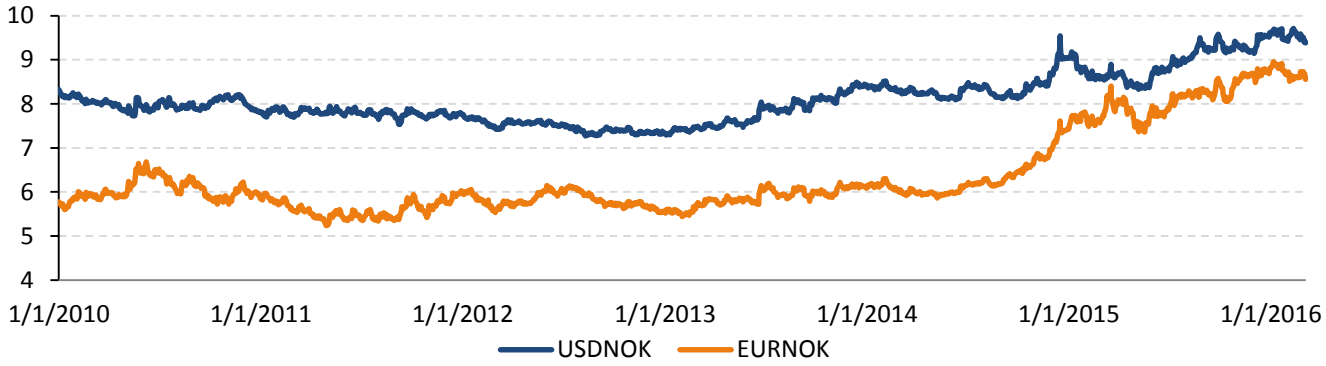
Foreign exchange rates

Air carriers with international operations are exposed to fluctuations in currencies, and foreign exchange (FX) risk is therefore present. The FX risk of an airline varies with its corporate strategy, size of international operations and hedging policy. The majority of key operating costs are denominated in USD in the airline industry. IATA (2015d) points to three main channels which directly affect an airlines exposure to FX risk: Demand, supply and financial accounts. The sensitivity to FX risk on the demand side varies on a route-by-route basis, but tends to be bigger in leisure markets as leisure travelers tend to be more sensitive to FX fluctuations. As aircraft payments and leasing costs are normally quoted in USD, fluctuations also affect investment decisions in the industry. In addition key operating costs, such as fuel, are denominated in USD. Related to financial accounts, FX fluctuations affect both profitability and balance sheet valuations. Regarding balance sheet valuations, risks are related to reporting standards and

marked to market for derivatives. In addition, funding in foreign currency is normal in the aviation industry.

Non-US carriers are normally in a situation of a FX deficit, leading to a conversion of local currency into USD to pay their obligations. Depreciation in local currency implies lower profits since costs are more often denominated in foreign currency in contrast to revenues.

Figure 13 - Development NOK/USD and NOK/EUR (10'-cut-off date)
(Source: Own contribution, Bloomberg)



According to figure 13, NOK is at a historical low level. This is mainly due to the high correlation with oil prices and the recent decreasing trend of interest rates in Norway. Even though FX risk is identified as a key risk factor for airlines, Loss and gains related to FX varies from one year to another for most airlines. This is difficult to estimate since several macroeconomic factors affect the result, and the amount of income in each currency decides the final exposure. We will also argue that NAS gets a larger fraction of international operations and hence more income in foreign currencies. They will therefore be less dependent on NOK in the forecast period. As a result, FX effects are excluded from our forecasts.

Interest rates

As a capital intensive industry with historically low profits, interest rate levels and fluctuations become important factors. Interest rates in the European region have been historically low since the financial crisis, to improve the economic conditions in the region. The average 10 year Norwegian government bond from 1985–2016 was 6.54 percent, from 2010–2016 it was 2.54 percent. By February 2016 interest rate level was 1.39 percent (Norges Bank 2016), which illustrates the dramatic decrease in interest rates. Low interest rates are an important factor,

especially for LCC with continuous renewal or growth in their aircraft fleet, as this makes cheap funding possible. However, one has to discuss if today's levels are to remain or not. Historically these levels are of course not normal, but it may be possible that we now got a new normal. Some analysts expects negative Norwegian interest rates within a year, other expect increased levels. It is therefore difficult to predict. Most analysts do however agree that negative interest rates are not normal and not something to expect in the long run.

5.1.3. Socio-cultural factors

Socio-cultural factors are considered to be more relevant for developed markets than emerging, where growth in GDP is seen as the key factor for the aviation industry. It is more difficult to quantify the effects and relations between socio-cultural factors, but to better understand the factors affecting the industry, these are analyzed below.

Population growth is an important factor in the aviation industry, as bigger population increases the potential passengers. From 1950 the world population has more than tripled, where Asian countries are responsible for more than half of the population growth (Airbus 2015). Forecasts by United Nations Population Division (Airbus 2015, p. 70) suggest an increase in world population of 30 percent within 2050, a high but considerable decreased growth compared to earlier periods.

Several studies forecast a rapid growth in the global middle class, where the biggest contribution is from emerging markets (EY 2013, Kharas and Gertz 2010 and Goldman Sachs 2008). EY (2013) projects that 66 percent of the global middle class will be situated in the Asia-Pacific by 2030. Euromonitor (2014) projects that 54 percent of the world population will live in Asia-Pacific, and 60 percent will live in urban areas. A combination of economic growth, growth in population and middle class, in addition to increased urbanization in emerging economies, will influence the international aviation industry directly. The European industry will also be influenced indirectly both in the short- and long-term. Growth in the mentioned factors will lead to increased competition as airlines from emerging economies are expected to grow (Airbus 2015). These carriers are expected to gain momentum, raising their share of global RPK to 62 percent in 2034 from today's share of 51 percent. Asia-Pacific is projected to become the largest market with 40 percent of world RPK. Long-haul passenger outflows from Western Europe to US and China will increase by multiples of 1.7 and 3.0 respectively by 2034. This trend is also expected in the passenger inflows in the European region (Airbus, 2015).

The growth in European visitors grew by 4 percent in 2014 compared to 2013, amounting to 588 million according to UNWTO (Airbus 2015, p. 70). This represents 46 percent of international tourism. Southern and Western Europe account for 74 percent of European visitors, while Northern Europe represents 14 percent with a growth of 6.9 percent compared to 2013. In addition to strong growth and a big share of international tourism, a survey conducted on behalf of European Travel Commission (ETC), European Tourism Association (ETOA) and Eurail Group, indicates strong growth in key long-haul markets from Europe. (ETC 2016)

5.1.4. Technological

Technological improvements related to aircraft, engines, IT and the use and application of mobile technology have been key factors for the success of LCCs and the rapid growth of the airline industry in general. Technological improvements have also been key for FSCs, as they have adopted a lot from the LCC business model the last decade. As fuel is the largest operational cost for airlines, fuel efficiency has been a key factor across the industry.

Figure 14 - Fuel efficiency and emission in the airline industry (90'-12')
(Source: Own contribution, IATA Airlines Worldwide 2013)

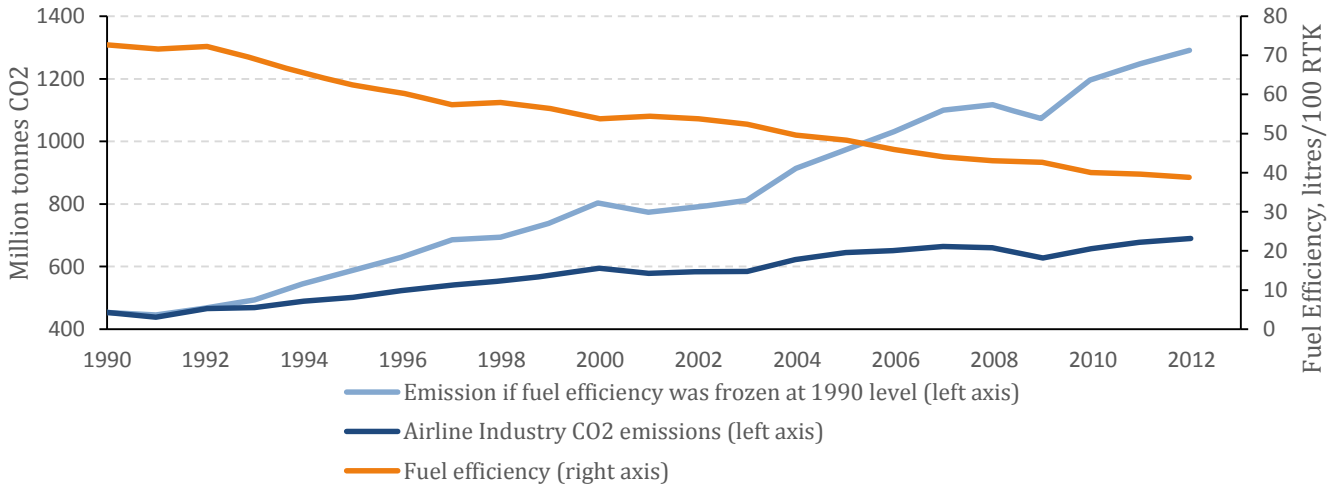


Figure 14 illustrates that if fuel efficiency had not improved since 1990 levels, the airline industry's total emissions would have been nearly the double amount of today. According to IATA (2015c) new aircraft have seen a massive improvement in fuel efficiency, being 70 percent more fuel efficient than 40 years ago and 20 percent more efficient than 10 years ago. This development is illustrated on the right axis in the figure. Newly introduced models like A380 (Airbus) and B787

(Boeing) are aiming at 3 liters per 100 passenger km. To quantify the differences across the industry, ICCT (2014) compared 20 carriers on the transatlantic market, showing NAS is providing 40 passenger km per liter (pax-km/L), compared to transatlantic market average of 32 pax-km/L. The least efficient carriers with a pax-km/L ranging from 27-28 are characterized by old fleets, twin-aisle airplanes and a big share of premium seating. The figure above and data presented should also be discussed in the light of the change in operational decisions in different business models. After introduction of the LCC business model there have been drastic changes to load factors, seat configuration and freight carriage. ICCT has modelled that seat configuration accounts for 46 percent of the variation in fuel efficiency on transatlantic flights, fuel burn accounts for 35 percent whereas load factor and freight carriage accounts for 10 and 9 percent respectively. LCCs have the youngest and greenest fleets in the industry. With an increased market share, as described in section 3.2, increased fuel efficiency comes as a natural result. The aviation industry has a goal of an annual fuel efficiency improvement of 1.5 percent from 2009 to 2020. In addition, they seek to reduce the net CO_2 emission 50 percent by 2050 compared to 2005 levels (IATA 2013). The aviation industry is a key industry in Europe, accounting for 4.1 percent of the regional GDP (Airbus 2015) and 3 percent of the regions greenhouse gas emissions (EU com 2016b). Fuel efficiency is therefore expected to remain an important factor in the coming years and possible remedies for high emission fleets and carriers may be expected.

Related to fuel efficiency is also the introduction of alternative fuel such as biofuel. The first commercial flights using biofuels were introduced in 2011, and during 2014 a total of 21 airlines have used biofuel for commercial flights (IATA 2014a). Biofuel is believed to decrease the overall carbon footprint by 80 percent over their full lifecycle. A further commercializing of such fuel may imply further political and legal remedies for old aircraft and fleets. This will give modern fleets and alternative fuel consuming aircraft an important competitive advantage.

The evolvement in technological solutions related to conference calls and IT-systems affect both customers and airlines. Increasing globalization and growth in companies looking to expand, both their operations and organizations, increase the demand for communication around the world. The possibilities for conference calls are increasing, as green numbers are being added to annual reports. At the same time, we find little evidence that conclude that this will lead to a significant decreased demand for air travel.

Leisure represents 52 percent of all international flights, according to UNWTO (Airbus 2015). A key factor restricting the travel pattern of long-haul travelers may be visa procedures. With the development of technology we expect visa procedures to become easier and contribute to increased long-haul travel in the future.

The emergence of metasearch travel engines the last years has clearly changed the information flow in the industry. As pricing is a top factor influencing a ticket purchase according the Global Passenger Survey (IATA 2015b), metasearch engines has led to a more efficient market. In addition, the survey states that proactive notifications from carriers, the use of technology to track luggage and to store boarding passes are keys for the customers. This technology is already implemented by the industry, with LCCs as the pioneers, and the evolvement of such services is expected to increase in the future.

Sharing economy business models have emerged the last years. The most known examples of this are Uber and Airbnb. This trend makes it affordable for more people to travel and is expected to contribute to increased travel. Destinations that earlier were not profitable for airlines due to constrained hotel capacity, will be made available by Airbnb and others. We see the emerging development of sharing economy business models as a trend that will continue the next decade and further reduce the cost of travel, make new destinations available and in total stimulate demand growth.

5.1.5. Conclusion and outlook

Despite the continuous deregulation of the industry, it is expected that both international and domestic legislation will keep the industry restricted in order to balance market fragmentation, environmental issues and customer needs. Continued consolidation and increased competition by carriers from emerging markets may be the result of these restrictions. In addition, remedies against carriers with old fleets with high emission are considered a key legal evolvement.

Growth in GDP is identified as the key value driver for the industry world-wide, with an average multiple for growth in RPK of 1.95x since 1970. Especially in emerging market this is expected to sustain. During the next twenty years RPK is expected to grow by 4.6-4.9 percent per annum world-wide, with strongest growth next ten years. Growth in GDP during the period is expected at 3.1 percent world-wide and 1.8 percent in Europe. The international long-haul market is expected

to generate the strongest growth, with annual growth of 4.7 percent. Oil price is a key value driver for both operational costs and demand, since fuel is a large fraction of operational cost and oil is an economic driver. Prices are expected to rise in the long run to 51.23 USD in 2025 based on the forward curve. Low prices will contribute to increased demand internationally and low fuel costs.

World-wide population is expected to grow by 30 percent by 2050, a considerable decrease from historical development. A considerable increasing middle-class from emerging economies is expected, whereas 60 percent of the middle-class will be situated in Asia-Pacific in 2030. This will transfer to strong traffic growth in the region, e.g. flows from Western Europe to China are expected to grow by 3.0x by 2034. Carriers from this region are expected to grow and become more present on a global scale, with Europe remaining a preferred destination for long-haul travel.

Emissions are expected to remain a key factor in the industry, and continuous improvements in technology are expected to push the relative operational cost benefit for LCCs further. Fuel efficiency in the period 1990-2012 shows a CAGR of 2.48 percent in efficiency gains, a development expected to continue. As leisure represents the majority of international flights, recent growth in metasearch travel agents and sharing economy business models are expected to increase price pressure, reduce the cost of travel, increase demand and possible destinations.

5.2. Porter´s Five Forces

Porter´s five forces framework helps identify the attractiveness of an industry in terms of five competitive forces: The threat of new entrants, the threat of substitutes, the power of buyers, the power of suppliers and the rivalry among existing competitors (Porter 2008). Porter defines an attractive industry as one that exhibits good profit potential. When the forces are strong, the profit potential is small and vice versa. The five forces analysis helps to identify the competitive situation in the industry.

Sub-question to be answered in this section:

> *How is the competitive environment in the industry? How do we expect it to be in the future?*

5.2.1. Threats of new entrants

New entrants to an industry bring new capacity and a desire to gain market share that puts pressure on prices, costs, and the rate of investment necessary to compete (Porter 2008, p. 80). Threat of new entries therefore limits the profit potential of an industry. According to Porter, the threat of entry in an industry depends on the height of entry barriers that are present and the reaction entrants can expect from incumbents (Porter 2008, p 81). Important entry barriers for the airline industry are identified as supply-side economies of scale, capital requirements, incumbency advantages independent of size and restrictive government policy.

Supply-side economies of scale

Higher number of seats reduces the cost per unit as the fixed costs are spread over more units, this makes supply-side economies of scale important, especially for LCCs. In addition, there is a strong correlation between size on aircraft orders and discount compared to list prices in the aviation industry. NAS´ order in 2013 is a good example of this. This forces new entrants to enter in large scale if they don´t want to accept a cost disadvantage.

Capital requirement

The airline industry is a capital intensive industry which may reduce the threat of new entrants. At the same time, Porter states that it is important to not overstate the degree to which capital requirement alone deter entry (Porter 2008, p. 81). He points out that if industry returns are attractive, and expected to remain so, and capital markets are efficient, investors will allocate the capital entrants need. The height of this entry barrier is therefore closely related to the profitability in the industry. Europe remains the least profitable of world's major aviation regions according to CAPA (2014, p. 84), which indicates that capital requirement is a high entry barrier. One way to avoid this barrier is to lease aircraft. There are many examples of new entrants in the airline industry the last decades despite high capital requirements. This makes us conclude that capital requirements are not an entry barrier of great height.

Incumbency advantages independent of size

Existing airlines have an advantage over new entrants with regards to airport slots because of The Grandfather Rights discussed in section 5.1.1. In areas with only one airport which operates close to maximum capacity, this become a major entry barrier. The slot allocation regulation was intended to give easier access for new entrants, but analysis made by the EU com concluded that the allocation system still can be improved. They have proposed a recast which will provide

easier access for new entrants and allowing a greater number of carriers to challenge the dominant player in the markets which have a large presence at busy airports (EU com 2016a). Slot trading was discussed in section 5.1.1. It will give an advantage for large players, since the expensive slots make it even more difficult for new entrants. We conclude that the incumbency advantages independent of size depend on the pressure on the airport at the given location.

Restrictive government policy

The airline industry has historically been heavily regulated, and restrictive government policy may hinder new entrants. Regulations can also make other entry barriers higher such as raising economies of scale new entrants' faces. One example is safety regulations, where the unit cost decreases with fleet size since the educational facilities can be spread out on more units. However, if regulations are to change in future, we expect a further liberalization with regards to "open skies" including more countries.

The effects of supply-side economies of scale, capital requirement, incumbency advantages independent of size and the restrictive government policy indicate high entry barriers. However, it is important to remember that new airlines enter the industry every year. Overall threat of new entrants is found to be moderate, but there are segments where the entry barriers are lower and the threat is accordingly higher. The long-haul segment is one example of this. We therefore conclude that the threat of new entrants differs between the segments in the airline industry.

5.2.2. The power of suppliers

A supplier is defined as powerful if it can capture more of the value themselves by charging higher prices, limiting quality or services, or shifting costs to industry participants. Powerful suppliers, including suppliers of labor, can squeeze profitability out of an industry that is unable to pass on cost increases in its own prices (Porter 2008, p. 82). The main suppliers in the airline industry are identified as suppliers of airports, aircraft and labor.

Airports

We have already described The Grandfather Rights in section 5.1.1, and the historical increase in travel by air in section 3.4. This put pressure on airport capacity, and a lot of airports already operate with traffic in excess of their design (McKinsey 2015). Regions with only one airport result in more powerful airports. If they decide to increase their fees they leave the airlines with two options: Accept the fee or cancel their route. London is a city with several airports where each

individual airport is less powerful. Due to their focus on low costs, many LCCs have a strategy to utilize secondary airports. This reduces the bargaining power of airports with excess capacity.

The airports are obviously dependent on the airlines to stay in business. If they raise their fees too much, they risk that all airlines shut down their business at the given airport. RYA closed its base in Valencia in 2008 due to disagreement with local authorities over allocation of marketing funds (BBC 2008). Another example is the announced seat tariff in Norway discussed in section 5.1.1. However, the number of airports is few compared to the number of airlines. In regions with pressure on airport capacity, airports increase their power. We would conclude overall that airports have a moderate power.

Aircraft

The two main suppliers of commercial aircraft are Boeing and Airbus. They are expected to account for 85 percent of the deliveries to the industry over the next 20 years (Flight Global Report 2015, p. 2) and the market for aircraft is therefore in a duopolistic situation. This may give aircraft suppliers' high bargaining power and makes it difficult for airlines to negotiate on price. However, the aircraft Boeing and Airbus offer are very similar and almost perfect substitutes. A320neo is comparable with B737-8, and A350 is similar to B787 Dreamliner. The competition between the two suppliers is intense, which reduce the supplier power of aircraft manufacturers.

A single aircraft fleet increases the bargaining power of the aircraft manufacturers. To avoid this, airlines engage in negotiations with both manufacturers. NAS' order of 100 aircraft from Airbus in 2012 is one example of this practice. That order laid pressure on both Boeing and Airbus in future negotiations. Aircraft manufacturers bargaining power do also depend on the size of the airline. One example is RYA, which is a significant customer of Boeing with currently 372 B737 on order (Ryanair 2016). Switching costs related to aircraft may be high for airlines due to several reasons. One example is regarding which type the crew is trained for. Switching costs increase the bargaining power of the aircraft manufacturer significantly, and some airlines therefore educate personnel for both types.

Taking into account two suppliers which have intense competition, many small airline companies and some degree of switching cost, we conclude that the power of aircraft suppliers is moderate. We also expect it to remain so in the future.

Labor

Airlines have employees as pilots and crew, but Pilots are the only supplier of labor that can navigate the aircraft which makes them powerful. The pilots' and crew unions have considerably bargaining power, which has led to several strikes the last decades. Strikes may damage an airlines reputation, lead to economic loss and in worst case destroy the company. Historically airline employees have not been reluctant to use their bargaining power to strike, which illustrates how powerful they are. There has been a trend towards organizing employees in subsidiaries instead of employment in the parent company. This development is thought to continue, with an increasing trend of international labor, both for pilots and crew. As a result, unions will become less powerful.

To summarize the power of suppliers, we conclude that the power of airports depend on the capacity at the given airport. Aircraft manufacturers are not very powerful considering the duopolistic situation, this is due to intense competition and similar products. The airlines face powerful labor unions today, but we think they will become less powerful in the future following the arguments above.

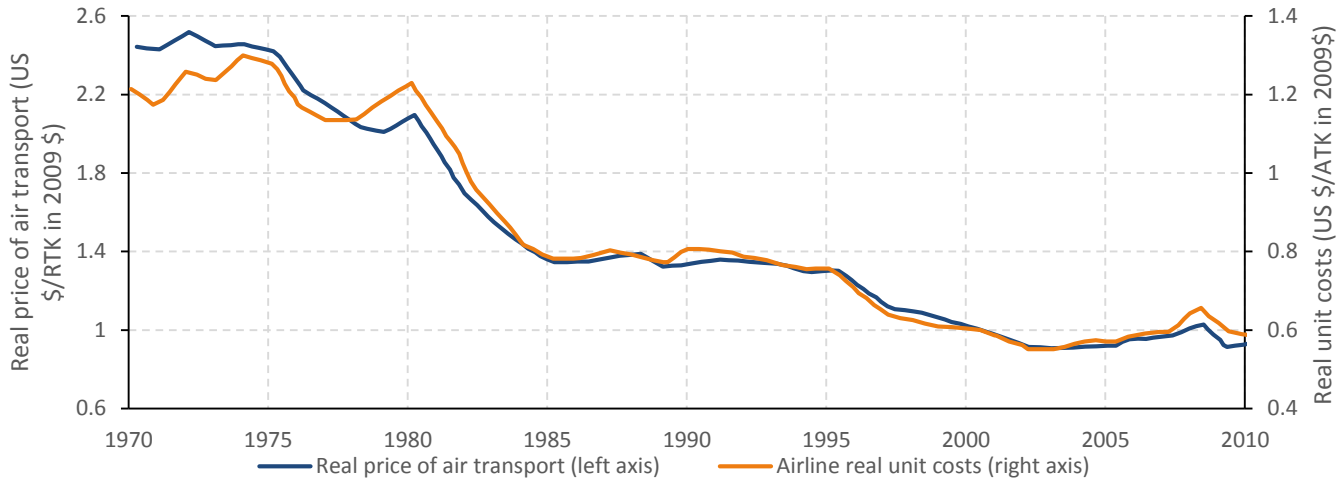
5.2.3. The power of buyers

Powerful buyers can capture more value by forcing down prices, demanding better quality or more service (thereby driving up costs). They can generally play industry participants off against one other, all at the expense of industry profitability (Porter 2008, p 83). Buyers are powerful if they have negotiating leverage relative to industry participants. Especially if they are price sensitive, they use their clout primarily to pressure price reductions (Porter 2008, p. 83). The buyers of the airline industry are the individuals buying tickets.

Transportation on a given route is comparable between different airlines despite different business models and thus services included. The market for airline tickets is also transparent due to several meta-search engines online, discussed in the PESTEL analysis. A quarter of all travelers visit at least three websites before purchasing their tickets according to IATA (2014b, p. 6). These findings point towards low switching costs for passengers. Comparable products combined with transparency and low switching costs result in powerful customers. All reductions in real unit costs have historically been transferred directly to customers through reduced fares (IATA 2013a, p 18). Figure 15 illustrates their power. We expect the industry to be even more

transparent in the future due to technological development and increased use of technology of travelers.

Figure 15 - Real price of air transport and real unit costs (70'-10')
(Source: Own contribution, IATA (2013))



5.2.4. Threats of substitutes

Porter (2008, p. 84) states that "If an industry does not distance itself from substitutes and through product performance, marketing or other means, it will suffer in terms of profitability – and often growth potential." Customers are affected by two main factors when they are deciding how to travel: Price and travel length measured in time. Substitutes for short-haul flights may be boat, bus, car or train. The infrastructure in the country decides how attractive these substitutes are, but for long-haul flights there are no similar substitutes.

Business travelers are more sensitive than leisure travelers with regard to time consumed on travels, and are therefore prepared to pay more to reduce travel time. For some business travelers air transportation has been the only option. Use of video link instead of physical meetings makes business travelers more price sensitive. Video link is less time consuming, reduces traveling costs and is environmental friendly (Harvard Business Review 2009). However, the video link technology today does not represent a perfect substitute for physical meetings. If the price of air transportation increases, this threat might become bigger based on the findings in the PESTEL analysis. In total, we conclude that the threat of substitute for business travelers is low.

The airline industry faces higher threats of substitutes in countries with good infrastructure and short distances between cities, low fares is therefore more important in such areas. For long-haul travels we do not see any substitutes that represent a threat. The threat of substitutes in the airline industry is therefore said to be low in total.

5.2.5. Rivalry among existing competitors

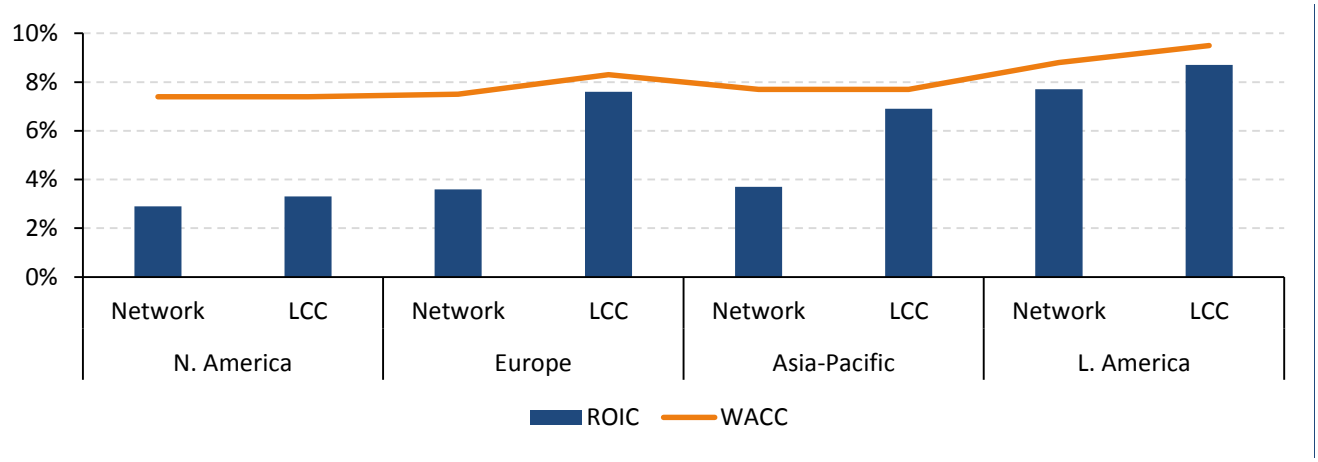
Rivalry among existing competitors takes many familiar forms, including price discounting, new product introductions, advertising campaigns and service improvements, and high rivalry limits the profitability in the industry (Porter 2008, p. 85). The airline industry has generated one of the lowest returns among all industries over the past 30 to 40 years according to McKinsey & Company (IATA 2013a, p. 12).

In section 3.5 we analyzed fragmentation in the Norwegian market and found that SAS and NAS had almost 85.9 percent market share. If the profit in the Norwegian market is high, combined with low fragmentation, threat of new entrants should be high. However, the airline industry has the discussed entry barriers that reduce this threat. As we saw in section 3.5, flag carriers do often have large market share in domestic markets due to The Grandfather Rights. The markets are however not monopolies and rivalry is intense due to homogenous products, transparency and low switching costs. The result is price competition, which transfers value directly from airlines to customers. Threat of substitutes is also significant in some short-haul markets which force airlines to further reduce fares.

If established airlines reduce the number of departures on some routes to increase their load factor, they risk losing the slot next year due to the “use it or lose it” rule. This may result in more efficient markets and lower fares, but it may also lead to loss for the airlines. The above may explain why threat of new entrants is high despite low historical long term return on some routes. Figure 16 yields the spread between ROIC and WACC in the period 2014-2011 for both FSCs and LCCs. One can observe that European LCCs, on average, is one of the closest to deliver a ROIC equal or greater than WACC. Breakeven load factors are highest in Europe, caused by a combination of low yield due to the highly competitive open aviation area, and high regulatory costs according to IATA (2015c, p. 6). During the time period 1999 to 2007, twenty-two European LCCs declared for bankruptcy (Cento 2009, p. 24). Several new airlines have been established in

the European short-haul segment the last decade despite intense rivalry. The European long-haul segment is not characterized by the same intense rivalry.

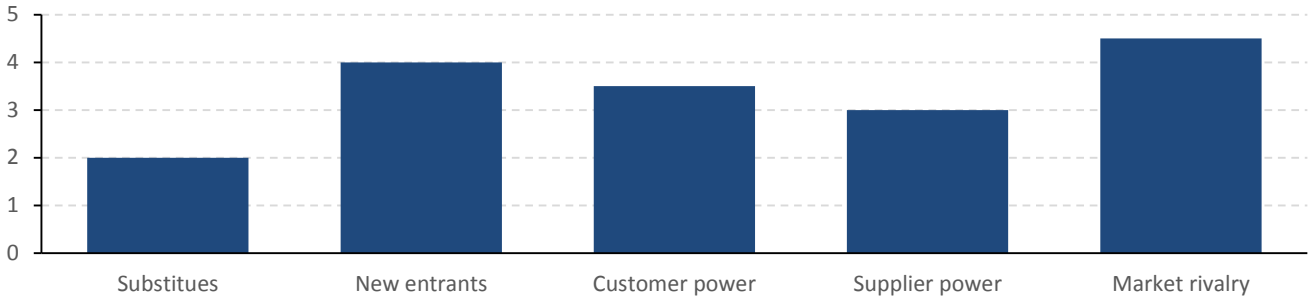
Figure 16 – ROIC and WACC comparison (04'-11')
(Source: Own contribution, IATA 2013)



According to McKinsey (IATA 2013a, p. 1) 90 percent of FSCs operating profits stems from long-haul operations. As mentioned in section 4.1.3., LCCs have not traditionally engaged in this segment before with a few exceptions. The relatively less intense rivalry has led to a higher cost level for some airlines operating long-haul. This gives a player like NAS an opportunity to offer tickets with higher margins. There are however no guarantees for success for new entrants within long-haul. McKinsey (2013) points at several factors which they consider different from short-haul, and thus makes it difficult for LCCs to copy their short-haul business model. One example highlighted by McKinsey is that half of the potential unit cost advantage for LCCs in long-haul is from higher seat capacity, produced by shrinking premium cabins. Many of the FSCs do vary their seat configuration based on demand, to maximize profits and hence beat LCCs at their own game.

We can conclude that rivalry in the European short-haul industry is very intense. The competition is expected to become even harder due to Asian carriers that establish business in Europe. The competition is less intense in the long-haul industry, and the threat of new entrants is therefore significant in this market. Our Porter five forces analysis is summarized in figure 17, where every force is given points at a scale ranging from one to five, where five indicate a strong force.

Figure 17 - Summary Porter five forces
(Source: Own contribution)



6. Internal analysis

In this chapter key industry measures are analyzed, and the historical performance of NAS and RYA is benchmarked against the peer-group. In addition, both profitability and liquidity are analyzed in a financial analysis. An overview of key industry measures is shown in appendix 1.

6.1. Key industry measures

Question to be answered in this section:

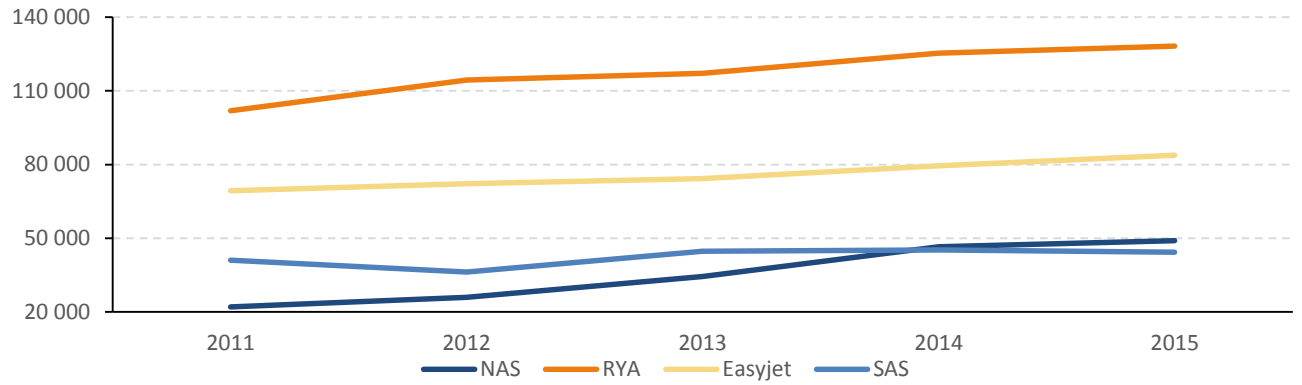
How does NAS and RYA perform compared to peers on key industry measures?

6.1.1. Available seat kilometers

In the airline industry, supply of passenger carrying capacity of an airline is measured by available seat kilometers (ASK). ASK is therefore a good indicator of operational size compared to revenue, which bias a FSC upward. ASK is found by the following relation:

$$ASK = available\ seats \times kilometers\ flown$$

Figure 18 - ASK (11-15)
(Source: Own contribution, Annual reports)



We see from figure 18 that RYA is by far the greatest supplier of ASK. NAS and SAS offers approximately the same supply as indicated in section 4.1. EasyJet is somewhere in between RYA and the two other carriers. Both NAS and RYA have large firm orders, but NAS will increase their ASK significantly the coming years due to large long-haul growth supported by growth in the short-haul market. We therefore expect the gap in ASK between RYA and NAS to decrease the coming years.

6.1.2. Load factor

Load factor is a measure of the capacity utilization of an airline fleet. The load factor is found by the following relation:

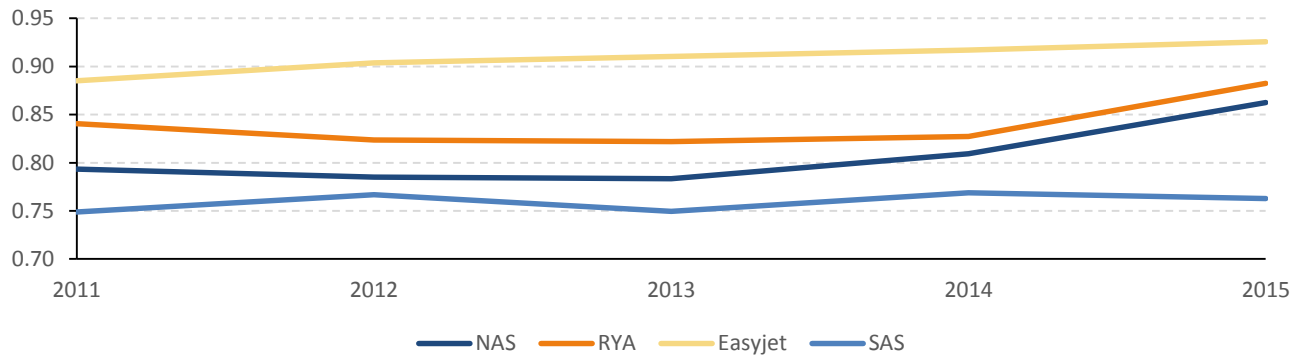
$$Load\ factor = \frac{RPK}{ASK}$$

Revenue passenger kilometers (RPK) show the number of travelled kilometers by paying customers, and are found by the following relation:

$$RPK = sold\ seats \times kilometers\ flown$$

A load factor of 1 indicates that every seat on every flight is used. Load factor is considered an important measure since the airline industry is capital intensive and has high fixed costs. It is especially important for LCCs due to capacity utilization necessary for profitable operations.

Figure 19 – Load factor (11-15)
(Source: Own contribution, Annual reports)



From figure 19 we clearly see that the three LCCs have a higher load factor than FSC SAS. We observe that EasyJet has highest load factor with 0.93 in 2015. RYA and NAS have experienced a somewhat similar development and increased their load factor to 0.88 and 0.86 respectively in 2015. One reason for the increased load factor for NAS, might be the introduction of long-haul in 2013. The long-haul business has an average load factor of 88.3 percent since the launch. This number is not expected to increase in the coming years due to launch of new routes in new markets. We also expect a stable load factor on short-haul for NAS because of continuous expansion in Europe. SAS has a load factor of 0.76, which is significantly lower than the other three LCCs. Load factor is less important for FSCs due to their business model. We don't expect any increase in load factor for SAS, a more likely scenario is a decrease due to their increased

focus on frequent flyers, which are more profitable. However, it is important to mention that load factor is not a measure of profitability. An airline can increase its load factor in competition with other airlines by simply reducing their fares, which may lead to loss. It is therefore important to see the load factor in relation to the yield.

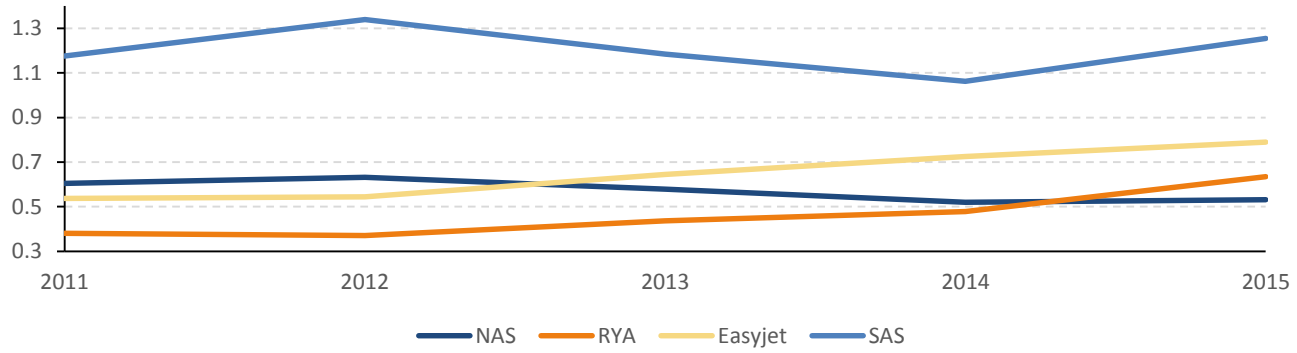
6.1.3. Airline yields

Airline yields (yield) is the average revenue produced per passenger-km or tonne-km carried (Doganis 2001, p. 9). The yield is found by the following relation:

$$Yield = \frac{revenues}{RPK}$$

The yield is therefore mainly affected by kilometers flown and fare prices.

Figure 20 – Yield (11-15)
(Source: Own contribution, Annual reports)



We see clearly from figure 20 that LCCs have a business model with a low yield compared to SAS. This illustrates the differences in the two business models, as the trend was opposite for load factor. FSCs get higher yield from higher fares and especially premium tickets. To maximize the producer surplus FSCs offers, as mentioned in section 4.1.1., a wide range of different fares. NAS had the highest yield of the three LCCs in 2011, but has the lowest yield in 2015. The negative trend is due to longer flights after the introduction of long-haul. If we isolate operations into short- and long-haul, we obtain a yield for long-haul of 0.43 since introduction. We expect slightly lower future yield levels for NAS as a result of increased competition in the short-haul market. Figure 19 and 20 clearly identify differences between LCCs and FSCs. It is therefore important that we analyze the combined effects of load factor and yield. This is done by the measure revenue per available seat kilometer (RASK).

6.1.4. Revenue per available seat kilometer

RASK is airlines average revenue produced per available seat kilometer supplied. RASK is found by the following relation:

$$RASK = \frac{revenues}{ASK}$$

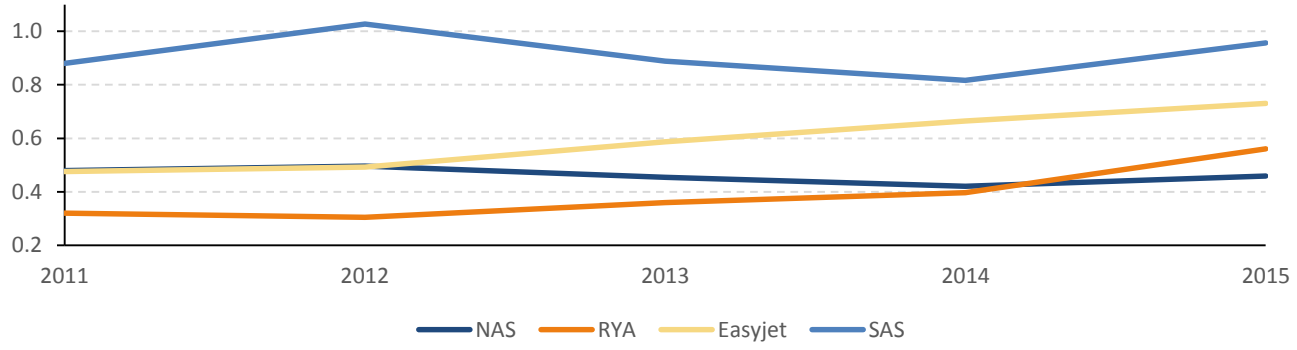
If costs are held constant, a higher RASK indicates a more profitable airline. The combined effect of load factor and yield is clearer if RASK is rewritten as:

$$RASK = load\ factor \times yield$$

By combining these factors and obtaining RASK an unbiased comparison across airlines is possible.

Figure 21 – RASK (11-15)

(Source: Own contribution, Annual reports)



As observed from figure 19 and 20, RYA has increased both yield and load factor, and therefore increased their RASK significantly in the period 2012-2015 as shown in figure 21. The main reason of this development is attributed to the introduction of the AGB program. RYA has had positive momentum and had a RASK of 0.56 in 2015 which is second highest of the three LCCs. We do not expect a large increase in load factor the coming years due to today's high level. EasyJet has a RASK of 0.73 in 2015, which is highest of the three LCCs, mainly due to the high load factor. NAS had the lowest RASK with 0.46. They have increased their load factor the last years but reduced their yield due to long-haul operations. As mentioned above, we expect decreased yield and therefore a reduction in RASK in the future. In 2015 SAS has a superior RASK, which is natural since a FSC usually have a higher cost level than LCCs. As a result

RASK has to be analyzed in relation to the cost level of the airlines to be able to compare the different business models.

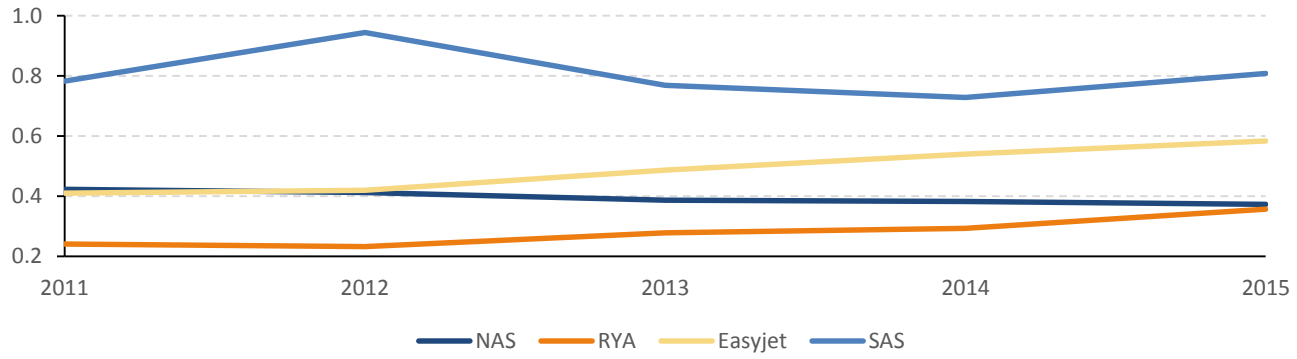
6.1.5. Cost per available seat kilometer

Cost per available seat kilometer (CASK) is the airline industry measure of unit cost. CASK represents the cost of operating one kilometer and is expressed by the following relation:

$$CASK = \frac{operating\ cost}{ASK}$$

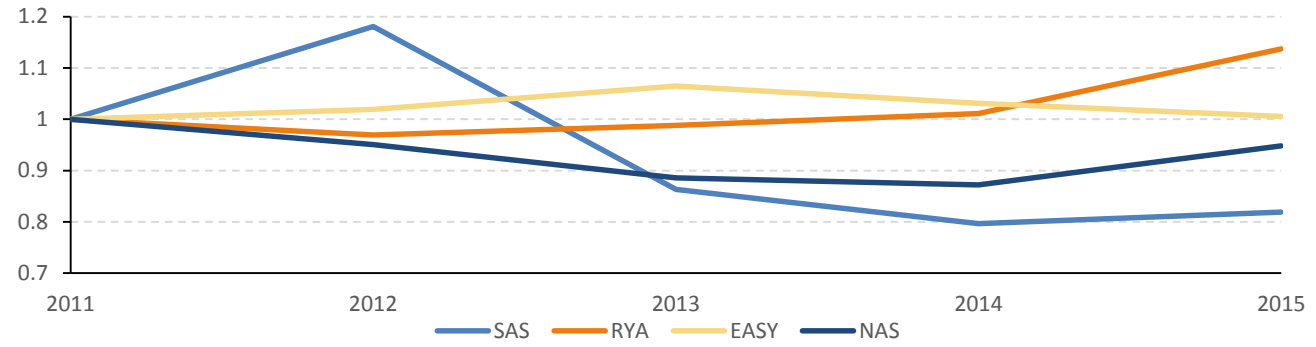
LCCs have a massive focus on this measure, because low CASK implies that the airline easier can be profitable. If they reduce the CASK they also reduce their break even and can thus offer lower fares.

Figure 22 – CASK (11-15)
(Source: Own contribution, Annual reports)



We see clearly from figure 22 that the LCCs have a lower unit cost than SAS. RYA has lowest unit cost through all five years, but we see that CASK is increasing to 0.36 in 2015 which may be related to implementation and increased costs regarding the AGB program. However, we expect that RYA also the coming years will have the lowest unit cost due to their strategic goals, discussed in section 4.2.2. NAS has the second lowest CASK in 2015 with 0.37. EasyJet has the highest unit cost of the three LCCs, estimated to 0.58 in 2015. Some of the increase in unit cost stems from the depreciation of NOK against GBP. SAS has reduced its unit cost significantly from 0.94 in 2012 to 0.81 in 2015. This illustrates that cost reductions carried out by SAS and other FSCs, as mentioned in section 6.2.2., make them more competitive. The reduction in SAS unit cost compared to other carriers is very clear when we observe the indexed CASK ex. fuel in figure 23. In addition, this figure isolates the effects of FX fluctuations.

Figure 23 – CASK ex. fuel indexed (11-15)
(Source: Own contribution, Annual reports)



Payroll is a significant fraction of unit cost and we have chosen to investigate if there are significant differences in payroll costs as a fraction of unit cost between the companies. This is due to different income levels in the four countries where the carriers are located.

Figure 24 – Gross income 15'
(Source: Own contribution, SOURCE)

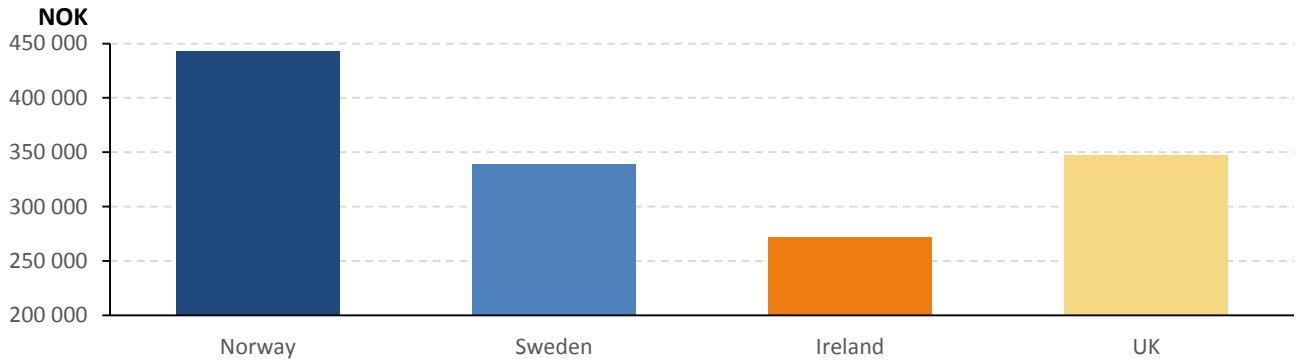


Figure 24 shows gross income for 2015, denominated in NOK, in the countries where the four carriers are established. It clearly shows that Norway is the country with highest income level, and we therefore choose to measure payroll as a percentage of CASK to investigate if this can give more insight into differences in the companies unit cost.

Figure 25 – Payroll as percentage of CASK in 2015
(Source: Own contribution, Annual reports)

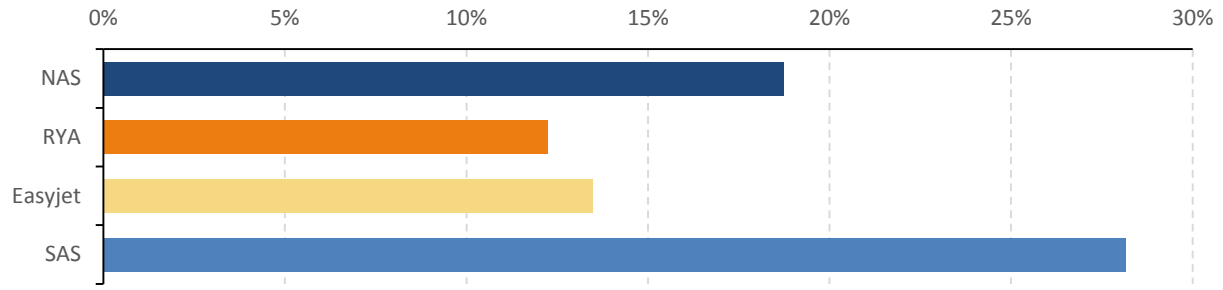


Figure 25 reveals large differences between the companies in 2015, when investigating payroll as a fraction of CASK. RYA has the lowest fraction with 12.2 percent, which is as expected based on the income levels presented in figure 24. EasyJet is slightly higher with 13.5 percent, while NAS has 18.7 percent. This difference between the LCCs is quite high given the small margins in the industry. However, we expect NAS´ payroll fraction to decrease over the next years due to more international operations with bases and subsidiaries in several European countries. Over 28 percent of SASs unit cost consists of payroll costs. Both UK and Norway had higher gross income than Sweden in 2015, thus this is not due to the income level in Sweden. SAS has a large fraction of Norwegian and Danish employees, as well and they are an old firm with high salaries. This make them less competitive, and the salaries in the company have been reduced several times to stay in business, as mentioned in section 6.2.2.2.

CASK can be compared across different airlines but there are several pit falls. The measure does not take into account length of routes. An airline with longer routes on average, will obtain a lower CASK, all else equal. However, we have chosen to compare the different companies to illustrate the differences between the business model and the development in the industry.

6.2. Financial analysis

A financial analysis is necessary to supplement the strategic analysis above in addition to build an important basis for the forecasting in section 8. The aim of the financial analysis is to assess profitability and liquidity of NAS and RYA with regards to both level and trend by a competitive benchmarking with its peers. All pro forma statements are shown in appendices 2-13. In addition, key financial measures for NAS is shown in figure 26.

Figure 26 – Summary key financial measures NAS 11'-15'
(Source: Own contribution)

Historical key financial measures NAS NOK (1 000)	2011	2012	2013	2014	2015
Net Revenue	10 532 191	12 859 042	15 579 545	19 540 039	22 491 200
EBITDA margin	11.71%	16.78%	14.65%	9.04%	18.53%
Profit margin	3.53%	7.01%	5.09%	0.86%	7.01%
ROIC	3.21%	6.19%	4.60%	0.60%	4.23%
NIBD	9 635 857	12 144 468	14 455 048	26 167 437	34 276 265

6.2.1. Financial statement adjustments

In a financial statement analysis, it is important to assess the quality of the financial statements. NAS, RYA and its peers all follow International Financial Reporting Standards (IFRS) and use auditors to provide correct and unbiased financial statements, but IFRS does not distinguish between core and non-core activities. According to Petersen & Plenborg (2012, p. 68) the company´s operations is the primary driving force behind the value creation and therefore important to isolate. Financial statements need to be reorganized to assess value creation and the firm's operational performance. The definition of operations is not clear-cut and depends on the business model and the characteristics of the firm (Petersen & Plenborg 2012, p. 68). Some of the items in the financial statements are self-explanatory in their classification, but several items necessitate further analysis of notes and needs to be adjusted. Benchmarking NAS and RYA against its peers, also requires that classifications are carried out in a consistent matter across firms and financial statements. All companies in this analysis have very similar items, but with some deviations in accounting names. As a result, description of justification and argumentation about unclear items occurring in financial statements is provided on a general basis in the following section. All reformulations are carried out following Petersen & Plenborg (2012), supported by Koller, Goedhart & Wessels (2010) and based on the companies' annual and interim reports.

6.2.1.1. Income statement adjustments

Other income

Other income may stem from different transactions and is therefore not clear-cut. Gains or a loss from sale of non-current assets is a special item which may be characterized as operational

according to Petersen & Plenborg (2012, p. 75). Another example of such income may be compensations from law suit, which is an income that wouldn´t occur next year and may therefore be treated as financial. Income items not related to passenger or ancillary revenues are therefore analyzed for each income statement for all investigated companies.

Operational lease expenses

Most fleets in the industry consist of both leased and owned aircraft. It´s important for LCCs to have a young and flexible fleet, and many LCCs choose operational leases to obtain new aircraft. Operational leases bias most financial ratios since it´s not recognized on the balance sheet. Reorganization of the financial statements is carried out by capitalizing the value of the assets on the balance sheet and adjusting operating profit upward by removing the implicit interest in rental expense (Koller, Goedhart & Wessels 2010, p. 577). Several methods for capitalization may be applied and are presented by Koller, Goedhart & Wessels (2010). We define asset value as:

$$Asset\ Value_{t-1} = \frac{Rental\ expense_t}{k_d + \frac{1}{Asset\ life}}$$

Where k_d denotes cost of financing the asset, and the fraction is the periodic deduction assuming straight-line depreciation. As operational leases are secured in the asset, cost of debt is assumed lower than the company's unsecured debt. As a result, yield of AA-rated corporate bonds should be applied as a proxy for the relevant cost of financing (Koller, Goeadhart and Weesels 2010, p. 583). This method requires an estimate of the asset´s life time, which is not precisely disclosed in financial statements. A similar way of capitalizing operational leases, is derived from the presented method and is applied by several companies in the peer-group. To capitalize the operational leases, both EasyJet (2014) and SAS (2015) multiply their operational lease expenses by a capitalization rate of 7 to estimate the asset value, while McKinsey (IATA 2013a) uses 7.3 as lease multiple. Backing out the implied asset life with $k_d = 0.0278$[5], results in an implied asset life of 8.7 years. This measure seems reasonable when considering that commercial aircraft should be depreciated over 7 or 12 years under MACRS[6] depending on the case. As a result, a capitalization rate of 7 is assumed for all companies investigated, capitalized operational lease calculations for NAS, RYA and its peers are carried out in appendix 14. When

[5] Yield on 10y AA-rated US corporate bond 03/03/2016. Source: Bloomberg
[6] Modified Accelerated Cost Recovery System. Tax depreciation system in United States.

operational leases are capitalized, company specific cost of debt is used to estimate interest expenses, and depreciation is calculated as the residual with regards to the artificial lease expense. Cost of debt for NAS and RYA is calculated in section 9.1.2. Cost of debt calculations are shown in appendix 15 for SAS and appendix 16 for EasyJet. It is important to bear in mind that the capitalization of operational leases does not affect the firm's equity, as the capitalization affects both operating assets and NIBD.

Restructuring costs

Restructuring of an organization is assumed required from time to time for every organization to stay competitive, and may be necessary to manage operational challenges. Costs related to restructuring are as a result recognized as operational in accordance to Petersen & Plenborg (2012, p. 84).

Other losses/gains - Derivative financial instruments

Airlines may use derivatives for financial risk management of jet fuel price, interest rate risk and FX risk. Petersen & Plenborg (2012, p. 78) state that both operational and financial hedges are financial decisions, and their gains and losses should be treated as part of financing activities. As a consequence, gains and losses associated with the use of financial instruments are recognized as financial.

Net financial items

Net financial items are the sum of different financial items, such as interest income and expenses, gains and losses related to FX exposure and other financial items. Gains and losses in such items relates to financial assets and financial liabilities, which fluctuate due to exposure to different risk factors such as FX and interest rates. A firm's financial policy decides whether these risks should be hedged according to Petersen & Plenborg (2010, p. 76). Net financial items are as a result recognized as financial.

Share of profit (loss) from associated company

Plenborg and Petersen (2012, p. 76) states that investments in associates and related income or loss should be classified in accordance to the associates relation to the firm's core business. As a result, all associated companies in financial statements are analyzed individually, and profit (loss) from associates are defined as operational or financial according to their relation to NAS, RYA

and their peers. The associates are mainly identified as subsidiaries, handling or subcontractors, and therefore considered an integral part of operations. At the same time some investments as NAS' share of Norwegian Finans Holding ASA and RYA's investment in Aer Lingus are considered financial, as these investments can be compared to excess cash.

6.2.1.2. Balance sheet adjustments

Capitalized operating lease

Operating leases were dealt with under income statement adjustments. The value of capitalized operating leases is added to book assets and long-term debt. This is done in order to make the firms comparable related to the use of operational leases (Koller, Goedhart & Wessels, 2010, p. 583).

Other assets

Other assets are often a group of several items which have to be classified as operational of financial individually. By studying the notes, we find that these items mainly consist of prepayments and interest receivables, which are recognized as operational and financial, respectively.

Provisions

Provisions mainly relate to maintenance on operating leased aircraft, pensions and restructuring. Provisions related to maintenance are recognized as operating. Pension assets and liabilities may be seen as related to employee compensation, and therefore defined as operational. On the other hand, pension assets is a way of funding pension obligations, and pension liabilities are interest bearing. As a result, all items related to pensions are recognized as financial. Koller, Goedhart and Wessels (2010, p. 163) recommends that one-time provisions related to restructuring are defined as non-operating. At the same time these future costs arise due to natural shifts in the industry and could thus be considered operational. Petersen and Plenborg (2012, p. 76) states that restructuring should be considered as operational because of its necessity in relation to the firms' day-to-day operations. Expenses and provisions related to restructuring are therefore classified as operational. Provisions related to loyalty programs are also recognized as operational.

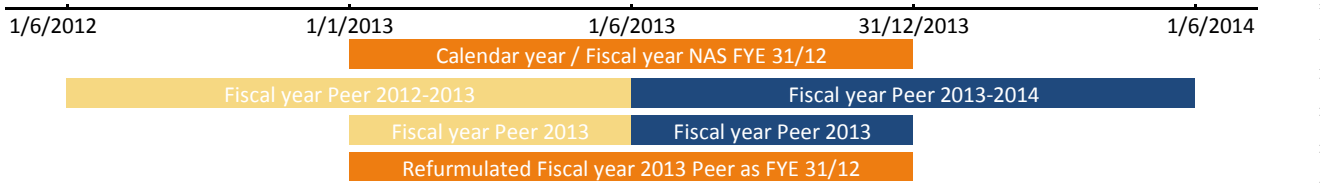
Cash and cash equivalents

Excess cash holdings should not be included in invested capital as it´s unnecessary for core operations. Some cash holdings are needed for operations, but this amount is not disclosed in financial statements. As cash and cash equivalents tend to be high for some companies in the industry, we have conducted an analysis of minimum cash needed to support operations by investigating the minimum cash to revenue across the European airline industry. Operational cash to revenues in the industry is found to be 8.3 percent. Calculations are based on the 15 largest listed airlines in Europe, and 8.3 percent operating cash is found as the average cash amount over five years for the two companies with the smallest cash holdings. This is done in accordance to Koller, Goedhart & Wessels (2010, p. 145), the cash analysis is shown in appendix 17.

6.2.1.3. Fiscal year-end and unaudited interim reports

When assessing profitability and different financial ratios within a group of companies, matching FYE is important. The airline industry is intra year seasonal, which makes adjustments even more important. FYE varies between companies across and within different countries. All compared companies have different FYE as a result of the diversity in origin. All financial statements in the analysis are adjusted to FYE 31/12 to match both calendar year and the FYE applied by NAS.

Figure 27 – Normalizing fiscal year illustration
(Source: Own contribution)



As figure 27 shows, when a fiscal year does not match the calendar year, the financial statements are normalized by the assumption that revenues and expenses occur evenly through the fiscal year. This may be perceived simplistic in an industry with such cyclicality in income, but is not thought to have significant impact on our results.

Due to the cut-off date, not all companies have disclosed audited financial statements for the calendar year 2015. Interim reports serve as a proxy for financial statements during periods where this problem occurs. All information in these reports are considered lateral compared with

audited financial statements. Interim reports are less detailed than audited financial statements, which may lead to some difficulties related to the separation between e.g. operating and financing activities. In such cases, unspecified posts are allocated as operating and financial based of historical development or historical fractions of aggregated posts during the period of analysis. Such adjustments are neither thought to have significant effects on our analysis. As an example, 17.9 percent of liabilities are allocated based on estimates from the Q4 2016 interim report of NAS. In addition, RYA has not guided or published their Q4 2016 by the cut-off date, which results in lack of financial data. Consensus from Bloomberg is applied as estimates for Q4 with estimated revenues of 1 162 EURm and EBITDA year over year (YoY) growth of 30 percent.

6.2.2. Profitability analysis

Sub-question to be answered in this section:

What is the benchmarked profitability of NAS and RYA?

Profitability is important for a company´s future survival and to ensure a satisfactory return to shareholders. The historical profitability is an important element in defining the future expectations for a company (Petersen & Plenborg 2012, p. 93). This section will present the profitability measures EBITDA margin, return on invested capital and return on equity. NAS and RYAs historical performance on these measures will be analyzed and benchmarked to its peers. All calculations will be carried out based on the analytical financial statements in order to obtain an unbiased picture of the profitability of the companies and to make them comparable. An overview of all relevant profitability measures is shown in appendix 18.

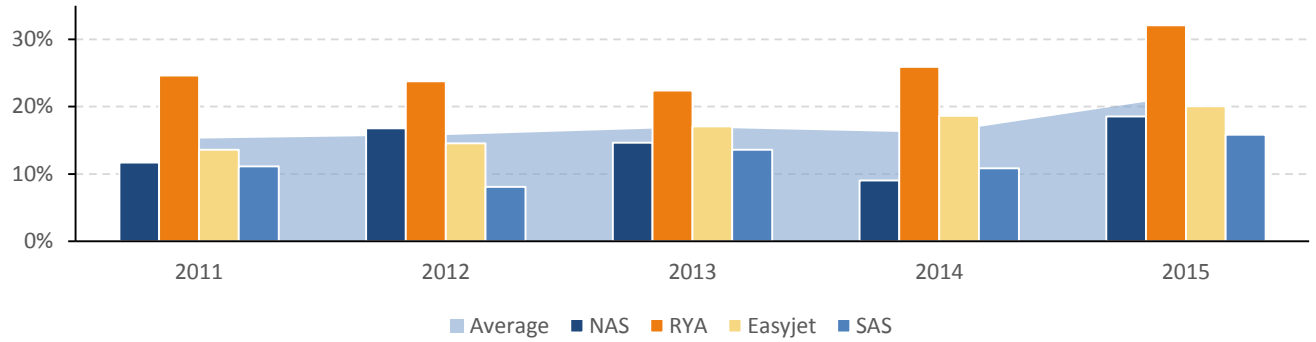
6.2.2.1. EBITDA margin

EBITDA margin is a measure of operating profitability and it´s defined as:

$$EBITDA\ margin = \frac{EBITDA}{Total\ revenue}$$

EBITDA margin exclude depreciation and amortization and is therefore preferred by some analyst as a better proxy for the core profitability of the company. As described above, some airlines lease a lot of aircraft while other operates a fully-owned fleet. The former airline would have a large cost related to the lease while the latter would have large depreciations and thus obtain a better EBITDA margin. EBITDA margin would not be a good measure in this case, but a comparison is unbiased due to our financial statement adjustments.

Figure 28 – EBITDA margin across peer-group ('11-'15)
(Source: Own contribution, Annual reports)



Based on figure 28, all companies have a positive trend in their EBITDA margin during the period. The superior performance in 2015 is found mainly related to lagged fuel cost savings. Further RYA has the highest EBITDA margin all five years, achieved by lowest CASK across the peer-group. RYAs number one priority is to maintain a low cost base, the high profitability is therefore found to be sustainable. NAS has had a positive development during the period, except a weak 2014 result. The bad performance in 2014 is due to the troubled launch of long-haul operations. We expect a further increase in EBITDA margin short term due to growth in the profitable long-haul segment. Increased competition, as discussed in section 5.1.3., will lead to decreasing profitability long term. EasyJet show the same trend as NAS, except a strong 2014. SAS has the lowest EBITDA margin all years; only exception is NAS in 2014. We observe that the gap between SAS and the LCCs is much smaller in 2015. The main reason for this is thought to be that the old fleet SAS operate, is a smaller disadvantage with the current price level of fuel.

6.2.2.2. Return on invested capital

Return on invested capital (ROIC) is the overall profitability measure for operations. The ratio expresses the return on capital invested in a firm's net operating assets as a percentage (Petersen & Plenborg 2012, p. 93). ROIC after tax is defined as:

$$ROIC = \frac{NOPAT}{Invested\ capital} \times 100$$

It´s clear from the ratio above that, all else equal, a decrease in invested capital will increase the ROIC. This underscores the importance of adjustments related to leasing of aircraft. Without these adjustments all airlines that lease aircraft will obtain an artificial high ROIC. ROIC is also an

important measure in relation to lending. Companies with high ROIC may be able to get cheaper funding, which is important in a capital intensive industry such as the airline industry.

Figure 29 – ROIC after tax across peer-group ('11-'15)
(Source: Own contribution, Annual reports)

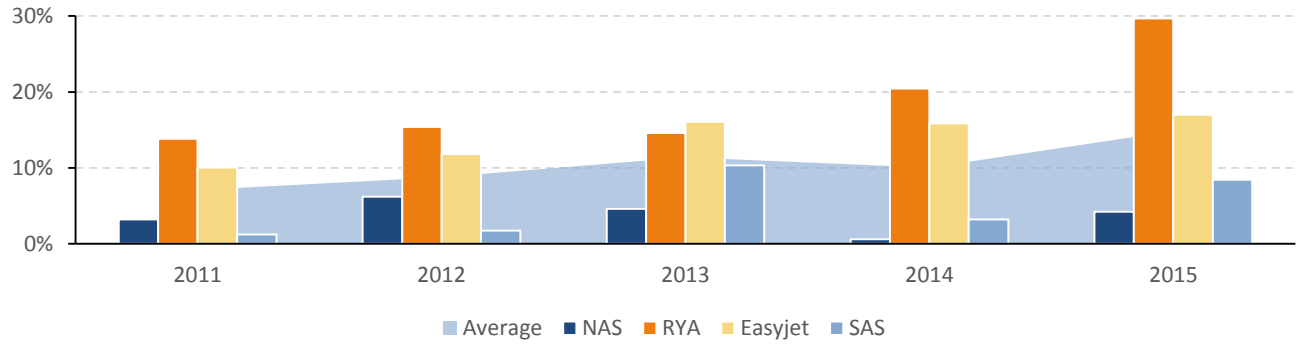


Figure 29 shows that RYA is outperforming the other three companies all years except in 2013. NAS have performed well below RYA and EasyJet all years. This is also reflected by the spread in cost of debt between RYA and NAS, which is found in section 9.1.2. to be 5.7 percent.

ROIC fail to explain whether profitability is driven by a better revenue and expense relation or improved capital utilization (Petersen & Plenborg 2012, p. 107). To answer this question ROIC should be decomposed into profit margin and turnover rate of invested capital. The profit margin before tax is defined as:

$$Profit\ margin = \frac{NOPAT}{Net\ revenues} \times 100$$

The profit margin illustrates how many cents the company generates on each euro received.

Figure 30 – Profit margin ('11-'15)
(Source: Own contribution, Annual reports)

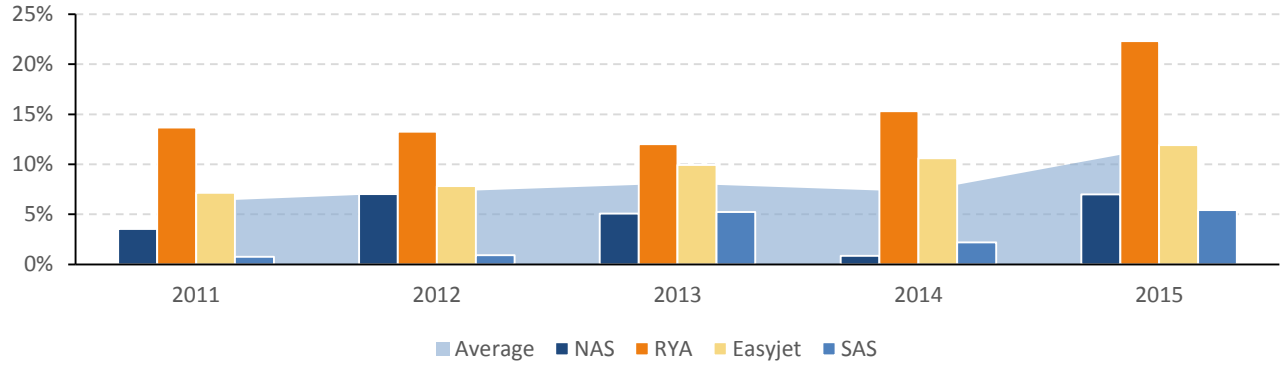


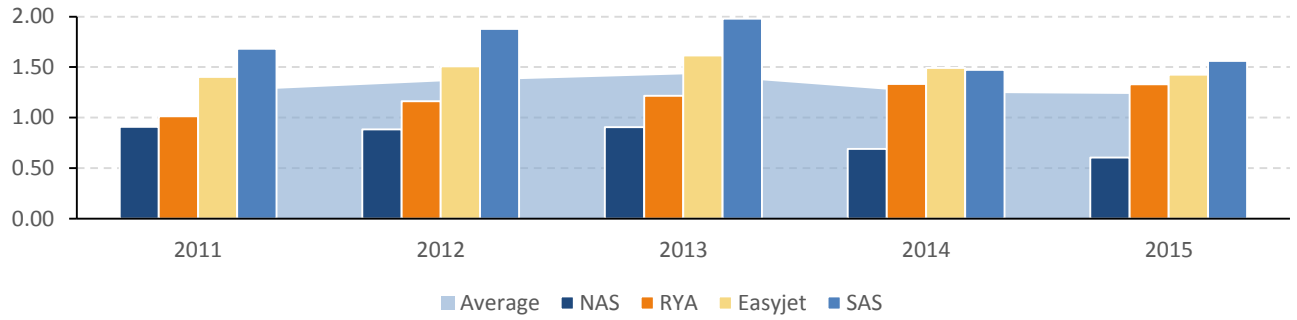
Figure 30 clearly shows that RYAs profit margin is superior all five years, a position expected to be sustainable due to their low CASK. The big increase in 2015 is due to strong growth in sales and reduction in fuel costs. NAS has a relative stable profit margin except the poor performance in 2014. We expect some increase in profit margin the coming years as a result of strong revenue growth. NAS ranks below RYA and EasyJet all years, but above SAS. EasyJet has a steady increase all five years. SAS has a very low profit margin the first two years, and the company was close to bankruptcy in late 2012. During this process, all employees agreed on a 15 percent reduction in their salary, which is reflected in profit margin in 2013. They had a significant drop in profit margin in 2014, which was mainly due to reduced revenues and increased leasing costs. SAS has continued the restructuring and is still trying to reduce their cost base.

The other component on ROIC, namely the turnover rate of capital is defined as:

$$Turnover\ rate\ of\ invested\ capital = \frac{Net\ revenue}{Invested\ capital}$$

The turnover rate expresses a company´s ability to utilize invested capital. All things being equal, it is attractive to have a high turnover rate of invested capital (Petersen & Plenborg 2012, p. 108).

Figure 31 – Turnover rate of invested capital ('11-'15)
(Source: Own contribution, Annual reports)



From figure 31, it's clear that NAS has the lowest turnover rate of invested capital across the peer-group. SAS is the top performer all years, except 2014. Based on figure 30 we can conclude that the differences in ROIC is mainly explained by differences in profit margin.

6.2.2.3. Return on equity

Return on equity (ROE) measures the profitability taking into account both operating and financial leverage (Petersen & Plenborg 2012, p. 117). While ROIC is a measure of return on all invested capital, ROE measure the return that can be attributable to the equity capital invested in the firm. ROE is defined as:

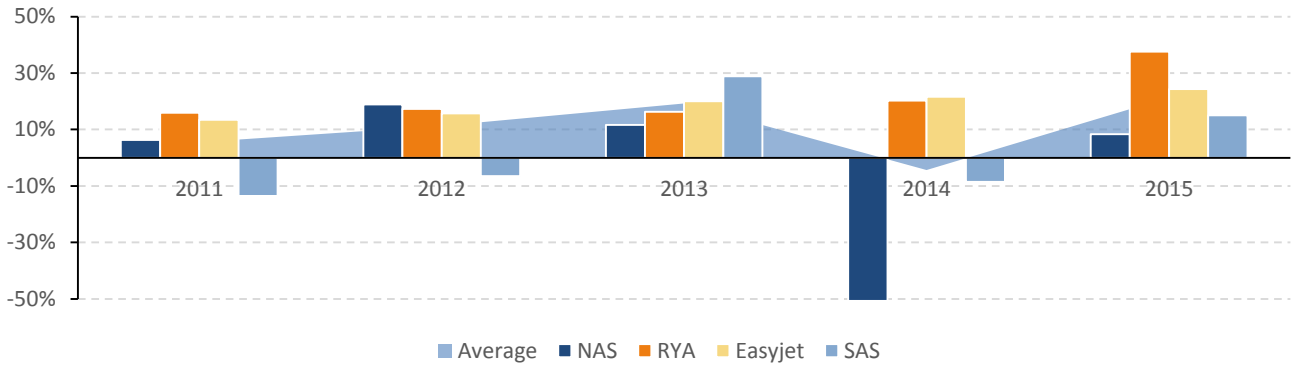
$$ROE = \frac{Net\ income}{Book\ value\ of\ equity} \times 100$$

Level and trend is affected by financial leverage, operating profitability and net borrowing interest rate after tax. This can be shown by the following relationship:

$$ROE = ROIC + (ROIC - NBC) \times \frac{NIBD}{BVE}$$

From the above relationship it´s clear that if the spread between ROIC and NBC is positive, ROE increases with leverage.

Figure 32 – ROE across peer-group ('11-'15)
(Source: Own contribution, Annual reports)



By observing figure 32, the first thing we notice is the poor performance of NAS in 2014. This is a result of negative spread between ROIC and NBC and high gearing of the company. ROE for RYA and EasyJet follow the development in ROIC. This is as expected, since both have high fraction of equity in their capital structure. SAS has a negative ROE in three of five years. They were close to bankruptcy in 2012 despite positive NOPAT all years. The large increase in 2013 is due to the reduced payroll and reduced financial expenses which saved the company.

To summarize the profitability across the peer-group, RYA delivers extraordinary profitability compared to both peer-group and the airline industry in general. The level of profitability is found sustainable, as the underlying drivers are found to be internal. NAS has a positive development in profitability, and they have completed a costly launch of long-haul operations. The volatile nature of their ROE is due to their high level of leverage. The positive development on NAS' profitability is expected to continue short-term, due to growth in the profitable long-haul segment.

6.2.3. Liquidity risk analysis

Sub-question to be answered in this section:

What is the benchmarked liquidity risk of NAS and RYA?

Without liquidity a company cannot pay its bills or carry out profitable investments, and in certain cases lack of liquidity leads to bankruptcy (Petersen & Plenborg 2012, p. 150). In this section we will therefore analyze both short-term and long-term liquidity risk. The short-term liquidity risk is related to obligations that fall due during the next twelve months, while the long-term liquidity risk is related to long term liabilities and in general the financial health of the company and its ability to

satisfy all obligations. A firm´s liquidity risk is influenced by its ability to generate positive net cash flows in both the short- and long-term (Petersen & Plenborg 2012, p. 140). The liquidity risk of NAS and RYA will be analyzed in the same way as the profitability was analyzed, using peers to benchmark the risk. An overview of all relevant liquidity measures is shown in appendix 19 and 20.

6.2.3.1. Measuring short-term liquidity risk

Current ratio

A measure of the short-term liquidity risk is the current ratio. It indicates if current assets are able to cover the current liabilities. All else being equal, it is better to have a high current ratio. The current ratio is defined as:

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

Figure 33 – Current ratio across peer-group ('11-'15)
(Source: Own contribution, Annual reports)

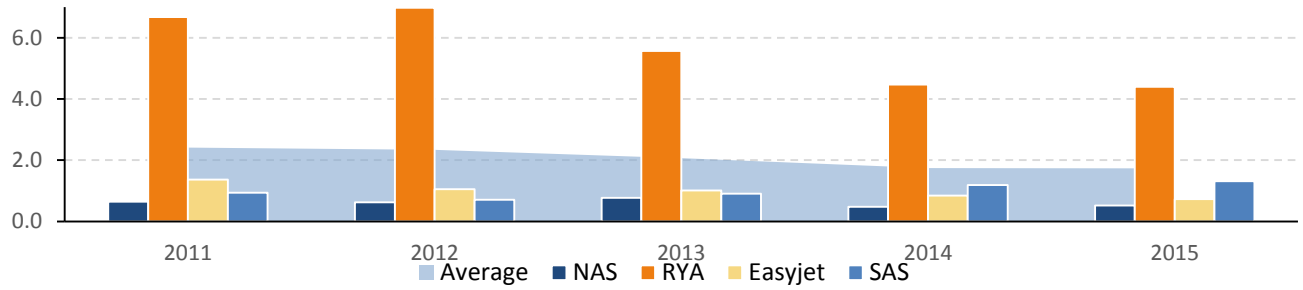


Figure 33 shows that RYA has a current ratio clearly superior to all peers. They have huge amount of cash, which gives them very strong short time liquidity. The average cash and cash equivalent to net revenue the last five years has been 80 percent for RYA, a cash analysis is found in appendix 17. The average ratio of the fifteen other biggest airlines in Europe during the same period is 17.8 percent. RYA is far above industry average, and the other companies show more normal levels of current ratio. It´s however worth notice that it has decreased each year. NAS has a stable current ratio, but it is lowest across peer-group for all years. EasyJet has decreasing current ratio, and it´s reduced with 50 percent during the period. The reason is increased non-interest bearing debt with 20 percent and a reduction in financial cash position with

62 percent as the main drivers. SAS has increased current ratio as the only selected company as a result of increasing current assets.

Quick ratio

Current ratio includes inventory, which in many cases has low liquidity. A ratio that only includes the most liquid current assets is the quick ratio. The quick ratio is defined as:

$$Quick\ ratio = \frac{Cash + securities + receivables}{Current\ liabilities}$$

According to Petersen & Plenborg (2012, p. 155), the quick ratio is perceived to be a relatively more conservative indicator of short-term liquidity risk due to the exclusion of inventory.

Figure 34 – Quick ratio across peer-group ('11-'15)
(Source: Own contribution, Annual reports)

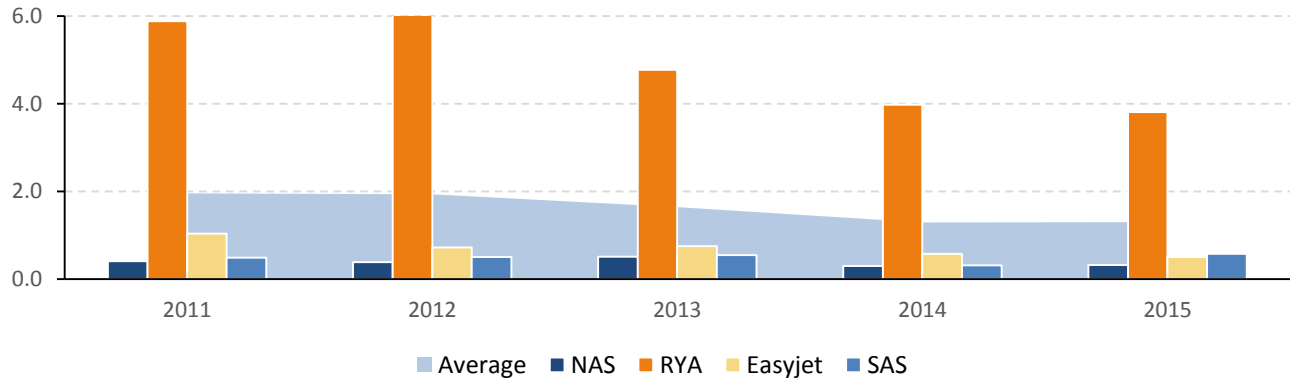


Figure 34 draws the same picture for the quick ratio as for the current ratio, mainly due to low degree of inventories across the airline industry. RYA is found to be superior, with NAS as worst performer across peer-group. In total we conclude that RYA has short-term liquidity risk close to zero, while it is more important to monitor for NAS.

6.2.3.2. Measuring long-term liquidity risk

Financial leverage

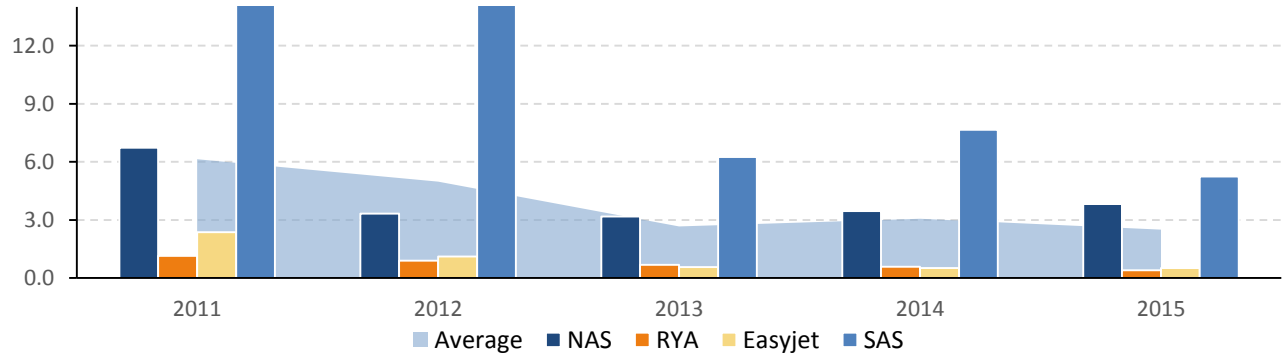
Financial leverage is a measure of long-term liquidity risk, and it´s defined as:

$$Financial\ leverage = \frac{Total\ liabilities}{Equity}$$

A high financial leverage indicates high long-term liquidity risk. In determining the financial leverage it's important that all financial obligations are recognized in the balance sheet, including

the leases (Petersen & Plenborg 2012, p. 158). Leases are already capitalized in our analytical balance sheet and total liabilities are therefore straight forward to find.

Figure 35 – Financial leverage based on market value of equity ('11-'15)
(Source: Own contribution, Annual reports, Bloomberg)



From figure 35 we observe that both RYA and EasyJet have low financial leverage. SAS has reduced its leverage a lot during the period. This is a result of the equity they raised in 2013 due to decreased market value of equity after the financial crisis. NAS has much higher leverage than both RYA and EasyJet. NAS have reduced the level significantly from 2011, and it has remained stable the last four years. Figure 35 shows financial leverage based on market values, and the level can therefore fluctuate a lot from one year to another given the same amount of liabilities. The high levels of leverage also help explain why ROE was found to be volatile for NAS and SAS.

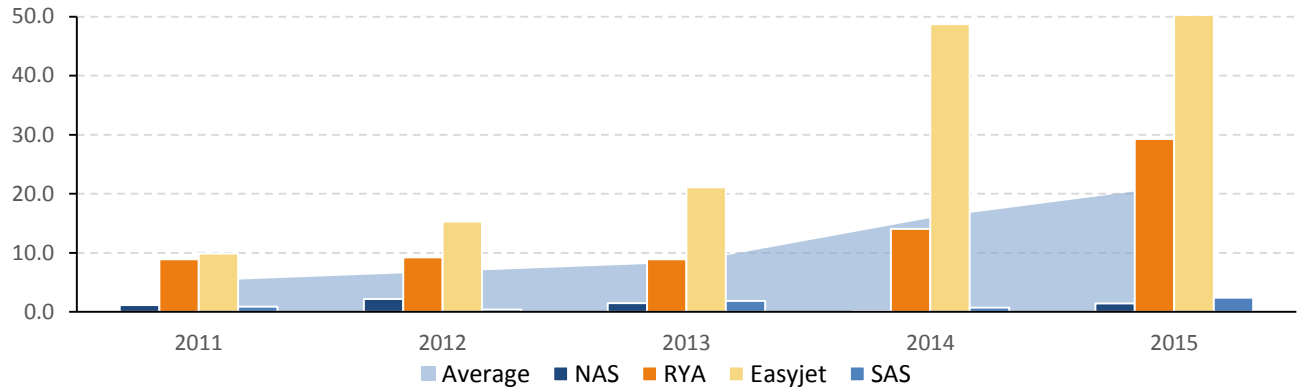
Interest coverage ratio

The interest coverage ratio measures a company's ability to meet its net financial expenses by its operating profit (EBIT) (Petersen & Plenborg 2012, p. 161). The interest coverage ratio is defined as:

$$Interest\ coverage\ ratio = \frac{EBIT}{Net\ financial\ expenses}$$

The ratio measures how many times the net financial expenses are covered by the operating profit. Hence, the higher the ratio, the lower the long-term liquidity risk.

Figure 36 – Interest coverage ratio ('11-'15)
(Source: Own contribution, Annual reports)



From figure 36, we observe that RYA and EasyJet have a high interest coverage ratio. The positive trend and high current levels are mainly due to lower financial leverage, higher credit rating and better operating profitability compared to peers. Both companies hold a credit rating of BBB+, which is the highest credit rating held by any airline. The large increase in interest coverage ratio from 2013 to 2014 for EasyJet is a result of reduction in financial expenses of over 50 percent. This stems from an old bank loan with high interest rate. NAS has a steady interest coverage ratio during the period with an average of 1.3. SAS has had a positive development during the period and increased their interest coverage ratio from 0.87 to 2.40. This result is mainly due to fluctuations in EBIT.

When we summarize the long-term liquidity risk we conclude that the risk is very low for RYA compared to peers. Long-term liquidity risk for NAS is higher due to high financial expenses because of high leverage.

7. SWOT

Key findings from our external and internal analyses are summarized in a SWOT analysis for both NAS and RYA, presented in figure 37 and 38.

Figure 37 – SWOT NAS
(Source: Own contribution)

S	O
- Modern fleet - Position in scandinavia	- Long-haul expansion - Passenger growth long-haul and short-haul
W	**T**
- Size compared to peers - Norwegian labor laws - Salary level in Norway - Financial situation	- AOC approval for Irish subsidiary - New entrants - Labor unions - Competition

Figure 38 – SWOT RYA
(Source: Own contribution)

S	O
- Lowest fares - Financial situation - Size	- Non-organic growth - Long-haul establishment - Passenger growth short-haul
W	**T**
- Reputation - Service level	- Competition - New entrants

8. Forecasting

We have now conducted internal and strategic analysis of both the historical and future environment of NAS. The main elements were summarized in the SWOT analysis, and the findings will serve as the fundament for our forecasts of the pro forma income statement and balance sheet, which will result in the projected FCFF.

To be able obtain high quality on the valuation one has to choose a proper forecast period. The forecasts are build upon three periods: The historic period, the explicit period and the terminal period, according to Petersen and Plenborg (2012, p. 188). The historic period is used to analyze current levels and ratios and creates a foundation for forecasting. The explicit period builds on the findings in the historic period, but also incorporates the expectations about the future found in our earlier analyses as well. The terminal period assumes that the company develops at a steady rate for all foreseeable future. The forecast period should be chosen based on how many years it will take the company to reach the steady state. A explicit forecast period of 10-15 years, with most detailed forecasts the first 5-7 years, and a more simplified forecast for the remaining years, is recommended according to Koller, Goedhart and Wessels (2010, p. 188). We have therefore chosen an explicit forecast period of ten years, where the first seven years are most detailed. This is based on the guiding provided by NAS which will be discussed below.

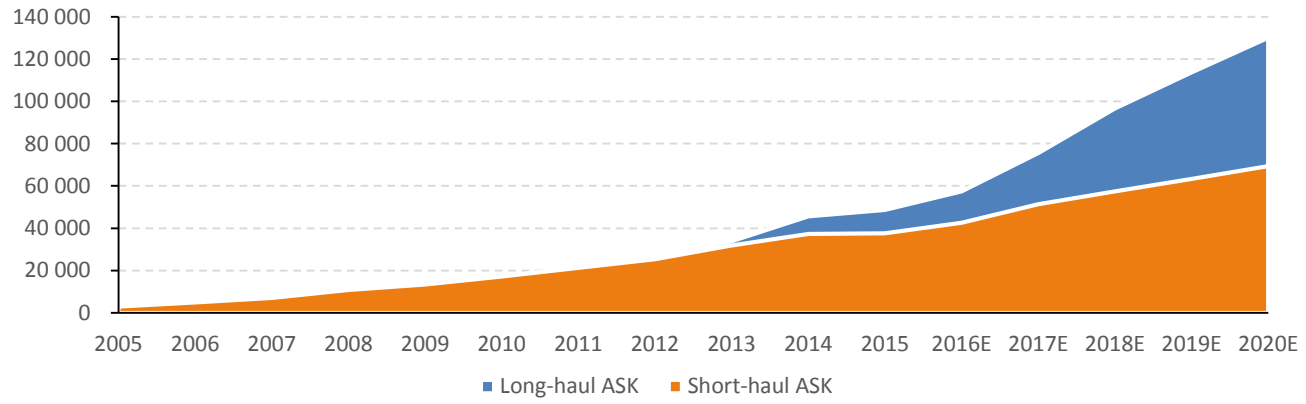
8.1 ASK

ASK may be seen as the future production level, and is mainly driven by the size of the fleet and ASK provided per aircraft. ASK/aircraft is again affected by the degree of utilization, length of routes, in addition to seat capacity and configuration. Due to long lead time in deliveries of aircraft and establishment of routes, airline carriers hold good estimates of future short-term provided ASK. NAS has guided expected development in ASK for the period 2015-2020 based on current firm orders, redelivery plan and route network (NAS 2015). The guiding will serve as the basis for our short-term forecasted ASK, as it's mainly managed by NAS. Long-term, from 2020, the components ASK/aircraft and number of aircraft are the most important drivers, as no guiding is disclosed from NAS. In addition, ASK is divided into long- and short-haul operations, due to different macroeconomic drivers as described in our strategic analysis.

8.1.1. Development ASK short-term

Since guiding is applied as our estimate of short-term ASK, the interesting part is the development in fleet and ASK/aircraft, which will serve as the basis for long-term forecasts. NAS estimates steady growth in short-haul ASK, with a CAGR of 13 percent in the period 2015-2020. In addition, long-haul is estimated to provide 45 percent of total ASK in 2020 with a CAGR of 40.6 percent in the period 2015-2020. This is illustrated in figure 39.

Figure 39 – Estimated ASK development split into short- and long-haul ('15-'20)
(Source: Own contribution, NAS Q4 Interim Report 2015)



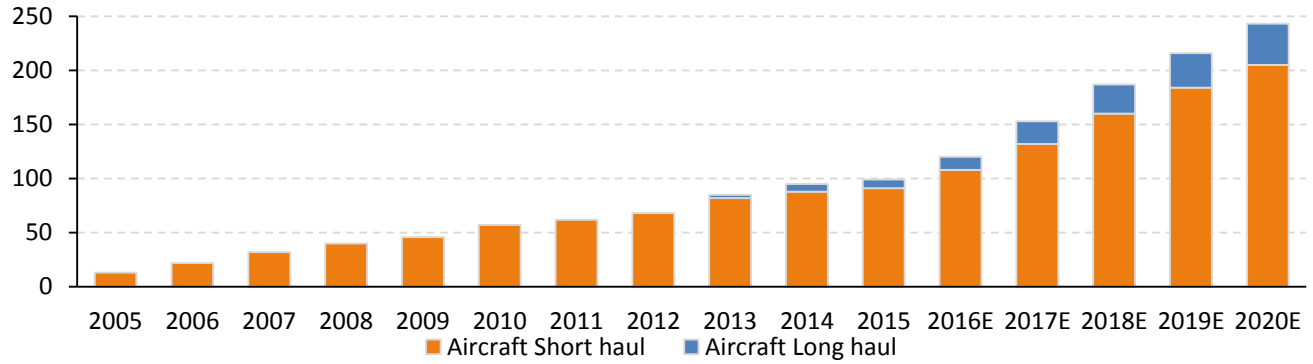
NAS' current fleet is described in section 4.1.3., and the YE 2015 fleet comprised of 99 aircraft. AAA currently has firm orders of 267 aircraft, in addition to 160 purchase options set for delivery between 2015 and 2022 (AAA 2015). As a result NAS has potential annually delivery of 61 aircraft over a period of seven years, which indicates a massive scale up of operations compared to today's fleet.

ASK provided through long-haul operations are as mentioned estimated to growth considerably the coming years. The current long-haul fleet amounts to nine B787, comprising of eight B787-8 and one B787-9. NAS currently has firm orders of 29 additional B787-9, including ten purchase options, with delivery before 2020. Four and five of these aircraft are set for delivery in 2016 and 2017, respectively. In our estimates, we assume exercise of all purchase options and evenly distributed delivery of the remaining B787-9 currently on order.

The current short-haul fleet amounts to 91 B737-8. Guiding from NAS indicates a short-haul fleet consisting of 108 aircraft at YE 2016 and 132 at YE 2017. From YE 2017 through 2022, the short-

haul fleet is estimated based on current firm orders of aircraft, assuming exercise of 50 percent of purchase options. In addition, the average historical redelivery rate of aircraft during the period 2006-2014 is applied. As average fleet age is perceived as a strategic decision assumed to be maintained, we believe a constant redelivery rate of 12 percent serves as a good proxy for future redelivery. The forecasted fleet until YE 2020 of NAS is calculated in appendix 21 and illustrated in figure 40.

Figure 40 – Forecast fleet NAS ('05-'20)
(Source: Own contribution, NAS)

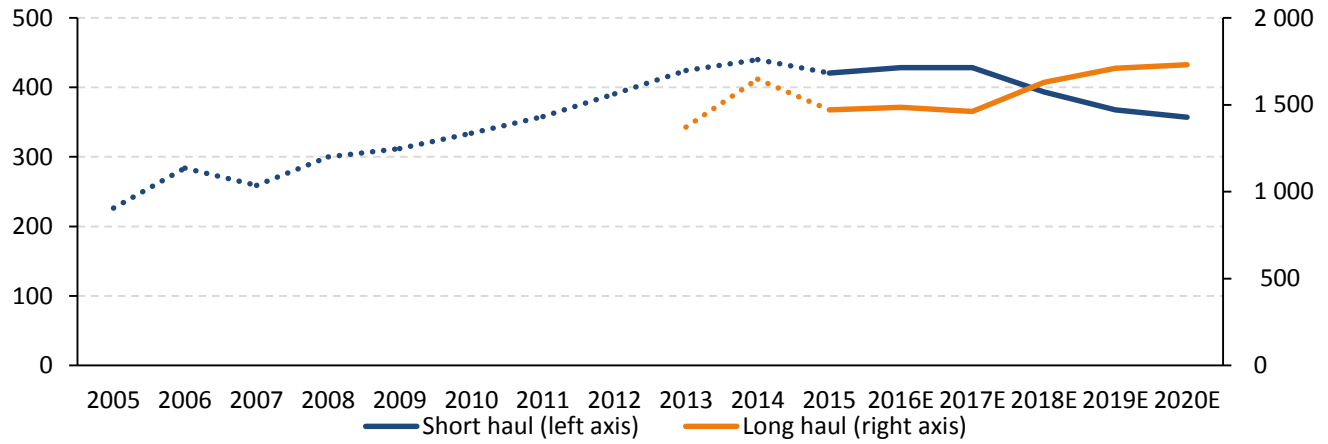


Most uncertainty connected to the forecasted fleet is related to the fraction of exercised options. To investigate the magnitude, we performed a sensitivity analysis on the 2022 YE fleet with respect to redelivery rate. We found that the fleet is not very sensitive due to the fact that redelivery rate is a percentage and not a pre-specified number of aircraft. The simplistic sensitivity analysis is found in appendix 22.

We are now able to calculate future ASK/aircraft which may be seen as the production level and utilization per aircraft. From figure 41, we see that short-haul ASK/aircraft is expected to decrease from 413 in 2015 to 343 in 2020. Seat capacity and seat configuration are assumed to remain stable, as new aircraft entering the fleet are almost identical to current. In addition, fleet utilization, i.e. block hours is expected to stay constant. The main driver of decreased short-haul ASK/aircraft is therefore decreasing average length of routes. This relates to establishment of European domestic routes, as we currently see in Spain. The new base in Italy may also be an indication of such development.

For long-haul operations, we see an increasing ASK/aircraft since introduction in 2013. In long-haul operations this measure is very sensitive to length of routes compared to short-haul. In addition the increasing fraction of B787-9 contributes to the increase, due to a 344 seat configuration which is 18.2 percent more seats compared to B787-8. Historical and forecasted development in ASK/aircraft for both short- and long-haul is illustrated in figure 41.

Figure 41 – ASK/Aircraft short- and long-haul ('05-'20)
(Source: Own contribution, NAS Annual Reports (05'-15')



8.1.2. Development ASK long-term

Current firm orders of aircraft stretches to 2022, making it possible to estimate the fleet up to this point with high certainty. From 2023 the level of NAS' short-haul fleet is assumed to have reached the desired level, and net development in the fleet is zero.

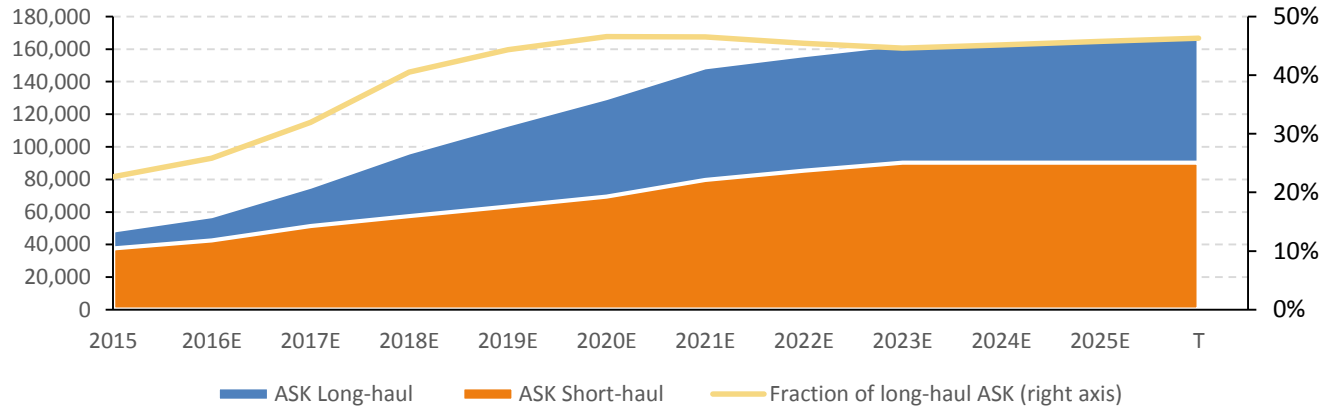
As the latest delivery of B797-9 is due in 2020, more uncertainty is related to the long-term estimates for the long-haul fleet. Supported by our strategic analysis, our estimates show strong growth in long-haul operations short-term, but we expect increased competition long-term. An annual net increase of one B787-9 is assumed from 2020.

We saw a decreasing trend for our estimated short-haul ASK/aircraft in the period 2015-2020. In addition, the 2020 level of ASK/aircraft is below RYA's average of 403 during the period 2011-2015 (Annual reports). Looking at the drivers of ASK/aircraft, we expect that NAS by 2020 has established their desired route network, such that ASK/aircraft is expected to stay constant on 2020 levels, through the explicit forecast period for short-haul operations.

For long-term development in long-haul, in accordance with our strategic analysis, we see strong possible growth in Asia, which will have a negative impact on ASK/aircraft due to shorter routes than the current transatlantic structure. In 2020, the long-haul fleet will comprise of 30 B787-9 and 8 B787-8, the increasing fraction of higher capacity aircraft is also growing long-term. These effects are assumed to offset each other, making ASK/aircraft stable at 2020 levels long-term.

Over the whole forecast period we estimate a CAGR in ASK of 8.59 percent for short-haul operations and 20.32 percent for long-haul, with the strongest growth short-term due to massive growth in fleet. Compared to industry reports, this indicates a growth for NAS higher than the industry in total. At the same time, growth for LCCs is expected to be above average in the industry. In addition, important traffic flows for NAS are expected to grow substantially the next two decades. The passenger flows from Western Europe to US are expected to grow by 70 percent during the period. Low oil prices will stimulate economic growth which will transfer to high RPK growth. Growing middle class will increase passenger flows long-term, especially in key markets such as Asia Pacific. In addition, Europe is expected to remain the most popular tourism location. Development in ASK is illustrated in figure 42, and all calculations are shown in appendix 23.

Figure 42 – Development ASK ('15-'25)
(Source: Own contribution, NAS)



8.2. RASK

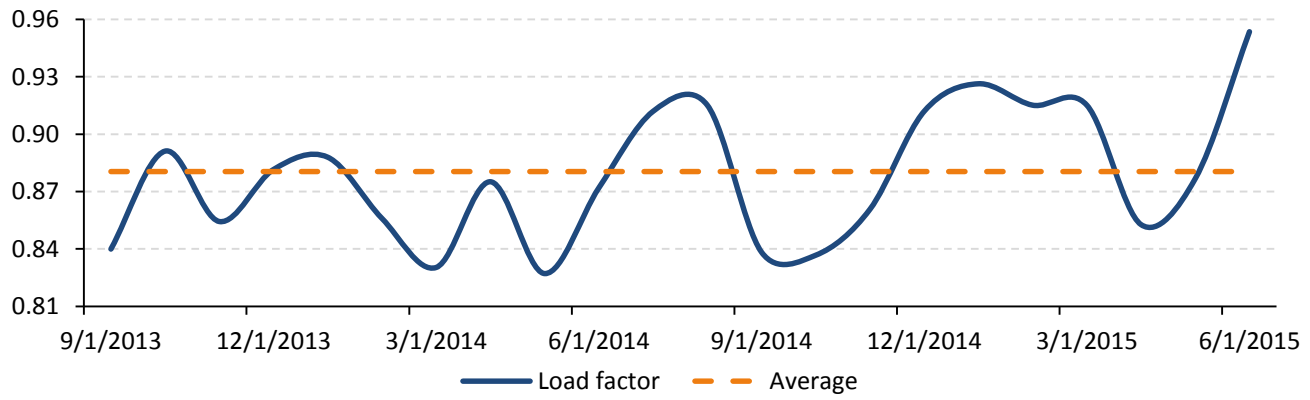
Forecasts of revenue necessitate an estimate of RASK, which is the product of load factor and yield. These measures were treated in the section 6.1., and should be seen in relation to each other as airlines are able to manage these measures based on the price sensitivity of customers.

8.2.1. Load factor

Load factor for the forecast period is shown in appendix 23 and is a measure of capacity utilization of fleet. Load factor may also be seen as the match between demand and supply, measured by RPK and ASK. In section 6.1.2., NAS' load factor was identified in a positive trend due to the introduction of long-haul. At the same time NAS had the lowest load factor of LCC peers.

From figure 43 we observe that between Q3 2013 and Q2 2015, the average load factor in long-haul operations is found to be 0.88. Since introduction, a continuous expansion of routes has been made and is expected to continue in the forecast period. Our estimated CAGR for ASK in the forecast period is 20.32 percent, assuming NAS is able to capture market shares from established FSCs. Thus, the average load factor of 0.88 since introduction of long-haul is applied as an estimate for the future load factor in long-haul.

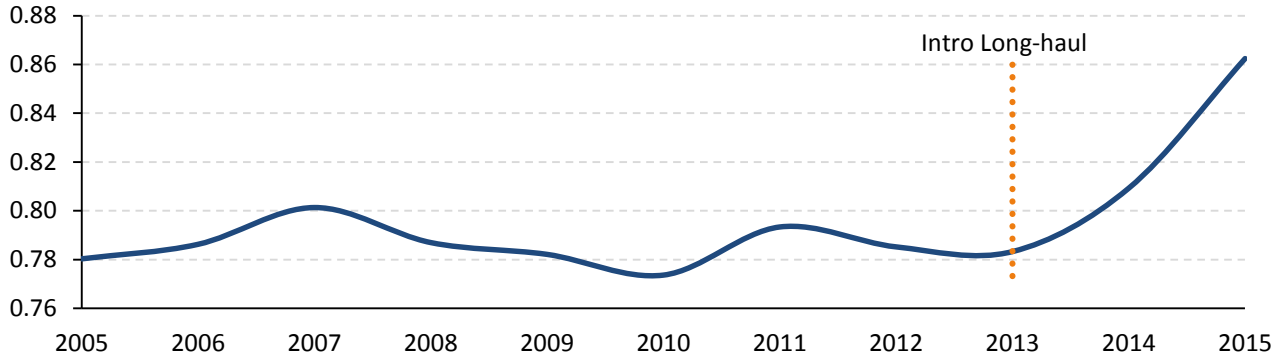
Figure 43 – Load factor long-haul operations between Q3 '13 and Q2 '20
(Source: Own contribution, NAS)



Total load factor for NAS has trended upwards since the introduction of long-haul in 2013, illustrated in figure 44. Our estimated CAGR of short-haul ASK is 8.59 percent during the explicit forecast period. Historical load factor has remained relatively stable until introduction of long-haul.

There has been a continuous growth in both routes and fleet during this period despite macroeconomic events such as the financial crisis. We expect load factor to trend up towards the industry's' best-practice in the long-term. This means an increase from 0.79 in 2016 to 0.92 in 2020.

Figure 44 – Historical load factor ('05-'15)
(Source: Own contribution, NAS Quarterly Reports '05-'15)



8.2.2. Yield

Yield is the price per passenger per km, yield for the forecast period are shown in appendix 23. In section 6.1.3., NAS was identified to have the lowest yield compared to peers with a decrease of 12 percent in yield since 2011. Decreasing yield was attributed to introduction of long-haul operations, as yield is decreasing in ASK/aircraft. As mentioned, yield has to be seen in relation to development in load factor and ASK. Appendix 24 shows historical quarterly YoY-growth in ASK and yield for NAS in the period 2008-2015. It identifies a negative relationship between growth in ASK against growth in yield. This is a result of negative pressure on yield as ASK grows to obtain the wanted load factor on new routes.

From our strategic analysis, we saw that historic cost efficiency gains have been passed on to customers due to rivalry among competitors, resulting in lower yields. This trend will continue, especially in the short-haul market which is expected to see competition from Asia and Middle-East in the long-term. Another key driver for yield is fuel prices which currently are historically low, but expected to trend upwards long-term. At the same time improvements in fuel efficiency are expected to continue, offsetting the effect of higher prices of fuel to some extent. Less regulations of the industry are expected to contribute to further increased competition, possibly offset by the

seat tariff introduced in Norway. At the same time, Norwegian traffic accounts for a decreasing fraction of NAS' future traffic flows.

The average yield in long-haul since Q3 2013 is 0.41, and it has remained fairly stable since introduction. During 2015 the average yield was 0.397. Short-term we expect yield at the same level as 2015. The effect of negative yield pressure due to high growth in ASK is expected to be offset by the increased operational efficiency, as operations will normalize after introduction. Long-term decreasing yield is estimated due to increased competition from other LCCs entering the long-haul market, pushing yields down. Thus, yield in the period 2020-2025 is estimated to decrease with 0.5 percent annually.

In short-haul operations, yield is expected to remain stable short-term. Our strategic analysis showed the possibility for increased competition from Asia and Middle-East long-term, which is expected to push yield further down in the industry. As a result, our forecast shows an annual decrease in yield of 0.5 percent in the period 2020-2025.

8.3. Income statement

All calculations related to the forecasted pro forma income statement are shown in appendix 25. In addition, assumptions and trends are further elaborated below.

8.3.1. Revenue

Operating revenue is the product of ASK, load factor and yield for each subsequent year. During the forecast period CAGR for revenue is estimated to 10.1 percent, with strongest growth short-term. As the previous sections showed, growth is mainly a result of the increased size of aircraft fleet, following current firm orders. Yield is expected to decrease long-term due to increased competition, and load factor is estimated to remain fairly stable trending against best-practice in the industry.

8.3.2. Operating cost

Operating costs excluding fuel comprise of payroll expenses, handling costs and other operating expenses. CASK ex. fuel has historically been closely linked to the development in ASK/aircraft (R^2=0.705, based on quarterly data 2008-2015), see appendix 26 and 27 for illustration and calculations. The correlation is however decreasing due to the recent introduction of long-haul. Looking at our reformulated historical income statement, CASK ex. fuel divided by ASK is stable

around 26 percent. Thus, ASK is applied as value driver for CASK ex. fuel in the forecast period. CASK ex fuel has however had a decreasing trend during the period 2011-2015 of 1.32 percent annually. CASK ex. fuel was 26.8 percent of ASK in 2015. The 2015 level will serve as basis for our forecasts with a decreasing trend equal 1.32 percent incorporated.

8.3.3. Lease cost

To be able to conduct an unbiased competitive benchmarking in section 6., we had to capitalize operational leases. In section 4.1.3., we identified that the leased fraction of NAS' fleet is decreasing. This trend is backed up by the current firm orders and the establishment of AAA. In addition, according to Koller, Goedhart and Wessels (2010, p. 577) capitalizing leases complicate the estimation of WACC. Thus, leases are not capitalized and lease costs are treated as an operational cost based on our forecasted fleet, seen in appendix 25. The future lease cost per aircraft is assumed constant at 2015 levels for both long- and short-haul aircraft.

8.3.4. Fuel cost

In our strategic analysis we identified a close relation between the price of fuel and crude oil. Appendix 28 shows that Crude is modelled to explain 97.9 percent of fluctuations in the price of jet fuel ($R^2 = 0.979$). As a basis for the forecasted oil prices, the futures price curve of Crude as of the cut-off date is applied, plotted in appendix 29. The forecasted price of Crude per barrel moves from 39.99 USD in 2016 to 51.23 USD in 2025. This is in line with our strategic analysis, that historical levels are not likely due to the introduction of shale production from U.S.

Looking at the development in ASK per ton fuel for NAS during 2011-2015 we see a CAGR 2.822 percent. From our strategic analysis we saw that fuel efficiency measured by liters/100 revenue tonne-kilometer (RTK) has decreased significantly also industry-wide between 1990 and 2011, with a CAGR of -2.475 percent. The introduction of the new B737-8 and A320-neo is expected to contribute to further fuel reduction for NAS. In addition, ASK per ton fuel is driven by the length of routes which is increasing during the forecast period. Despite this, we assume an annual fuel efficiency of 2.475, making our estimates for fuel efficiency conservative.

Applying the futures price of Crude oil and our regression model to find the implied price of jet fuel in USD. This is converted to NOK by multiplying with a constant USD/NOK[7], and yields the

[7] USD/NOK of 8.533 as of 4/3/2016. source: Bloomberg

expected jet fuel price denominated in NOK. The estimated ASK/ton jet fuel combined with our estimated ASK yields the fuel cost for the forecast period. All calculations are shown in appendix 23.

8.3.5. Depreciation

Depreciation is mainly related to aircraft and thus highly correlated with total non-current assets. As a result, depreciation is assumed to stay at the historical average related to total non-current assets. During the period 2011-2015 the average depreciation to total non-current assets is 4.58 percent, this is assumed to stay constant throughout the forecast period.

8.4. Balance Sheet

Historical balance sheet value drivers are shown in appendix 30, while forecasted value drivers are shown in appendix 31. In addition, the forecasted pro forma balance sheet needed to calculate FCFF is shown in appendix 32. As the main value drivers are identified as ASK or revenue, only special posts are commented in this section.

8.4.1. Intangible assets

According to NAS (2014), intangible assets comprise of software, goodwill and other intangible assets. In addition, intangibles are separated in definite and indefinite life. Intangible assets with indefinite life will not affect FCFF, and is thus neglected. As a result, only intangible assets related to software need to be estimated for the forecast period. Software is assumed closely related to size, as more software is needed with increased operations. As a result ASK is applied as the value driver of software and the historical average in the period 2011-2015 is assumed for the forecast period.

8.4.2. NIBD

To estimate NIBD we follow Petersen & Plenborg (2012, p. 204) and measure it as a percentage of invested capital. We find invested capital a good proxy, as NIBD will not be constant in the forecast period due to the planned expansion. In-line with theory, we apply the average NIBD to Invested Capital during the period 2011-2015 for future levels of NIBD.

8.5. Key financial ratios

Figure 45 shows key financial ratios for the forecast period. These numbers are not comparable with our ratios in section 6.2.2., as leases are not capitalized in our forecasts. Because of this, the

same historical ratios are calculated without capitalized leased and shown in appendix 33. Both EBITDA margin and Profit margin is found to be considerably higher in our forecasts than historical averages. Average historical EBITDA margin in the period from 2011-2015 is 5.46 percent and -0.39 percent for Profit margin. The average historical ROIC is found to be 2.69 percent, but excluding the negative year 2014 the average is 4.15 percent. We find it natural that the profitability changes as NAS expands their long-haul operations, in addition three of five years in the historical period are influenced by the costly introduction of long-haul. Despite the estimated increased profitability, the generated cash flows do not show the same development.

Figure 45 – Forecasted key financial ratios 16'-Terminal
(Source: Own contribution)

Forecasted key financial ratios	Short-term					Long-term						
NOK (1 000 000)	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	T	average
Revenue	25 560	34 774	42 593	48 889	55 700	59 712	62 807	65 581	66 068	66 527	66 958	**54 106**
EBITDA margin	15.10%	18.97%	19.22%	19.68%	20.17%	15.42%	15.79%	16.20%	16.27%	16.45%	16.59%	**17.26%**
Profit margin	5.26%	7.72%	6.81%	6.41%	6.64%	2.98%	3.24%	3.60%	3.65%	3.77%	3.86%	**4.90%**
ROIC	**4.80%**	**6.54%**	**4.86%**	**4.14%**	**4.22%**	**1.87%**	**2.03%**	**2.27%**	**2.30%**	**2.38%**	**2.43%**	**3.44%**

9. Valuation

In this chapter the present value approach to obtain a fair stand-alone value of NAS. We need the weighted average cost of capital to be able to discount the free cash flows to firm and thereby estimate the enterprise value, in relation to the valuation of synergies the weighted average cost of capital for RYA is also estimated. The estimated enterprise value will be controlled through a relative valuation and a sensitivity analysis.

9.1. Weighted average cost of capital

Sub-question to be answered in this section:

What is the weighted average cost of capital associated with an investment in NAS and RYA respectively?

The weighted average cost of capital (WACC) is a weighted average of the required rate of return (cost of capital) for each type of investor (Petersen & Plenborg 2012, p. 246). WACC represents the opportunity cost that investors face for investing their funds in one particular business instead of others with similar risk (Koller, Goedhart & Wessels 2010, p. 235). WACC will be applied as discount rate in the discounted cash flow (DCF) model in section 9.2., and is defined as:

$$WACC = \frac{E}{(NIBD + E)} \times r_e + \frac{NIBD}{(NIBD + E)} \times r_d \times (1 - t)$$

To be able to find WACC for NAS and RYA we need to consider and estimate each component in the relation above.

9.1.1. Cost of equity

There are several different ways to estimate investors´ required rate of return. The most common is the Capital Asset Pricing Model (CAPM), but the extension Fama French three-factor model and the arbitrage pricing theory model are also frequently used (Koller, Goedhart & Wessels 2010, p. 238). Koller, Goedhart & Wessels believes that CAPM is the best model for estimating cost of equity for developing a WACC to use for company valuation. We therefore apply CAPM to determine equity cost of capital in this thesis. CAPM states that the expected rate of return on any security equals the risk-free rate plus the security´s beta scaled by the market risk premium and is therefore defined as:

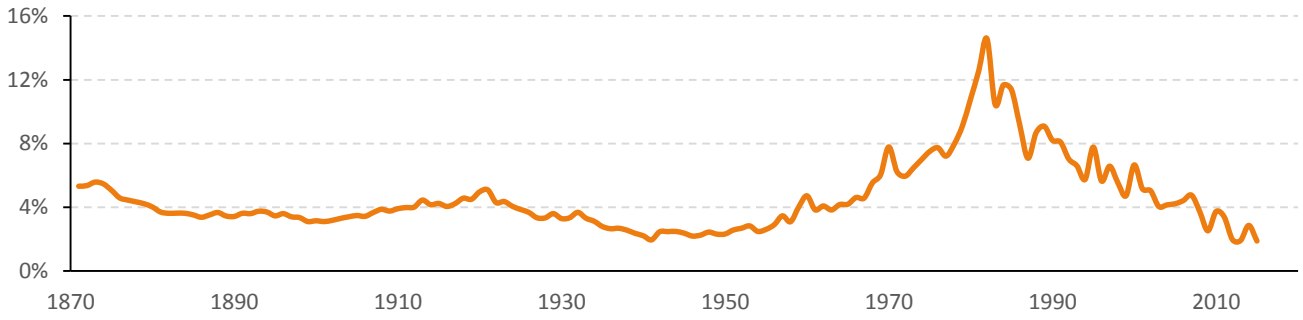
$$E(R_i) = r_f + \beta_i[E(r_m) - r_f]$$

Risk-free rate

It is common practice to use long term government bonds as a proxy for the risk-free rate, which exists in many different maturities. To match the maturity of each single cash flow with government bonds with the same maturity is the ideal choice. Few practitioners do this according to Koller, Goedhart & Wessels (2010, p. 241). For simplicity they choose a single yield to maturity from the government bond that best matches the entire cash flow stream being valued. They also state that the most common maturity for corporate valuation is 10-year government bonds. A 30-years government bond might match the cash flows better, but bonds with such long maturities are often illiquid, and their prices and yield premiums may not reflect their current value. Finally, Koller, Goedhart & Wessels (2010, p. 241) states that one should always use government bond yields denominated in the same currency as the company's cash flows to estimate risk-free rate. Following this the inflation will be modeled consistently between cash flow and discount rate. Some would argue that interest levels today are a bad proxy for the future levels, as they may be interpreted as historically low. Looking at long-term government bonds for a longer horizon, one could argue that interest levels are on average. Investigating long-term US Treasury Bills back to 1870, as illustrated in figure 46, we see that levels today are not far from the average over the

whole period. At the same time, by applying the YTM on government bonds, an expected future increase should be reflected in the price of which the bonds trade at, and therefore also the YTM.

Figure 46 – Historical 10y US Treasury yield
(Source: Own contribution, Robert Shiller homepage)



Based on the above we apply the average mid YTM in 2016 of Norwegian 10-year government bonds for NAS and German 10-year zero unsecured strip for RYA as proxy for the risk free rate. Yields for these bonds are 1.415 and 0.482 percent, respectively.

Beta

According to CAPM, a stock´s expected return is driven by beta, which measures how much the stock and the entire market move together (Koller, Goedhart & Wessels 2010, p. 249). The beta measures how much systemic risk a share will add to a well-diversified portfolio. A beta value needs to be estimated since it cannot be observed. The standard empirical method for estimating a beta is to regress the returns on any asset against the returns on an index representing the market portfolio, over a reasonable time:

$$R_i = \alpha + \beta R_m + \varepsilon$$

Damodaran (2012) points out three critical decisions that we need to make in setting up the regression: 1) the length of the estimation period, 2) return interval and 3) choice of market index.

When determining the length of the estimation period we need to consider the development of the company. Some use a long period, while others use a short period. If the firm has changed its risk characteristics the last years, the latter is best. If the risk characteristics are stable, the former is better due to increased amount of data. As discussed in section 4.1., NAS has experienced large growth the last decade. As a result of the above, an estimation period of five years is applied.

With regard to the return interval one can choose between daily, weekly and monthly returns. By applying weekly returns we get more data and therefore more significant results. However, Damodaran points out that by applying daily returns, one expose the data to non-trading bias. This is a problem for small stocks with low liquidity that will be affected by non-trading days and hence biased downwards. We therefore choose to use monthly return interval in our regression, a frequency supported by Campell, Lo and Mackinley (1997, p. 184)

In the choice of market index analysts use a proxy, and they usually choose an index of the market where the stock trades. Damodaran points out that this might not be the best approach for an international company or cross-border trader, and one should therefor use an international index. The airline industry is global, and our companies have operations covering Europe, United States and Asia. In addition, RYA is listed on several stock exchanges. The MSCI World Index, a value-weighted index comprising of large stocks from 23 developed countries, is a good choice according to Koller, Goedhart & Wessels (2010, p. 253). The MSCI World Index is applied as the market proxy in the beta estimation for both NAS and RYA.

The equity beta above is called a raw beta, and is estimated to 1.48 for NAS and 0.20 for RYA. It is based on the average debt/equity ratio during the estimation period and not the current debt/equity ratio. The raw beta is unlevered by using the average ratio and levered back using the current ratio. Finally, several studies find that betas tend to move towards 1 over time. To improve our beta estimate, we therefore apply Bloomberg smoothing mechanism to get what is called the adjusted beta:

$$\beta_{adj} = \beta_{raw} \frac{2}{3} + \frac{1}{3}$$

By this we obtain a beta estimate of 1.19 for NAS and 0.33 for RYA. All computations for raw beta and adjusted beta can be found in appendix 34 and 35.

Market risk premium

The market risk premium is defined as the spread between the expected return on the market portfolio and the risk-free rate. In the CAPM the market portfolio includes all assets, both traded and non-traded and is therefore not observable. Koller, Goedhart and Wessels (2010, 237) supports the difficulties in estimation of market risk premium, but states that various models yields a premium between 4.5 and 5.5 percent. Damodaran (2016a) estimate the risk premium for

mature markets to 6 percent. A recent study by KPMG (2016) recommends application of a market risk premium of 6 percent as of YE 2015. The study shows a fairly stable estimated risk premium ranging between 6-6.5 percent in the period mid 2012- YE 2015. As the study conducted by KPMG is the most recent study, a market risk premium of 6 percent is applied in our CAPM.

Company-specific adjustments

Some characteristics of a firm may affect the equity holders required rate of return. According to Petersen et al. (2006, referred in Petersen & Plenborg 2012, p. 265) investors demand a discount for investing in stocks with limited or no liquidity. Following Petersen, the liquidity premium may lie in the range of 3-5 percent. The size of the company measured in market capitalization may also affect the equity holders required rate of return. According to a survey carried out by PwC (2015), 83 percent suggest a small stock premium for companies with a market cap below 5000 NOKm in the range of 0-5 percent, since small companies are more risky than large.

Oslo Stock Exchange (2016) states in their annual statistics that NAS is the 9th most traded company at OSE, accounting for 2.88 percent of the total turnover. As a result, we do not find a liquidity premium necessary for NAS. NAS had a market cap of 11 500 NOKm YE 2015, which is more than twice the threshold for a small stock premium according to PwC. A small stock premium is as a result not added to the cost of equity capital. Liquidity and small stock premium will not be considered for RYA because of the size of the company.

We obtain a cost of equity for NAS of 8.58 percent and RYA of 2.47 percent. According to Damodaran (2016b), the European industry average cost of equity is 9.28 percent. We do not find the estimated cost of equity for RYA applicable in relation to the estimated risk-free rate of 0.482 percent and a market risk premium of 6 percent. The main reason for the low cost of equity is the low estimated raw beta and the current capital structure applied to obtain the levered beta. The low beta estimate is a result of low correlation with the index. RYA has delivered steady positive returns during the estimation period, while the index has been more volatile. Similar results are obtained with other indexes. Despite positive returns the last five years, we do not find it realistic that equity holders demand only 2.47 percent in required return. In addition, an underestimated cost of equity for RYA will potentially bias the estimated value of synergies upwards. As a result, the European industry average cost of capital is applied as the cost of equity for RYA.

9.1.2. Cost of debt

The cost of debt measures the current cost to the firm of borrowing funds to finance projects (Damodaran 2012). It reflects the required rate of return for creditors and is based on the financial and operational risk related to the company.

NAS

The effective interest rate on debt during 2014 was 4.5 percent, a decrease of 0.3 percentage point compared to 2013 according to NAS (2014). This is a result of the increased fraction of cheaper funding related to aircraft financing which is denominated in USD. The aircraft deliveries during 2015 have been financed through the private EETC[8] market in the U.S. (Norwegian 2015, p. 39).

During the year of 2015, the unsecured bond with ticker *NAS03* matured, the floating rate of this bond was NIBOR 3M[9] + 5.5 percent (NAS 2014). At the time of this analysis, four listed bonds were issued by NAS on Oslo Stock Exchange, whereas one unsecured bond is denominated in EUR. All data related to issued bonds is collected from Securities Notes published by Oslo Stock Exchange (2015) and Bloomberg.

Figure 47 – Issued bonds by NAS on Oslo Stock Exchange 04.03.2016
(Source: Own contribution, Oslo Stock Exchange, Bloomberg)

Ticker	Seniority	Currency	Principal	Maturity	Coupon	YTM
NAS04	Sr unsecured	MNOK	825.00	03.07.2017	NIBOR 3M + 3.75%	**6.806**
NAS05	1st lien	MNOK	225.00	21.11.2017	NIBOR 3M + 4.00%	**4.892**
NAS06	Sr unsecured	MNOK	1 000.00	22.05.2018	NIBOR 3M + 5.75%	**7.066**
NAS07	Sr unsecured	MEUR	250.00	11.12.2019	7.25%	**7.013**

Figure 47 provides an overview of the listed bonds of NAS. The secured bond *NAS05* is secured in the hangar owned by NAS situated at Oslo Airport. This bond is not found to reflect the real credit risk of the creditors because of the mentioned collateral. The unsecured bonds *NAS04* and *NAS06,* are both denominated in NOK and issued during 2014 and 2015, with a floating rate of NIBOR 3M plus a credit spread between 3.75 and 5.75 percent. NIBOR 3M was 1.04 percent as of cut-off date (Oslo Stock Exchange 2015). Applying the average YTM of the two unsecured bonds denominated in NOK results in a required rate of debt of 6.936 percent. The spread between our estimated cost of debt and the recognized effective interest rate has to be seen in

[8] Enhanced Equipment Trust Certificates
[9] Norwegian Interbank Offered Rate 3 months provided by Oslo Stock Exchange

relation to the liquidity analysis conducted in section 6.2.3. and the future growth plan of the company. Due to the large future CAPEX, we find our estimates reliable. All information about issued bonds is shown in appendix 16.

Koller, Goedhart and Wessels (2010, p. 261) suggests using the company's long-term bonds when estimating the cost of debt. As NAS has no long-term bonds, the available information is applied. The estimation seems reasonable comparing the estimated required rate of debt at 6.936 percent with the recognized effective interest rate of 4.5 percent during 2014 (NAS 2014). In addition, the average net financial items excluding extraordinary posts over NIBD during the period 2011-2015 is 2.9 percent. Calculations are shown in appendix 36, and exclude capitalized lease and interests related to capitalization.

RYA

RYA's total debt FYE 2015 comprises of borrowings from different financial institutions, two unsecured bonds denominated in EUR and some other long-term debt related to financial leases and aircraft (RYA 2015, p.187). Whereas NAS' does not give a full disclosure of interest rates, RYA provides almost complete information related to interest rates and maturities.

Appendix 37 shows the maturity profile and the combination of fixed and floating interest rates for RYA, as well as current and non-current debt. Weighting the floating and fixed rate of non-current debt yields a cost of debt of 2.03 percent. Performing the same calculations for FY 14 and 15 yields a rate of debt of 2.49 percent for both years.

RYA (2015) states that fixed interest rates are fixed for durations between 7 to 12 years depending on the underlying structures. This is also illustrated as the unsecured bonds issued during 2014 and 2015 have lower interest rates than the secured debt. As the secured debt is not believed to serve as a good proxy for the required rate of return for creditors today, we choose to apply YTM of unsecured bonds.

Figure 48 – Issued bonds by RYA on Irish Stock Exchange 04.03.2016
(Source: Own contribution, Bloomberg)

Ticker	Seniority	Currency	Principal	Maturity	Coupon	YTM
BN8TL73	Sr unsecured	MEUR	850	17.06.2021	0.01875	1.028
BW9PHM0	Sr unsecured	MEUR	850	10.03.2023	0.01125	1.374

As figure 48 shows, the average YTM on the issued bonds is 1.201 percent, with initial maturities of eight years. RYA is rated BBB+ by the agencies Standard & Poors and Fitch, making RYA one of the highest rated airlines in the world (Financial Times 2016). A required rate of debt for RYA of 1.201 percent is low but seems reasonable. All information about issued bonds is found in appendix 16.

9.1.3. Capital structure

The capital structure of a company determines the respective weights for cost of equity and cost of debt in the WACC. Koller, Goedhart and Wessels (2010, p. 237) suggests applying a forward-looking capital structure, in addition the market values, not book values should be used. According to Damodaran (2016b) the industry average percent debt is 58.9 percent.

NAS

NAS' capital management policy is to have a capital structure which meets the demand of operations, reduces cost of capital and complies with financial covenants and future investment plans. Equity and debt is continuously adjusted and monitored to obtain an optimal capital structure (NAS 2014). Since no target capital structure is disclosed, the historical average capital structure is applied as a proxy for future capital structure. The target capital structure is set to be 24.4 percent equity and 75.6 percent debt.

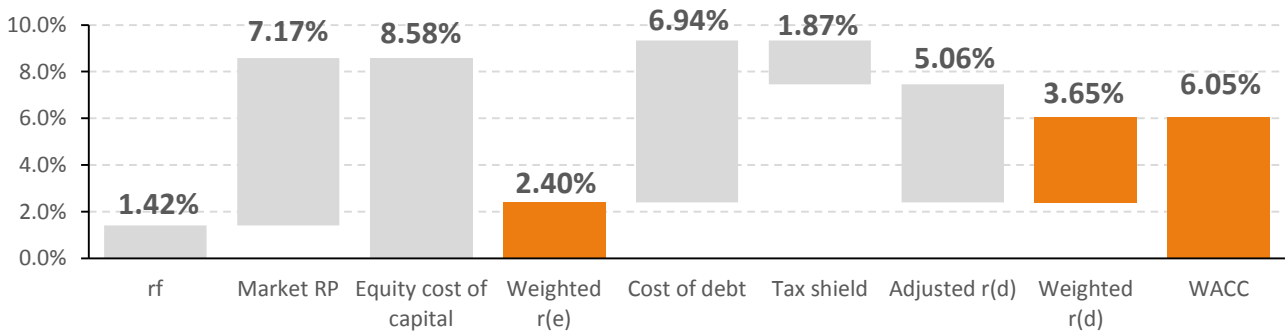
RYA

RYA's historical capital structure is calculated in appendix 38, and suggests an historical average of 97.2 percent equity and 2.8 percent debt. The low level of debt is in line with the short-term liquidity analysis in section 6.2.3.1. This capital structure deviates from the industry average of 58.9 percent debt. RYAs current capital structure is mainly affected by the company's large cash holdings, which is considered bad cash management. In addition, RYA completed a 400 EURm share buy-back and completed an extraordinary dividend payment of the 400 EURm in proceeds from the sale of Aer Lingus during 2015 (RYA 2016). This may suggest that the historical capital structure is not a good proxy for the future and is thus not considered sustainable. As a result, the average industry capital structure is applied in the WACC.

9.1.4. WACC

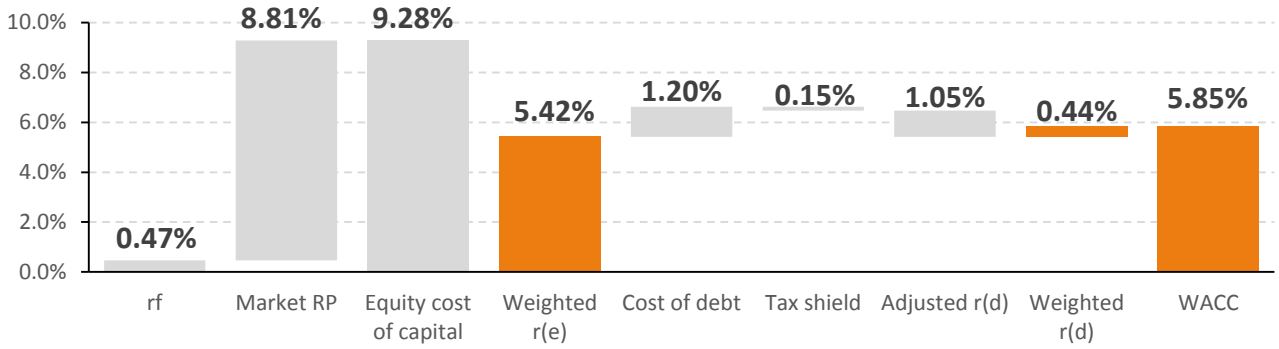
As a result of previous calculations, the WACC for NAS is estimated to 6.05 percent. Figure 49 illustrates the breakdown.

Figure 49 – WACC break-down NAS
(Source: Own contribution)



The corresponding breakdown for RYA is shown in figure 50, and the WACC is estimated to 5.85 percent based on the argumentation to apply the European industry average cost of capital.

Figure 50 – WACC break-down RYA
(Source: Own contribution)



All calculations related to the estimation of WACC for NAS and RYA are shown in appendix 39.

9.2. DCF valuation

Sub-question to be answered in this section:

What are the forecasted cash flows for NAS?

What is the stand-alone value of NAS and how sensitive is it to changes in the underlying assumptions?

All present value approaches are derived from the dividend discount model and therefore theoretically equivalent (Petersen & Plenborg 2012, p. 212). The DCF approach which undoubtedly is the most popular of the present value approaches (Petersen & Plenborg 2012, p. 216) will be applied in this thesis. According to the DCF model, only the free cash flows (FCFF) to the firm and WACC affect the enterprise value (EV). The FCFF is derived by the following formula from Petersen & Plenborg (2012, p. 176):

$$FCFF = NOPAT + Depreciation\&Amortization - \Delta NWC - CAPEX$$

Where NWC is net working capital and CAPEX is capital expenditures. Our FCFF were forecasted based on the external and internal analysis and is found in section 5 and 6. The DCF model can be specified as a two-stage model:

$$Enterprise\ value_0 = \sum_{t=1}^{n} \frac{FCFF_t}{(1+WACC)^t} + \frac{FCFF_{n+1}}{WACC - g} \times \frac{1}{(1+WACC)^n}$$

The second stage of the model is what is referred to as Gordon´s growth model where g refers to the constant growth in the steady-state terminal period. The DCF model specified above estimates the enterprise value as opposed to market value of equity. It is therefore necessary to deduct the market value of net interest bearing debt from the enterprise value to obtain an estimated market value of equity. As cash flows are generated throughout the year, discounting in full-year increments understates the appropriate discount factor (Koller, Goadhart & Wessels, p.106.). As Q2 and Q3 historically are the most cash flow generating quarters in the airline industry, half-year increments are chosen in our DCF-model. In addition, the goal is to obtain EV as of the cut-off date 04.03.2016. As a result the discount factor is adjusted by 0.326[10]. Figure 51 shows the output from the DCF model, all intermediary calculations are shown in appendix 40.

[10] The fraction of a year from cut-off date (03/04/2016) to half-year point (01/07/2016).

Figure 51 – DCF Valuation NAS
(Source: Own contribution)

Discounted Free Cash Flow to Firm (DCFF) NOK (1 000 000)		Short-term					Long-term					
		2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	T
FCFF		-4 752	-10 201	-15 321	-12 221	-7 374	-4 925	-1 880	156	3 115	3 230	4 272
WACC		6.08%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%	6.08%
discount factor		0.98	0.92	0.87	0.82	0.77	0.73	0.69	0.65	0.61	0.58	0.54
Present value of FCFF		**-4 661**	**-9 433**	**-13 355**	**-10 043**	**-5 713**	**-3 596**	**-1 294**	**101**	**1 906**	**1 863**	**2 322**
Value of FCFF in forecast period	-44 225											
Value of FCFF in terminal period	77 928											
Estimated Enterprise value	33 702											
NIBD	18 783											
Expected Market Value of Equity	14 919											
Shares outstanding	35.76											
Share price (04/03/2016)	**417.21**											

The DCF-model implies an EV of 33 702 NOKm, deduction of NIBD amounts 18 783 NOKm yields a market value of equity equal 14 919 NOKm. Based on current shares outstanding this translates to a share price of 417.21 NOK.

According to figure 51, NAS won't generate positive FCFF before 2023 due to growing CAPEX related to upscaling of their fleet the coming years. Inspection of how much of the estimated enterprise value is designated to the forecast period and the terminal period will be the first test of our DCF-valuation and forecasts. FCFF from the forecast period yields a negative value, while 230 percent of the estimated EV lies in the terminal period. It is natural that the majority of the value relates to the terminal period, due to the perpetual growth assumption. NAS is a young company early in its life cycle, and our forecasts assume strong growth the coming years. In addition, the establishment of AAA suggests an increased fraction of owned aircraft, which translates to an increase in CAPEX.

A second test of our DCF-valuation and forecast is to compare our short-term estimates with consensus. Figure 52 shows our estimates, Bloomberg consensus[11] and the deviations for the first three years. Our estimated revenues are in line with consensus, but our estimates for EBITDA and EBIT is found to be higher than consensus, implying lower operating costs in our estimates. The estimates for FCFF in 2016 are more optimistic than consensus, whereas more pessimistic for 2017 and 2018. This is mainly related to differences in CAPEX. At the same time

[11] Number of contributors to consensus varies from 3 to 14. FCFF estimates are based on an average of 5 estimates and has the lowest number of contributors.

the median 12m target price from 13 analysts is 385 NOK, with 69 percent BUY recommendation (Bloomberg), more pessimistic than our theoretical share price of 417.21 NOK.

Figure 52 – Short-term estimates vs consensus
(Source: Own contribution, Bloomberg)

Key highlights	Our estimates			Bloomberg consensus			Diff in %		
NOK (1 000 000)	2016E	2017E	2018E	2016E	2017E	2018E	2016E	2017E	2018E
Revenues	25 560	34 774	42 593	25 823	30 694	37 698	-1.0%	13.3%	13.0%
EBITDA	3 859	6 595	8 186	3 220	4 519	5 650	19.8%	45.9%	44.9%
EBIT	2 400	4 494	5 156	1 818	2 583	3 312	32.0%	74.0%	55.7%
EBITDA margin	15.1%	19.0%	19.2%	12.5%	14.7%	15.0%	21.1%	28.8%	28.2%
EBIT margin	9.4%	12.9%	12.1%	7.0%	8.4%	8.8%	33.4%	53.6%	37.8%
CAPEX	7 624	16 197	23 368	9 878	14 555	14 369	-22.8%	11.3%	62.6%
FCFF	-4 752	-10 201	-15 321	-6 432	-9 357	-12 076	-26.1%	9.0%	26.9%

9.3. Relative valuation

We apply relative valuation to get a more nuanced picture of the share price from our DCF valuation. According to Petersen & Plenborg (2012) relative valuation is used commonly by practitioners due to its low level of complexity and rapid execution. In addition, McKinsey (2005) suggests that properly executed multiple valuations serves as a stress-test for i.e. forecasted cash flows. However, Petersen & Plenborg (2012, p. 234) also states that unless one complies with the restrictive assumptions the relative valuation is based on, one get biased estimates. The most important assumption in valuation based on multiples is that the companies are truly comparable, i.e. share the same economic characteristics and outlook and that they have same accounting quality. A proper relative valuation is therefore not as straight forward as often assumed.

Multiples may be equity-based or based on EV. Since equity-based multiples can be heavily affected by capital structure, such multiples are discharged. According to McKinsey (2005), empirical evidence shows that forward-looking multiples are more accurate predictors of value than historical industry multiples. They are also less susceptible to manipulations by changes in capital structure. As a result, forward-looking EV multiples are applied.

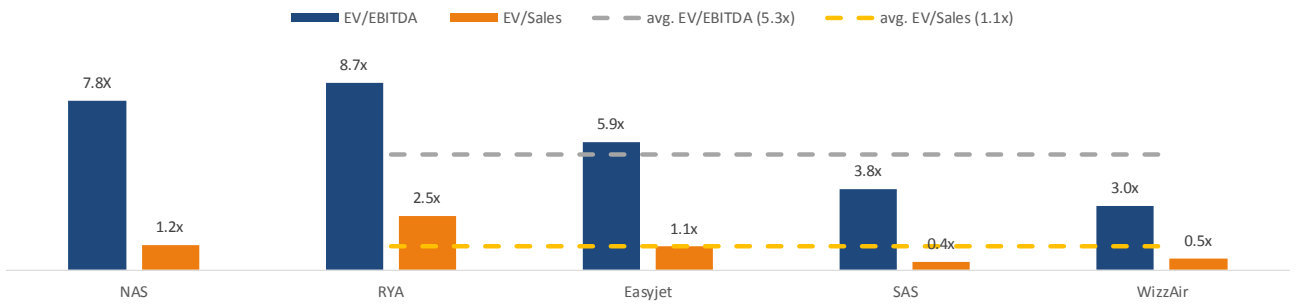
9.3.1. EV/EBITDA and EV/Sales

EV/EBITDA is used to determine the value of the company from an acquirer's perspective since it takes debt into account and is unaffected by depreciation policies. The disadvantage with

EV/EBITDA is that it ignores the variation in CAPEX and depreciation. However, EV/EBITDA is considered best practice according to Koller, Goedhart and Wessel (2010). EV/Revenue gives an idea how much one has to pay to buy the sales of a company, and is the multiple least affected by accounting differences. In addition, the multiple remain applicable even when earnings are negative or highly cyclical. At the same time sales is rarely a key value driver. EV/Sales is by (Suozzo et. Al 2001, p. 28) considered a crude measure, but applicable when there is accounting differences and cash flows are considered unrepresentative. In light of the negative cash flows from section 9.2., EV/Sales is applied as the second multiple in our relative valuation. EV/NOPAT requires an identical expected tax rate, and is neglected due to the needed cross-country comparison.

Multiples across the peer-group are presented in figure 53, with a peer-average EV/1Y EBITDA of 5.3x and EV/1Y Sales of 1.1x. EBITDA, Sales and EV for NAS are our estimates from section 9.2., whereas consensus as of the cut-off date is applied for the peer-group.

Figure 53 – Implied EV according to EV/EBITDA and EV/Sales
(Source: Own contribution, Bloomberg)



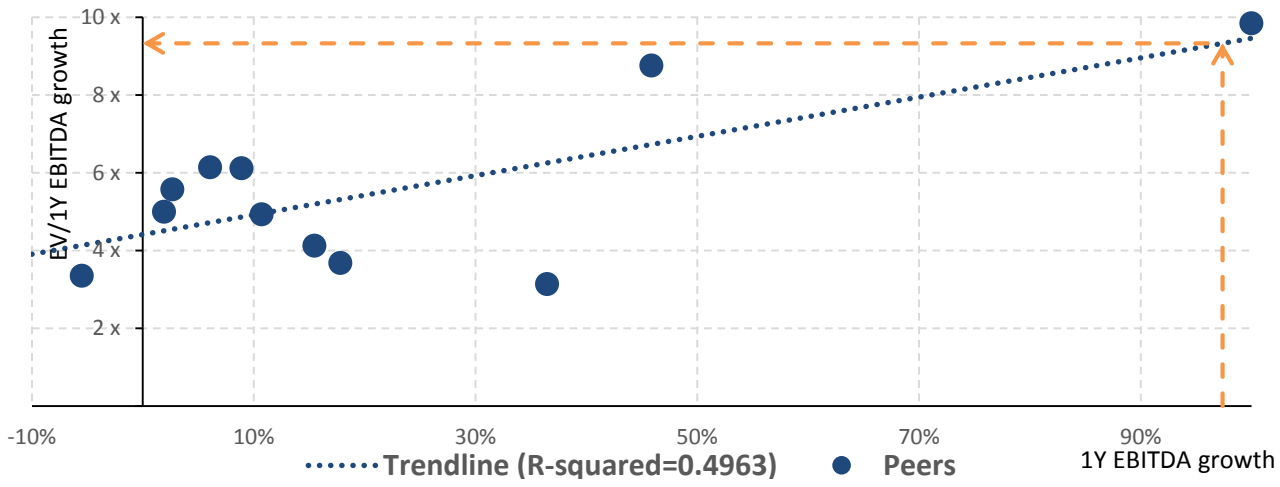
NOKb	NAS	RYA	Easyjet	SAS	WizzAir
EBITDA	3.86	17.62	10.50	4.03	2.33
Sales	25.56	60.78	57.04	38.11	13.21
NIBD+mkt. cap	30.27	153.26	62.41	15.15	6.97

Implied EV		Diff. from DCF
by EV/EBITDA	20.64	-38%
by EV/Sales	29.02	-13%
Average EV	**24.83**	

From figure 53, we observe that implied EV from EV/EBITDA deviates from our DCF-result with -38 percent. Applying consensus from Bloomberg for estimated EBITDA means that leases are not taken into account, which may bias the results. EV/Sales on the other hand, reduces the difference drastically to -13 percent compared to the DCF-result.

As the implied EV from EV/EBITDA deviates a lot from our DCF-model, further analysis related to this multiple is conducted. There may be several reasons for the deviations, but from section 6.2.2.1. we identified clear differences in EBITDA margin across the selected peer-group. Data from a broader peer-group is collected, comprising of nine LCCs worldwide, including our previous peer-group. Company names and data collected are shown in appendix 41. Figure 54 shows the trading EV/1Y EBITDA growth multiples for the peer-group in relation to the estimated growth in 1Y EBITDA. This assumes a linear relationship between the chosen multiple and growth in the selected driver, which may be argued as to simplistic. This will at the same time serve as a sanity check to our DCF-model, and our earlier relative valuation. In addition, figure 54 shows the plotted linear regression (R^2=0.4963), and the implied EV for NAS based our estimated YoY growth in EBTIDA. The implied EV/1Y EBITDA growth is 9.3x which corresponds to an EV for NAS of 35 983 NOKm, which is 6.8 percent more than our DCF-model. This yields a share price of 481 NOK.

Figure 54 – Implied EV according EV/ 1Y EBITDA growth broad peer-group
(Source: Own contribution, Bloomberg)



It should be mentioned that some analysts, according to McKinsey (2005), apply industry multiples and current EV to back out the required earnings or sales for their estimates. This means that such estimates will reflect the assumed appropriate multiple. The possible effect of this is neglected, as the number of peers and the number of analysts are considered sufficient. As a result, the relative valuation is considered to support our DCF-model.

9.4. Sensitivity and scenario analysis

A general criticism of the DCF valuation method is that the output is highly sensitive to changes in input factors. The sensitivity of the model increases with the allocated value in the terminal period, due to Gordon's growth model. In section 9.2 we found that the terminal period accounts for 230 percent of EV, and a sensitivity analysis is conducted to illustrate this. Figure 55 illustrates the sensitivity of the estimated share price of NAS with respect to changes in WACC and terminal growth.

Figure 55 – Share price sensitivity wrt. WACC and terminal growth
(Source: Own contribution)

	WACC	Optimistic			Realistic			Pessimistic		
Growth		5.08%	5.33%	5.58%	5.83%	6.08%	6.33%	6.58%	6.83%	7.08%
Optimistic	4.10%	5519.6	3899.8	2832.4	2078.0	1517.8	1086.5	745.1	468.8	241.1
	3.85%	4034.4	2940.1	2166.6	1592.3	1150.1	800.0	516.7	283.2	88.0
	3.60%	3050.9	2257.9	1669.0	1215.6	856.6	566.0	326.6	126.4	-43.1
Realistic	3.35%	2351.7	1747.9	1282.9	914.8	616.8	371.2	165.9	-7.9	-156.6
	3.10%	1829.0	1352.2	974.7	669.1	417.2	206.6	28.3	-124.2	-255.9
	2.85%	1423.6	1036.3	722.9	464.6	248.5	65.6	-90.8	-225.9	-343.4
Pessimistic	2.60%	1099.8	778.3	513.3	291.7	104.1	-56.4	-195.0	-315.6	-421.2
	2.35%	835.4	563.6	336.2	143.7	-21.0	-163.2	-286.9	-395.2	-490.7
	2.10%	615.3	382.1	184.6	15.6	-130.3	-257.3	-368.5	-466.5	-553.3

The terminal growth is set to 3.1 percent, in-line with the long term GDP growth according to Airbus (2015). All else equal, an increase (decrease) of 0.25 percentage points in terminal growth will yield a share price of 616.8 NOK (248.5 NOK). Looking at the sensitivity with respect to the WACC, we may conclude that the share price is more sensitive to the WACC than the terminal growth.

9.5. Conclusion from stand-alone valuation

Our DCF-model estimates a theoretical EV of 33 702 NOKm, subtracting NIBD of 18 783 NOKm yields a value of equity equal to 14 919 NOKm which corresponds to a share price of 417.21 NOK. Our estimated key financial measures (Revenue, EBITDA, CAPEX and FCFF) are on average perceived optimistic compared to consensus for the FY's 2016, 2017 and 2018. The relative valuation based on 1Y forward-looking EV/EBITDA and EV/Sales suggests that our DCF-model yields a higher share price than implied according to the peer-group. At the same time,

with a broader LCC peer-group, our regression analysis of EV/1Y growth EBITDA supports the DCF-model. As 230 percent of the EV is allocated to the terminal value, our sensitivity analysis shows that the estimated share price is sensitive to changes in WACC and for growth in the terminal period.

As of the cut-off date, 04.03.2016, NAS trades at 309.20 NOK, suggesting undervaluation of 25.89 percent compared to our theoretical DCF-model.

10. Synergies

We have now estimated the stand-alone value of NAS, and the value per share is found to be 417.21 NOK by our DCF-model. To answer our main problem statement, we now need to estimate the value of the potential synergies related to a merger between RYA and NAS. A brief overview of theory and empirical findings is provided, before an estimation and valuation of synergies is conducted.

Question to be answered in this section:

What are the synergies of:

- *Revenues?*
- *Costs?*
- *Financial?*

10.1. Theory and empirical findings

Synergies allow firms to create additional value through the combination of existing resources. Damodaran (2005) describes synergy as the potential additional value from combining two firms. By Jensen and Rubach (1983) synergies are explained as the excess present value of the combined firm, compared to the market values of the bidding and target firm. Synergies may be considered one of the main reasons for engaging in M&A activities, but according to a study conducted by Bain & Company (2014a) overestimation of synergies is the second most common reason for bad deal outcomes. This makes synergy estimation and valuation one of the largest pitfall when engaging in M&A activities.

10.1.2. Definition of synergies

Damodaran (2005) split synergies into operational and financial. PWC (2014) defines three different categories of synergy. The first being revenue and market growth, the second is cost reduction and efficiency leverage, and third is capital optimization. In this thesis, synergies are split into revenue-, cost- and financial synergies. Damodaran (2005, p. 6) argues that an unbiased estimate of the value of synergies is obtained by answering two questions:

- What form is the synergy expected to take?
- When will the synergy start affecting cash flows?

This means identifying how the potential synergy will arise, with what magnitude and at what time in the future. When these questions are answered, the NPV of synergies is obtained by discounting the estimated cash flows.

Revenue synergies

Synergies related to revenue may stem from increased market power, potential cross-sales or introduction to new markets. McKinsey (2004) finds that 70 percent of 160 analyzed mergers fail to achieve estimated revenue synergies, and identifies revenue synergies as the area with greatest estimation error. This is supported by PwC (2014, p. 14) where the realization of revenue synergies consistently underperforms the realization of cost synergies, and only 54 percent of the respondents in the survey reports a favorable revenue synergy result. According to BCG (2013) this may be the reason that only five percent of announced mergers that disclose synergies mention revenue synergies, whereas cost synergies are mentioned in 94 percent when synergies are disclosed. While the fundamental idea behind revenue synergy is clear-cut, assumptions rely on the behavior and actions of customers making potential estimation error large.

Cost synergies

Cost synergies are considered the easiest synergies to model and may be split into one-time cost savings and continuing savings (Damodaran 2005). Such cost savings affect operating income in a positive matter, increasing the future cash flow generated from the merged entity. Cost synergies are according to PwC (2014) easy to model due to historical financial information, which is more reliable than data applied to model revenue synergies. As M&A makes it possible to realize reduced costs in the future, there may also be costs related to the realization of these cost savings. McKinsey (2004) suggests increasing such estimated one-time costs to realize

synergies. In addition, they stress to calibrate assumptions with overall market growth and the competitive reality in the industry.

Financial synergies

Financial synergy takes form as higher cash flows or lower cost of capital. Potential sources of such synergies may be increased debt capacity, tax benefits or the combination of excess cash and high-return projects in the combined entity. There is also possible to achieve better credit quality through M&A activity, a synergy defined as cost of capital synergy by J.P. Morgan (2009, p. 4). RYA's credit grade and cost of debt were treated in section 9.1.2., due to their best-industry rating we choose to ignore this type of synergy to make our estimates conservative. In addition, diversification is often mentioned in the literature as operational and financial risk is reduced by M&A activities. Such synergies are neglected as financial synergies in this thesis, as diversification may be done by individual investors at a far lower cost than engaging in M&A activity.

10.1.2. Airline specific synergies

As mentioned in section 5.1, the airline industry has seen an increasing consolidation the previous decades. An airline merger should enable the carrier to offer a broader and deeper set of services, expand their customer base and realize efficiency gains and economies of scale, according to Booz Allen[12] (2001). Our strategic analysis shows that this trend is considered to continue due to increased competition and yield pressure. Consensus from ten industry experts (Lenartowicz, Mason and Foster 2013) is in line with our expectation of further consolidation. They point at the development in US, in addition to a maturing industry, making M&A a natural choice of growth as the LCC industry in Europe matures.

The study by Lenartowicz, Mason and Foster (2013) interviews ten industry experts about the main drivers, characteristics and sources of synergy in M&A activity in the airline industry. Main drivers for engaging in M&A activity were identified as network growth, removing competition, gaining access to new markets and relief of economic pressure. This may be the reason for the strict regulation on M&A activity by EU, as described in section 5.1.1. Further the main characteristics of a potential merger partner or target are described as fleet compatibility, business culture, network benefits, complimentary network and efficiency gains. In relation to the

[12] Booz Allen Hamilton, American management consulting firm

described potential synergies from M&A activity, the key sources of synergy in LCC mergers were head-office rationalization, network optimization and leveraging greater purchasing power. In contradiction to general considered synergies, only two of the respondents mentioned increased yield and load factor as key sources of synergy.

According to Iatrou (2006), the main synergies from M&A in the airline industry is found to be related to economies of scale with corporate planning, financial synergies, IT synergies and maintenance. Given this broad overview over synergies in the industry, a short analysis of the empirical findings related to premiums in M&A activity is conducted below.

10.1.3 Empirical findings of premiums

Synergy was defined as the difference between the value of the merged company and the target. A study by BCG (2013) examines how synergies are split between acquirer and target. They show that acquirers do not capture synergies as a whole, as sellers know that the company is worth more in the acquirers hands and therefore demand a premium. BCG argues that the realized deal price will be in the range between the stand-alone value and the stand-alone value in addition to the value of synergies. The study shows that sellers on average collect 31 percent of the capitalized value of expected synergies. Further BCG shows that industries with a high level of international consolidation generate significant synergies, ranging from 2 to 10 percent of the targets latest annual sales (Median of 4.8 percent).

Control premium is defined as the premium paid over market value in order to obtain a controlling share in a company. According to a survey conducted by PwC (2015) about the risk premium in the Norwegian market, the median control premium on Oslo Stock Exchange is in the range 20-30 percent. In addition, some respondents indicate that the premium depends on the competitive situation and ownership structure of the remaining shares.

Acquisition premium is defined as the premium paid over pre-acquisition market value for a target firm (Hitt et. Al 2009). By this definition, the acquisition premium should be the sum of control premium and the value of potential synergies. Laamanen (2007) points to an average acquisition premium in US in the range 30-50 percent for the period 1987-2007. In 2013 the average premiums was found to be 35.4 percent, but increasing in M&A-concentrated industries (BCG

2013). McKinsey (2004) states that acquisition premiums typically range between 10 to 35 percent.

Data collected from Zephyr[13] suggests an average bid premium of 26.81 percent on rumor date in the air transport industry from 2007 to current date, based on 19 M&A transactions. Data for this analysis is shown appendix 42. The bid premium on announcement date is found to be 21.92 percent. It should be mentioned that the total number of transactions in this timeframe in the industry were 785, such that the validity of this data is not considered strong, but serves as a sanity check for the broader conducted analysis referred to above.

10.2. Motivation behind acquisition of NAS by RYA

Findings from our overview of companies and internal analysis in section 4 and 6, suggest a closer strategic fit between RYA and NAS today compared to previous years. Since the introduction of AGB in 2013, RYA should not be considered an ULCC. Historically both NAS and RYA have operated solely Boeing aircraft, in-line with one of the main characteristics of fleet compatibility for merger potential. The recent order and delivery of A320-neos from Airbus may be seen as an attempt by NAS to decrease the power of suppliers. In addition, all aircraft set for delivery in the coming years are leased out through AAA. This may suggest that NAS not plan to operate these aircraft, and that the A320's will serve as the basis for AAA, the newly established subsidiary functioning as a leasing company.

RYAs previous attempts of a takeover of Aer Lingus have been blocked by EU, as described in section 5.1.1. The offers were structured to keep Aer Lingus as a separate company and to maintain the brand, increasing operations on primary airports and investing in transatlantic operations (RYA 2012, p. 106-107). The offers were blocked due to competitive conditions in the Irish market (EU com 2013) and ended with the sale of RYAs 29.8 percent shareholding in Aer Lingus at a price of 2.50 EUR per ordinary share in July 2015. Since this, RYA has been in negotiations with several long-haul carriers regarding a potential feeder deal during 2015 (Bloomberg 2015). This makes us believe the main motivation for the attempted acquisition of Aer Lingus may have been their long-haul operations.

[13] Database of corporate M&A, IPO, PE and venture capital deals

The sale of RYAs position in Aer Lingus also provided RYA with a cash position of approximately 400 EURm, leaving the company's estimated total interest-bearing assets at 5 309.5 EURm as of YE 15. This gives RYA a insignificant NIBD, which may be considered bad cash management as a potential tax shield is not enabled. This, in combination with the estimated CAPEX for NAS over the next five years (estimated to 86 118 NOKm) makes us confident that this would create financial synergies related to capital optimization.

Section 5.1.1. described a strict regime in allowance for mergers in the European airline industry, with all mergers being treated individually based on a route-by-route basis. Appendix 43 illustrates that the route overlap for NAS and RYA is quite small compared with SAS and NAS. This is related to RYA's higher presence at secondary airports compared to NAS. This makes it reasonable to believe that a potential merger should not be blocked due to competitive conditions.

RYA has a goal to be the largest scheduled passenger airline in Europe, with a long-term traffic target of 180m passengers in FY2024 (RYA 2016). RYA has during 2015 doubled their passenger flow from Copenhagen, making the Norwegian market a natural next target. As mentioned in section 3.5., the Norwegian market is far less fragmented than rest of Europe, making the possibility of yield pressure lower. This is thought to offset the effect of a potential seat tariff to some degree. In addition, the Norwegian market is one of few markets RYA has low presence today. As mentioned in section 5.1.1., RYA has announced that they will pull out of the Norwegian market. This is considered as a way to put pressure on the Norwegian government.

As described in section 6.1.2., high load factor is important for profitability for the LCC business model. We expect that NAS will provide 1.67x more ASK in 2020 compared to 2015, based on our findings about the current fleet and the forecasted fleet in section 4.1.3. The risk of lower load factor in long-haul operations during the up-scaling phase is considered high, as there is no feeder agreement with another carrier.

Another reason for a potential merger between RYA and NAS is the long lead time in aircraft deliveries. If RYA wants to engage in long-haul traffic, they may be able to pressure Boeing due to their position, but delivery will take time. Acquiring a carrier which is present would lower this time considerably. In addition, NAS' introduction phase of long-haul operations illustrates that

long-haul is far more complex than short-haul, with new regulations and increased risk related to aircraft functionality and crew due to smaller fleet.

10.3. Estimation of synergies

As this thesis is written from an external point of view, the estimation of synergies is done with limited amount of relevant data. At the same time, this analysis could serve as a basis for a pre-merger due diligence, assuming that NAS and RYA have no connection. To be able to estimate the cost synergies, annual reports in the period 2011-2014 are applied. As annual report 2015 is not disclosed before the cut-off date, we assume annual report 2014 to be a good proxy for 2015 in relation to detailed income statement accounts.

10.3.1. Operational cost synergies

Clear-cut synergies, which are assumed a direct result of economies of scale, are estimated first. This is cost savings mainly related to operations and selling, general and administration (SG&A) costs. An example is decreased compensation to board of directors, as the merged entity won't need two boards of directors. Another example is decreased expenses related to ground handling, due to increased market power. All calculations are shown in appendix 44.

Board of directors is assumed terminated as of YE 2016 with no severance, as two boards of directors are assumed redundant. Growth in compensation to board of directors is set to average growth during the period 2011-2014. Compensation to executive management is not as clear-cut, because some top-level management may be needed, especially in the transitional phase. All executive positions except CEO, CFO and CHRO are not assumed necessary from YE 2016. Related to the downsizing of executive management, possible severance may be executed. According to NAS (2014, p. 40), executive management has not been given any specific rights in case of terminated employment. To make our estimated synergies conservative, we assume 6 months' severance for all executive management. Growth in compensation for executive management is assumed driven by revenue. Auditor fees are also considered to disappear from YE 2016, with revenues as the identified value driver for the forecast period.

Handling costs are estimated to be approximately 17 percent of operating costs ex. fuel in 2016 and thereby a key operational cost for NAS. Ground handling is by IATA (2013a) considered to

become a more concentrated and consolidated sector, with continued price pressure, and high customer bargaining power with low switching costs. This makes it evident to assume that the merger would decrease handling expenses to some extent. The sector for services (catering, fuel, MRO ground handling) generated an average worldwide ROIC ex. goodwill of 11 percent during 2004-2011 (IATA 2013a). Based on this, we assume a potential synergy in handling costs of 1.5 percent during the whole forecast and terminal period.

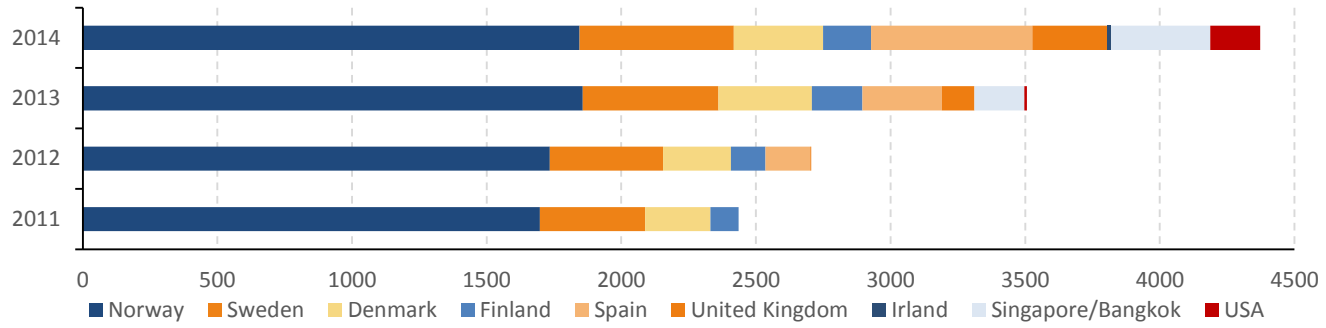
Maintenance expenses are related to maintenance, repair and overhaul (MRO) of aircraft, a sector where large carriers are able to push suppliers according to IATA (2013a, p. 33). This makes it evident that a potential merger would benefit from better purchase conditions. The merged company will be the largest in Europe measured by passengers. In accordance to handling costs, the potential synergies related to maintenance expenses are set to 1.5 percent and the value driver is identified as growth in ASK.

Other operating expenses are related to systems, marketing, back office and consultants (NAS 2014, p.39). No decomposition of these costs is disclosed in annual reports, making the estimation difficult. At the same time, there is clearly room for synergies related to such costs as these functions easily may be consolidated. Head-office expenses are mentioned by experts as a key synergy when engaging in M&A-activities in the LCC industry. We assume an annual synergy of 10 percent, making this a conservative choice.

According to A.T. Kearney (2013) the typical synergy value of operational productivity improvements in SG&A is in the range of 10 percent of the combined cost base. To make our estimates conservative, we have assumed an annual synergy of 5 percent related to sales and distribution.

Payroll for NAS and the peer-group was discussed in section 6.1.5., and the income level in Norway was identified as high compared to Ireland. Figure 56, shows the development in origin for total man-labor years by origin for NAS in the period 2011-2014.

Figure 56 – NAS man-labor years by origin (11'-14')
(Source: Own contribution, NAS annual reports (11'-14'))



As mentioned in section 3.5, Norway is a key market for NAS. It is assumed to remain this way in a potential merger, as Norway is identified as the most consolidated market in Scandinavia. Norwegian labor laws regulate the use of foreign labor in Norwegian aviation, making it unlikely that the merged company would get decreased labor costs related to the Norwegian market. In addition, figure 56 makes it evident that Norwegian employees are becoming a smaller fraction of NAS' employees. This was taken into consideration in our stand-alone valuation, as a result payroll synergies are neglected to avoid double counting. In addition, we assume no payroll synergies as NAS and RYA are able to hire crew on equal terms unconditional of size due to the use of international subsidiaries.

10.3.2. Revenue synergies

In addition to the mentioned operational synergies, synergies related to cross-sales and increased market power due to network optimization have to be quantified. Since introduction, load factor for long-haul operations has been high compared to the average historical load factor of NAS. In a potential merger, RYA will be able to feed NAS' long-haul bases since RYA operates almost 4x as many bases as NAS. This is expected to increase the estimated load factor from our stand-alone valuation considerably. From section 5.2.5., we identified the competition among existing competitors to be high, especially long-term. This makes us believe that yield should not be affected, despite the increased post-merger market power.

Some of the same effects are expected for short-haul operations, but the increased load factor is attributed to route and network optimization and not increased feeding. According to appendix 43, NAS and RYA have 18 percentage city overlap and 2 percentage airport overlap. This makes it

possible to optimize the aggregate network to increase load factor. The same EBITDA margins as generated from our DCF-model are assumed for the estimated revenue synergies for the forecast and terminal period. This implies that revenue synergies are net effects on cash flows, calculations are shown in appendix 44.

10.3.3. Financial synergies

From section 3.5., it is clear that RYA is a much bigger player in the European airline industry than NAS. In section 9.1.4., we estimated the WACC of NAS and RYA to 6.05 and 5.85 percent. According to section 10.1., the most prominent financial synergy is the decreased discount rate. Damodaran (2005) suggests estimating the cost of capital for the merged firm by first estimating the unlevered beta of the merged firm[14] to apply in the new cost of equity, in addition to adjusting the capital structure and cost of debt.

A merger should theoretically contribute to diversification, assuming the assets of the two companies are not perfectly correlated. At the same time, there is little reason to believe that investors would consider RYAs systematic risk different if engaging in what may be considered an add-on acquisition. According to figure 10 (overview of peer-group), RYA's EV is more than 4.9x the EV of NAS[15]. Based on this, we assume that the cost of capital for the merged company is equivalent with RYA's pre-merger cost of capital of 5.85 percent.

Our forecasted synergies are considered conservative. At the same time, there will always be a risk of implementation when engaging in M&A-activity. This risk may either be taken into account after the synergies are estimated or by adjusting the discount rate by adding a risk premium. The implementation risk premium applied by practitioners is currently too low, considering the historical low WACC across industries, according to Bain & Company (2014b). Further they stress that the risk premium should be in-line with the knowledge of industry, geographical presence and previous M&A-experience. As a result a standard risk premium is neglected. RYA has previously not engaged in M&A-activity, but the potential acquisition is in their core industry and operations are located in well-known countries. A risk of implementation premium of 0.5 percent is added to the WACC, making the relevant discount rate for synergies CF 6.35 percent.

[14] Calculated as the weighted average unlevered beta, with respect to firm values. The same as consider the two firms as a portfolio
[15] Assuming NOK/EUR 9.383 as of cut-off date (Source: Bloomberg)

10.3.4. Cost of implementation

Based on our strategic analysis, RYA and NAS seem to be a much better strategic fit today compared to earlier. Both companies are aggressively searching for strong growth and thrive to be cost-leaders in the industry. By industry experts, business culture is mentioned as a key factor for merger partners. As this thesis is based solely on external data, an analysis of such internal factors is hard to conduct. In addition, such an analysis is considered beyond the scope of this thesis. This means that possible negative effects related to inefficiency, top level management slack etc. are not estimated. The costs related to implementation of IT systems, accounting practices and optimization of route and base network are also hard to estimate, as our only source for costs is annual reports. As a result, the cost of implementation is based on empirical findings from general M&A-activity and best possible assumptions are made.

In section 10.1., the average acquisition premium in the airline industry since 2007 was found to be 24.15 percent, seen from announcement of the deals. This premium should include both control premium and the value of synergies. PwC (2015) found the control premium at Oslo Stock Exchange to be in the range of 20-30 percent. Several studies (BCG 2013, Laamanen 2007, McKinsey 2004) suggests an acquisition premium in the range of 30-40 percent. To make our estimated value of synergy conservative, an acquisition premium of 30 percent is applied. Adding stand-alone estimated EV for NAS from our DCF-model of 33 702 NOKm and an acquisition premium of 30 percent, yield an “empirical” deal value of 43 813 NOKm. According to a survey performed by EY (2013), the average cost of integration was 14 percent of deal value. The survey is conducted on 200 senior corporate executives based on a list of companies involved in M&A activities the past two years with an estimated EV of more than 450 USDm and revenue of 800 USDm. The main regions were America and EMEIA (40 percent each), and the main industries were industrials, consumer products, tech and energy. We assume that the cost of implementation in the airline industry is higher than average due to the complexity of implementing IT-systems, and rescaling of operations on different routes and bases. In addition, the surveyed deals are larger than NAS according to our estimated EV, making us believe that an integration cost of 14 percent for this acquisition is too small. As a result, the cost of implementation is set to 25 percent of deal value. This suggests an estimated cost of implementation of 10 953 NOKm.

10.4. Valuation of synergies

Question to be answered in this section:

What are the forecasted cash flows of the synergies?

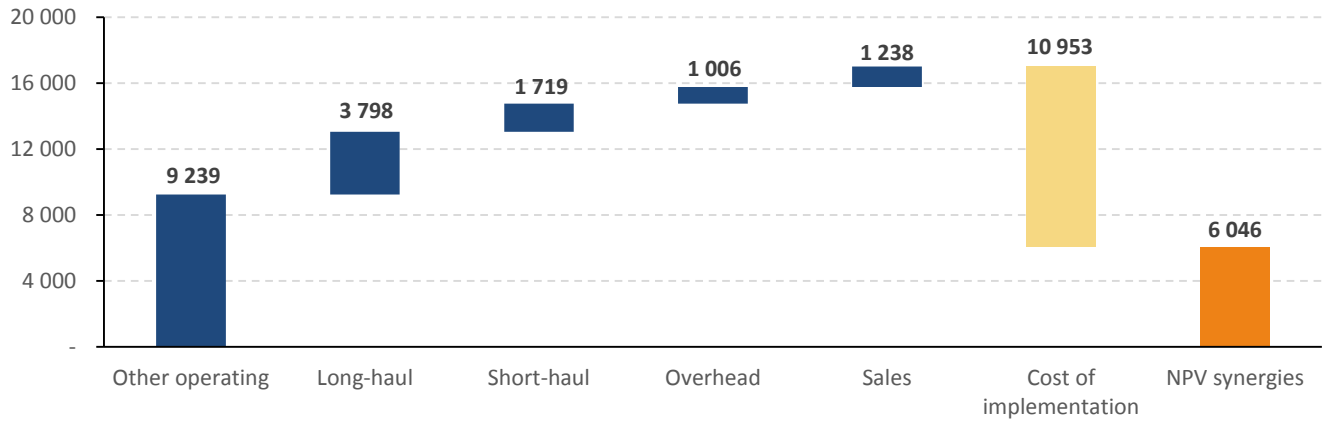
Applying the estimated revenue synergies from increased load factor in both long-haul and short-haul operations and the estimated operational costs yields the synergy cash flow, as shown in figure 57. The increased tax due to decreased cost base is also taken into account. Discounting by the relevant cost of capital yields a present value of synergies equal to 17 000 NOKm as of the cut-off date.

Figure 57 – Synergy cash flow
(Source: Own contribution)

Synergy CF	Short-term					Long-term					
NOK (1 000 000)	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	T
Revenue synergies	106	172	204	227	439	325	327	326	308	237	220
Cost synergies	46	77	313	366	417	474	500	523	530	537	544
Synergy CF after tax	152	249	517	593	856	799	827	849	838	774	763
WACC	6.35%	6.35%	6.35%	6.35%	6.35%	6.35%	6.35%	6.35%	6.35%	6.35%	6.35%
Discount factor	0.98	0.92	0.87	0.81	0.77	0.72	0.68	0.64	0.60	0.56	0.53
Present value synergy CF	**149.28**	**229.55**	**448.23**	**483.09**	**655.69**	**575.17**	**560.08**	**540.87**	**501.83**	**435.62**	**404.15**
Value of FCFF in forecast period	4 579.41										
Value of FCFF in terminal period	12 420.24										
Value of synergies as of cut-off	16 999.66										
Cost of implementation	-10 953.26										
Net value of synergies	6 046.39										
Number of shares	35.76										
Synergy per share	**169.08**										

Subtracting the estimated cost of implementation and dividing by outstanding shares of NAS, yields an estimated synergy per share of 169.08 NOK. From figure 57 we see the same tendency as for the stand-alone valuation: The majority of value is allocated to the terminal period, but to a smaller extent. Figure 58 illustrates the synergy breakdown, to get a clearer picture where the synergies stem from. Overhead includes synergies related to board of directors, executive management and auditor remuneration.

Figure 58 – Synergy breakdown
(Source: Own contribution)

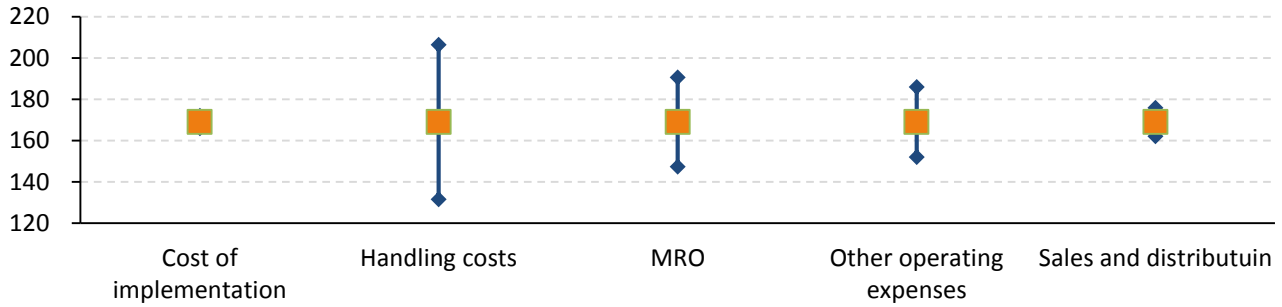


Synergies related to long- and short-haul operations are as mentioned earlier net cash flow effects, thus these synergies are larger than illustrated. Synergy related to operating expenses accounts for 54.35 percent of present value of synergies, and is by far the largest synergy.

10.4.1. Sensitivity and conclusion

Throughout the estimation of synergies, all forecasts are made with what we consider conservative assumptions. This is done in the light of previous research, which shows that especially revenue synergies often are over-estimated. The greatest uncertainty in our estimated value of synergies lies in the cost of implementation. It is estimated based on empirical findings due to lack of detailed data. At the same time, we consider the estimated cost of implementation a fair estimate. As an analysis of sensitivity, figure 59 illustrates the change in synergy per share for a ±1 percentage point change in key synergy drivers, except the cost of implementation where the figure shows a one percent change in the total cost.

Figure 59 – Sensitivity synergies per share
(Source: Own contribution)



As illustrated, synergy per share is most sensitive to handling costs. Overall the sensitivity to different key drivers is considered small, especially compared to our stand-alone DCF-model. The sensitivity to the cost of implementation is small, which strengthens our results, as the biggest uncertainty is related to this cost. The added implementation risk premium of 0.5 percent implies a risk of implementation corresponding to 33.9 percent of synergies per share. We find this reasonable, as all measures in the analysis is assumed conservative and the acquisition is made in a well-known industry.

Figure 60, illustrates the decomposition of the maximum potential acquisition price per share of NAS in a potential acquisition by RYA as of 04.03.2016. Compared to our estimated theoretical stand-alone price per share of 417.21, the acquisition price suggests a theoretical premium of 40.5 percent. NAS was trading at 309.20 NOK per share as of the cut-off date, making the total potential premium related to market price 89.6 percent.

Figure 60 – Potential acquisition price breakdown
(Source: Own contribution)

Standalone	
Estimated Enterprise value	33 702
NIBD	18 783
Expected Market Value of Equity	14 919
Shares outstanding	35.76
Share price (04/03/2016)	**417.21**

Synergies	
Estimate PV synergies	17 000
Cost of implementation	10 953
NPV synergies	6 046
Synergies per share (04/03/2016)	169.08
Max potential acquisition price	**586.29**

The estimated premium may seem high, compared to the empirical findings in section 10.1. As a sanity check, if theoretical stand-alone EV from our DCF-model is assumed correct, and one add an acquisition premium of 20 percent, then the implied payment for synergies is 2 411 NOKm.

This is far below the estimated NPV of synergies, which is estimated to 6 458 NOKm. At the same time, the NPV of synergies are larger than 10 percent of latest annual sales of NAS, as suggested by BCG (2013).

10.4. Sharing of synergies

Question to be answered in this section:

What are the synergy contribution from NAS and RYA?

The NPV of total synergies in the potential acquisition are estimated to be 17 000 NOKm, corresponding to 169.08 NOK per share. As mentioned earlier, we need to identify who contributes which synergies to be able to answer the problem statement. The theoretical fair price of NAS' equity in a potential acquisition by RYA is the theoretical stand-alone value in addition to the contribution of synergies by NAS. As a result, we need to identify who contributes which synergies.

Figure 61 – Synergy contribution in percent NAS and RYA
(Source: Own contribution)

Contribution synergies	Operating	Long-haul	Short-haul	Overhead	Sales
RYA	60%	5%	70%	50%	50%
NAS	40%	95%	30%	50%	50%
Total	100%	100%	100%	100%	100%

Figure 61 shows that NAS contributes 95 percent of synergies related to long-haul, as this value would be impossible to extract by RYA without NAS. Synergies related to short-haul are contributed to RYA, as they are providing the size and passengers, but at the same time NAS provides a good brand and a compatible fleet. This would not have been able with another target. 60 percent of synergies related to other operating costs are contributed by RYA as they have the size that would enable the majority of these synergies. Synergies related to overhead and sales are assumed 50 percent to each, as these synergies would be enabled regardless of the choice of merging partners. The synergy contribution measured in NPV is shown in figure 62.

Figure 62 – Synergy contribution NAS and RYA
(Source: Own contribution)

Contribution synergies NOKm	Operating	Long-haul	Short-haul	Overhead	Sales	Total
Allocated RYA	1 972	68	428	179	220	**2 866**
Allocated NAS	1 314	1 283	183	179	220	**3 180**
NPV synergies						**6046**

Synergies are allocated based on contribution, calculations are shown in appendix 45. As a result, 3180 NOKm (52.6 percent) is allocated to NAS and the residual 2866 NOKm (47.4 percent) is allocated to RYA.

The fair price per share for NAS in a potential acquisition by RYA is estimated to 506.14 NOK.

11. Conclusion

The objective of this thesis has been to obtain a stand-alone value of NAS' equity as of 04.03.2015, and the fair price per share in a potential acquisition by RYA. Comprehensive analyses of the airline industry and firm-specific factors have been conducted where we have applied acknowledged and well-known strategic frameworks, valuation theory and empirical findings to answer these questions properly. The thesis can be divided into four parts based on the sub-questions asked in chapter one: External analysis, internal analysis, valuation and synergies. Our conclusion will therefore summarize the main findings in each section.

In the external analysis key value drivers were identified through a PESTEL analysis. We found that GDP growth, especially in emerging markets is a key value driver. The emerging middle class in Asia will be an important driver for demand in the future. We also found that emissions are expected to remain a key factor in the industry and continuous improvements in technology are expected to push the relative operational cost benefit for LCCs further. Despite the continuous deregulation of the industry, it is expected that both international and domestic legislation will keep the industry restricted in order to balance market fragmentation, environmental issues and customer needs.

The Porters five forces were applied to analyze the competitive environment in the industry. Rivalry among existing competitors were identified as intense overall, but less intense in the profitable long-haul market. Threat of new entrants is considered high, especially by LCCs in the long-haul segment and by Asian carriers in European short-haul. Cost reductions are transferred directly to customers and they are therefore found to be powerful. Airports and pilots are found to be the most powerful suppliers. The threat of substitute is considered low in most markets, and the threat decreases with travel length.

The internal analysis started out with an analysis of key industry measures. NAS had lowest yield and RASK compared to peers, but their unit cost was solid. NAS´ had a disadvantage compared to peers with regards to Norwegian labor law and income level, which affect their unit cost. The financial analysis discovered that RYA was outperforming the peer-group with regard to both profitability and liquidity, which may be a result of the low unit cost identified in key industry measures. NAS has delivered positive returns except in 2014 and showed a positive trend in

profitability. It is significant liquidity risk related to NAS due the high degree of leverage and vast amounts of capital expenditures the coming years.

The valuation section is based on level and trends discovered in the external and internal analysis. We expect the strong growth in global passengers and capacity to continue the next decade. Growing middle-class from emerging economies will be strong drivers for demand in the future. We expect that establishment of long-haul operations by other LCCs and increased competition from Asian carriers will result in yield pressure long-term. When analyzing Norwegian Air Shuttle on a stand-alone basis, theoretical enterprise value is estimated to be 33 702 NOKm, based on a cost of capital equal to 6.08 percent. This suggests a stand-alone value of equity of 14 919 NOKm. The equity value is supported by relative valuations based on EV/Sales and EV/1Y EBITDA growth. Our stand-alone valuation suggests that NAS is undervalued with 25.88 percent compared to market value as of 04.03.2016

The valuation of synergies is divided into operational cost synergies, revenue synergies and financial synergies. Total present value of synergies is estimated to 17 000 NOKm, based on a cost of capital equal to 6.35 percent. Cost of implementation is estimated to 10 953 NOKm, based on empirical findings. This suggests a net present value of synergies equal to 6 046 NOKm, corresponding to 169.08 NOK per share. Maximum price to pay per share by RYA is as a result found to be 586.29 NOK. Taking into account that NAS is found to contribute with 52.6 percent of total synergies, we find the fair price per share in a potential acquisition by RYA to be 506.13 NOK.

The stand-alone value of Norwegian Air Shuttles equity per 04.03.2015 is found to be 14 919, corresponding to 417.21 NOK per share, and the fair price per share in a potential acquisition by Ryanair is estimated to 506.13 NOK.

12. Development after cut-off

On 22.03.2016 NAS signed a lease agreement which comprise of two additional B787-9, with delivery in 2018 (Norwegian 2016c). NAS further estimate their long-haul operations to comprise of 40 Dreamliners in 2020, which is two more aircraft compared to our forecasts. As discussed in section 4.1., the pending U.S. AOC has been a key risk factor related to the utilization of the future long-haul fleet and its growth potential. The U.S. transportation regulators announced that they have no legal basis to deny NAS the U.S. AOC on April 15th (Bloomberg 2016c), which strengthens our belief that our forecasts are reliable. Further, on April 19th RYA's CEO Micheal O'Leary said in an interview with Bloomberg that RYA and NAS were only minor technical details away from a feeder deal related to NAS' expanding long-haul operations. This is considered a big step towards crystalizing the potential value of the long-haul operations and may also be the first step towards a potential acquisition. In addition, NAS seems to continuously improve operations according to their Q1 2016 Report, released April 21th. The report showed YoY growth in ASK of 17 percent, an increased yield of 2 percent and a 5 percent decrease in CASK. Overall NAS increased their underlying result from operations, measured by EBITDA ex other losses (gains) with 426 NOKm compared to Q1 2015 (NAS 2016). As of 11.05.16, the share of NAS currently closed at 350.90 NOK, suggesting a convergence against our theoretical stand-alone share price of 417.21 NOK compared to the cut-off date.

13. Litterature

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Appendices

Appendix 1 – Key industry measures

		2011	2012	2013	2014	2015
NAS	ASK	21 958	25 920	34 318	46 479	49 028
	RPK	17 421	20 353	26 881	37 615	42 284
	LF	0.793	0.785	0.783	0.809	0.862
	Yield	0.605	0.632	0.580	0.519	0.532
	RASK	0.480	0.496	0.454	0.420	0.459
	CASK	0.423	0.413	0.387	0.382	0.374
	PayrollASK	0.084	0.080	0.072	0.069	0.070
RYA	ASK	101 965	114 488	117 208	125 395	128 249
	RPK	85 709	94 283	96 344	103 754	113 187
	LF	0.841	0.824	0.822	0.827	0.883
	Yield	0.381	0.371	0.437	0.479	0.562
	RASK	0.320	0.305	0.359	0.396	0.496
	CASK	0.241	0.233	0.279	0.294	0.337
	PayrollASK	0.031	0.028	0.033	0.036	0.041
Easyjet	ASK	69 318	72 182	74 223	79 525	83 846
	RPK	61 347	65 227	67 573	72 933	77 619
	LF	0.885	0.904	0.910	0.917	0.926
	Yield	0.538	0.545	0.645	0.725	0.789
	RASK	0.476	0.492	0.587	0.664	0.731
	CASK	0.411	0.420	0.487	0.540	0.584
	PayrollASK	0.055	0.054	0.062	0.071	0.079
SAS	ASK	40 953	36 126	44 629	45 158	44 289
	RPK	30 668	27 702	33 451	34 714	33 781
	LF	0.749	0.767	0.750	0.769	0.763
	Yield	1.176	1.340	1.185	1.062	1.255
	RASK	0.881	1.027	0.888	0.817	0.957
	CASK	0.783	0.944	0.768	0.729	0.808
	PayrollASK	0.278	0.320	0.232	0.197	0.228
Wizz	ASK	40 953	36 126	44 629	45 158	44 289
	RPK	30 668	27 702	33 451	34 714	33 781
	LF	0.749	0.767	0.750	0.769	0.763
	Yield	1.352	1.563	1.255	1.107	1.198
	RASK	1.012	1.199	0.941	0.851	0.914
	CASK	0.899	1.102	0.814	0.759	0.772
	PayrollASK	0.320	0.373	0.245	0.205	0.217

Appendix 2 - NAS Pro Forma Income Statement

Pro Forma Analytical Income Statement Reformulated to Fiscal Year 31/12

Analytical Income Statement NOK (1 000)	2011	2012	2013	2014	2015
Passenger revenue	**9 097 288**	**11 201 072**	**13 381 461**	**16 254 622**	**18 505 800**
Ancillary revenue	1 224 744	1 405 495	1 757 887	2 727 439	3 275 300
Other revenues	206 688	234 624	371 871	557 978	710 100
Other income	3 471	17 851	68 326	0	0
Net revenue	**10 532 191**	**12 859 042**	**15 579 545**	**19 540 039**	**22 491 200**
Payroll expenses	(1 836 194)	(2 068 202)	(2 478 295)	(3 208 986)	(3 433 700)
Jet fuel	(3 093 514)	(3 740 508)	(4 707 203)	(6 321 053)	(5 184 500)
Handling costs	(982 191)	(1 077 334)	(1 339 417)	(1 854 844)	(2 336 800)
Other operating expenses	(3 386 461)	(3 815 003)	(4 772 902)	(6 387 864)	(7 367 700)
EBITDA	**1 233 831**	**2 157 995**	**2 281 728**	**1 767 292**	**4 168 500**
Depreciation, amortiziation and impairment	(293 950)	(385 244)	(529 825)	(748 138)	(1 133 300)
Depreciation capitalized leases	(426 847)	(531 414)	(660 796)	(949 699)	(1 138 699)
EBIT	**513 034**	**1 241 337**	**1 091 107**	**69 455**	**1 896 501**
Tax	(44 416)	(166 535)	(115 817)	557 284	171 100
Tax shield	(97 018)	(173 084)	(183 044)	(458 055)	(491 778)
Operating tax	**(141 434)**	**(339 619)**	**(298 861)**	**99 229**	**(320 678)**
NOPAT	**371 600**	**901 718**	**792 246**	**168 684**	**1 575 823**
Interest income	35 665	47 543	149 658	196 269	76 300
Interest expense	(70 246)	(118 845)	(256 702)	(447 241)	(349 700)
Lease interest	*(402 820)*	*(501 501)*	*(623 599)*	*(896 241)*	*(1 074 601)*
Net foreign exchange (loss) or gain	(228 470)	273 353	(472 938)	(36 948)	0
Net other financial expenses	(5 861)	(15 163)	1 108	13 781	(102 700)
Other losses/gains net	305 720	(336 385)	502 148	(583 751)	(474 100)
Share of profit (loss) from associated company	19 518	32 840	46 597	57 631	103 400
Net financial items	**(346 494)**	**(618 158)**	**(653 728)**	**(1 696 500)**	**(1 821 401)**
Corporate tax rate	*28%*	*28%*	*28%*	*27%*	*27%*
Tax on financial items	(97 018)	(173 084)	(183 044)	(458 055)	(491 778)
Profit	**122 124**	**456 644**	**321 562**	**(1 069 761)**	**246 200**

Appendix 3 - NAS Pro Forma Balance Sheet (1/2)

Pro Forma Analytical Balance Sheet Reformulated to Fiscal Year 31/12

Analytical Balance Sheet NOK (1 000)	2011	2012	2013	2014	2015
Current assets					
Inventory	81 994	68 385	74 135	82 851	104 100
Trade and other receivables	1 072 497	1 096 558	1 623 079	2 173 522	2 553 100
Operational cash	874 172	1 067 300	1 293 102	1 621 823	1 866 770
Total current assets	**2 028 663**	**2 232 243**	**2 990 316**	**3 878 196**	**4 523 970**
Current non-interest-bearing debt					
Financial lease liability	15 485	10 853	6 860	3 227	0
Trade and other payables	1 230 935	1 564 955	1 949 691	2 680 445	0
Air traffic settlement liabilities	1 208 326	1 739 681	2 566 519	2 965 427	4 014 100
Tax payable	488	0	0	2 211	0
Other current non-interest-bearing liabilities					3 503 118
Total current non-interest-bearing debt	**2 455 234**	**3 315 489**	**4 523 070**	**5 651 310**	**7 517 218**
Operating working capital	**(426 571)**	**(1 083 246)**	**(1 532 754)**	**(1 773 114)**	**(2 993 248)**
Non-current assets					
Buildings	9 525	9 525	14 966	252 236	0
Aircraft, other parts and installations	3 869 159	5 579 757	7 526 707	12 527 932	18 533 907
Capitalized aircraft leases	*5 807 669*	*7 230 405*	*8 990 765*	*12 921 580*	*15 493 100*
Equipment and fixtures	31 991	58 476	72 972	83 687	0
Prepayment to aircraft manufacturers	2 126 954	2 844 359	2 514 882	4 102 664	5 107 032
Deffered tax assets	2 069	4 293	28 517	518 915	629 355
Other non-current assets	140 943	160 124	220 278	440 294	484 603
Other non-current tangible assets	0	0	0	0	895 497
Total non-current assets	**11 988 310**	**15 886 939**	**19 369 087**	**30 847 308**	**41 143 495**
Non-current non-interest-bearing debt					
Provision for periodic maintenance	81 865	175 306	412 737	835 480	0
Deferred tax	134 646	301 042	443 991	169 851	0
Other non-current non-interest-bearing liabilities					1 159 526
Total non-current non-interest-bearing debt	**216 511**	**476 348**	**856 728**	**1 005 331**	**1 159 526**
Invested capital exc. Intangibles	11 345 228	14 327 345	16 979 605	28 068 863	36 990 721
Intangible assets	236 216	237 774	225 270	206 826	250 845
Invested capital (Operating assets)	**11 581 444**	**14 565 119**	**17 204 875**	**28 275 689**	**37 241 565**

Appendix 4 - NAS Pro Forma Balance Sheet (2/2)

Pro Forma Analytical Balance Sheet Reformulated to Fiscal Year 31/12

Analytical Balance Sheet NOK (1 000)	2011	2012	2013	2014	2015
Total equity	**1 945 589**	**2 420 652**	**2 749 829**	**2 108 251**	**2 965 300**
Interest-bearing debt					
Pension obligation	151 187	0	127 821	201 883	0
Borrowings	2 682 888	4 166 854	5 736 896	9 950 228	16 543 400
Short term part of borrowings	1 551 918	1 349 359	768 401	3 330 387	3 041 400
Derivative financial instruments	539	190 356	0	458 958	0
Capitalized aircraft leases	*5 807 669*	*7 230 405*	*8 990 765*	*12 921 580*	*15 493 100*
Other interest-bearing liabilities					487 156
Total interest-bearing debt	**10 194 201**	**12 936 974**	**15 623 883**	**26 863 036**	**35 565 056**
Interest-bearing assets					
Non-current financial assets available for sale	2 689	2 689	82 689	82 689	73 536
Investment in associate	82 091	116 050	164 575	223 594	352 161
Derivative financial instruments	242 790	0	37 389	0	0
Current financial assets available for sale	0	10 172	11 158	0	0
Other financial assets	0	0	0	0	275 663
Cash and cash equivalents	230 774	663 595	873 024	389 316	587 430
Total interest-bearing assets	**558 344**	**792 506**	**1 168 835**	**695 599**	**1 288 791**
NIBD	**9 635 857**	**12 144 468**	**14 455 048**	**26 167 437**	**34 276 265**
Invested capital	**11 581 446**	**14 565 120**	**17 204 877**	**28 275 688**	**37 241 565**

Appendix 5 - RYA Pro Forma Income Statement

Pro Forma Analytical Income Statement Reformulated to Fiscal Year 31/12

Analytical Income Statement EUR (1 000 000)	2011	2012	2013	2014	2015
Scheduled revenue	**3 335.0**	**3 740.9**	**3 797.1**	**4 142.6**	**5 237.0**
Ancillary revenue	865.1	1 019.7	1 201.5	1 357.1	1 378.6
Other income	7.8	2.6	-	-	-
Net revenue	**4 207.8**	**4 763.2**	**4 998.5**	**5 499.7**	**6 615.6**
Staff expense	(405.3)	(430.5)	(456.6)	(493.1)	(550.2)
Jet fuel	(1 502.0)	(1 812.6)	(1 981.2)	(1 997.4)	(2 104.7)
Handling costs	(538.5)	(597.2)	(615.8)	(688.9)	(830.3)
Other operating expenses	(726.3)	(790.0)	(824.5)	(894.9)	(1 008.4)
EBITDA	**1 035.9**	**1 132.9**	**1 120.4**	**1 425.5**	**2 121.9**
Depreciation, amortiziation and impairment	(301.3)	(324.5)	(346.3)	(371.2)	(371.4)
Depreciation capitalized leases	*(84.6)*	*(88.2)*	*(92.2)*	*(98.4)*	*(115.4)*
EBIT	**650.0**	**720.1**	**682.0**	**955.9**	**1 635.2**
Tax	(66.0)	(79.4)	(71.9)	(103.9)	(192.1)
Tax shield	(8.8)	(9.2)	(9.5)	(8.9)	32.4
Operating tax	**(74.8)**	**(88.6)**	**(81.3)**	**(112.8)**	**(159.6)**
NOPAT	**575.2**	**631.6**	**600.7**	**843.0**	**1 475.5**
Financial income	40.0	31.6	19.2	17.6	25.5
Financial expenses	(105.4)	(101.8)	(87.2)	(76.5)	(70.8)
Lease interest	*(7.8)*	*(8.1)*	*(8.5)*	*(9.0)*	*(10.6)*
Net other financial expenses	3.1	4.5	0.8	(3.3)	315.4
Net financial items	**(70.0)**	**(73.7)**	**(75.7)**	**(71.2)**	**259.5**
Corporate tax rate	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Tax on financial items	(8.8)	(9.2)	(9.5)	(8.9)	32.4
Profit	**514.0**	**567.1**	**534.4**	**780.7**	**1 702.6**

Appendix 6 - RYA Pro Forma Balance Sheet (1/2)

Pro Forma Analytical Balance Sheet Reformulated to Fiscal Year 31/12

Analytical Balance Sheet EUR (1 000 000)	2011	2012	2013	2014	2015
Current assets					
Inventories	2.8	2.7	2.6	2.2	2.2
Other assets	68.6	63.7	107.4	130.8	152.0
Current tax	7.1	2.3	0.8	0.9	0.0
Trade receivables	51.3	55.0	57.6	59.6	59.8
Operational cash	349.2	395.3	414.9	456.5	549.1
Total current assets	**479.0**	**519.0**	**583.3**	**650.0**	**763.1**
Current non-interest-bearing debt					
Trade payables	173.6	149.0	147.1	184.9	251.2
Current tax	0.0	0.2	0.1	0.0	97.9
Total current non-interest-bearing debt	**173.6**	**149.3**	**147.2**	**184.9**	**349.1**
Operating working capital	**305.4**	**369.8**	**436.1**	**465.1**	**414.0**
Non-current assets					
Property, plant and equipment	4927.3	4911.0	5021.8	5368.4	5738.2
Capitalized aircraft leases	*646.3*	*674.3*	*704.7*	*752.0*	*881.6*
Total non-current assets	**5573.6**	**5585.3**	**5726.5**	**6120.4**	**6619.8**
Non-current non-interst-bearing debt					
Accrued expenses and other liabilities	1234.0	1315.4	1506.3	1844.0	1487.3
Provisions	89.7	114.6	129.8	165.2	168.4
Deffered tax liability	306.5	339.7	363.1	438.9	418.5
Other creditors	141.4	132.4	99.8	64.5	38.5
Total non-current non-interst-bearing debt	**1771.5**	**1902.1**	**2098.8**	**2512.5**	**2112.7**
Invested capital exc. Intangibles	4107.5	4052.9	4063.8	4073.0	4921.1
Intangible assets	46.8	46.8	46.8	46.8	46.8
Invested capital (Operating assets)	**4154.3**	**4099.7**	**4110.6**	**4119.8**	**4967.9**

Appendix 7 - RYA Pro Forma Balance Sheet (2/2)

Pro Forma Analytical Balance Sheet Reformulated to Fiscal Year 31/12

Analytical Balance Sheet EUR (1 000 000)	2011.0	2012.0	2013.0	2014.0	2015.0
Total equity	**3218.5**	**3281.1**	**3282.5**	**3847.8**	**4529.8**
Interest-bearing debt					
Current maturities of debt	360.5	392.0	450.9	416.7	397.1
Current derivative financial instruments	52.5	30.9	79.5	632.6	585.8
Provisions	10.2	13.1	4.7	3.9	0.0
Non-current derivative financial instruments	42.3	51.0	44.9	65.9	59.5
Non-current maturities of debt	3270.8	3138.0	2736.4	3677.9	3823.6
Capitalized aircraft leases	*646.3*	*674.3*	*704.7*	*752.0*	*881.6*
Total interest-bearing debt	**4382.5**	**4299.3**	**4021.1**	**5548.9**	**5747.6**
Interest-bearing assets					
Available for sale financial assets	140.8	203.3	250.5	343.3	0.0
Non-current derivative financial instruments	8.5	4.7	1.6	416.0	220.8
Current derivative financial instruments	269.9	116.6	32.1	562.5	434.8
Restricted cash	37.1	27.3	16.2	8.4	4.2
Financial assets: cash>3 months	796.5	1913.1	1697.1	3078.0	3817.8
Cash and cash equivalents	2189.1	1212.4	1192.9	864.5	825.6
Interest receivable	4.9	3.3	2.7	4.3	6.3
Total interest-bearing assets	**3446.6**	**3480.7**	**3192.9**	**5276.9**	**5309.5**
NIBD	**935.8**	**818.6**	**828.1**	**272.0**	**438.1**
Invested capital	**4154.3**	**4099.7**	**4110.6**	**4119.8**	**4967.9**

Appendix 8 - Easyjet Pro Forma Income Statement

Pro Forma Analytical Income Statement Reformulated to Fiscal Year 31/12

Analytical Income Statement GBP (1 000 000)	2011	2012	2013	2014	2015
Seat revenues	**3 490.3**	**3 894.0**	**4 261.0**	**4 500.5**	**4 616.0**
Non-seat revenues	62.3	61.0	64.3	66.3	70.0
Net revenue	**3 552.5**	**3 955.0**	**4 325.3**	**4 566.8**	**4 686.0**
Crew	(413.3)	(437.5)	(460.3)	(485.5)	(505.0)
Fuel	(975.0)	(1 157.3)	(1 199.3)	(1 238.0)	(1 199.0)
Airport and ground handling	(931.0)	(985.8)	(1 085.3)	(1 110.8)	(1 122.0)
Other operating expenses	(749.5)	(798.5)	(841.5)	(880.3)	(920.0)
EBITDA	**483.8**	**576.0**	**739.0**	**852.3**	**940.0**
Depreciation, amortiziation and impairment	(93.8)	(106.8)	(113.5)	(123.0)	(138.0)
Depreciation capitalized leases	*(94.9)*	*(87.0)*	*(96.7)*	*(109.3)*	*(102.5)*
EBIT	**295.1**	**382.2**	**528.8**	**620.0**	**699.5**
Tax	(32.8)	(66.5)	(92.8)	(132.8)	(138.0)
Tax shield	(7.8)	(6.0)	(5.8)	(2.7)	(2.7)
Operating tax	**(40.5)**	**(72.5)**	**(98.5)**	**(135.4)**	**(140.7)**
NOPAT	**254.6**	**309.7**	**430.3**	**484.6**	**558.8**
Financial revenue	9.5	9.5	6.5	10.5	9.0
Financial expenses	(28.8)	(24.8)	(20.8)	(11.0)	(11.0)
Lease interest	*(10.6)*	*(9.7)*	*(10.8)*	*(12.2)*	*(11.5)*
Net financial items	**(29.9)**	**(25.0)**	**(25.1)**	**(12.7)**	**(13.5)**
Corporate tax rate	*26.0%*	*24.0%*	*23.0%*	*21.0%*	*20.0%*
Tax on financial items	(7.8)	(6.0)	(5.8)	(2.7)	(2.7)
Profit	**232.5**	**290.8**	**411.0**	**474.5**	**548.0**

Appendix 9 - Easyjet Pro Forma Balance Sheet (1/2)

Pro Forma Analytical Balance Sheet Reformulated to Fiscal Year 31/12

Analytical Balance Sheet GBP (1 000 000)	2011	2012	2013	2014	2015
Current assets					
Trade and other receivables	184.0	229.3	195.5	201.5	206.0
Operational cash	294.9	328.3	359.0	379.0	388.9
Total current assets	**478.9**	**557.5**	**554.5**	**580.5**	**594.9**
Current non-interest-bearing debt					
Trade and other payables	464.3	530.3	540.3	516.0	495.0
Unearned revenue	478.0	508.8	553.3	583.8	619.0
Current tax payable	14.0	36.3	56.8	50.5	43.0
Current provisions for liabilities and charges	48.5	64.5	84.3	85.8	61.0
Total current non-interest-bearing debt	**1 004.8**	**1 139.8**	**1 234.5**	**1 236.0**	**1 218.0**
Operating working capital	**(525.9)**	**(582.2)**	**(680.0)**	**(655.5)**	**(623.1)**
Non-current assets					
Property, plant and equipment	2 210.5	2 366.3	2 345.5	2 625.8	2 877.0
Capitalized aircraft leases	738.5	677.3	752.5	850.5	798.0
Other non-current assets	61.5	89.0	177.8	149.5	130.0
Total non-current assets	**3 010.5**	**3 132.5**	**3 275.8**	**3 625.8**	**3 805.0**
Non-current non-interest-bearing debt					
Non-current provisions for liabilities and charges	168.0	148.5	165.0	151.5	165.0
Non-current deferred income	55.8	51.5	66.5	58.3	47.0
Deffered tax	183.8	184.5	154.5	183.5	176.0
Total non-current non-interest-bearing debt	**407.5**	**384.5**	**386.0**	**393.3**	**388.0**
Invested capital exc. Intangibles	**2 077.1**	**2 165.8**	**2 209.7**	**2 577.0**	**2 793.9**
Goodwill	365.0	365.0	365.0	365.0	365.0
Other intangible assets	87.3	93.8	104.8	116.5	127.0
Invested capital (Operating assets)	**2 529.4**	**2 624.5**	**2 679.5**	**3 058.5**	**3 285.9**

Appendix 10 - Easyjet Pro Forma Balance Sheet (2/2)

Pro Forma Analytical Balance Sheet Reformulated to Fiscal Year 31/12

Analytical Balance Sheet GBP (1 000 000)	2011	2012	2013	2014	2015
Total equity	**1 727.3**	**1 849.8**	**2 055.8**	**2 191.3**	**2 249.0**
Interest-bearing debt					
Current bank loans	139.5	109.5	78.0	80.5	88.0
Current finance lease obligations	9.0	9.0	10.0	33.3	94.0
Current derivative financial instruments	45.5	34.5	66.8	157.3	368.0
Non-current bank loans	857.8	575.5	379.3	281.3	228.0
Non-current finance lease obligations	208.0	193.5	182.8	153.3	94.0
Capitalized aircraft leases	738.5	677.3	752.5	850.5	798.0
Non-current derivative financial instruments	26.3	28.3	36.5	42.5	101.0
Total interest-bearing debt	**2 024.5**	**1 627.5**	**1 505.8**	**1 598.5**	**1 771.0**
Interest-bearing assets					
Current derivative financial instruments	80.5	59.0	26.0	71.8	128.0
Loan notes	10.8	9.3	5.3	-	-
Current resticted cash	100.0	97.5	5.8	18.8	6.0
Money market deposits	284.5	234.5	308.3	493.0	289.0
Cash and cash equivalents	691.4	408.7	506.8	101.5	261.1
Non-current derivative financial instruments	23.3	19.0	18.8	38.0	44.0
Non-current restricted cash	32.0	24.8	11.3	8.3	6.0
Total interest-bearing assets	**1 222.4**	**852.7**	**882.0**	**731.2**	**734.1**
NIBD	**802.1**	**774.8**	**623.7**	**867.3**	**1 036.9**
Invested capital	**2 529.4**	**2 624.5**	**2 679.5**	**3 058.5**	**3 285.9**

Appendix 11 - SAS Pro Forma Income Statement

SAS - Pro Forma Analytical Income Statement Reformulated to Fiscal Year 31/12

Analytical Income Statement SEK (1 000 000)	2011	2012	2013	2014	2015
Revenue	**41 412**	**43 016**	**41 486**	**38 280**	**39 650**
Share of profit (loss) from affiliated companies	28	36	26	31	37
Other income	12	250	483	121	777
Net revenue	**41 452**	**43 303**	**41 995**	**38 432**	**40 464**
Payroll expenses	(13 092)	(13 469)	(10 953)	(9 255)	(9 622)
Jet fuel	(7 769)	(9 543)	(9 006)	(8 743)	(8 430)
Handling costs	(1 709)	(1 647)	(1 658)	(1 752)	(1 998)
Other operating expenses	(14 263)	(15 156)	(14 725)	(14 533)	(14 130)
EBITDA	**4 619**	**3 489**	**5 654**	**4 150**	**6 284**
Depreciation, amortiziation and impairment	(2 413)	(1 702)	(1 622)	(1 447)	(1 466)
Depreciation capitalized leases	*(1 126)*	*(1 184)*	*(1 331)*	*(1 592)*	*(1 872)*
EBIT	**1 080**	**602**	**2 701**	**1 111**	**2 946**
Tax	(58)	212	(209)	89	(461)
Tax shield	(712)	(414)	(326)	(361)	(336)
Operating tax	**(770)**	**(202)**	**(534)**	**(272)**	**(797)**
NOPAT	**309**	**400**	**2 167**	**839**	**2 148**
Financial revenue	224	104	59	106	124
Financial expenses	(1 030)	(1 222)	(1 021)	(1 047)	(632)
Lease interest	*(434)*	*(456)*	*(512)*	*(613)*	*(721)*
Net other financial expenses	(1 469)	0	(6)	(86)	(300)
Net financial items	**(2 709)**	**(1 573)**	**(1 481)**	**(1 640)**	**(1 529)**
Corporate tax rate	*26.3%*	*26.3%*	*22.0%*	*22.0%*	*22.0%*
Tax on financial items	(712)	(414)	(326)	(361)	(336)
Profit	**(1 687)**	**(759)**	**1 012**	**(440)**	**956**

Appendix 12 - SAS Pro Forma Balance Sheet (1/2)

SAS - Pro Forma Analytical Balance Sheet Reformulated to Fiscal Year 31/12

Analytical Balance Sheet SEK (1 000 000)	2011	2012	2013	2014	2015
Current assets					
Expendable spare parts and inventories	705	747	356	343	345
Accouncts receivable	1 275	1 540	1 325	1 097	1 249
Other receivables	2 574	1 543	932	1 197	867
Other current assets	940	1 020	875	970	1 095
Operational cash	-	-	-	3 190	-
Total current assets	**5 494**	**4 850**	**3 488**	**6 797**	**3 556**
Current non-interest-bearing debt					
Accounts payable	1 540	2 211	1 657	1 504	1 528
Unearned transportation revenue	3 453	4 947	3 984	4 284	4 482
Other provisions	428	1 329	831	671	479
Other current liabilities	42	41	44	7	22
Total current non-interest-bearing debt	**5 463**	**8 527**	**6 516**	**6 465**	**6 511**
Operating working capital	**31**	**(3 677)**	**(3 028)**	**332**	**(2 955)**
Non-current assets					
Land and buildings	491	393	241	296	560
Aircraft	11 866	12 686	8 585	7 462	7 095
Capitalized aircraft leases	*10 920*	*11 478*	*12 900*	*15 433*	*18 151*
Equipment and spare parts	1 566	1 638	356	286	269
Equity in affiliated companies	317	384	359	399	421
Deffered tax assets	1 340	730	852	988	375
Other non-current assets	221	239	366	974	1 672
Total non-current assets	**26 721**	**27 548**	**23 659**	**25 837**	**28 543**
Non-current non-interest-bearing debt					
Other provisions	1 673	2 194	1 482	2 072	1 992
Deffered tax liability	2 154	1 013	-	-	-
Total non-current non-interest-bearing debt	**3 827**	**3 207**	**1 482**	**2 072**	**1 992**
Invested capital exc. Intangibles	22 925	20 664	19 148	24 097	23 596
Intangible assets	1 693	2 222	1 819	1 887	1 798
Invested capital (Operating assets)	**24 618**	**22 886**	**20 967**	**25 984**	**25 394**

Appendix 13 - SAS Pro Forma Balance Sheet (2/2)

SAS - Pro Forma Analytical Balance Sheet Reformulated to Fiscal Year 31/12

Analytical Balance Sheet SEK (1 000 000)	2011	2012	2013	2014	2015
Total equity	**12 433**	**11 694**	**3 506**	**5 146**	**6 339**
Interest-bearing debt					
Subordinated loans	1 019	1 137	964	1 020	1 104
Bond loans	2 809	3 203	2 653	2 625	2 184
Other loans	6 179	6 102	4 948	4 484	4 807
Capitalized aircraft leases	10 920	11 478	12 900	15 433	18 151
Other liabilities non-current	55	157	161	166	188
Current portion of long-term loans	2 309	1 823	2 445	1 946	1 264
Short-term loans	997	450	270	423	229
Current other liabilities	1 160	1 153	715	727	964
Accrued expenses and prepaid income	2 934	3 770	3 573	4 410	4 684
Total interest-bearing debt	**28 382**	**29 273**	**28 627**	**31 232**	**33 575**
Interest-bearing assets					
Other holdings of securities	23	72	289	228	3
Pension funds, net	11 355	12 803	3 486	3 876	4 368
Other long-term receivables	1 011	1 625	2 196	1 932	1 951
Short-term investments	2 842	713	2 351	3 944	5 151
Cash and bank balances	966	2 868	2 845	413	3 047
Total interest-bearing assets	**16 197**	**18 081**	**11 166**	**10 393**	**14 520**
NIBD	**12 185**	**11 192**	**17 461**	**20 838**	**19 055**
Invested capital	**24 618**	**22 886**	**20 967**	**25 984**	**25 394**

Appendix 14 – Capitalized operational lease

NAS Capitalized Aircraft Lease

NOK (1000)	2011	2012	2013	2014	2015
Aircraft leases	829 667	1 032 915	1 284 395	1 845 940	2 213 300
Capitalized aircraft leases	**5 807 669**	**7 230 405**	**8 990 765**	**12 921 580**	**15 493 100**
Lease interest	402 820	501 501	623 599	896 241	1 074 601
Lease depreciation	426 847	531 414	660 796	949 699	1 138 699

Capitalization rate	7
Cost of debt	0.06936

RYA Capitalized Aircraft Lease

EUR (1 000 000)	2011	2012	2013	2014	2015
Leasing costs for aircraft	92	96	101	107	126
Capitalized aircraft leases	**646**	**674**	**705**	**752**	**882**
Lease interest	8	8	8	9	11
Lease depreciation	85	88	92	98	115

Capitalization rate	7
Cost of debt	0.01201

Easyjet Capitalized Aircraft Lease

GBP (1 000 000)	2011	2012	2013	2014	2015
Leasing costs for aircraft	106	97	108	122	114
Capitalized aircraft leases	**739**	**677**	**753**	**851**	**798**
Lease interest	11	10	11	12	11
Lease depreciation	95	87	97	109	103

Capitalization rate	7
Cost of debt	0.01437

SAS Capitalized Aircraft Lease

SEK (1 000 000)	2011	2012	2013	2014	2015
Leasing costs for aircraft	1 560	1 640	1 843	2 205	2 593
Capitalized aircraft leases	**10 920**	**11 478**	**12 900**	**15 433**	**18 151**
Lease interest	434	456	512	613	721
Lease depreciation	1 126	1 184	1 331	1 592	1 872

Capitalization rate	7
Cost of debt	0.03971

Appendix 15 – Cost of debt SAS (Source: Annual Reports)

	Interest rate(*YTM)	Carrying amount SEKm	Currency	Issue/Maturity
Subordinated loan	2.375%	1096	CHF	n/a
Bond MEUR 60	4.400%	560	EUR	2010/2016
Bond MEUR 40	5.500%	363	EUR	2011/2017
Bond MSEK 1 500*	5.807%	1493	SEK	2013/2017
Bond MSEUR 35	8.700%	328	EUR	2013/2018
Finance leases	3.240%	837	n/a	n/a
Convertible bonds	3.625%	1466	n/a	n/a
Other loans	3.280%	3208	n/a	n/a
Total carryin amount		**9351**		
Weighted interest rate		**3.97%**		

Appendix 16– Issued bonds NAS, RYA and Easyjet

	RYA		NAS				Easyjet
Coupon details	1.875% Annual	1.125% Annual	7.25% semi annual	NIBOR 3M+3.75%	NIBOR 3M+5.75%	NIBOR 3M + 4%	1.75% Annual
Floating/Fized	Fixed	Fixed	Fixed	Floating	Floating	Floating	Fixed
Rating Moodys	n/a	n/a	n/a	n/a	n/a	n/a	Baa1
Rating S&P	BBB+	BBB+	n/a	n/a	n/a	n/a	BBB+
Rating Fitch	BBB+	BBB+	n/a	n/a	n/a	n/a	n/a
Seniority	Sr Unsecured	Sr Unsecured	Sr Unsecured	Sr Unsecured	Sr Unsecured	1st lien	Sr Unsecured
Exchange	ISE	ISE	OBX	OBX	OBX	OBX	LSE
Announcement date	6/10/2014	3/3/2015	12/1/2015	6/17/2014	5/12/2015	11/12/2014	2/2/2016
Maturity	6/17/2021	3/10/2023	12/11/2019	7/3/2017	5/20/2018	11/21/2017	2/9/2023
Currency	EUR	EUR	EUR	NOK	NOK	NOK	EUR
Amount issued	850000	850000	125000	825000	1000000	225000	500000
Closing price	104.325	98.345	101.137	97.438	99.438	100.25	102.048
mid YTM	**1.028**	**1.374**	**7.013**	**6.806**	**7.066**	**4.892**	**1.437**
Date	3/4/2016	3/4/2016	3/4/2016	3/4/2016	3/4/2016	3/4/2016	3/4/2016

Appendix 17 - Cash analysis (Source: Thomson One)

Airline	Average cash to revenue
Aeroflot	0.081
Air berlin	0.085
Utair aviation	0.095
Turkish airline	0.109
NAS	0.123
SAS	0.134
Lufthansa	0.165
Airfrance KLM	0.166
Pegasus	0.215
Flybe Group plc	0.218
IAG	0.225
Finnair	0.280
Easyjet	0.299
Aegon airlines	0.301
RYA	0.831
Average ex. RYA	**0.178**
Average two lowest	**0.083**

Appendix 18 – Profitability

		2011	2012	2013	2014	2015	average
NAS	Pretax ROIC	4.4%	8.5%	6.3%	0.2%	5.1%	4.9%
	ROIC	3.2%	6.2%	4.6%	0.6%	4.2%	3.8%
	ROIC ex. Intangibles	3.3%	6.3%	4.7%	0.6%	4.3%	3.8%
	Pretax profit margin	4.9%	9.7%	7.0%	0.4%	8.4%	6.1%
	Profit margin	3.5%	7.0%	5.1%	0.9%	7.0%	4.7%
	Turnover rate of invested capital	0.91	0.88	0.91	0.69	0.60	0.80
	365/Turnover rate of invested capital	401.36	413.43	403.08	528.18	604.38	457.07
	EBITDA margin	11.7%	16.8%	14.6%	9.0%	18.5%	14.1%
	ROE	6.3%	18.9%	11.7%	-50.7%	8.3%	-1.1%
RYA	Pretax ROIC	15.6%	17.6%	16.6%	23.2%	32.9%	21.2%
	ROIC	13.8%	15.4%	14.6%	20.5%	29.7%	18.8%
	ROIC ex. Intangibles	14.0%	15.6%	14.8%	20.7%	30.0%	19.0%
	Pretax profit margin	15.4%	15.1%	13.6%	17.4%	24.7%	17.3%
	Profit margin	13.7%	13.3%	12.0%	15.3%	22.3%	15.3%
	Turnover rate of invested capital	1.01	1.16	1.22	1.33	1.33	1.21
	365/Turnover rate of invested capital	360.36	314.16	300.16	273.42	274.09	301.29
	EBITDA margin	24.6%	23.8%	22.4%	25.9%	32.1%	25.8%
	ROE	16.0%	17.3%	16.3%	20.3%	37.6%	21.5%
Easyjet	Pretax ROIC	11.7%	14.6%	19.7%	20.3%	21.3%	17.5%
	ROIC	10.1%	11.8%	16.1%	15.8%	17.0%	14.2%
	ROIC ex. Intangibles	12.3%	14.3%	19.5%	18.8%	20.0%	17.0%
	Pretax profit margin	8.3%	9.7%	12.2%	13.6%	14.9%	11.7%
	Profit margin	7.2%	7.8%	9.9%	10.6%	11.9%	9.5%
	Turnover rate of invested capital	1.40	1.51	1.61	1.49	1.43	1.49
	365/Turnover rate of invested capital	259.88	242.21	226.12	244.46	255.95	245.14
	EBITDA margin	13.6%	14.6%	17.1%	18.7%	20.1%	16.8%
	ROE	13.5%	15.7%	20.0%	21.7%	24.4%	19.0%
SAS	Pretax ROIC	4.4%	2.6%	12.9%	4.3%	11.6%	7.2%
	ROIC	1.3%	1.7%	10.3%	3.2%	8.5%	5.0%
	ROIC ex. Intangibles	1.3%	1.9%	11.3%	3.5%	9.1%	5.4%
	Pretax profit margin	2.6%	1.4%	6.5%	2.9%	7.4%	4.2%
	Profit margin	0.7%	0.9%	5.2%	2.2%	5.4%	2.9%
	Turnover rate of invested capital	1.68	1.88	1.98	1.47	1.56	1.71
	365/Turnover rate of invested capital	216.98	194.19	184.47	247.76	233.77	212.83
	EBITDA margin	11.2%	8.1%	13.6%	10.8%	15.8%	11.9%
	ROE	-13.6%	-6.5%	28.9%	-8.5%	15.1%	3.1%

Appendix 19 – Short-term liquidity

		2011	2012	2013	2014	2015	Average
NAS	Turnover rate of NWC	14.0	34.1	(16.4)	136.9	(4.1)	32.9
	Liquidity cycle	26.0	10.7	(22.2)	2.7	(89.8)	(14.5)
	Current ratio	0.64	0.62	0.77	0.48	0.52	0.61
	Quick ratio	0.41	0.39	0.51	0.30	0.32	0.38
RYA	Turnover rate of NWC	(2.2)	(2.4)	(2.3)	(2.1)	(2.8)	(2.4)
	Liquidity cycle	(163.6)	(152.5)	(159.4)	(174.6)	(132.1)	(156.4)
	Current ratio	6.68	6.98	5.57	4.47	4.39	5.62
	Quick ratio	5.89	6.12	4.77	3.98	3.86	4.92
Easyjet	Turnover rate of NWC	(2.9)	(3.1)	(3.0)	(3.2)	(3.3)	(3.1)
	Liquidity cycle	(126.2)	(119.5)	(120.3)	(114.1)	(109.0)	(117.8)
	Current ratio	1.36	1.05	1.01	0.84	0.72	1.00
	Quick ratio	1.03	0.72	0.75	0.58	0.50	0.72
SAS	Turnover rate of NWC	(8.8)	(5.5)	(7.8)	(6.5)	(6.7)	(7.0)
	Liquidity cycle	(41.7)	(66.6)	(46.8)	(56.0)	(54.5)	(53.1)
	Current ratio	0.94	0.71	0.90	1.19	1.31	1.01
	Quick ratio	0.49	0.50	0.54	0.31	0.58	0.48

Appendix 20 – Long-term liquidity

		2011	2012	2013	2014	2015	Average
NAS	Financial leverage (market)	6.7	3.3	3.2	3.5	3.8	4.1
	Financial leverage (book)	6.6	6.9	7.6	15.9	14.9	10.4
	Interest coverage ratio	1.17	2.17	1.49	0.06	1.41	1.26
RYA	Financial leverage (market)	1.1	0.9	0.7	0.6	0.4	0.7
	Financial leverage (book)	2.0	1.9	1.9	2.1	1.8	2.0
	Interest coverage ratio	8.89	9.20	8.92	14.07	29.27	14.07
Easyjet	Financial leverage (market)	2.4	1.1	0.6	0.5	0.5	1.0
	Financial leverage (book)	2.0	1.7	1.5	1.5	1.5	1.6
	Interest coverage ratio	9.88	15.30	21.10	48.73	51.94	29.39
SAS	Financial leverage (market)	14.3	14.6	6.3	7.7	5.2	9.6
	Financial leverage (book)	3.0	3.5	10.4	7.7	6.6	6.3
	Interest coverage ratio	0.87	0.38	1.83	0.71	2.40	1.24

Appendix 21 – Calculations Fleet Forecasts until 2023

		New deliveries during year					
	Fleet YE	Owned	Leased	Flynordic*	Total	Redeliveries/sale	Rate of redelivery
2005	0	0	2	0	2		
2006	22	2	7	0	9	-13	
2007	32	0	2	8	10	0	
2008	40	3	8	5	16	8	25.0%
2009	46	2	8	0	10	4	10.0%
2010	57	5	8	0	13	2	4.3%
2011	62	8	8	0	16	11	19.3%
2012	68	8	5	0	13	7	11.3%
2013	82	8	9	0	17	3	4.4%
2014	88	11	3	0	14	8	9.8%
						Average	12.0%

Fraction exercised options	50%
Delivery before 2022	267
Options	160
Exercised options	80
Total delivery before 2022	347
Delivery LH inc options	-31
SH delivery before 2022	316
SH delivery before 2017	-49
Delivery SH 2018-2022	267
Redelivery/sale before 2017	-8
New aircraft 2018-2022	**259**
Deliveries per year	43.166667

	2017E	2018E	2019E	2020E	2021E	2022E	2023E	Total
New		44	43	43	43	43	43	259
Redelivery		16	19	22	25	27	29	138
Fleet YE	132	160	184	205	223	239	253	

Appendix 22 – Sensitivity exercised options

Fraction of exercised options	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2022 YE fleet	197	208	218	228	239	251	261	271	282	292

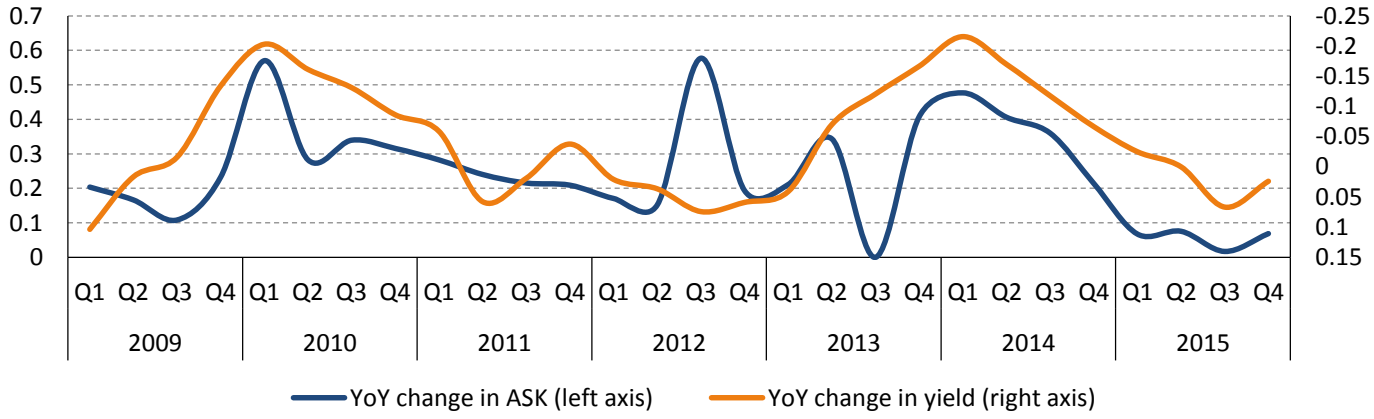
Appendix 23 – Underlying forecast revenue, fuel cost and operating cost

	Revenue	Short-term					Long-term					
	NOK(1 000 000)	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	T
Short-haul	Aircraft	108	132	160	184	205	223	239	253	253	253	253
	ASK/aircraft	428	428	393	368	357	357	357	357	357	357	357
	ASK	46 258	56 553	62 917	67 678	73 159	79 583	85 293	90 289	90 289	90 289	90 289
	Load factor	0.79	0.80	0.81	0.83	0.84	0.85	0.87	0.88	0.89	0.91	0.92
	Yield	0.53	0.53	0.53	0.53	0.53	0.53	0.52	0.52	0.51	0.51	0.50
	Revenue short-haul	19 320	24 029	27 188	29 736	32 673	35 778	38 587	41 090	41 321	41 540	41 747
Long-haul	Aircraft	12	21	27	32	38	40	41	42	43	44	45
	ASK/aircraft	1 485	1 462	1 630	1 710	1 731	1 731	1 731	1 731	1 731	1 731	1 731
	ASK	17 824	30 695	44 007	54 716	65 782	69 244	70 975	72 706	74 437	76 168	77 899
	Load factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
	Yield	0.40	0.40	0.40	0.40	0.40	0.39	0.39	0.38	0.38	0.37	0.37
	Revenue long-haul	**6 239**	**10 745**	**15 405**	**19 154**	**23 027**	**23 934**	**24 220**	**24 491**	**24 746**	**24 986**	**25 211**
	Total revenue	**25 560**	**34 774**	**42 593**	**48 889**	**55 700**	**59 712**	**62 807**	**65 581**	**66 068**	**66 527**	**66 958**

	Short-term					Long-term					
Fuel cost	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	T
Forward Crude oil USD	39.99	43.95	45.88	47.00	47.93	48.84	50.07	50.81	51.23	51.23	51.23
Jet fuel price per gallon USD	1.18	1.29	1.35	1.38	1.41	1.43	1.47	1.49	1.50	1.50	1.50
Gallons per ton	333.05	333.05	333.05	333.05	333.05	333.05	333.05	333.05	333.05	333.05	333.05
Price per ton	394	431	449	460	468	477	489	496	500	500	500
ASK	57 470	75 529	96 529	113 705	130 000	148 826	156 267	162 995	164 726	166 457	168 188
ASK/ton	0.048	0.049	0.050	0.051	0.053	0.054	0.055	0.057	0.058	0.059	0.061
Consumption ton	1 206 317	1 547 099	1 929 488	2 217 927	2 474 525	2 764 460	2 832 572	2 883 156	2 843 403	2 803 888	2 764 623
Fuel cost USD	475 030 405	666 787 013	866 678 279	1 019 725 562	1 159 227 304	1 318 754 064	1 383 976 000	1 428 910 375	1 420 449 910	1 400 709 757	1 381 094 550
Fuel cost NOK (1 000 000)	**4 063**	**5 703**	**7 413**	**8 722**	**9 915**	**11 280**	**11 838**	**12 222**	**12 150**	**11 981**	**11 813**

Operating cost ex. Fuel	Short-term					Long-term					
NOK (1 000 000)	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	T
ASK	**57 470**	**75 529**	**96 529**	**113 705**	**130 000**	**148 826**	**156 267**	**162 995**	**164 726**	**166 457**	**168 188**
CASK ex fuel	0.264	0.261	0.258	0.254	0.251	0.251	0.251	0.251	0.251	0.251	0.251
Operating cost ex fuel	**15 197**	**19 710**	**24 858**	**28 895**	**32 601**	**37 322**	**39 188**	**40 875**	**41 309**	**41 743**	**42 177**

Appendix 24 - YoY change in ASK and yield

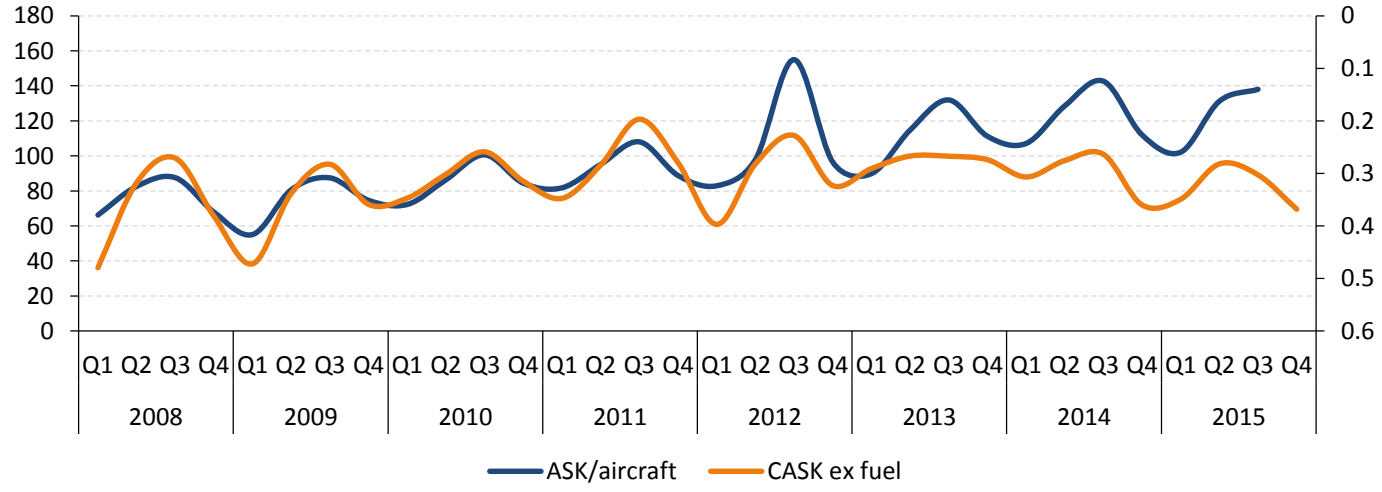


Appendix 25 – Forecast Pro Forma Income Statement

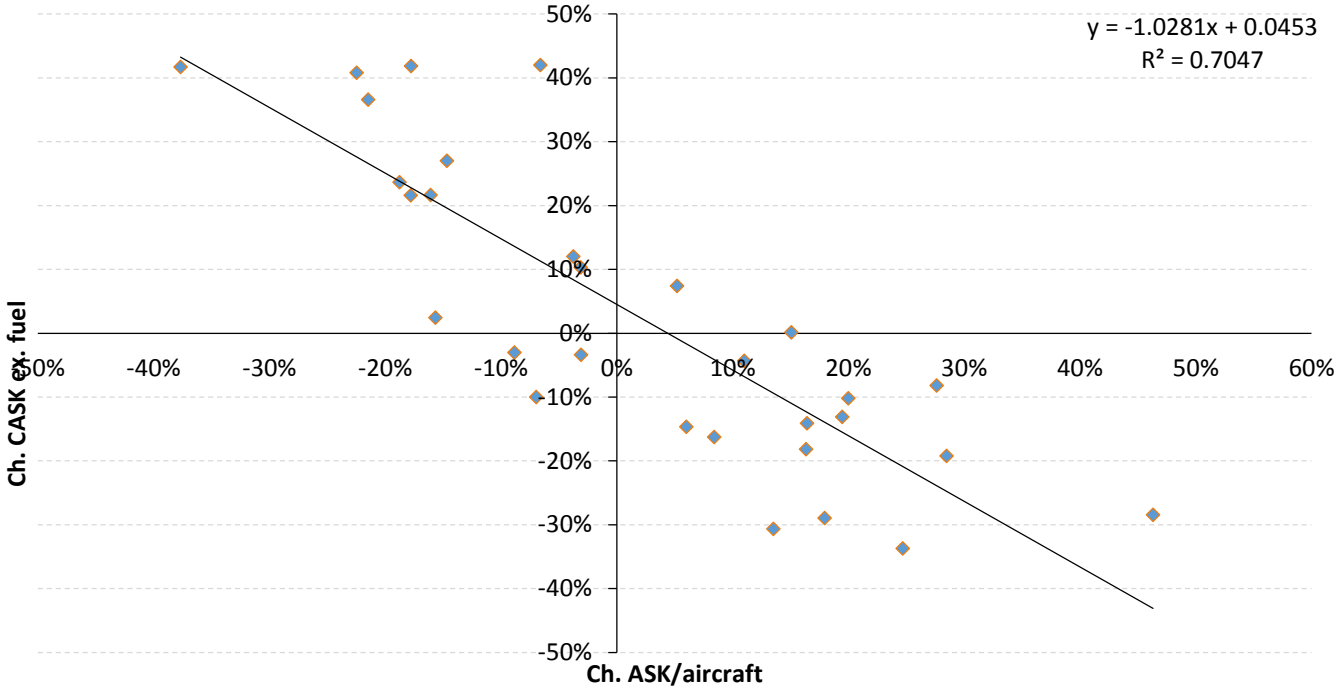
Pro Forma Income Statement

	Short-term					Long-term					
Analytical income statement NOK (1 000 000)	**2016E**	**2017E**	**2018E**	**2019E**	**2020E**	**2021E**	**2022E**	**2023E**	**2024E**	**2025E**	**T**
Operating revenue	**25 560**	**34 774**	**42 593**	**48 889**	**55 700**	**59 712**	**62 807**	**65 581**	**66 068**	**66 527**	**66 958**
Other revenue?											
Net revenue	**25 560**	**34 774**	**42 593**	**48 889**	**55 700**	**59 712**	**62 807**	**65 581**	**66 068**	**66 527**	**66 958**
Jet fuel	(4 063)	(5 703)	(7 413)	(8 722)	(9 915)	(11 280)	(11 838)	(12 222)	(12 150)	(11 981)	(11 813)
Other operating expenses	(15 197)	(19 710)	(24 858)	(28 895)	(32 601)	(37 322)	(39 188)	(40 875)	(41 309)	(41 743)	(42 177)
Lease cost	(2 440)	(2 766)	(2 137)	(1 649)	(1 948)	(1 905)	(1 862)	(1 862)	(1 862)	(1 862)	(1 862)
EBITDA	**3 859**	**6 595**	**8 186**	**9 622**	**11 236**	**9 206**	**9 919**	**10 622**	**10 747**	**10 940**	**11 106**
Depreciation,amort and imprair.	(1 459)	(2 102)	(3 030)	(3 828)	(4 429)	(4 873)	(5 136)	(5 321)	(5 364)	(5 407)	(5 450)
EBIT	**2 400**	**4 494**	**5 156**	**5 794**	**6 807**	**4 332**	**4 783**	**5 301**	**5 383**	**5 534**	**5 656**
Tax operations	(648)	(1 213)	(1 392)	(1 564)	(1 838)	(1 170)	(1 292)	(1 431)	(1 453)	(1 494)	(1 527)
NOPAT	**1 752**	**3 280**	**3 764**	**4 230**	**4 969**	**3 163**	**3 492**	**3 870**	**3 930**	**4 040**	**4 129**
Net interest expenses	(320)	(469)	(681)	(864)	(1 001)	(1 088)	(1 147)	(1 188)	(1 197)	(1 205)	(1 214)
Profit(loss) from affiliated company											
Net financial items	**(320)**	**(469)**	**(681)**	**(864)**	**(1 001)**	**(1 088)**	**(1 147)**	**(1 188)**	**(1 197)**	**(1 205)**	**(1 214)**
Tax rate	*27%*	*27%*	*27%*	*27%*	*27%*	*27%*	*27%*	*27%*	*27%*	*27%*	*27%*
Tax on financial items	(86)	(127)	(184)	(233)	(270)	(294)	(310)	(321)	(323)	(325)	(328)
Profit	**1 346**	**2 685**	**2 899**	**3 132**	**3 698**	**1 781**	**2 035**	**2 362**	**2 410**	**2 509**	**2 587**

Appendix 26 – Quarterly ASK/aircraft and CASK ex. fuel



Appendix 27 – Regression quarterly change CASK ex. fuel and ASK/aircraft



Appendix 28 – Crude oil and jet fuel

SUMMARY OUTPUT

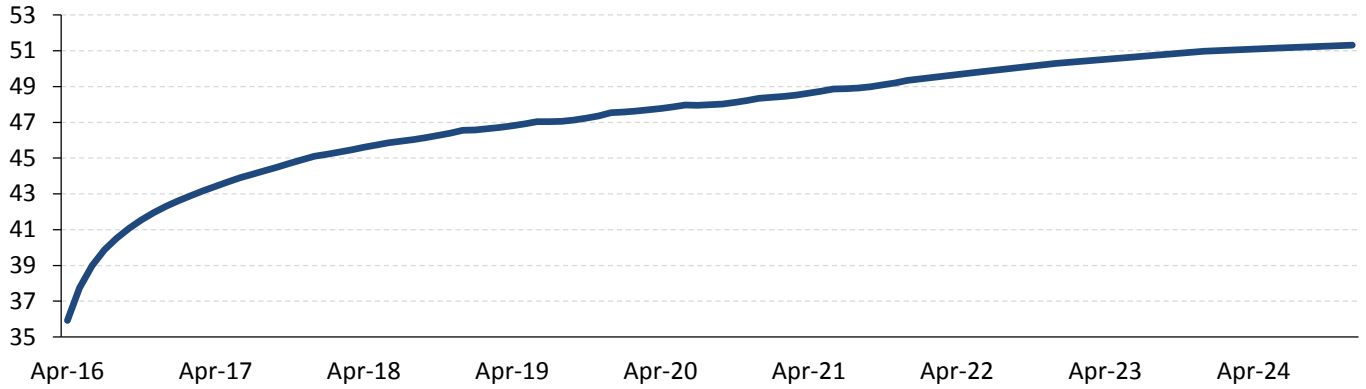
Regression Statistics	
Multiple R	0.989750337
R Square	0.979605729
Adjusted R Square	0.979491795
Standard Error	0.12547918
Observations	181

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	135.3753257	135.3753257	8597.974881	3.0221E-153
Residual	179	2.818359397	0.015745025		
Total	180	138.1936851			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.051993508	0.02235138	2.326187857	0.021128773	0.007887409	0.096099607	0.007887409	0.096099607
X Variable 1	0.028263634	0.00030481	92.7252656	3.0221E-153	0.02766215	0.028865119	0.02766215	0.028865119

Appendix 29 - Forward curve crude oil



Appendix 30 - Historical Balance Sheet drivers

Historical Balance Sheet Value Drivers	Historical 2011	2012	2013	2014	2015	average
ASK	**21 293 757**	**25 382 533**	**33 881 721**	**45 618 233**	**48 676 019**	
Revenue	**10 532 191**	**12 859 042**	**15 579 545**	**19 540 039**	**22 491 200**	
Inventory in % of ASK	0.39%	0.27%	0.22%	0.18%	0.21%	0.25%
Trade and other receivables in % of revenue	10.18%	8.53%	10.42%	11.12%	11.35%	10.32%
Operational cash in % of revenues	8.30%	8.30%	8.30%	8.30%	8.30%	8.30%
Air traffic settlement liabilities in % of ASK	5.67%	6.85%	7.57%	6.50%	8.25%	6.97%
Trade and other payables in % of ASK	5.86%	6.21%	5.77%	5.89%	7.20%	6.18%
Buildings in % of ASK	0.04%	0.04%	0.04%	0.55%	1.38%	0.41%
Aircraft, other parts and installations - See Appendix xx.	-	-	-	-	-	
Equipment and fixtures in % of ASK	0.15%	0.23%	0.22%	0.18%	0.46%	0.25%
Prepayments to aircraft manufacturers in % of ASK	9.99%	11.21%	7.42%	8.99%	10.49%	9.62%
Deffered tax assets in % of total noncurrent assets ex deffered	0.03%	0.05%	0.28%	2.98%	2.52%	1.17%
Other non-current assets in % of ASK	0.66%	0.63%	0.65%	0.97%	1.00%	0.78%
Provision for periodic maintenance in % of ASK	0.38%	0.69%	1.22%	1.83%	1.98%	1.22%
Deferred tax in % of non-current non-interestbearing debt ex deffered	164.47%	171.72%	107.57%	20.33%	20.33%	96.89%
Definite Intangible assets in % of ASK	0.54%	0.46%	0.30%	0.18%	n/a	0.37%
NIBD in % of Invested capital	66.30%	67.00%	66.52%	86.27%	86.37%	74.49%

Appendix 31 - Forecast Balance Sheet Drivers

Forecasted Balance Sheet Value Drivers	Short-term 2016E	2017E	2018E	2019E	2020E	Long-term 2021E	2022E	2023E	2024E	2025E	T
Inventory in % of ASK	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
Trade and other receivables in % of revenue	10.32%	10.32%	10.32%	10.32%	10.32%	10.32%	10.32%	10.32%	10.32%	10.32%	10.32%
Operational cash in % of revenues	8.30%	8.30%	8.30%	8.30%	8.30%	8.30%	8.30%	8.30%	8.30%	8.30%	8.30%
Air traffic settlement liabilities in % of ASK	6.97%	6.97%	6.97%	6.97%	6.97%	6.97%	6.97%	6.97%	6.97%	6.97%	6.97%
Trade and other payables in % of ASK	6.18%	6.18%	6.18%	6.18%	6.18%	6.18%	6.18%	6.18%	6.18%	6.18%	6.18%
Buildings in % of ASK	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%	0.41%
Aircraft, other parts and installations - See Appendix xx.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Equipment and fixtures in % of ASK	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%	0.25%
Prepayments to aircraft manufacturers in % of ASK	9.62%	9.62%	9.62%	9.62%	9.62%	9.62%	9.62%	9.62%	9.62%	9.62%	9.62%
Deffered tax assets in % of total noncurrent assets ex deffered	1.17%	1.17%	1.17%	1.17%	1.17%	1.17%	1.17%	1.17%	1.17%	1.17%	1.17%
Other non-current assets in % of ASK	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%	0.78%
Provision for periodic maintenance in % of ASK	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%	1.22%
Deferred tax in % of non-current non-interestbearing debt ex deffered	96.89%	96.89%	96.89%	96.89%	96.89%	96.89%	96.89%	96.89%	96.89%	96.89%	96.89%
Definite Intangible assets in % of ASK	0.37%	0.37%	0.37%	0.37%	0.37%	0.37%	0.37%	0.37%	0.37%	0.37%	0.37%
NIBD in % of Invested capital	74.49%	74.49%	74.49%	74.49%	74.49%	74.49%	74.49%	74.49%	74.49%	74.49%	74.49%

Appendix 32 - Forecast Balance Sheet

Pro Forma Balance Sheet NOK (1 000)	Historical 2015	Short-term E2016	E2017	E2018	E2019	E2020	Long-term E2021	E2022	E2023	E2024	E2025	T
ASK	**48 676 019**	**57 470 002**	**75 529 367**	**96 529 006**	**113 705 341**	**130 000 000**	**148 826 338**	**156 267 395**	**162 994 707**	**164 725 800**	**166 456 892**	**168 187 985**
Current assets												
Inventory	104 100	145 832	191 658	244 945	288 531	329 879	377 651	396 533	413 604	417 997	422 389	426 782
Trade and other receivables	2 553 100	2 637 924	3 588 961	4 395 942	5 045 703	5 748 645	6 162 727	6 482 097	6 768 430	6 818 644	6 866 017	6 910 550
Operational cash	1 866 770	2 121 440	2 886 272	3 535 252	4 057 795	4 623 107	4 956 115	5 212 955	5 443 227	5 483 609	5 521 707	5 557 521
Total current assets	**4 523 970**	**4 905 196**	**6 666 891**	**8 176 140**	**9 392 029**	**10 701 631**	**11 496 493**	**12 091 585**	**12 625 261**	**12 720 249**	**12 810 113**	**12 894 852**
Current non-interest-bearing debt												
Air traffic settlement liabilities	4 014 100	4 005 710	5 264 463	6 728 156	7 925 362	9 061 114	10 373 326	10 891 975	11 360 874	11 481 533	11 602 192	11 722 850
Trade and other payables	3 503 118	3 554 310	4 671 216	5 969 967	7 032 261	8 040 026	9 204 366	9 664 569	10 080 628	10 187 690	10 294 752	10 401 813
Total current non-interest-bearing debt	**7 517 218**	**7 560 020**	**9 935 679**	**12 698 123**	**14 957 623**	**17 101 140**	**19 577 693**	**20 556 543**	**21 441 502**	**21 669 223**	**21 896 943**	**22 124 664**
Operating working capital	**-2 993 248**	**-2 654 823**	**-3 268 788**	**-4 521 984**	**-5 565 594**	**-6 399 509**	**-8 081 199**	**-8 464 958**	**-8 816 242**	**-8 948 974**	**-9 086 830**	**-9 229 811**
Non-current assets												
Buildings	672 406	236 862	311 294	397 844	468 636	535 794	613 387	644 055	671 782	678 917	686 051	693 186
Aircraft, other parts and installations	18 533 907	25 248 748	37 170 452	54 950 371	70 345 870	81 558 759	89 100 113	93 960 386	97 225 050	97 967 195	98 709 341	99 451 487
Equipment and fixtures	223 091	142 268	186 974	238 959	281 479	321 817	368 422	386 842	403 496	407 781	412 067	416 352
Prepayment to aircraft manufacturers	5 107 032	5 528 900	7 266 301	9 286 571	10 939 020	12 506 647	14 317 835	15 033 701	15 680 902	15 847 442	16 013 982	16 180 521
Deffered tax assets	629 355	246 751	355 422	512 369	647 398	749 011	824 145	868 516	899 814	907 103	914 392	921 681
Other non-current assets	484 603	448 682	589 676	753 625	887 725	1 014 941	1 161 923	1 220 017	1 272 539	1 286 054	1 299 569	1 313 084
Other non-current tangible assets												
Total non-current assets	**25 650 395**	**31 852 212**	**45 880 119**	**66 139 738**	**83 570 128**	**96 686 969**	**106 385 825**	**112 113 518**	**116 153 582**	**117 094 491**	**118 035 401**	**118 976 310**
Non-current non-interst-bearing debt												
Provision for periodic maintenance	963 624	701 641	922 125	1 178 505	1 388 208	1 587 147	1 816 994	1 907 841	1 989 973	2 011 108	2 032 243	2 053 377
Deferred tax	195 902	679 790	893 407	1 141 804	1 344 976	1 537 719	1 760 409	1 848 426	1 928 001	1 948 477	1 968 954	1 989 430
Total non-current non-interst-bearing debt	**1 159 526**	**1 381 431**	**1 815 532**	**2 320 309**	**2 733 184**	**3 124 866**	**3 577 403**	**3 756 267**	**3 917 974**	**3 959 585**	**4 001 196**	**4 042 807**
Invested capital exc. Intangibles	21 497 621	27 815 957	40 795 799	59 297 445	75 271 349	87 162 594	94 727 222	99 892 293	103 419 366	104 185 932	104 947 374	105 703 692
Intangible assets	250 845	214 319	281 666	359 978	424 033	484 799	555 007	582 756	607 844	614 300	620 755	627 211
Invested capital (Operating assets)	21 748 465	28 030 276	41 077 465	59 657 423	75 695 382	87 647 393	95 282 229	100 475 049	104 027 210	104 800 232	105 568 130	106 330 903
NIBD	18 783 165	20 880 207	30 599 270	44 439 783	56 386 718	65 289 965	70 977 278	74 845 494	77 491 556	78 067 393	78 639 413	79 207 614

Appendix 33 – Pro Forma Financials NAS uncapitalized

Pro Forma Uncapitalized Income Statement NAS

Analytical Income Statement NOK (1 000)	2011	2012	2013	2014	2015
Net revenue	10 532 191	12 859 042	15 579 545	19 540 039	22 491 200
Total operating expenses	(10 128 027)	(11 733 962)	(14 582 212)	(19 618 687)	(20 536 000)
EBITDA	**404 164**	**1 125 080**	**997 333**	**(78 648)**	**1 955 200**
Depreciation, amortiziation and impairment	(293 950)	(385 244)	(529 825)	(748 138)	(1 133 300)
EBIT	**110 214**	**739 836**	**467 508**	**(826 786)**	**821 900**
Tax	(44 416)	(166 535)	(115 817)	557 284	171 100
Tax shield	15 771	(32 664)	(8 436)	(216 070)	(201 636)
Operating tax	(28 645)	(199 199)	(124 253)	341 214	(30 536)
NOPAT	**81 569**	**540 637**	**343 255**	**(485 572)**	**791 364**
Net financial items	56 326	(116 657)	(30 129)	(800 259)	(746 800)
Corporate tax rate	0	0	0	0	0
Tax on financial items	15 771	(32 664)	(8 436)	(216 070)	(201 636)
Profit	**153 667**	**391 316**	**304 690**	**(1 501 901)**	**(157 072)**

Pro Forma Uncapitalized Balance Sheet NAS

Analytical Balance Sheet NOK (1 000)	2011	2012	2013	2014	2015
Operating working capital	(426 571)	(1 083 246)	(1 532 754)	(1 773 114)	(2 993 248)
Total non-current assets	6 180 641	8 656 534	10 378 322	17 925 728	25 650 395
Total non-current non-interest-bearing debt	216 511	476 348	856 728	1 005 331	1 159 526
Invested capital exc. Intangibles	**5 537 559**	**7 096 940**	**7 988 840**	**15 147 283**	**21 497 621**
Intangible assets	236 216	237 774	225 270	206 826	250 845
Invested capital (Operating assets)	**5 773 775**	**7 334 714**	**8 214 110**	**15 354 109**	**21 748 465**

Uncapitalized key financial ratios NAS

Key numbers	2011	2012	2013	2014	2015
EBITDA-margin	3.84%	8.75%	6.40%	-0.40%	8.69%
Profit margin	1.46%	3.04%	1.96%	-7.69%	-0.70%
ROIC	1.41%	7.37%	4.18%	-3.16%	3.64%

Appendix 34 – Estimation raw beta for NAS and RYA

NAS - MSCI Monthly

Regression Statistics	
Multiple R	0.3752155
R Square	0.140786671
Adjusted R Square	0.125972648
Standard Error	0.140540754
Observations	60

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.187712454	0.187712454	9.503608322	0.003136651
Residual	58	1.145598804	0.019751704		
Total	59	1.333311258			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.02281319	0.018236553	1.250959546	0.215971968	-0.013691237	0.059317617	-0.013691237	0.059317617
X Variable 1	**1.482341661**	0.480843833	3.082792293	0.003136651	0.519828155	2.444855168	0.519828155	2.444855168

RYA - MSCI Monthly

Regression Statistics	
Multiple R	0.120988472
R Square	0.01463821
Adjusted R Square	-0.002350786
Standard Error	0.064160016
Observations	60

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.003546902	0.003546902	0.861628902	0.357130239
Residual	58	0.238757442	0.004116508		
Total	59	0.242304344			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.024974067	0.008325397	2.999745039	0.003977147	0.008308975	0.04163916	0.008308975	0.04163916
X Variable 1	**0.203763486**	0.219516026	0.928239679	0.357130239	-0.235645582	0.643172554	-0.235645582	0.643172554

Appendix 35 – Adjusted beta for NAS and RYA

Adjusted beta	NAS	RYA
Raw Beta	1.48	0.20
Historical D/E ratio	1.82	0.08
Unlevered Beta	0.52	0.19
Current D/E ratio	2.46	0.03
Levered Beta	1.29	0.01
Adjusted Beta	**1.19**	**0.33**

Appendix 36 - Rough estimates cost of debt NAS ballpark

NOK(1 000)	2 011	2 012	2 013	2 014	2 015	Average
Net financial items ex. Extraordinaries	36 808	(149 497)	(76 726)	(857 890)	(850 200)	
NIBD ex. Capitalized leases	3 828 188	4 914 063	5 464 283	13 245 857	18 783 165	
Cost of debt	**0.96%**	**-3.04%**	**-1.40%**	**-6.48%**	**-4.53%**	**-2.90%**

Appendix 37 – Cost of debt RYA

	Description	Average rate	Current	Non-current	Total	weight
Fixed rate	Secured long term-debt	2.70%	93.9	450.80	544.70	17%
	Unsecured long term-debt	1.48%	7.1	1 726.40	1 733.50	53%
	Debt swapped from floating to fixed	3.36%	159	843.90	1 002.90	31%
	Secured long term-debt after swaps	**2.26%**	**260**	**3 021.10**	**3 281.10**	**100%**
	Finance leases	2.82%	-	274.40	274.40	
	Total fixed rate debt	**2.30%**	**260**	**3 295.50**	**3 555.50**	
Floating rate	Secured long term debt		248.8	1 296.30	1 545.10	
	Debt swapped from floating to fixed		-159	(843.90)	(1 002.90)	
	Secured long term-debt after swaps	0.50%	89.8	452.40	542.20	62%
	Finance leases	1.27%	49.8	284.10	333.90	38%
	Total floating rate debt	**0.79%**	**139.6**	**736.50**	**876.10**	**100%**
	Total financial liabilities	**2.00%**	**399.6**	**4 032.00**	**4 431.60**	
	Total non-current liabilities	**2.03%**				

Appendix 38 – Historical Capital Structure RYA

EURm	2011	2012	2013	2014	2015
Outstanding shares	1 490	1 465	1 432	1 404	1 372
Stock price	3.72	4.8482	6.4256	10.0564	15.01
Market Capitalization (Market value of equity)	**5 541**	**7 103**	**9 201**	**14 117**	**20 599**
NIBD	**936**	**819**	**828**	**272**	**565**
Enterprise value	**6 477**	**7 922**	**10 030**	**14 389**	**21 164**
D/EV	0.14	0.10	0.08	0.02	0.03
E/EV	0.86	0.90	0.92	0.98	0.97
D/E	0.17	0.12	0.09	0.02	0.03

Appendix 39 – WACC for NAS and RYA

Capital structure	NAS	RYA
Outstanding shares	35 760	1 372
Stock price	309.20	14.14
Market Capitalization (Market value of equity)	11 056 880	19 399
NIBD	**28 468 596.47**	**564.66**
Enterprise value	**39 525 476.85**	**19 963.26**

Debt cost of capital		
D/E	2.57	0.71
Tax rate	27.00%	12.50%
Cost of debt	**6.94%**	**1.20%**
D/EV	0.72	0.42
Weighted r(d)	**3.65%**	**0.44%**

Equity cost of capital		
Risk-free rate	1.42%	0.47%
Adjusted Beta	1.19	n/a
Market risk premium	6.00%	8.81%
Equity cost of capital	**8.58%**	**9.28%**
E/EV	27.97%	58.37%
Wegithed R(e)	**2.40%**	**5.42%**

WACC		
WACC	**6.048%**	**5.854%**

Appendix 40 – CAPEX and Pro Forma Cash Flow Statement

CAPEX	Short-term					Long-term					
NOK(1 000 000)	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	T
Intangibles and tangibles end of period	32 067	46 162	66 500	83 994	97 172	106 941	112 696	116 761	117 709	118 656	118 656
Depreciation, amortiziation and impairment	1 459	2 102	3 030	3 828	4 429	4 873	5 136	5 321	5 364	5 407	5 450
Intangibles and tangibles start of period	25 901	32 067	46 162	66 500	83 994	97 172	106 941	112 696	116 761	117 709	118 656
CAPEX	**7 624**	**16 197**	**23 368**	**21 322**	**17 606**	**14 642**	**10 891**	**9 386**	**6 311**	**6 354**	**5 450**

Pro Forma Cash Flow Statement	Short-term					Long-term					
NOK (1 000 000)	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	T
NOPAT	1 752	3 280	3 764	4 230	4 969	3 163	3 492	3 870	3 930	4 040	4 129
Depreciation	1 459	2 102	3 030	3 828	4 429	4 873	5 136	5 321	5 364	5 407	5 450
Change net working capital	-338	614	1 253	1 044	834	1 682	384	351	133	138	143
CAPEX	-7 624	-16 197	-23 368	-21 322	-17 606	-14 642	-10 891	-9 386	-6 311	-6 354	-5 450
FCFF	**-4 752**	**-10 201**	**-15 321**	**-12 221**	**-7 374**	**-4 925**	**-1 880**	**156**	**3 115**	**3 230**	**4 272**

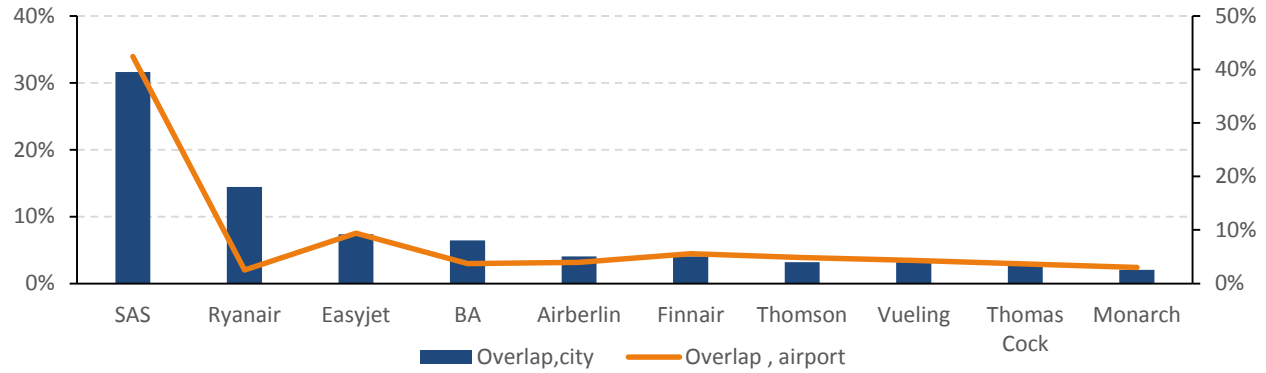
Appendix 41 – Broad peer analysis multiples

NOK (1 000 000 000)	Market cap.	Enterprise Value	1Y EV/EBITDA	1Y EBITDA	Current EBITDA	Change EBITDA
NORWEGIAN AIR SHUTTLE AS	13.26	29.17	9.84	2.96	1.48	100.00%
WIZZ AIR HOLDINGS PLC	12.62	7.05	3.13	2.32	1.7	36.47%
WESTJET AIRLINES LTD	16.61	16.55	3.35	4.98	5.27	-5.50%
SPIRIT AIRLINES INC	25.23	23.62	4.99	4.8	4.71	1.91%
SOUTHWEST AIRLINES CO	225.61	223.35	4.93	45.85	41.41	10.72%
SAS AB	7.6	14.89	3.68	4.03	3.42	17.84%
RYANAIR HOLDINGS PLC	156.24	152.97	8.76	17.52	12.01	45.88%
JETBLUE AIRWAYS CORP	51.42	59.98	4.12	14.55	12.6	15.48%
EASYJET PLC	69.35	63.73	6.11	10.63	9.76	8.91%
CEBU AIR INC	9.26	15.29	5.57	2.69	2.62	2.67%
ALLEGIANT TRAVEL CO	21.88	24.62	6.14	4.02	3.79	6.07%

Appendix 42 – M&A activity airline industry

Target	Acquirer	Rumor date	Announcement date	Rumor premium	Announcement premium	Deal value EUR (1 000)
TAM	LAN	12/8/2010	18/01/2011	81.80%	16.51%	3 388 599.00
Continental Airlines	United Airlines	14/04/2010	30/04/2010	-2.47%	1.46%	2 323 798.00
AirTran	Southwest Airlines	24/09/2010	24/09/2010	69.06%	69.06%	2 307 032.00
Iberia	BA	14/06/2002	7/4/2010	51.69%	5.67%	2 298 040.00
Northwest	Delta	n/a	11/4/2008	n/a	14.17%	2 266 348.00
Aer Lingus	IAG	17/12/2014	22/05/2015	40.11%	8.05%	1 379 183.00
Shanghai Airlines	China Eastern	22/07/2008	9/7/2009	8.95%	15.75%	933 858.00
Consorcio Aeroméxico	Banamex	15/02/2006	15/10/2007	-37.50%	1.86%	769 982.00
Malaysian Airline System	Khazanah Nasional	18/07/2014	14/10/2014	35.00%	8.00%	325 698.52
China National	Air China	21/06/2006	21/06/2006	6.87%	6.87%	318 027.00
HAECO	Swire Pacific	4/6/2010	25/06/2010	25.00%	-0.10%	257 847.00
World Air	Global Aero Logistics	1/9/2006	4/4/2007	45.18%	15.74%	230 517.00
Austrian Airlines	Lufthansa	21/05/2008	26/02/2009	9.78%	29.77%	213 058.00
Vueling	IAG	6/11/2012	26/03/2013	61.71%	9.08%	142 930.00
ExpressJet	Skywest	3/8/2010	3/8/2010	105.79%	105.79%	83 689.80
Skywest Airlines	VAH	29/10/2012	25/02/2013	-19.64%	51.09%	38 560.00
Meridiana	n/a	25/02/2013	11/4/2013	-29.87%	0.08%	6 439.00
Cimber	Manswell	29/07/2011	26/08/2011	-34.50%	-7.98%	58.71
Aeroport Tomachevo	Trans Siberia	14/06/2012	14/06/2012	65.67%	65.67%	40.60
Average				**26.81%**	**21.92%**	
Median				**30.00%**	**9.08%**	

Appendix 43 – Route overlap (source : OAG aviation Worldwide Schedules analyzer)



Appendix 44 – Synergies Pro Forma Forecasts

Cost synergies economies of scale NOK (1 000 000)	Short-term 2016E	2017E	2018E	2019E	2020E	Long-term 2021E	2022E	2023E	2024E	2025E	T
Compensation board of directors	0	1.726	1.986	2.285	2.630	3.026	3.482	4.006	4.610	5.305	6.104
Net compensation executive management	0	10.615	26.003	29.846	34.004	36.454	38.343	40.037	40.334	40.614	40.877
Auditor fee	0	9.283	11.370	13.050	14.869	15.940	16.766	17.506	17.636	17.759	17.874
Sales and distribution	0	0.000	51.128	58.686	66.861	71.678	75.392	78.722	79.306	79.857	80.375
Maintenance expenses	25.667	33.498	42.482	49.619	56.210	64.524	67.872	70.880	71.692	72.487	73.270
Other operating expenses	0	0.000	230.296	268.985	304.718	349.788	367.939	384.245	388.647	392.956	397.201
Handling costs	37.967	50.695	65.827	78.781	91.512	107.243	114.735	121.486	124.264	126.786	129.098
Net cost synergies	63.634	105.817	429.092	501.253	570.804	648.652	684.529	716.883	726.489	735.764	744.799
Increased tax	-17.181	-28.571	-115.855	-135.338	-154.117	-175.136	-184.823	-193.558	-196.152	-198.656	-201.096
FCFF	**46.453**	**77.246**	**313.237**	**365.915**	**416.687**	**473.516**	**499.706**	**523.325**	**530.337**	**537.108**	**543.703**

Load factor	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	T
Assumed LF short-haul	0.81	0.82	0.83	0.84	0.883	0.89	0.9	0.91	0.92	0.92	0.93
Assumed LF long-haul	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93

Revenue synergies NOK (1 000 000)	Short-term 2016E	2017E	2018E	2019E	2020E	Long-term 2021E	2022E	2023E	2024E	2025E	T
Revenue short-haul	610	637	588	503	1 688	1 542	1 477	1 380	1 201	566	398
Revenue long-haul	351	604	866	1 077	1 295	1 346	1 362	1 377	1 391	1 405	1 418
Total revenue synergies	**960**	**1 241**	**1 454**	**1 580**	**2 983**	**2 888**	**2 839**	**2 757**	**2 592**	**1 971**	**1 815**
EBITDA	145	235	280	311	602	445	448	447	422	324	301
NOPAT	106	172	204	227	439	325	327	326	308	237	220
FCFF	**106**	**172**	**204**	**227**	**439**	**325**	**327**	**326**	**308**	**237**	**220**

Appendix 45 – Synergy allocation NAS and RYA

Allocated synergies NOKm	Operating	Long-haul	Short-haul	Overhead	Sales	Total
PV(synergy)/NPV synergies	3 286.16	1 350.73	611.47	357.64	440.38	6 046.39
Allocated RYA	1 971.70	67.54	428.03	178.82	220.19	**2 866.28**
Allocated NAS	1 314.46	1 283.19	183.44	178.82	220.19	**3 180.11**
NPV synergies						**6 046.39**