Valuation of SAS

Copenhagen Business School

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Author:

Daniel Yousafzai

Supervisor:

Henrik Kyhnauv, external

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1. Executive Summary

Scandinavian Airlines (SAS) was founded in 1946 and is a joint venture built upon the flag carriers from Sweden, Denmark and Norway. The company is listed on the Stockholm, Copenhagen and Norway stock exchanges simultaneously and the ownership are divided between institutional and private investors, consisting of the three Scandinavian governments, which accounts for 50 percent of the shares, whilst the rest are freely traded. The unique cross-country, part state owned, and part private owned company, makes for an interesting case, especially in the current economic climate.

The purpose of this thesis is to assess and evaluate the current state of SAS, as well as to assess the future of the company with the angle being that of an investor's. This will be accomplished by conducting a strategic financial analysis and valuation of SAS, to arrive at a theoretical share price as of August 1st 2013.

The strategic analysis revealed that SAS is operating in a tough environment, where the external factors are heavily affected by the financial crisis. In the industry itself, SAS are opposed to fierce competition mainly from the low-cost carriers, with the competitive landscape being characterized and driven by ticket prices. The customer's lack of loyalty in the industry contributes to the challenging environment and each market share must be fought for. To further add to the woes, SAS' costs are amongst the highest in the industry, which results in a limited maneuver room to turn things around. However, the company itself has recognized this as one of the main problems, and SAS is actively attempting to reduce the cost levels through their 4Excellence and 4XNG strategies with divestments being a big part of the means to accomplish it.

With the sales declining, SAS' financial results over the past few years, has been anything but to be proud of. The return of equity has been negative throughout the analysis period, albeit improving over the years. The return on invested capital has also been negative, except for 2011, where it was positive. Likewise, the profit margin has shown the same development. Despite the key financial figures being at very poor levels, there is some hope to be found in the small signs of improvement.

The strategic and financial analyses formed the basis for the forecasting, which in turn led to a valuation of SAS using the DCF and EVA-models. In both models WACC was used as the discount factor, which was found to be 7.79 percent and through a weighted valuation incorporating three scenarios, the calculated share price as at August 1st, 2013, was found to be SEK 11.79, indicating that SAS' share price was undervalued by SEK 1.11.

2. Introduction

Whenever there is a downturn in the economy, such as the recent and ongoing financial crisis, one of the first industries to be hit is the aviation industry. The volatility in the industry is extreme and highly sensitive to economic trends, coupled this with a fierce competition, the aviation industry is one of the toughest around. As a result of this, several airlines has in the past few years thrown in the towel and gone bankrupt, which is why the aviation industry is interesting to analyze.

In recent years Scandinavian Airlines has experienced severe financial problems and been on the verge of bankruptcy. Had it not been for the restructuring deals the company negotiated in late 2012 with it employees, banks and investors, the company would, put simply, not exist today. The company is from an era where national airlines were a pride of the country and while such companies were not always profitable, they were seen as a necessity for the sovereign states. The legislative reform which took place from the early nineties to the year 2007, meant that independent companies was allowed to operate in other countries within the EU and the US. This resulted in increased competition for the flag carrier airlines from low cost carriers such as Ryan Air, EasyJet and in particular for SAS; Norwegian Air Shuttle. Given the almost decade long financial troubles the firm has found itself in, one could question whether such a company should be allowed to continuously be on life support. However, what makes SAS particular interesting is the fact that it is a cross-border corporation, which unlike most public companies, the majority shareholders are to be found amongst the national governments of the Scandinavian countries and which employs in the excess of 40,000 people.

Having so many widespread stakeholders, entire societies would be impacted if it were allowed to fail. It is in everyone's interest then, to keep the company afoot. Having established the importance of a flag carrier of Denmark, Sweden and Norway, this master thesis will focus on a strategic analysis and valuation of the company, given the recent turbulence experienced by SAS.

It is clear to see what impact the financial crisis in 2008 had on SAS, as illustrated in the below graph, which shows the development of SAS' stock price over the past ten years:

Figure 1 – SEK SAS AB.ST, Source: Google Finance

3. Problem statement

As has been argued in the introduction, the importance of a Scandinavian flag carrier cannot be undermined. Based on the current situation SAS find themselves in, given their near-bankruptcy experience, and factoring in the current business climate, it is interesting to conduct a strategic analysis and valuation of Scandinavian Airlines.

Thereof, the main problem can be formulated as the following:

- "What is the intrinsic value of one SAS share as of August 1st, 2013?"

In order to answer the question above, one must take into account the various internal and external factors that may affect the value of the SAS stock. A strategic analysis will be conducted in order to identify the macroeconomic factors, the industry competitiveness, as well as the internal conditions that may influence the profitability of the company and ultimately the value of the corporation. On top of that, a financial analysis will be conducted that will go through key financial figures to better understand the financial situation of the company. Furthermore, estimates will be made on the basis of the strategic and financial analysis, which will ultimately result in a valuation of SAS.

Therefore, in regards to the above, the following questions will be addressed:

- Which areas of SAS are contributing to their financial troubles?
- How is the competitive situation of SAS?
- What is the future outlook of SAS?

3.1 Limitations

Given the complexity of the corporation, not all segments of SAS can be analyzed in depth, within the boundaries of a master thesis. The purpose of this dissertation is to analyze the current situation SAS is in and ultimately to conclude on whether the company is a viable business investment. And if so, at what price the stocks should be traded at and furthermore to see if the current share prices are overvalued or undervalued compared to the intrinsic value of the firm.

Thus, the common theme of the strategic analysis will be profitability and the factors that affect the profitability of SAS.

In order to provide an objective analysis and valuation of the company as possible, this thesis will only be based on public available information.

Given the dynamic nature of the environment and that of a public traded company, it has been necessary to use a cutoff date. Thus, any information after the cutoff date will not be taken into account as they have the possibility to greatly affect the valuation of the company. Any groundbreaking information after the cutoff date will however be discussed briefly in the discussion section of the thesis. Discussions as to why the chosen valuation method has been preferred will be dealt with in the discussion section as well.

The company will be regarded on a corporate level and no independent analysis of branches or departments will be carried out.

The scope of the financial analysis will be the last 5 years leading up to the bankruptcy scare experienced by SAS in 2012.

It is the assumption of the author that the target group defined is familiar with the terms and theories used in this thesis and will as such not be dealt with in an in-depth level. Lastly the author's assumption is that the company is compliant with applicable accounting laws and as such the quality of the annual reports, company documents etc. will not be considered.

3.2 Scope of Aim

The target group for this master thesis is the supervisor, censor and potential investors. The thesis is the final assignment for the MSc. IBS line.

4. Methodology

The following section aims at describing the methodological considerations and assumptions, as well as areas, which will be used and covered in this master thesis.

The overall structure of the thesis will be as follows:

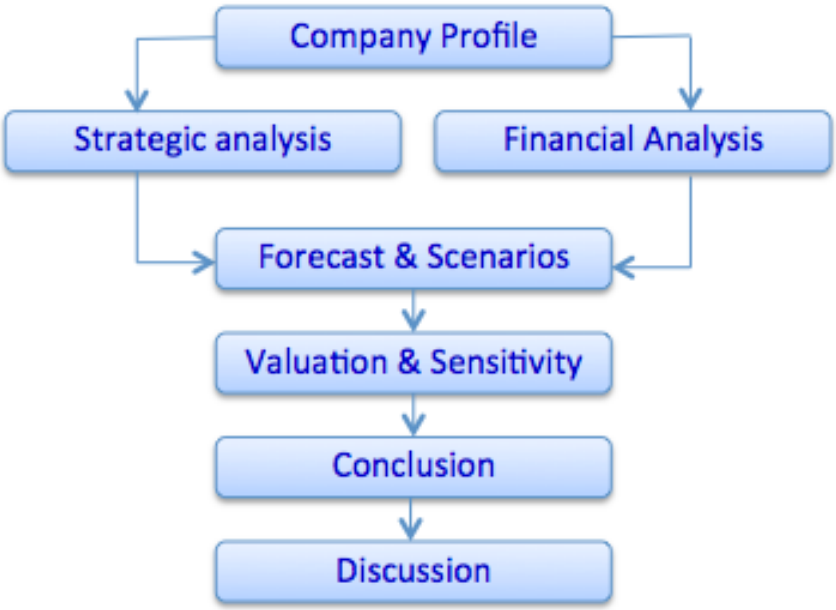

Figure 2 - Thesis Structure

4.1 Company Profile

To give a better understanding of the company and its origin, the thesis will start off by introducing SAS with a short history, before presenting the ownership structure. As part of the company profile, the strategic initiatives taken by SAS in recent will also be presented, before moving on to the strategic analysis.

4.2 Strategic Analysis

The strategic analysis will try to uncover the external and internal environments SAS operates in and will primarily be based on the theories developed by Michael E. Porter. The objective of the analysis is to look at macroeconomic factors, the competiveness of the industry, internal conditions and other factors that have the possibility of influencing the profitability of SAS.

The PESTEL model, which is a further development of the classic PEST model, originally looks at the Political, Economic, Sociocultural and Technological factors. The extended model however,

also factors in the Environmental and Legal aspects so it's better suited for analyzing the complexity of the modern day business environment. The impact of these external factors are great on SAS and they are all influencing SAS to a varying degree, however these factors can also be impacted by SAS themselves, which will be discussed in the thesis.

Following the analysis of the environment will be an analysis of the competiveness of the industry by using Porters Five Forces. Porter argues that the profitability of a given company is correlated by the following five forces:

- Bargaining power of suppliers
- Threat of new entrants
- Bargaining power of buyers
- Threat of substituting products or services
- Rivalry amongst existing companies.

Using Porters Five Forces will help to establish a good understanding of the industry and the competition.

While the PESTEL and Porters Five Forces models helps examining the external environment in the industry, the internal analysis focuses on SAS' internal non-financial value drivers, which can be influenced directly by the company. To help us analyze the internal environment of SAS, Barney's VRIO framework will be applied.

Lastly, a SWOT analysis will be carried out as a summarization of what we have learned from the PESTEL model, Porters Five Forces and the Internal analysis, to identify the company's internal strengths and weaknesses as well as the external opportunities and threats SAS are opposed to, given their current situation and the general business climate.

4.3 Financial Analysis

The purpose of the financial analysis is to establish a knowledge and understanding of the company's annual reports as well as serve as basis for the valuation. A historical analysis of SAS' financial statements for the years 2008-2012 will be carried out.

The first step of the financial analysis will be to reorganize the financial statement for analytical purposes. The company's core business will then be identified, while at the same time, making it possible to make a separation of the operating and financing related items. This will also allow identification of the various sources of value creation and they will subsequently be used for the calculation and analysis of financial ratios.

The analysis of the company's profitability will be made according to the DuPont model[1]

4.4 Forecasting

Budget statements based on the strategic- and financial analysis will be prepared for a forecasted period of five years (2013-2017). In addition, the budget statements will also contain terminal values relating to the terminal period.

Forecasting and the preparation of the budgets can be subject to great uncertainty, which is why it is deemed necessary to work with the forecasting based on possible scenarios for the future.

4.5 Valuation

The valuation of the company will be carried out by using the DCF- and EVA models. Both models should give the same value estimate, as long as they both are based on the same assumptions. The EVA model can thus be used with advantage to control the calculated value estimate derived by the DCF model.

Both models have a prominent role in the finance theory, and it is considered that these models are the most useful in practice.[2]

The discount rate used is the entity's weighted average cost of capital (WACC). WACC consists of the owners' required rate of return, the value of equity, loan interest rates and net interest-bearing debt, and is thus an expression of the required rate of return for both the owners and lenders. Market values rather than book values will be used for the determination of the value of equity and net interest-bearing debt, as this information is known for a public listed company.[3]

4.6 Sensitivity Analysis

A sensitivity analysis will be carried out in order to see how the valuation will be affected if some of the assumptions and the determents were to change.

[1] Regnskabsanalyse for beslutningstagere, p. 145-181
[2] Regnskabsanalyse og værdiansættelse - en praktisk tilgang, p. 32-39
[3] Regnskabsanalyse og værdiansættelse - en praktisk tilgang, p. 42-48

4.7 Source criticism

Quality assessment of the material and sources used in the thesis is a prerequisite for building credibility. In addition, all parts of the thesis needs be assessed and the quality of data should be considered and discussed. The quality criteria cover data validity and reliability. All material and literature used in the thesis, has been critically examined with a view to assess the degree of validity and reliability in order to create an appropriate and credible picture.[4]

The thesis will primarily make use of secondary data, that is data, which is already public available. The strategic analysis will make use of available statistics, annual reports and articles. The financial records and other related figures are derived from the audited financial statements. The collection of data through secondary sources is assessed to meet the quality standards, so that all sources used in the thesis is considered to be reliable. It is also assumed that the management's assumptions and estimates are consistent with the truth, and thus not subject to significant uncertainties and manipulation.

It has not been necessary to make use of primary data. It should also be stressed that there has been no contact with the management and other staff of SAS before or during the preparation of the thesis. The valuation is based solely on publicly available information.

5. Company profile

5.1 History

The establishment of a joint Scandinavian airline originates from the idea of having transatlantic flights between the United States and Scandinavia. The talks had been ongoing since the 1930's, but the Second World War brought the plans to a halt. Once the war was over, the three national airlines resumed their negotiations and Scandinavian Airlines System, as it was called back then, was founded in 1946 as a consortium between the three flag carrier airlines of Denmark (Det Danske Luftfartselskab A/S), Norway (Det Norske Luftfartselskap AS), and Sweden (AB Aerotransport). The initial idea of the joint venture was to cooperate and establish intercontinental flights from Scandinavia to North America. The plans were followed up by action later that year when the first flight from Stockholm to New York took place, with stopovers in Copenhagen, Preswick (Scotland)

[4] Den skinbarlige virkelighed, p. 83-84

and Gander (Newfoundland).[5] The progress of the new airline and cooperation between the airlines later expanded to European routes and a complete merger took place in 1951.

The airline reached a significant milestone in its early days, as it was the first to fly a transpolar route to Los Angeles (USA) from Copenhagen with stopovers in Søndre Strømfjord (Greenland) and Winnipeg (Canada). The route was in particular popular with Hollywood trendsetters. By flying over the North Pole the route could be shortened by approximately 1,000 km.

Through the 1980's and 1990's the company was on the offense by acquiring local airlines either in full or as partial investments. SAS acquired Braathens and Widerøe in Norway, Linjeflyg and Skyways Express in Sweden and Cimber Air in Denmark. The urge for expansion however, was not limited to national airlines, as the company also bought stakes in Texas Air Corporation, British Midland and Spanair. Some of the holdings have later been sold.

Following an unsuccessful merger attempt to become the largest airline company in Europe with KLM, Austrian Airlines and Swissair, SAS was one of the founding members of Star Alliance in 1997 along with United Airlines, Air Canada, Lufthansa and Thai Airways.

In 2001, the company went public with half its shares being traded on the Copenhagen-, Stockholm and Oslo exchange simultaneously. At the same time, the company created a holding company where the national holdings were restructured to: Denmark (14.3 percent), Norway (14.3 percent) and Sweden (21.4 percent), which bring us to the company's ownership structure:

5.2 Ownership Structure

SAS is very unique in terms of their ownership structure. 50 percent of the shares are owned by the Scandinavian governments and the rest of the total 329 million shares, are primarily listed on the Swedish Stock exchange. The share price as of August 1st was traded at SEK 12.9

SAS AB is the holding company that owns the three national divisions of SAS Danmark A/S, SAS Norge AS, and SAS Sverige AB. SAS AB further represents three wholly owned subsidiaries: Blue1, Widerøe, and SAS Cargo as well as the two operations of Estonian Air and Air Greenland, which are to be divested as extension of the focus and cost-cutting strategy, 4Excellence.

The current corporate structure of SAS is as follows:

[5] http://www.sas.dk/1946

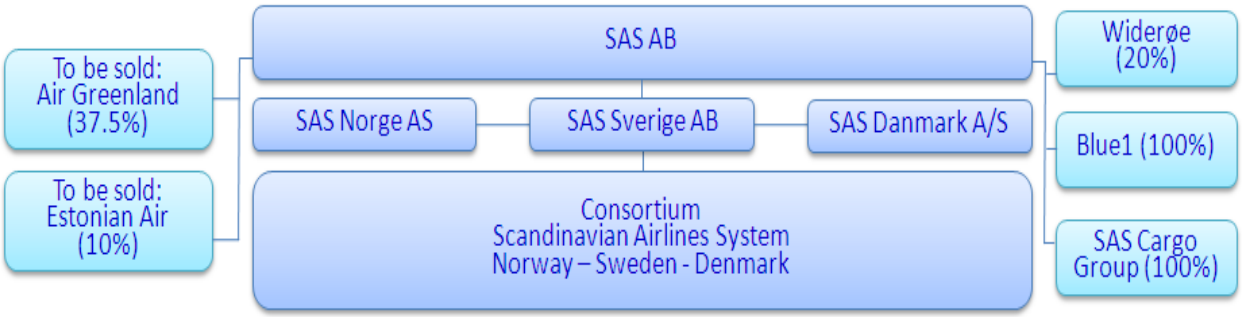

Figure 3 - SAS Corporate Structure 2013 – Source: Own making

5.3 Core SAS

The corporate structure presented in the above figure, is the outcome of the Core SAS strategy that was initiated back in February 2009, with the main purpose being to refocus on the company's core business. The strategy had its focus on five core competencies of SAS: The Nordic market, business travelers, cost reductions, streamlining the organization and lastly a strengthened capital structure.[6]

It is evident to see from the SAS annual report for 2011 that SAS successfully managed to implement a unit cost reduction of 23 percent and a cost saving of SEK 7.6 billion, which ensured improved profitability and efficiency. Even though the strategy by large succeeded, there was still much to improve, which is also what SAS tried to do with their new strategy launched in 2011.

5.4 4Excellence

4Excellence was launched in 2011 as the successor of the Core SAS strategy and which aimed to achieve expertise in four core areas that SAS considered being important components in the airline industry. The four areas of expertise were[7]:

- "Commercial Excellence – Do the right things that the customer is willing to pay for and make us natural choice for Nordic travelers."
- "Sales Excellence – Increase cost efficiency and achieve higher levels of loyalty among companies and travelers. Sales are about relationships, not only transactions."
- "Operational Excellence – Ensure that we deliver the highest quality and cost efficiency based on customer value."
- "People Excellence – Realize the full potential of employees through strong leadership and cooperation on shared goals."

[6] SAS Group Annual Report & Sustainability Report 2009, p. 8-15
[7] www.sasgroup.net 2013, strategy

4Excellence is a strategy primarily based on the reduction of costs, as the financial situation of recent years has had SAS struggling. 4Excellence builds upon the idea that the Nordic customers should see SAS as their natural choice of airline. As such, it is imperative that the customers can choose from quality products, which they are willing to pay a premium for.

4Excellence was launched in September 2011 and below are the goals SAS set up in the four key areas:

Figure 4 – Source: SAS Annual Report 2012 p. 4

While the strategy so far has been successful in a number of areas there were three challenges which SAS wanted to address as well and this bring us to their latest strategy called: "4Excellence – Next Generation".

5.5 4Excellence – Next Generation

The new areas, which SAS wants to focus on, are:

- Cost and flexibility
- Liquidity
- Equity

A stressed financial situation at SAS pushed the organization to bring about a comprehensive austerity and deep cuts in the payroll budget, as a reaction to the bad numbers on the bottom line. The SAS' Saving Plan from 2012 in numbers and brief details will be discussed in the following.

While the original 4Excellence strategy yielded positive results in terms of growth in the number of passengers as well as reduction of costs to some extent, it also provided the aforementioned challenging areas SAS hopes to combat with their new strategy. Because of the financial distress of the company in late 2012 the new strategy was widely discussed publically as it put afoot a comprehensive savings plan, which could be summarized to three main points[8]:

- SAS to gain SEK 2.6 billion by divestment of assets including: buildings, aircraft engines, Widerøe and the SAS Ground Handling entities.
- Closure of 800 administrative positions and greater emphasis on centralization of administrative tasks in Stockholm.
- Saving of SEK 2.6 billion annually on the operation by cutting wages of employees and increasing productivity.

The aim of the savings plan was to reduce the number of staff from 15.000 to 9.000 in the form of form of divestment of its subsidiaries and outsourcing of SAS Ground Handling. The negotiations in November 2012 were very dramatic and had SAS failed to reach agreements with its creditors and the labor unions, it would have gone bankrupt. In order for the company to compete with its competitors, SAS is forced to have payroll and associated costs as well as employee terms and benefits as the same level as the market dictates. As customers are not willing to pay high prices on

[8] SAS Annual Report 2012

airfares, SAS has little choice but reducing their costs, streamline the organization and become more productive. The negotiations with the labor unions were imperative for SAS to succeed in order for them to finalize the deal with its banks and majority investors, so the line of credit could be prolonged until March 31st 2015.[9]

With the new strategy, SAS had the expectation of increased loyalty amongst its customers and the target for their loyalty program EuroBonus members were that they should represent a greater share of the earnings up from 41 percent to 50 percent in 2012.[10] Furthermore SAS wants to achieve increased flexibility, less complexity and increase the variable costs (proportionally) with regards to the fixed costs. This will be obtained by outsourcing, leaving SAS to focus on its core competencies. It was deemed necessary to outsource respectively Ground Handling, customer support, and administrative positions. If SAS are to succeed with the strategy the end results will be a decrease in costs per unit over the next years and reduction of costs benefitted by outsourcing to specialist companies who are able to obtain economies of scale. The profitability and the underlying value drivers will be further examined in the financial analysis to identify areas where SAS can further improve.

6. Strategic Analysis

The following situation will discuss the competitive situation of SAS by looking at both external and internal factors using popular analysis models. The analyses will further help to determine the non-financial value drivers for SAS, which will be summarized in SWOT as points.

6.1 PESTEL

As SAS operations are worldwide and its majority shareholders are spread out between the countries in Scandinavia it goes to outline that SAS is truly a global company. While the main source of earnings derives from the Scandinavian market, the company is still heavily affected by the global business climate and the developments on the global markets. Analyzing the macroeconomic factors should enable us to outline the aviation industry's value drivers and constrains, which ultimately affects SAS' current and future profitability.

[9] SAS Annual Report 2012, p. 9
[10] SAS Annual Report 2012, p. 14

6.1.1 Political Factors

The political environment has the potential to create great unrest in the aviation industry, as was the case with 9/11 and the increased security requirements it brought along. Political disputes in oil producing countries have a tendency to affect the industry negatively with increased fuel prices as a result. As fossil fuels are considered bad for the environment it is subject to a great range of taxes imposed by the judicial bodies.

Regulations[11]

The deregulations of the past couple of decades have also heavily influenced the aviation industry, as there are now fewer restrictions airliners has to comply with. In recent decades the industry has evolved from the traditional state-owned flag carriers to a more dynamic and free market industry. The changes has come into effect by a number of deregulations put in place by both the United States and the European Union, with one of the most important being the "Third Package"[12], which came into effect in 1997. Some of the most significant changes were that an airline was allowed (within the EU) to operate routes between two other member states through its home country (called the "Sixth Freedom" in the Chicago Convention)[13]. Furthermore, the airliners were allowed to operate domestic routes in other member states (the "Seventh Freedom"). In addition the airliners were also allowed to compete on routes, frequencies, prices and service levels without any intervention by the regulators.

Another significant political change was when the "Open-Skies Agreement between the EU and the US" came into effect in March 2008. This deal brought along a number of improvements for airliners and is the recent biggest move towards a more liberalized aviation industry worldwide. The most important barriers that were removed were that airlines could fly from any point in the EU to any point in the US. Other important changes were that European airlines could use USA as a stopover to other third countries. There was also no discrimination for cargo flights as the same rules applied to them.

From the perspective of SAS, the open skies agreement also had the "unfortunate" side effect that it did not require independent bilateral agreements with the US, as long as they are member states of the European Union. For SAS this increases the competitive pressure as competitors from other European countries now enjoys at least the same benefits as SAS, as everyone is now allowed to

[11] "Characteristics of the Airline Industry", John Keynes (2009)
[12] See, e.g., Starkie (2002); Chang and Williams (2002).
[13] "The Freedom of Fifth Freedom Flights", Vallero, Luigi (2004)

roam freely. The deregulations does however, also enable SAS to engage in new activities with the purpose of growing their business if they manage to seize the opportunities.

6.1.2 Economic Factors

Since the ownership of SAS consists of the three governments of the Scandinavian countries and with Scandinavia being the core market, it makes sense to look at the economic development in those countries. A good indicator of a country's wealth, progress and productivity is GDP[14], which measures the total output of a given country for a fixed period of time.

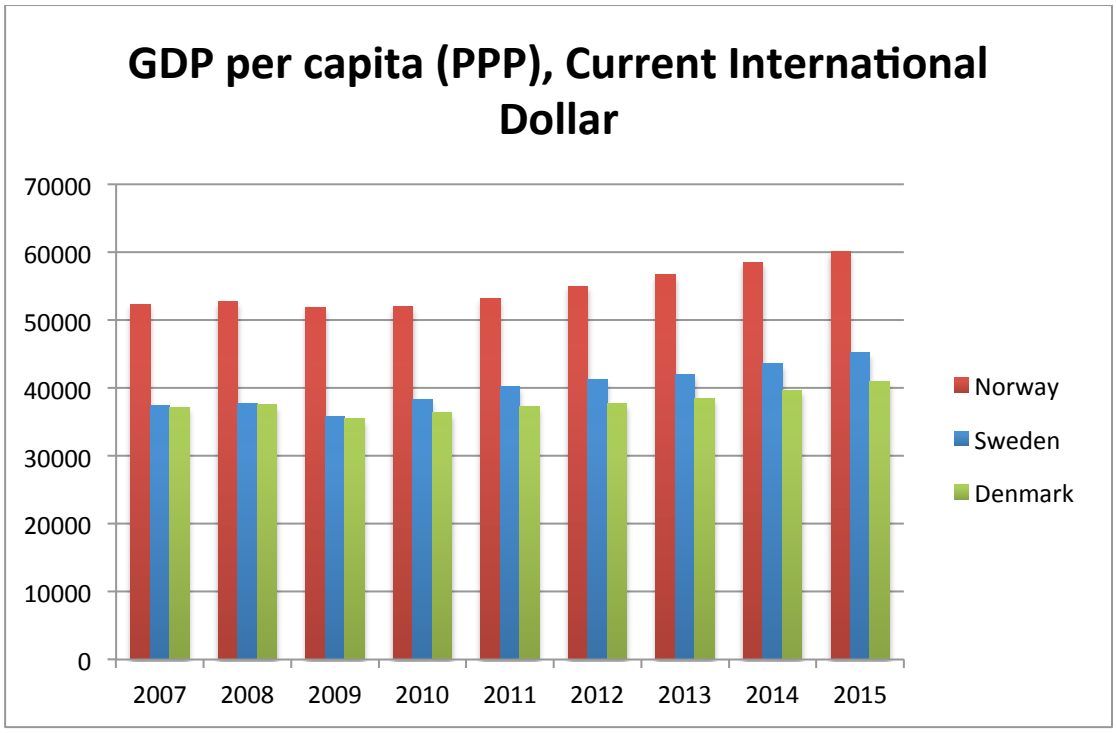

Figure 3 - Data: IMF World Economic Outlook Database 2013 - Source: Own making

As can be seen from the above figure (estimates for 2013 and beyond) the overall GDP development can best be described as stagnant and there is not a significant improvement to expect year over year. It also shows that Norway has the highest GDP figures, thus the strongest economy, which is well in line with general opinion. All countries did suffer a decline in their GDP following the outbreak of the financial crisis but it has since grown above pre-crisis figures, albeit the development is not as staggering as say the developing countries. What the figures shows in reality

[14] The GDP figures used are Purchasing Power Parity, as this term asks how much money is needed to buy the same basket of goods and services regardless of the country in question, which makes the numbers more comparable.

is that there is no dramatic GDP growth expected and one can come to the conclusion that an upturn in the economy for the Scandinavian countries and growth is slow but steady.

Oil Prices

Oil prices has a huge impact on the running costs of an airliner as Jet fuel accounts for 22.9 percent of the airline's total operating expenses[15]. Jet fuel is closely correlated with the price of crude oil, as can be seen in the below figures that shows the price development of the past decade.

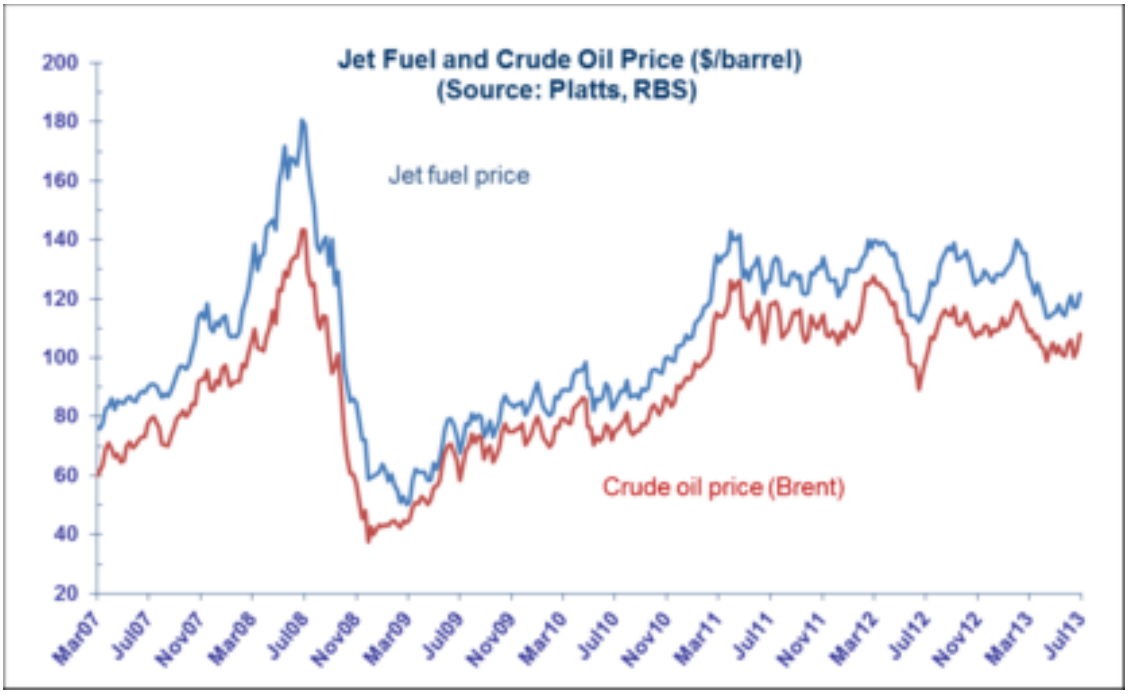

Figure 4 – Jet fuel vs. oil price development -Source: IATA16

As oil prices are very volatile and sensitive to the worldwide economic development, it poses a great risk for airlines due to their heavy dependency on Jet fuel. A way to deal with the short-term price fluctuations is by hedging the future fuel consumption, a tactic used by SAS to lock in their fuel expenses by buying swaps supplemented with capped options[17]. Hedging does however come at a high price, but it goes to show that in these troubled times for the company they are unwilling to take on unnecessary risks.

A number of other factors are worth mentioning, such as household income, inflation, spending rates, exchange rates and interest rates. As SAS has operations worldwide they deal in a number of

[15] SAS Annual Report 2012, p. 36
[16] http://www.iata.org/publications/economics/fuel-monitor/Pages/price-development.aspx
[17] SAS Annual Report 2012, p. 65

currencies. SAS' exposures to exchange rate fluctuations are great and can have a significant impact on the overall profitability. The net effect of the exchange rates adjustments (into SEK) was a gain of MSEK 1,929 in 2011 and a loss of MSEK 1,278 in 2010. Fluctuations in interest rates can also have a significant impact on SAS' ability to pay back borrowed funds if the rate rises.

6.1.3 Socio-Cultural Factors

It is widely expected that the aviation industry will see a growth in the numbers of passengers in the coming years. The International Air Transport Association (IATA) has forecasted a growth of 800 million more passengers worldwide by 2016[18].

While the forecast in growth in 2016 and beyond is largely carried by increasing wealth in China and other third world countries, the Nordic region and thus the core market of SAS is not left behind. In the Nordic region it was expected to see an increase in the revenue from 110 billion SEK to 170 billion SEK in 2020.[19]

According to IATA 80 percent of the growth by 2020 will stem from leisure travel, which is also why SAS has invested in leisure travel and planning to open up 45 routes on that account.[20]

Even though growth is expected for future traffic, the picture is not all good. Most of an airlines profit stems from the sales of premium seats. But times has changed and travellers (business as well as leisure) are opting towards lower cost flights going for the economy class seats instead of business and first class seats, as consumers are becoming more conscious about the costs. While IATA reports an overall growth in their annual report (yearly change) in premium seat sales, it had the following comment about the situation for European based airlines:

> *"Within Europe, where distances are relatively short, there has been a structural shift away from premium seats, resulting in the faster growth of economy travel"*[21]

6.1.4 Technological Factors

Technology plays a vital role in the aviation industry. It has the potential to greatly reduce the running costs and at the same time increase the competitiveness of an airline. The Internet has made it possible for consumers to search for the best possible deals by using search engines such as Expedia and Momondo. It enables consumers to compare on primarily prices and adds a

[18] http://www.iata.org/pressroom/pr/pages/2012-12-06-01.aspx
[19] SAS Group Annual Report 2011 with sustainability overview p. 10-11
[20] SAS Annual Report 2012, p. 16
[21] IATA Annual Review 2012, p. 12

transparency that would otherwise have been absent. However, it is to be noted that some airlines are adding various fees on top of the base price to retain their earnings; this is primarily widespread amongst the low-cost carriers.

Airplanes are technologically very advanced and there is a great focus on bringing down CO2 emissions. In fact IATA has an industry goal to bring down the CO2 emissions by 50 percent by year 2050 compared to the level of the emissions in year 2005[22]. In addition, EU has since the beginning of 2012 imposed a loft on CO2 emissions on flights arriving or departing from EU airports. This applies to both EU and non-EU based airlines. If the limit is exceeded the airline is required to buy CO2 quota corresponding to the pollution inferred by the airline.[23] By imposing these regulations EU puts an emphasis on reducing emissions by technological advancements in modern airplanes.

Other technological advancements such as self-service check-in is a great way to reduce running costs for the airlines as it allows for more efficient and simplified processes and greater flexibility for the consumer.

Boeing, one of the largest airplane manufactures, is expecting to see a significant increase in world passenger traffic growing 5 percent annually over the next two decades.[24] As there will be more traffic, more airplanes will be required, with the share of single aisle planes being the predominate factor behind the growth. In fact Boeing is expecting that 85 percent of the world fleet will be new by year 2032. Boeing also recognizes the need of more fuel-efficient planes from their customers, and besides new airplanes they expect that a higher utilization of the planes with an increasing load factor will be other important means of reducing the airlines fuel costs. [25]

SAS are committed to simplify their fleet by phasing out older airplanes, which should result in lower maintenance costs. In addition SAS has signed new leasing contracts, which will ensure that their future fleet output less emissions and as a result the fuel efficiency is improved by 10-15 percent per new aircraft. [26]

[22] IATA Annual Report 2010, p. 28
[23] http://ec.europa.eu/clima/policies/transport/aviation/index_en.htm
[24] http://www.boeing.com/boeing/commercial/cmo/market_developments.page?
[25] http://www.boeing.com/boeing/commercial/cmo/new_airplanes.page?
[26] SAS Annual Report 2012, p. 11

6.1.5 Environmental Factors

The aviation industry is highly sensitive to natural disasters and extreme weather. In the recent years we experienced the volcanic ash cloud from Iceland that paralyzed the European air traffic for several days and cost the industry a loss of 1.7 billion USD[27]. The same year at Christmas in 2010, the west European countries was hit by a severe weather storm that brought along a lot of snow, which resulted in a significant number of delays and cancelations and a big part of the cost were incurred on the airlines as they had increased costs i.e. with the airplanes being grounded and compensation to the consumers. This goes to show that there are some factors which are out of the possibility of the realms of the airlines and there are not many things that can be done to change it around (buying insurance can hedge ones risk, but there will always be some increased costs associated with planes being grounded).

An alternative to conventional fossil fuels, such as biofuel is widely considered to be the next big thing in the industry. It greatly reduces the carbon footprint and is both less harmful to produce and use than oil based fuel. SAS themselves are expecting to implement biofuel in their commercial flights and as a result of this reduce their CO2 emissions by 50 percent in 2020.[28]

Environmental factors also have the possibility to greatly affect the earnings of airlines. There are ongoing discussions about the pollution and noise factors that could be subjects to further taxation by the juridical bodies.

6.1.6 Legal Factors

Some of the legal implications have already been discussed in the above factors. There are though still some issues worth mentioning, one of which is the unionization of employees. When SAS was trying to restructure the company in order to survive last year, primarily by reductions in employee wages and pensions, the company was ultimately held hostage by the employee's unions in negotiations, even though SAS had successfully made deals with its creditors (mostly banks).

Any new piece of legislature affecting the aviation industry is bound to have a significant impact on SAS and there is not much that can be done to legislations that affects the profitability in a negative manner. One can try to up the efforts in lobbyism in the hope of changing the minds of the politicians and while it has proven successful historically in a number of occasions it is by no means a given.

[27] IATA Annual Report 2010, p. 16
[28] SAS Annual Report 2012, p. 31

6.1.7 Conclusion on PESTEL

Having gone through the macroeconomic factors that are significant in the aviation industry it is clear that there are not new developments around the corner, which will improve the situation of SAS by a significant extent. The macroeconomic conditions are still heavily affected by the financial crisis, which does have an impact of the consumers spending patterns, as the general trend is to go for more cost efficient seats rather than comfort. It does not help that there are no immediate better prospects in the macroeconomic.

Even though the technology is vastly improving in these years to produce more fuel and cost efficient airplanes it does require a significant capital commitment, and the question is whether SAS has any maneuver room when it comes to the aspects of changing out their outdated fleet.

But not everything is gloomy and there is some comfort in the reports from IATA, which indicates a future growth in passenger traffic within the next ten years and it is up to SAS to stay relevant and seize the moment.

6.2 Porters Five Forces

While the PESTEL analysis outlines the macroeconomic factors affecting the performance of SAS in a broader context, the Porter Five forces framework focuses on the competitive situation and intensity and thus the attractiveness of the aviation industry and the forces affecting the strategic decisions of SAS. Since SAS is a European company the focus of the analysis will be EU. The model consists of five factors, which all affects SAS to a certain degree.

6.2.1 Threat of new entrants

Whenever new entrants enter a new market the goal is to gain market shares from the already existing players. When a new entrant enters, there is a potential of falling prices and thus lower profitability for the rest of the market. The threat from new competitors depends greatly on the entry barriers.

There are high costs associated with the aviation industry as the capital requirements in order to purchase flights, slots, landing rights and all flight related operation costs are significant and don't come cheap. An example is acquiring slots at Heathrow which today averages €8.7 million for a daily slot and pre-crisis was sold at a staggering €159 million for four daily pairs.[29]

[29] http://www.routes-news.com/airlines/14-airlines/887-heathrow-airport-slot-trading

In the aviation industry in EU there are primarily three entry barriers: Airport slots, Government support and Bonus programs.

Airport slots in the larger European airports provide a great value for the airlines, as there is only a limited amount available. Slots are essentially the access to the gate, baggage handling, security check etc. Slots are typically distinguished by the physical area of a given airport and the time of day.

The existing players enjoy a competitive advantage as they can automatically renew their slot for a new season once they have acquired it in the first place. This results in the established airlines occupying all the attractive slots and only leaving out the less favorable for the new entrants, which are then required to seek alternative airports in the same region/city.

Bonus programs provide another challenge for new entrants. Bonus programs reward frequent fliers with discounts on flights, hotel deals and priority check-in just to name a few. It creates an incentive for the consumers to become loyal to a certain airline and further complicates the entry of a new supplier. For SAS the use of a loyalty program increased their customer base by 4 percent in 2011[30]

6.2.2 Threat of Substitutes

Substitute services have the potential to greatly reduce the profit of any airline. The threat is particular great if the substituting service costs are comparably lower with regards to the attractiveness of its service. A threat is also evaluated on the costs associated to switch to the alternative service. If the threat poses a significant danger then it goes without saying that the profitability in the industry will be under pressure. According to Michael E. Porter the challenge for the industry is often that it's difficult for it to identify substituting products and continuously be aware of the developments in other industries, which may ultimately lead to a substitution of their product or service.[31]

Alternative transportation

Depending on the travel distance the alternatives in the forms of car, bus, trains or boats may prove to be more or less an attractive alternative to a flight. Going on a car trip may be preferred to flying because of the experiences of the trip itself along with the cost savings, provided that you travel more than one person. It is not uncommon for families to prefer a car vacation as opposed to a

[30] SAS Annual Report 2012, p. 13
[31] "The Five Competitive Forces That Shape Strategy" - Porter, Michael E., Harvard Business Review, 2008, p. 31-32

flight. A cheap transportation alternative is also busses that connect the larger cities, but it can be considered as the least comfortable. Trains are also (for the most part) a greener alternative to road-bound vehicles and airplanes. While a flight is mostly a more time efficient way of travelling there are also other factors to be considered when choosing the means of transportation. One of these is the environmental factor, as was also discussed in the PESTEL analysis. The focus on carbon footprints can lead to consumers choosing more environmentally friendly transportation. While the threat of substitutes can be considered significant on shorter distances it is less likely that cars, busses, trains or boats will pose a real threat on overseas transportation.

However, it is not only other types of transportation that can pose a threat to airliners such as SAS. The evolution of technology along with the economy in recent years has made it not only a possibility for business travelers, but also a highly viable solution to stay put and take their meetings through the use of tele- and video conference facilities. This is primarily due to the fact of an increase in broadband speed as well as widespread access and lower prices of telecommunication including the equipment.

6.2.3 Bargaining power of Suppliers

According to Michael E. Porter the bargaining power of a supplier is considered to be great if the following characteristics are present: There are few suppliers, the supplier is independent on the industry, substituting products are non-existing or if the costs of transitioning to substituting products are high.

The airline industry is dependent on aircraft manufacturers to deliver new aircrafts and spare parts for existing planes. There are relatively few major manufacturers of aircrafts used for commercial passenger transportation in the world. The biggest suppliers of planes are by far French based Airbus and American based Boeing. In the Nordics, Bombardier is also a popular supplier of planes. If an airline orders new planes in high volumes it must, all else being equal, enable them to have a greater bargaining power than if they did not engage in volume purchases. Although there are relatively few suppliers (8 in total[32]), one must acknowledge the fact that the suppliers are also highly dependent on commercial airlines. While the likes of Boeing and Airbus also engage in

[32] http://businessaviation.com/aircraft-manufacturers/

manufacturing products to other than the commercial airline industry, some 50 percent of their income stems from the passenger airlines[33].

SAS wants to harmonize their fleet of aircrafts as mentioned earlier in the PESTEL analysis and as such, a harmonization of the fleet will also lead to lower operating and maintenance costs, given they will only need to train their staff on one brand or type of airplanes.

There is a continuous demand for new and more fuel-efficient airplanes and in essence there are no substitute products. At the same time the relatively few manufacturers are also dependent on the airlines. It is expensive for the airlines to switch to other suppliers as spare parts and knowledge of new aircrafts would need to be updated. To summarize, the assessment of the bargaining power of the aircraft manufacturers are considered to be medium-high.

Labor unions

Like many other industries, payroll is the largest expense, particularly in Northern Europe where salaries are among the highest in the world. And because most of the airline industry has experienced a significant downturn in recent years, cost-cuttings are now being effectuated everywhere.

An example of the bargaining power of the labor unions was seen in 2008, when SAS was forced to stop using Chinese cabin crew on the Copehagen-Beijing route after the Cabin Attendants Union (CAU) filed a complaint and SAS was as a result found guilty of using illegal employees, while at the same time fined SAS 900,000 DKK in the Copenhagen court.[34]

There was another dispute with CAU, when SAS put forward a plan to cut pay and benefits in order to save SEK 500 million annually, as according to SAS it was the only way for them to stay competitive. The deal involved 8 labor unions representing flight attendants and pilots, and even though a deal was reached with seven of the unions, it was CAU who held the cost savings hostage, due to labor union not being satisfied with the terms offered. Eventually though, they came to an agreement with SAS, and the company could continue to operate.[35]

As illustrated by the two examples, the bargaining power of the labor unions within the airline industry is strong and they play a vital role in keeping SAS afoot. So far SAS has managed to

[33] Boeing Annual Report 2012, p. 18
[34] http://www.finanznachrichten.de/nachrichten-2008-03/10459740-sas-fined-900-000-crowns-for-hiring-asian-flight-attendants-without-work-permits-020.htm
[35] http://www.newsinenglish.no/2010/03/12/employees-come-to-terms-with-sas/

convince the unions for their various cost savings over the last few years, but it is without a doubt becoming increasingly difficult, as was also put by an industry analyst:

"Labor disputes are becoming an almost every-day occurrence for airlines,"[36]

6.2.4 Bargaining power of customers

According to Porter the customer's bargaining power is strong when the following traits are present for an industry: Few customers making large purchases, customers switch suppliers often and easily, products from different vendors are not differentiated, and buyers are price sensitive[37].

Airplane passengers do share some of these characteristics, as it is easy to switch suppliers, the vast majority of customers are price sensitive and the products offered have a high degree of similarity.

Generally speaking the customers of the aviation industry can be divided into private and business consumers, as each segment has its own differentiating characteristics. Private consumers who tend to fly domestically or for vacation purposes do not seek exceptional service, as the price is often times the highest priority. The evolution of technology have also had an impact on the industry (as mentioned in the PESTEL analysis) the added price transparency and ease of information has made it easy for consumers to find and compare the prices and preferred departure times from every carrier present on the market.

Retails customers do not have costs of switching between companies and if they are not satisfied with their current provider they are free to choose another, as long as it is a moderately popular route. Oftentimes there will be at least two providers to choose from. In addition, consumers are also very price sensitive, as they have a price elasticity of -2[38]. In reality this means a 20 percent increase in price will see an increase of 40 percent in demand. Given that SAS are unable to compete on the price to the same extent as the low cost carriers, the patterns of the residential consumer has meant that SAS has lost market shares to the low cost carriers. On this basis the retail customers are assessed to have a moderate bargaining power.

[36] http://www.swedishwire.com/component/content/article/1-companies/3298-sas-saves-50-million-in-union-deal, paragraph 5, line 1.
[37] "Strategisk regnskabsanalyse" , Elling, Jens O. et al, p. 46
[38] Doganis, R., 2002:204

6.2.5 Intensity of rivalry

The aviation industry has plenty of suppliers, limited product differentiation capabilities and high fixed costs requiring a big volume, all characteristics that are in line with Porter's arguments for being a high intensity industry with regards to the competition.

In recent years the breakthrough of low cost carriers such as Easyjet and Norwegian has seen SAS opposed to new rivals and fierce competition in their home market. The center of aviation's report of the financial results in 2012 shows, that the low cost carriers grew much faster than traditional flag carriers, while they also had higher load factors, shorter sector lengths and much higher margins than the flag carriers.[39]

In the past ten years the yearly growth of low cost carriers has been in the double digits, as illustrated below:

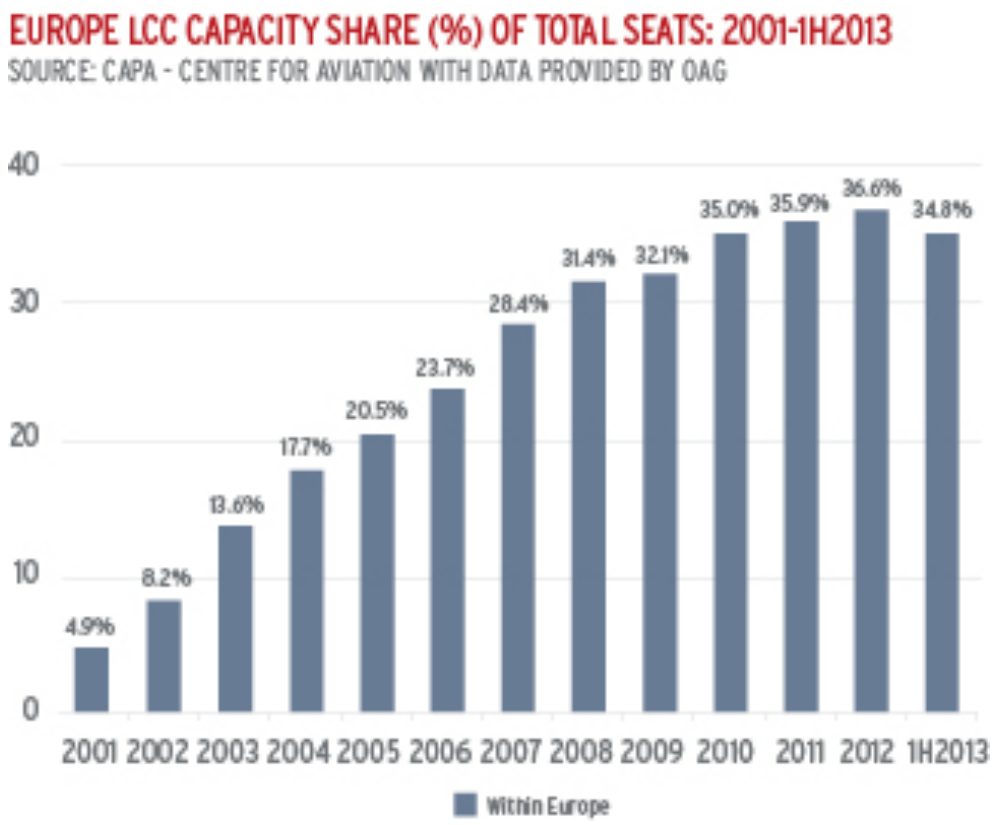

Figure 5 - Source: CAPA 2013

There is no doubt that SAS is today operating in a market, which is fundamentally different than the late 90's and early 2000's. The increased competition from budget airlines has hurt SAS both on

[39] http://centreforaviation.com/analysis/european-airlines-financial-results-in-2012-net-profit-of-biggest-13-down-72-for-the-year-102456

their market share and profitability as a result, and with the newer airlines taking on the long overhaul flights, such as Norwegian with cheaper prices on cross-Atlantic routes, SAS and other traditional carriers must be wary not to get complacent because of their history and sheer size of the company. Having presented the arguments, the competitive intensity of the industry must be considered high.

6.2.6 Conclusion on Porters

Having gone through the microeconomic factors in Porters five forces, it is clear that there is an abundant of challenging factors for any aviation company including SAS. While the threat of substitute products are moderate high over shorter distances, the threat over longer distances are notably lower, at least this applies for the private consumers. For the business consumer there are substitute products made possible by the evolution of technology, which can provide to be a cost effective way of doing business.

The overall competitive intensity in the aviation industry is considered to be high, as even though the entry barriers are steep, those that are already established on the market are fighting each other hard for every customer and especially the low cost carriers are proving to be a big challenge for traditional flag carriers.

SAS' suppliers are both major aircraft manufacturers and SAS do possess the ability to switch supplier, albeit it does come with its costs. However, there are not too many suppliers to choose from and added to this, the strong bargaining power enjoyed by the labor unions and the ease for consumers to switch between airline suppliers does contribute for a challenging environment to operate in.

6.3 Internal Analysis

The VRIO framework focuses on the company's resources and according to Barney, there are four attributes they must fulfill in order for them to become a source of sustained competitive advantage. The attributes are illustrated in the below figure along with how it can be identified if a resource is proving a sustained competitive advantage:

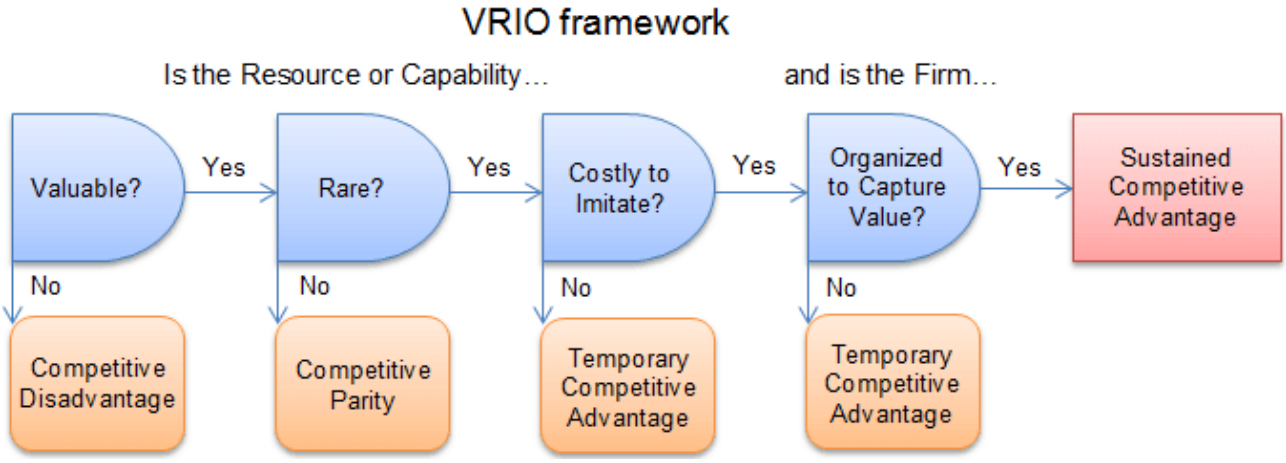

Figure 6 - Source: Rothaermel's (2013) 'Strategic Management', p.91

A number of resources have been identified as having the potential to fulfill the above criteria's. It will be discussed and assessed in the following, whether they do in fact provide SAS with sustained competitive advantages:

6.3.1 Brand

The SAS brand is a strong and well-known brand not only in Scandinavia, but also in Europe and worldwide. The Scandinavian heritage shines throughout the company's brand and values, such as good service and simplicity that are well in line with Scandinavian thinking[40] - At the same time traditional aviation values such as security; quality and a comprehensive route network are also present and consistent with SAS.[41]

In fact, SAS was named as the most punctual airline in Europe in 2012, while also obtaining high levels of customer satisfaction in recent years, despite the turbulence surrounding the company.

It is seen before that a company in crisis which successfully fights back, can come out of the other side of the crisis with a strengthened brand, and if SAS can turn things around there are no reason why the company won't be able to do the same. All in all, the SAS brand is rare and impossible to imitate due to its Scandinavian history and thus it does definitely provide the company with a sustained competitive advantage in the industry.

6.3.2 Star Alliance

As also mentioned in the history section, SAS was one of the founding members of Star Alliance. The membership allows SAS to offer their customers the possibility of travelling around the globe

[40] SAS Annual Report 2012, p. 6
[41] http://dagenssynspunkt.blogs.business.dk/2010/02/11/derfor-elsker-vi-sas/

and reach much further than SAS' own route network allows. In addition the company can market it under their own brand. Star Alliance is one of three major alliances in the industry, with the other two being Sky Team with 19 members[42] and One World with 13 members[43].

Besides the extended route network, other advantages of an alliance are cost reductions to be found in operational facilities and staff, such as ground handling, check-in, boarding and computer systems. If utilized correctly, it also enables alliances to engage in negotiating volume discounts from suppliers, share maintenance costs etc.

However, there are also disadvantages of being a member of an alliance. As the members are spread over the globe and come from different backgrounds, cultures and in different sizes, the associated alignment costs can be high. This applies to when an airline first enters the alliance, but also during the membership and potentially an exit from the alliance. In order to obtain synergy effects, there are management costs as well as membership fees that must be paid by each airline. If the company is not ready, the added complexity of an airline can also be a big challenge.

Whether the Star Alliance membership provides SAS with a competitive advantage can be discussed. While the alliance can be difficult to imitate and even if does add value to the company, it is by no means rare as alliances are very normal in the airline industry, and it is based on this reason, that the author does not see the alliance as a sustained competitive advantage.

6.3.3 Grandfather rights

Grandfather rights are prime airport slot allocations primarily used in the EU. The requirement of a grandfather right is the 80 percent rule, which stipulate that an airline must have used a slot, for at least 80 percent of the time during the summer/winter scheduling period. Failure to do so will result in the airline losing the right to use that particular slot in the subsequent year.[44]

SAS has been able to fulfill the 80 percent rule since the introduction of the 95/93-EU legislation in 1993, which has allowed the company to gain access to many of the attractive slots across major European airports and thus has been able to enjoy a competitive advantage over their competitors and especially the low-cost carriers. As there are a finite number of slots, the resource is difficult to imitate and there is no doubt that having attractive airport slots adds value for an airline. The only way to expand the volume of slots is to build new airports or expanding the current airports (which

[42] https://www.skyteam.com/About-us/Our-members/
[43] http://www.oneworld.com/member-airlines/overview
[44] http://ec.europa.eu/transport/modes/air/airports/slots_en.htm

may not be doable due to the physical constraints of the area). On this basis the resource is deemed to provide SAS with a sustained competitive advantage.

6.3.4 Route Map

As an extension of SAS' Star Alliance membership and the company's grandfather rights, SAS is able to offer a wide selection of destinations to its customers, which results in a very comprehensive route network. In 2012 SAS served 136 direct routes and had planned to open up 45 new routes in 2013 and expected to increase capacity by 5-6 percent to allow greater travel flexibility for the passengers[45]. With the membership of Star Alliance, SAS is able to offer their customers more than 1,300 more destinations.[46] In comparison members of One World can offer their customers 883 destinations, while Sky Team can offer 1,024 destinations. Thus, SAS can in collaboration with their alliance partners offer the most comprehensive route network in the world, which does act as a valuable resource for the company and at the same time being difficult to imitate.

6.3.5 EuroBonus

Loyalty programs are widely used in the industry as a mean to retain and attract new customers. The SAS EuroBonus loyalty program reward its customers with faster check-in, access to airport lounges, ticket upgrades, free amenities on select flights etc. The bonus points can be earned by buying SAS tickets or tickets from any of the Star Alliance members as well as by using select shopping, hotel and car rental services.

The purpose of the EuroBonus program is to have customers develop a sense of loyalty to the brand by offering benefits, which they will otherwise not have if using different airlines each time. Even though nearly all airlines have some sort of loyalty program, the value of the SAS' EuroBonus program is substantial and is thought to be worth up to DKK 3 billion.[47] So, while it is a valuable resource, it is not rare or that difficult to imitate, which is why it fails the criteria to become a sustained competitive advantage.

6.3.6 Staff

Employees are the cornerstones of any successful company and it will be no different for SAS if they want to become a successful company for the years to come. This is also acknowledged by SAS, as they have it as an integral part of their 4XNG strategy under "People Excellence". SAS' own internal employee satisfaction survey revealed that the employee satisfaction dropped 3 points

[45] SAS Annual Report 2012, p. 15
[46] http://www.staralliance.com/en/benefits/global-network/destinations/
[47] http://borsen.dk/nyheder/virksomheder/artikel/1/248285/sas_stor_vaerdi_i_eurobonus.html

in 2012 compared to the previous year and as a result was five points under the industry benchmark of 68 points. SAS explained the decrease due to the general uncertainty concerning the SAS group's situation.[48] The leadership index on the other hand was at 69 points, three points above the industry benchmark. It is also one of the main targets of the 4XNG and 4Excellence strategies to increase the job satisfaction levels to become top five in the Nordic transportation sector by 2015.

Until recently SAS had not hired new pilots since 2001, instead they were able to reorganize and rehire personal on leave to meet the demand of pilots. But in May 2013, the company hired 30 new pilots for the first time in 12 years in the first phase, with an additional 45 pilots required in the second phase.[49] Within the next 5-7 years SAS will face a generation change, as many of their pilots will be ready for retirement as they move close to the age limit allowed by the regulators. It is expected that the airline will be in need of 700-800 new pilots.[50] The recruitment of new pilots and ensuring a smooth transition will provide a challenge for SAS in the years to come.

It is also worth noting that the current payroll is amongst the highest compared to its competitors and given the above, while the staff of SAS is a valuable resource lead by the experienced pilots, they are not a unique or difficult to imitate for competitors. Added in the low employee satisfaction level currently at SAS, the staff cannot be considered to be a sustained competitive advantage.

6.3.7 Conclusion on the internal analysis

It has been assessed that SAS has three resources (Brand, Grandfather rights and Route Network) that meets all the criteria's to provide the company with sustained competitive advantages, all of which SAS should be able to utilize into profits. There are a number of other resources and capabilities that could have been included in the above analysis, such as management, technology, innovation and ownership structure, but it is of the author's opinion that all of those resources are not unique to SAS and does not provide SAS with any sustained competitive advantages as the company has competitors that exceed SAS in their utilization of those resources. That is not to say that SAS are particular bad with utilizing them, they just don't fulfill all the criteria's to provide meaningful advantages over their competitors.

[48] SAS Annual Report 2012, p. 41, 2nd paragraph
[49] http://www.check-in.dk/sas-ansaetter-piloter-efter-12-aars-pause-opd-#.UvecQmJdWxo
[50] http://www.avisen.dk/generationsskifte-sas-mangler-800-piloter_180513.aspx

6.4 SWOT

The SWOT analysis will be used to summarize and highlight the areas of strength, weakness, opportunity and threats for SAS, which were analyzed previously in the micro and macro analysis.

Strengths	Weaknesses
» Star Alliance » EuroBonus » Airport Slots » Comprehensive route network » SAS Brand » Market share (especially commercial) » Importance of flag carrier in home market	» Older fleet (less fuel efficient) » Financial weakness of company » Low credit rating » Unwanted subsidiaries » Dependency on governments
Opportunities	**Threats**
» Strategies (4Excellence and 4XNG) » Passenger growth » New fleet » Outsourcing of supporting functions » Star Alliance » Technology » Government support	» Terrorism » New and tougher legislation » Environmental pressure » Low or no growth in GDP » Labor unions » Alternative transportation » Technology » New and stronger competitors » Oil prices » Unfavorable exchange rates

It is clear that the threats outweigh the rest and the potential upsets are plentiful. Common for the threats are the nature of them, as they are all external factors, where SAS has little to no influence over the circumstances. The weaknesses are in general related to the poor financial performance of the company over the past few years. On the other end the strengths of the company can be found in SAS' core products and their longevity in the industry, as they have managed to build up market shares, routes, brands and favorable advantages compared to the newest competitors on the market. The opportunities are possible through the execution of a successful SAS 4XNG strategy mainly by

cutting running costs, but also by taking part of the expected industry growth and by implementing new innovations driven by technology.

7. Financial Analysis

This section will contain the development of the historical accounting analysis of the company's financial statements, which will clarify the historical profitability of SAS. The aim of the analysis is to identify the company's financial value drivers in order to assess the potential of future earnings. The financial analysis is based on the company's financial statements for the years: 2008-2012, thus constituting the analysis period. The official financial figures from the income statements and balance sheets are summarized in appendix 1 and 2.

In connection with the financial analysis, the accounting quality will also be evaluated in order to assess both the quality of the financial statements as well as the quality of the accounting policies used by the company.

7.1 Review of audit opinions

The auditor's primary function as an independent third party is to audit a company's annual report and express a conclusion through the audit report. If the auditor's report does not contain any reservations or additional information it is assumed that the annual report has met the basic requirements and quality standards as per the Financial Statements Act.

The auditor reports for previous annual reports with the scope of the analysis period has been examined in order to assess the quality of the reports, which has been presented by the management in order to identify important factors which may have had an impact of the auditor's conclusion.

It is found that Deloitte has conducted the audit of Scandinavian Airlines AB (SAS) throughout the analysis period.

In the period covering 2008 to 2012 the company's annual reports have been provided to audit reports without reservations or additional information. It is thus assumed that these can be used for analysis.

7.2 Review of audit accounting policies

In connection with the assessment of the accounting quality, the accounting policies applied in the years of the analysis period has also been examined. The examination of the accounting policies are designed to identify and correct accounting "noise" that may have occurred as a result of the

company not continuously using the same accounting principles over time. In case of any changes, it is necessary to assess the effect of them, seeing as they can have significant impact on the comparison of the accounting items specifically the key figures.

As SAS is a public listed company they are required to prepare the annual reports in accordance with the International Financial Reporting Standards (IFRS) valid from 31 December 2005.

While there has been no changes identified in the actual accounting policies for the analysis period there has been two recent changes identified which are necessary to asses, as the alterations affect the valuation result:

- **IAS19:** The IAS19, accounting standard of EU, was changed effective January 1st 2013 which now requires SAS to state its pension deficit on the balance sheet. To find the difference between the expected and actual returns, also called the actuarial gains and losses, have so far been done using the corridor method of accounting. This meant the differences could be amortized over the expected remaining life (i.e. average number of years to retirement) in the income statement. Using the corridor method, there had been no significant impact on the result from the actuarial results, since the annual fluctuations had been distributed over the years. The changes require the companies to recognize the actuarial adjustments in the comprehensive income at the time they occur. This means that you can no longer amortize the adjustments, thus leaving the annual adjustments to have a significantly greater effect on the comprehensive income. The adjustments are to be made on the equity.[51]

- **Shortened year:** There has been a change in the fiscal year for 2012, which has been shortened by two months. The change has according to SAS been applied in order for the company to better incorporate the two seasonal periods; summer and winter in their books.[52] Although, one could argue that the change has been implanted as a reaction to the revisited IAS19, as it allows SAS to implement the change of pension schemes and thus reduce the negative impact on book equity.

7.3 Reorganization of financial statements

The financial analysis will start with reorganizing the financial statements for analytical purposes, so that the company's core business is identified as well as to ensure there is a separation of the

[51] "Ændring af IAS 19 – personaleydelser", Jensen, S. M. & Steffensen, H.
[52] SAS Annual Report 2012, p. 48.

operational and financial items. The reorganization of the financial statements are intended to highlight the sources of value creation and subsequently used for the calculation and analysis of profitability. The analysis of the company's profitability is based on data in the DuPont model.

The reorganization will be conducted for the income statements and balance sheets for analysis. A reorganization of the equity statement is not considered necessary, as SAS has used the total income principle[53]. SAS shows the accounts, which are attributable to the income from an analyst's point of view. During the analysis period there were two types of transactions affecting the equity, which are to be included in the income statement; Hedging of cash flows and exchange rate adjustments of foreign operations. Besides these two types of adjustments, there have only been equity items relating to capital increases in 2009 and 2010 (equity offerings), which do not relate to total income. As there will be no reorganization of the equity statements, the changes in equity and dirty surplus items will not be taken into account. In other words; items in other total income will not be included in the reorganized income statements and the bottom line is as a result not the total income but the net profit.

The author agrees with SAS' valuation of the items and thus there will be no reorganization of the equity statement.

7.3.1 Reorganization of income statements

The reorganization of income statements is designed to identify and separate operational and financial related items. The breakdown is subsequently used for the calculation of key figures to assess the profitability of SAS' operational and financial activities. For the reorganization of the income statement the effective tax rate for the respective years will be used for the allocation of tax on the included corrections. The operating profit from the sale will thus be obtained and used for further financial analysis.

There are no items in SAS's financial statements for the years 2007-2012, which will be classified as extraordinary or special. However, there are items, which are described as nonrecurring in the notes to the financial statements.

Items that are adjusted for can be found in the reorganized income statement in Appendix 3:

[53] SAS Annual Reports

- Spanair filed for bankruptcy on January 27th 2012, which had an adverse effect on SAS' 2011 results. SAS was forced to perform a write-down for the associated receivables, loans, shares etc. for a total of 1.482 Million SEK. In addition to this SAS also provisioned 249 Million SEK. The provision is considered to be non-recurring as it's a onetime incident and thus not part of the primary operations. SAS also performed a write-down on Spanair receivables in 2010.

- The Icelandic volcanic eruption in 2010 had a negative impact of approximately 700 million SEK, but as such an event can safely be considered as non-recurring, this expense will also be moved to after operating sales.

- Several expenses are classified as restructuring and lawsuits in the annual reports of SAS. Most of the restructuring expenses are related to the Core SAS and 4Excellence strategies. As it can be expected that there will be less restructuring of the company in the future, the expenses has been treated as non-recurring with the rationale that they are not part of SAS' continuing operations. Lawsuit expenses were recognized on par with the restructuring costs.

- In 2011, SAS reported two revenue streams from 'USD hedges in plane sales' and the EuroBonus program. The revenue from USD hedges, derived from SAS decision to keep a number of airplanes, which would otherwise have been sold, thereby realizing money hedged in USD. The EuroBonus revenue was a result of SAS' revaluation of its liabilities. Both income streams has been treated as non-recurring in the reorganized statement, as there is no historical indication of these belonging to SAS' core operations.

- Leasing expenses has been split up between leasing obligations and interest expenses on the income statements. In order to correctly recognize the asset value of the aircrafts on the balance sheets, the operational leasing expenses has been converted to financial leasing expenses (more information under section 7.3.2).

- Since SAS has subsidiaries and operations in numerous countries with varying tax rates, the effective tax rate was used instead. The effective tax rate was calculated as following:

$$Effective\ tax\ rate = \frac{Amount\ of\ tax\ paid}{Income\ before\ tax}$$

7.3.2 Reorganization of balance sheets

The reorganized balance sheets does not as such include many corrections, but is has been deemed necessary to outline some of the classifications of the items, to assess whether they are operational or financial related. The information has been obtained from the notes of the respective annual reports:

- **Leasing:** It is important to distinguish between operational leasing and financial leasing and to determine which of the ones SAS is using. Financial leases are included in the balance sheet, because of their close resemblance to a situation of ownership, unlike operational leases. Operational leases are on the other hand charged to the income statement, where they are classified as operating expenses deductible from profits and there are no incidences of rents on the balance sheet. In accordance with Koller (2010) the operational leases has been reclassified as financial leases, as SAS during the lease term practically owns the airplanes, which is also why they should be recognized as assets (SAS Annual Report, 2012). The reclassification will ensure a more accurate value of SAS, as the NOTPLAT will not be underestimated and nor will the invested capital of the balance sheet with the exclusion of operational leases. In order to estimate the asset value of the leases, as well as the portion of the lease obligation and the interest expenses, the following equation was used:

$$\boldsymbol{Asset\ Value} = \frac{\boldsymbol{Leasing\ Cost}}{\boldsymbol{Cost\ of\ secured\ debt} + \left(\frac{\mathbf{1}}{\boldsymbol{Asset\ Life}}\right)}$$

  Cost of debt was found in SAS' annual reports under the notes for 'other loans'. The reclassification of leases was included in the balance sheets as a tangible fixed asset (presented on a separate line for ease) and 'debt and debt equivalents'. The calculations can be found in Appendix 4.

- **Cash:** In order to maintain operations and meet daily payment requirements, it is estimated that a portion of the cash can be categorized as working capital. Cash and cash equivalents is divided into operating cash flow and financial assets, of which the operating cash flow percentage is estimated to be 2 percent of the revenue for all years throughout the analysis period (Koller, 2010).

- **Pension commitments:** According to SEB the revision of IAS19 will affect SAS' book equity negatively by SEK 9.4 billion[54]. As this will impact the debt/equity ratio greatly is has been decided to recognize the pension commitments on SAS' 2012 balance prior to the forecasting of the cash flows. SAS has decided to alter its pension plans from the current defined benefit plans to defined contribution plans. This will save SEK 2.8 billion on SAS' equity resulting in a net reduction of SEK 6.6 billion in 2012 (Böhn et al, 2012). Although SAS has been granted the right to postpone the realization of it until November 1st 2013, it has been deemed necessary to include it in the 2012 balance sheet, as otherwise the liabilities would have been greatly underestimated. The adjustment resulted in a SEK 6.6 billion reduction of shareholders equity as well as a SEK 6.6 billion increase of debt.

- **Investments:** It appears in the notes of short-term investments, that they are investments in bonds and similar interest-bearing investments and as such they have been classified as a financial asset. Investments in associated companies are listed in the official balance of SAS' accounts as a financial asset. This item has been moved to the operating assets in the reorganized balance sheet as per the general recommendations.[55]

7.4 Cash flow analysis

The cash flow will not be reorganized as the free cash flow can be calculated on the basis of the reorganized income statements and balance sheets. The following equation has been used in order to find the free cash flow:

$$FCF = Operating\ profits + Depreciation\ \&\ Amortization - \Delta\ Net\ operating\ assets - CAPEX$$

MSEK	2009	2010	2011	2012
Operating profits	-990	813	110	-127
afskrivninger plus	1,845	1,867	2,413	1,426
Changes NWC (Primo - Ultimo)	-5,045	616	116	3,208
CAP Ex	-5,424	4,747	2,846	2,698
Free cash flow	**-9,615**	**8,043**	**5,485**	**7,205**

Table 1 – Free cash flow

[54] Böhn et al, 2012, p. 10
[55] "Regnskabsanalyse og værdiansættelse – en praktisk tilgang", Elling, Jens O. et al, p. 126

Although the trend in the free cash flow is improvement, the increase in 2010 and 2011 stems from non-recurring activities and the 2012 result is primarily due to a significant decline in net operating assets. It is worth to note that the turnaround in the free cash flow is due to the increase in operational liabilities compared to operational assets, which may result in more cash held in the company, which can gather interest, but is not necessarily good as the money is due to third parties.

7.5 Profitability analysis

Where the strategic analysis aims to identify and assess the non-financial value drivers, the profitability analysis aims to identify and assess historical financial value drivers, which are connected to SAS. The analysis will identify the financial value drivers, which operates the current profitability and thus identify the future earnings potential that can be used as foundation in the preparation of the forecasted statements.

The Profitability analysis will be based on the reorganized statements. The analysis is based on the DuPont model, which is illustrated in Figure 7:

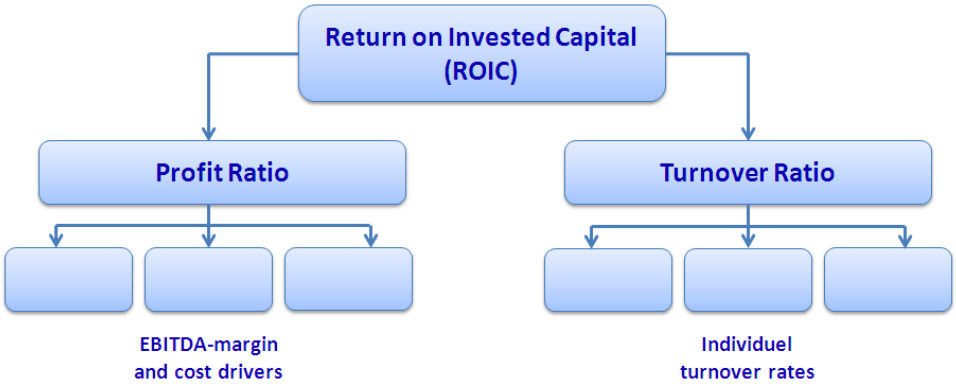

Figure 7 – Profitability Analysis Structure – Source: Own making

It is clear from the above figure that the return on invested capital or ROIC is the key figure, which measures the profitability from the operation. It is also clear that the return on investment can be decomposed so that it is possible to explain the development of it.

7.5.1 Return on equity – DuPont Level 1

Return on equity (ROE) is the overall measure equivalent to investors' returns on invested capital. ROE measures the profitability from operations (ROIC) plus the effect from financial leverage, thus taking into account both the operational and financial activities. The return on equity can be

expressed using the below formula, which also illustrates that ROE can be broken down into return on assets (which measures the return on operational activities) and financial activities.[56]

$$ROE = ROIC + [FGEAR + (ROIC - r)]$$

The ROE development of SAS is as follows:

Level 1	2008	2009	2010	2011	2012
ROE	-44%	-14%	-13%	-16%	-28%
ROIC	-7.84%	-3.25%	-2.68%	1.62%	-1.55%
FGEAR	2.42	2.11	1.08	1.18	3.66
r	7%	2%	7%	17%	6%
SPREAD	-14.86%	-5.21%	-9.74%	-15.01%	-7.24%

Table 2 – ROE development

As the table above illustrates, SAS has experienced a negative ROE for the past five years. The ROE in 2008 can be explained by the financial crisis and while the restructuring efforts and cost savings in the following years were having a positive effect on the ROE, the decrease in the shareholders equity in 2008, came as a result of SAS' pension commitments of 6.600 MSEK.

7.5.2 Return on invested capital – DuPont Level 2

The profitability analysis aims to clarify the development in the financial value drivers from the core operating activities as well as whether the business is profitable and able to remunerate the invested capital.

The overall key figure for the profitability is the return on invested capital (ROIC), which measures the profitability of the operations and thus the company's ability to manage its assets to generate profits. The return on capital is thus independent of how the company is financed. The ROIC however does not explain whether the profitability of the company is driven by an improved revenue/cost ratio, or whether it's driven by an improved utilization of the capital stock and the invested capital. It is therefore necessary to decompose the return on invested capital into an profit margin and a asset turnover rate.

The return on invested capital can be expressed using the following formula:

$$\boldsymbol{ROIC = \frac{Net\ operating\ income}{Invested\ capital} \times 100}$$

[56] Regnskabsanalyse og værdiansættelse - en praktisk tilgang, Elling, Jens O. et al, p. 211

SAS' development in return of invested capital is shown in Table 3, which also shows the decomposition of the return on invested capital into a profit margin and asset turnover rate.

Level 2	2008	2009	2010	2011	2012
ROIC	-7.84%	-3.25%	-2.68%	1.62%	-1.55%
Profit margin	-3.68%	-2.56%	-1.98%	1.06%	-0.91%
Asset turnover rate	2.13	1.27	1.35	1.53	1.70

Table 3 – Decomposition of ROIC

The assessment of the return on invested capital is made on the basis of the developments in yield over time, but the ROIC level is also taken into account with an estimate i.e. a comparison with the weighted average cost of capital, which indicates the required return for both owners and lenders.[57]

It is clear to see from table 3 that the trend in ROIC has been negative, albeit it had been improving and went positive in 2011 and then turned around last year. This is primarily due to a fluctuating operating margin as it also went through the same development. The operating margin shows the relationship between profit and turnover, and as can be noted the profit margin is disturbingly low. The poor profit margin is reflected in the low levels of ROIC and ROE.

The turnover ratio shows partly how much of the capital that is tied up in the business and partly the company's ability to adapt the invested capital to the revenue level. As shown in the above table the turnover ratio has decreased from 2.13 to 1.70 over five years. By using the inverse value of the asset turnover rate one can see how much of the capital that is tied in the net operating assets in order to create one SEK of sales. As can be seen from the below table, SAS has 0.59 SEK tied in 2012, which goes to show that the SAS is a capital intensive company.

	2008	2009	2010	2011	2012
Inverse asset turnover ratio	0.47	0.79	0.74	0.66	0.59

Table 4 – Inverse Turnover ratio[58]

Neither the operating margin nor the turnover rate can be said to be on acceptable levels, and although there has been some improvements in some of the key figures compared to five years ago, they are still far from being at desirable levels.

[57] Regnskabsanalyse for beslutningstagere, p. 151-152
[58] Own creation

The development of SAS' ROIC will be examined further by decomposing the ROIC and analyzing the trends in the operating margin and the turnover rate in level 3 of the DuPont Model.

7.5.3 Operating Margin – DuPont level 3

The profit margin measures the profit from the operation of one SEK of sales and thus indicates the percentage share of the company's revenue, which turns into profit after inclusion of all the operating costs. The profit margin can be expressed using the following formula[59]:

$$\textbf{Profit margin} = \frac{\textbf{Operating profits after tax}}{\textbf{Revenue}} \times 100$$

The profit margin is thus an indicator of how well the company is to adapt its operating expenses to revenues. A high profit margin, all else being equal, shows that the company is good at keeping its operating costs down and thereby increasing profits. Table 3 showed that the operating margin went from -3.66 percent in 2008 to -0.91 percent in 2012.

To analyze the profit margin further, the figure has been divided into profit margin from sales and profit margin from secondary income:

Level 3 - Profit Margins	2008	2009	2010	2011	2012
Profit margin, sales	0.8%	-2.2%	2.0%	0.3%	-0.4%
Profit margin, secondary income	-4.5%	-0.4%	-4.0%	0.8%	-0.6%

Table 5 – Profit margin decomposition

By making this decomposition it appears that the sales from the primary operations has not contributed significantly to the profits (if at all in some years) and alongside the profits from secondary income the numbers fluctuate a lot, and as such it is difficult to spot the direction of the trend. The negative secondary income profit margin in 2008 is as a result of SAS primarily losing money on cash flow hedges, while the negative margin in 2010 is as a result of high lawsuit expenses, ash cloud expenses as well as high restructuring expenses.

To further analyze the development, it has been necessary to decompose the profit margin in to a number of underlying drivers. The development will be illustrated by means of trend and common-size analyzes.

[59] Regnskabsanalyse for beslutningstagere, p. 164

Table 6 shows the operating margin and the underlying drivers in percentage compared to the net revenue.

Level 3 - Drivers for Profit Margins	2008	2009	2010	2011	2012
Revenue	100.0%	100.0%	100.0%	100.0%	100.0%
Payroll Expenses	-34.1%	-40.1%	-33.1%	-31.6%	-32.2%
Other Operating Expenses	-59.8%	-57.7%	-61.9%	-57.3%	-61.4%
Obligation leasing payments	-3.1%	-4.5%	-3.9%	-3.3%	-3.2%
Depreciation, amortization and impairment	-3.0%	-3.5%	-3.5%	-4.5%	-2.7%

Table 6 – Common-size analysis.

It is clear to see that payroll expenses and other operating expenses are the two largest expense items. The payroll expenses has compared to 2008 seen a minor improvement, but this is offset by the increased other operating expenses. The lease payments are at the same level as 2008 and realistically they won't be able to decrease much further.

Table 7 shows the decomposition of the profit margin in comparison to the base year 2008.

Level 3 - Profit margins decomposition	2008	2009	2010	2011	2012
Revenue	100.0%	84.4%	76.6%	77.8%	67.6%
Payroll Expenses	100.0%	99.1%	74.2%	72.1%	63.8%
Other Operating Expenses	100.0%	81.5%	79.3%	74.7%	69.5%
Obligation leasing payments	100.0%	123.2%	98.2%	82.9%	69.9%
Depreciation, amortization and impairment	100.0%	116.0%	117.3%	151.7%	89.6%
NOPLAT	100.0%	-233.4%	191.6%	25.9%	-29.9%

Table 7 – Trend analysis.

As can be seen from table 7, the revenue has gone down significantly over the years. The good thing is though, that the expenses have also gone down roughly at the same level as the revenue. But even so, the profit margin in 2008 was at an undesirable level and not much has changed since. The lack of improvement in the expense level relative to the revenue indicates that the expenses are still too high and that profits from operations as a result still remains negative. This is in line with SAS continuing efforts to cut in to the core and reorganizing the company with the '4Excellence – Next Generation' strategy.

7.5.4 Asset Turnover Rate – DuPont level 3

The turnover rate measures the amount of capital tied, and thus indicates how effective the company is to use the resources that are invested in the operation. The turnover rate can be expressed by the use of the following formula[60]:

$$\textbf{\textit{Turnover Rate}} = \frac{\textbf{\textit{Revenue}}}{\textbf{\textit{Invested Capital}}}$$

As can be seen from table 3 the turnover rate has been somewhat stable the past few years, albeit compared to 2008 it has seen a decrease. In order to get a picture of the efficiency of the capital stock, the underlying drivers have been analyzed in table 8.

Level 3 - Asset Turnover Rates	2008	2009	2010	2011	2012
Expendable spare parts and inventories	64.87	59.26	60.06	58.74	52.38
Intangible Assets	48.71	34.66	28.80	24.46	18.72
Tangible Assets	3.76	2.88	2.75	2.93	2.70
Current receivables	28.74	28.41	31.89	32.48	27.45
Accounts payable	25.72	25.84	23.28	26.89	18.66

Table 8 – Asset turnover rates

When looking at the turnover rates it is preferable to have a high value as possible and for liabilities it is preferable to have a low value as possible. From table 8 it is clear to see that the turnover rate of SAS' assets have all experienced a decrease, with the development in tangible assets in particular being worrying, seeing it is a significant item on SAS' balance sheet. While the development in accounts payable is positive it is not enough to offset the overall negative development in the asset turnover rate of SAS.

7.5.5 Industry Figures

In order to dig deeper into SAS' performance, a closer look can be taken on a set of industry figures, which serves as good indicators for the measurement of the performance of any given airline. The figures are closely related to revenue generation and will also be used as a basis in the forecasting section. The following parameters were chosen as key figures for SAS' historical performance analysis: Revenue Passenger Kilometers (RPK), Available Seat Kilometers (ASK) and Passenger Load Factor. The figures are presented in table 9:

[60]Regnskabsanalyse for beslutningstagere, p. 165

Industry Performance Figures	2008	2009	2010	2011	2012
Revenue passenger kilometers, total (mill.)	33,097	29,025	29,391	30,668	27,702
Available seat kilometers, total (mill.)	45,764	39,934	38,851	40,953	36,126
Load factor, total (%)	72.3	72.7	75.6	74.9	76.7

Table 9 – Industry Performance Figures - Source: SAS Annual Report p. 92

RPK measures the productivity of the airline as the number of kilometers travelled by paying passengers (Finnair Annual Report, 2012). RPK is thus the backbone of an airline's traffic revenue matrix and can be decomposed into ASK and load factor as shown in the table above. SAS has experienced a decreasing RPK for the analyzed period and is currently at a RPK level of 27.709 million kilometers, which is a drop of 10 percent from previous year.

One available seat kilometer is defined as one plane seat, empty or occupied, flying one kilometer (Norwegian Annual Report, 2012). ASK is hence a measure of total passenger carrying capacity in kilometers of the individual airline. As figure 15 illustrates, SAS has experienced a negative development in ASK from 2008 to 2012 implying a decline in capacity. Especially in 2009 and 2011 where SAS decreased its capacity in alignment with the introduction of Core SAS (2009) and 4Excellence (2011)

Load Factor is a measure for how well the airlines exploit their passenger carrying capacity, and ASK is hence an expression for the percentage of seats actually occupied on a flight (Pietersz, 2012). SAS has improved its load factor substantially throughout the last five years, presenting steep increases in 2009 and 2011 due to the restructuring initiatives.

In addition to the aforementioned, there are further industry figures that can be used as a benchmark to evaluate the performance of an airline. These are presented in table 10:

Industry Key Figures	2008	2009	2010	2011	2012
Jet fuel price paid incl. hedging, average (USD/tonne)	1120	831	773	970	969
Total unit cost (SEK)	0.96	01.02	0.95	0.86	0.81
Passenger revenue/revenue passenger km, scheduled, yield (SEK)	1.27	1.3	1.16	1.12	1.09
Passenger revenue/available seat km, scheduled,(SEK)	0.91	0.92	0.86	0.82	0.82

Table 10 – Source: SAS Annual Report p. 92

Jet fuel prices are one of the biggest costs for any airline and the evolution in these costs have been positive for SAS in the analysis period, as they have gone down 13 percent compared to 2008. In order to know its fuel costs SAS uses the mechanism of hedging to try to be in control over their fuel costs. Price development of fuel is therefore particularly interesting for the industry and

especially SAS, as the company has relative high fuel consumption, with jet fuel costs accounting for 22.9 percent of SAS' total operating expenses in 2012[61].

Total unit cost shows the total operating costs including leasing costs, but less depreciation, exchange rate costs and restructuring costs per available seat kilometers. It appears from the above table, that these costs have been reduced over the analysis period by approximately 16 percent, which must be considered positive.

As could also be seen from table 9, the revenue from passenger seat kilometers and available seat kilometers has seen a negative development with the revenue of these figure going down with respectively 14 percent and 10 percent in the analysis period.

7.6 Conclusion on Financial Analysis

The figures and trends presented in the financial analysis speaks for itself and draws a picture of SAS in continuing financial difficulties, even though there has been some improvement in the costs as par the Core SAS and Next Generation strategies. On the worrying side the revenue has seen a steep decline, the net operating income is negative, the equity is at a all time low in the analysis period (primarily due to the IAS19 revision that was accounted for) and important key figures such as ROE, ROIC and operating margins are (still) negative, while the turnover rates have seen a slight improvement, but still way off even when compared to 2008.

On the positive note, the return on equity and return on invested capital have shown a positive trend and while the revenue has fallen, the costs have also been brought down significantly over the years.

From the industry figures it appears that SAS is experiencing pressure on the ticket price. While the increased load factor is positive, it does not help anything but market shares, if the tickets have been sold at a discount. The revenue from passenger seat kilometers and average seat kilometers figures supports the view that SAS are having trouble at generating the needed earnings to turn the company around.

It can be noted that the bottom line has been red throughout the analysis period and no matter how you look at it, those are not signs of a healthy company.

[61] SAS Annual Report 2012, p. 36

8. Forecasting

The strategic- and financial analysis highlighted respectively the non-financial and financial value drivers that affect SAS earnings. The forecasting aims to compare these value drivers in the preparation of the budget statements for the future expectations of the growth and development of the company, which will be used as a basis for the valuation of SAS.

The forecasting and preparation of the pro forma statements may be subject to considerable uncertainty and it is found necessary to make the forecasting based on some possible set scenarios, reflecting the likely outcome of SAS' future development.

8.1 Forecast period

In order to properly determine the value of a company the forecasting should in principle be carried out indefinitely. However, this will be too cumbersome and subject to great uncertainty, which is why the valuation is typically based on a defined limited budget period.

The budget statements are prepared for a forecast period of five years. The period is chosen on the grounds that it is too difficult to predict the evolution of any given company too far in the future.

It is assumed that the length of the forecast period (2013-2017) is sufficient to ensure that abnormal earnings and losses are offset and that the growth rate will be approximately stable. The terminal period occurs in 2018, and beyond that it is assumed that the accounting items follows a constant growth rate.

8.2 Scenarios

The use of scenarios for the future development of SAS is intended to reflect the future expectations for the forecasting. The possible scenarios are divided into: 1) Base scenario, 2) Bullish scenario and 3) Bearish scenario.

The strategic- and financial analysis indicates that the development of SAS in the past few years has been somewhat turbulent, and the future of the company is somewhat uncertain. There are several conflicting factors with regards to reversing the trend, and it is with this reason, that the scenarios will be weighted by probabilities.

The Base scenario will be considered the most realistic and plausible future scenario for SAS, and will be based on the detected value drivers respectively from the strategic analysis and financial analysis. It is therefore assumed that the actual trends will roughly follow the base scenario. The

bullish and bearish scenarios will, in contrast, be less likely and the forecasting is prepared of the author's own subjective opinions and expectations based on the value drivers from the strategic analysis. On this basis a weight distribution based on the likelihood of the scenarios have been used where the base scenario is deemed to weigh 70 percent, the bullish scenario 5 percent and lastly the bearish scenario 25 percent.

In the following section, the assumptions for the base scenario will be described and forecasted in depth. The bullish and bearish scenario will then be presented, where the different assumptions will be outlined. Each scenario will be valued separately. However, it has been assumed for all scenarios that the going concern principle is satisfied, had this not been the case, the valuation of the company would have been needed to be made based on other valuation models, such as the liquidity model[62].

8.3 Forecasting of revenue

SAS has in recent years presented poor economic performance and financial results, as was highlighted in the financial analysis. The historical developments in the net revenue have gone down from MSEK 53.195 in 2008 to 35.986 in 2012 representing a decrease of 32.4 percent.

There are a number of factors that affects or have the potential to affect the future prospect of revenue. The most important factors are outlined below:

8.3.1 GDP

As analyzed in the strategic section, the future prospects of the growth in the Scandinavian countries are not expected to be at remarkable levels. It is important to assess the future GDP growth, as the traffic revenue can be expected to be strongly correlated with the overall macroeconomic development.

Real GDP Growth	2013	2014	2015	2016	2017
Denmark	0.84%	1.34%	1.54%	1.53%	1.53%
Norway	2.46%	2.19%	2.06%	2.08%	2.10%
Sweden	1.01%	2.21%	2.30%	2.40%	2.43%
Average	**1.43%**	**1.92%**	**1.97%**	**2.00%**	**2.02%**

Table 11 - Data: IMF World Economic Outlook Database April 2013 - Source: Own making

[62] Financial Statement Analysis, p. 235

As was also stated in the strategic analysis and as can be seen by the figures in table 11, Norway and Sweden are the countries that are expected to experience the strongest growth. However, as SAS operates in all three countries it is more relevant to use a Scandinavian average, when forecasting the future revenue growth.

8.3.2 Traffic Revenue

SAS' revenue can be split into traffic revenue and other operating revenue. The traffic revenue consists of three main drivers, which have already been presented in the strategic and financial analysis: GDP, ASK and Load factor. Other Operating Revenue consists of a great variety of factors, which can be difficult to forecast. Amongst those factors are revenues from sales of services and onboard sales, which can be said to be proportionally related to traffic revenue. As such, when forecasting, the emphasis will be on the traffic revenue, while the operating revenue will be set as a constant of the traffic revenue.

ASK

The recent years divestments and restructuring strategies (Core SAS, 4Excellence and 4XNG) has resulted in SAS decreasing it's overall capacity as was illustrated in the financial analysis. As part of the strategy, SAS sold off 80 percent of its shares in Widerøe, with the remaining 20 percent to be sold in 2016.[63] Widerøe represented an ASK of 1.193 Million in 2012[64], and the sale of its shares will reduce the ASK of SAS by 2.64 percent in 2013. However, the sale of Widerøe will be somewhat offset by SAS plans to lease 26 aircrafts in 2013-2014[65], which should increase the capacity by 5-6 percent according to SAS' expectations for 2013[66]. Furthermore SAS have placed an order to purchase 4 new Airbus A320 in 2016 and 11 more in 2017. The purchases have been set to increase the ASK by respectively 0.5 percent and 1.5 percent in 2016 and 2017. Beyond 2013, SAS plans to open 45 new routes from the Nordics. The increase in number of routes is assessed to have a yearly base impact of two percent. The forecasted ASK growth can be seen in the following table:

ASK Growth	e2013	e2014	e2015	e2016	e2017
Sale of Widerøe (ASK Reduction)	-2.64%	-	-	-0.66%	-
Capacity Increase	5.50%	2.00%	2.00%	2.50%	3.50%
Total	**2.86%**	**2.00%**	**2.00%**	**1.84%**	**3.50%**

[63] SAS Press Release May 5th, 2013. - http://www.flysas.com/en/Media-center/Press-releases/
[64] SAS Annual Report 2012, p. 22
[65] SAS Annual Report 2012, p. 10
[66] SAS Annual Report 2012, p. 15

Table 12 – ASK Growth

Load Factor

The passenger load factor has seen an increase in recent years and the load factor is expected to stay at the same level for the years to come. This is on the basis of SAS having gone through its main restructuring exercises and with the recent sale of Widerøe and commitments to invest in further aircrafts, SAS can be satisfied if the load factor is kept at the same level, when also taken into account the increase in capacity as explained above. In order to keep the load factor constant, SAS will have to attract more customers and given their strong image compared to its competitors, the Star Alliance membership and its frequent flights, it is the opinion of the author that is should be attainable. This is also well in line with the COO of SAS, which expects SAS to maintain the load factor at 77 precent in the years to come (Jensen, 2013). Thus, the 77 percent load factor will be held at a constant level and will not as such have a direct impact on the forecasted revenue.

Industry growth

As presented in the PESTEL analysis, the International Air Transport Association (IATA) is expecting a remarkable growth in the passenger aviation industry by year 2020.

In the association's regional outlook for Europe for the period 2013-2017, IATA is forecasting to see a 3.9 percent CAGR[67] growth. SAS is expected to take part of this growth on the basis of the company increasing its capacity and introducing 45 new routes. However, the company is subject to increased competition from mainly the low cost carriers and in particular from Norwegian who has the potential to give SAS a run for its money on its plans for intercontinental flights from and to Scandinavia. The trend of SAS losing market shares to its competitors in the Nordics is expected to continue and is expected to go down from its current 32.5 percent by two percent each year in the forecasting period.

Given SAS' decreasing revenue over the last few years, it is a tad unrealistic to assume that SAS will suddenly be able to turn things around to see a significant increase year over year. The author has found it necessary to only assume that SAS will partake in the CAGR growth by a factor of 50 percent in the base case.

[67] CAGR: Compound Annual Growth Rate.

BNP is accounted for by a 50 percent weight, as even though the airline industry is sensitive to economic cycles, it is unrealistic to think that all of the positive development would go into more airfares being bought, as there is a number of substitute products (as presented in the strategic analysis) who could also expect to capture a positive turnaround in the economy.

In conclusion, taking into account all of the above factors, which can affect the future revenue of SAS, the revenue growth is expected to be as following:

ASK Growth	e2013	e2014	e2015	e2016	e2017	Weight
Sale of Widerøe (ASK Reduction)	-2.64%	-	-	-0.66%	-	*100%*
Capacity Increase	5.50%	2.00%	2.00%	2.50%	3.50%	*100%*
BNP	0.72%	0.96%	0.99%	1.00%	1.01%	*50%*
Market share loss	-2.00%	-2.00%	-2.00%	-2.00%	-2.00%	*100%*
CAGR increase	1.95%	1.95%	1.95%	1.95%	1.95%	*100%*
Annual Revenue Growth	**3.53%**	**2.91%**	**2.94%**	**2.79%**	**4.46%**	

Table 13 – Annual Revenue growth

The growth rate for the terminal period has been calculated on the basis of the average annual growth rate plus a one percent addition resulting in a terminal growth of 4.32 percent, as it is expected that the BNP in the terminal period will see a slight increase, as well as SAS operating more efficiently due to their restructuring and a newer fleet, thus enabling SAS to capture more of the expected industry growth.

8.4 Forecasting of Expenses

Compared to its competitors, SAS unit costs (costs per ASK) are amongst the highest in Europe and the payroll expenses alone has in recent years accounted for one third of the company's revenue. There is no doubt that its high costs have been contributing to the negative results, as was also outlined in the financial analysis section.

When compared to its competitors it is clear to see where SAS is falling behind:

Unit costs (cost per available seat kilometre) and average stage length for selected European legacy and low-cost carriers 2011, 2012*

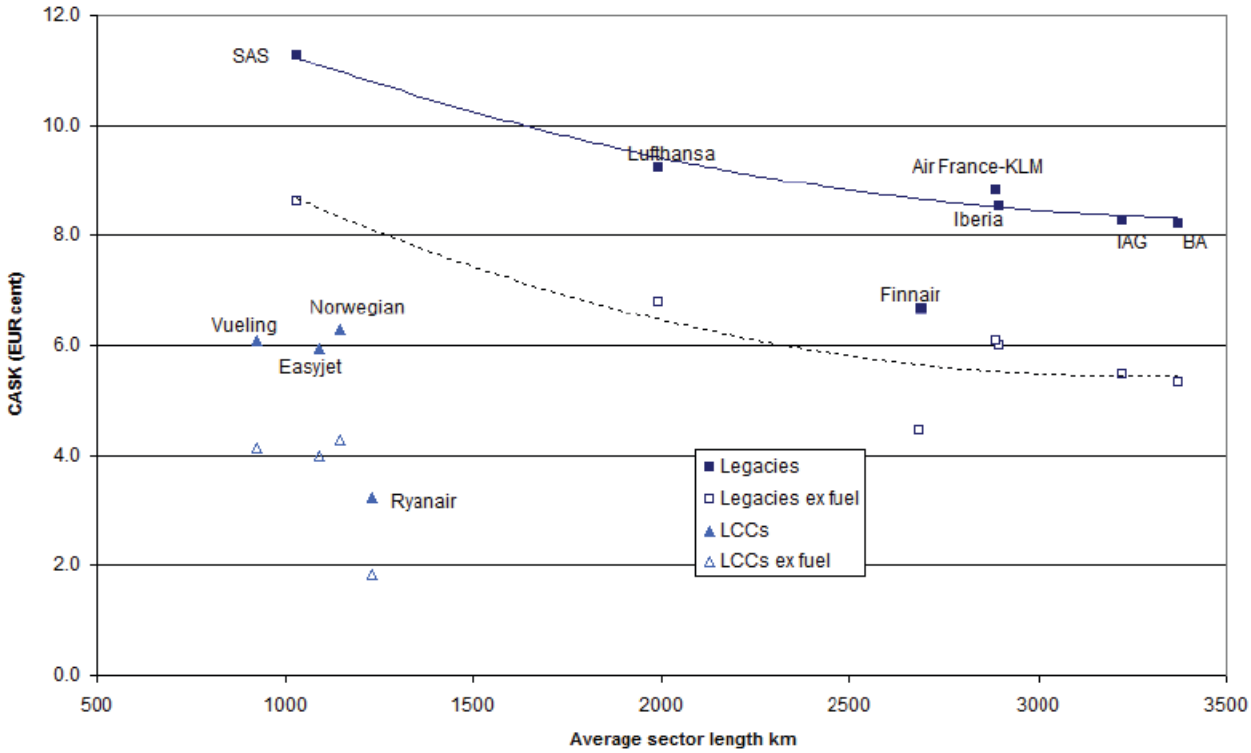

Figure 8 – Source: CAPA World Aviation Yearbook 2013 - Europe, p. 149

Payroll

Having presented the above, it is not realistic to assume that SAS all of a sudden can save significant amounts in payroll expenses. In recent years the payroll expenses has accounted for 32 percent and 31.6 percent of the revenue. SAS operates in countries where the unions have a strong bargaining power, which is why it is considered unlikely for the company to introduce further cost savings, than what the company already negotiated with the unions in 2012. SAS' plans with increased capacity over the next few years will also require more staff and although the company will see expense reductions in line with its divestments it is difficult to assess the effect it would have on SAS' expenses, thus it is assumed that the payroll expenses will increase in line with the inflation with an annual rate of two percent (it is assumed that the same rate will apply for the terminal period), with the exception being 2013, where the increase in payroll will be offset by the many divestments expected in 2013 (see section 8.4.1)

8.4.1 Other operating expenses

Of the other operating expenses, the jet fuel expenses, maintenance costs, and some restructuring costs are forecasted separately. The remaining other operating expenses are kept at a constant level and forecasted at an averaged historical level to the basic revenue. The historical average level is found to be at 59.62 percent.

Jet fuel

Given the volatility of oil prices it is uncertain what the jet fuel prices would be in the future. Historically the average jet fuel increase has been 0.57 percent and this will also be applied for future costs. However, SAS has committed themselves to gradually phase out old airplanes and replace them with new and more energy efficient planes, which is why the future jet fuel expenses are expected to increase proportionally with ASK. On this basis, the jet fuel costs development are expected to be as following:

Jet fuel Development	e2013	e2014	e2015	e2016	e2017
Percentage	4.10%	3.48%	3.51%	3.36%	5.03%

Table 14: Forecasted jet fuel development

For the terminal period an average of the annual percentages (3.61 percent) will be used.

Maintenance

SAS' fleet will increase in size, due to the leasing of additional 26 airplanes, as well as the purchase of Airbus 320's. With the larger fleet it is expected the maintenance and leasing costs will increase. The maintenance costs are expected to increase proportionally with the increase in capacity (ASK).

Restructuring savings

In line with the 4Excellence and 4XNG strategies SAS has goals to make annual divestments worth MSEK 3.000, of which the sale of Widerøe is part of it. Further plans are to centralize the administration in Stockholm (including reduction of administrative headcounts), which would have a positive effect on the expenses. SAS also wants to restructure its IT, outsource their call centre functions and the ground handling activities. The total cost reduction target of 3 billion SEK is expected to contribute over the next few years. Thus, the 3 billion SEK restructurings savings has been calculated to contribute with 1 billion SEK from 2013-2015 and will be added to the forecasted income statements as extraordinary revenue. It has been excluded from the previous calculated revenue growth, as it does not constitute a future core business activity of SAS and would have masked the real growth.

Taken all of the above into account, the forecasted other operating expenses are expected to develop as following:

Other Operating Expenses Development	e2013	e2014	e2015	e2016	e2017
Percentage	-4.04%	3.05%	3.07%	7.35%	4.46%

Table 15 – Other operating expenses development

Tax rate

As the effective tax rate is too volatile and difficult to predict, the basic corporate tax rate of 22 percent for Sweden has been applied in the forecast period.

Leasing & Credit costs

The future leasing costs has been calculated on the basis of SAS' future leasing commitments presented in their annual 2012 report.[68] To estimate the future cost of secured debt, a popular method used by analytics, investment bankers and corporate appraisers, where the credit rating of the company is taken into account, will be used. The cost of secured debt has thus been found by using the credit rating of the company as per August 1st, 2013. SAS have a relatively low credit rating of "Caa1" from Moody's[69], which corresponds to the "CCC+" by S&P, which goes well in line with the discussion throughout this thesis. The S&P U.S. Issued CCC & Lower High Yield Corporate Bond Index shows a yield as of August 1st 2013 at 7.14 percent[70]. This percentage needs to be added on top of the LIBOR 1-year rate, which as of August 1st 2013 was 0.58 percent[71]. This gives us a cost of secured debt of 7.72 percent and the assumption is that the credit rating will remain constant throughout the forecasting period.

One thing to note though, by using this method the short-term debt is completely ignored, resulting in the cost of secured debt being a little overstated, but even so, it is of the author's opinion that this is the best way to estimate the cost of debt. For the terminal period it is assumed that SAS will continue to have the same credit rating and an average has been calculated in order to determine the costs, as it is assumed that SAS will carry on having leased planes in their fleet.

[68] SAS Annual Report 2012, p. 72 – Note 34 Leasing Commitments
[69] Appendix 10
[70] http://us.spindices.com/indices/fixed-income/sp-us-issued-ccc-lower-high-yield-corporate-bond-index
[71] http://research.stlouisfed.org/fred2/series/USD12MD156N

Depreciation

Ideally the depreciation rate should be calculated on the basis of the change in PP&E. Or even more correct, should the depreciation tie to the gross PP&E, however this requires detailed and sometimes internal information of the assets, which is difficult to get hold of. As such, the depreciation rate to be used in the forecasted period has been calculated on the basis of the historical average depreciation rate, which had an almost evenly distributed depreciation rate from year to year. Thus, the depreciation rate to be used is 3.44 percent relative to the revenue.

Secondary Income

As SAS uses hedging to minimize their risk with regards to their jet fuel expenses, the historical average relative to revenue has been used for the forecasted period. The same applies to the share of income in affiliated companies, with the exception being, that the average has only been calculated on the basis of 2011 and 2012, as the income from previous years would not reflect the current picture, since SAS no longer have income to the same extent due to the sales of subsidiaries.

Since there is no evidence of other non-recurring items to appear in the forecasted period, no attempts has been made to include them in the base case.

Financial Income & Expenses

As it is difficult to determine the future the financial income & expenses items, they have been calculated as a historical average relative to revenue. This results in a rate of respectively 0.63- and 2.23 percent for respectively the financial income and financial expense items.

8.5 Forecasting of Balance Sheet

Forecasting each item of the balance sheet is not realistic as the future is too uncertain and there is not enough evidence to forecast the balance sheet items on an individual basis. However, the balance sheet can still be forecasted by determining the following three key figures: Net operating assets, net financial liabilities and equity.

The future net operating assets can be calculated by using the below formula:

$$\boldsymbol{Net\ Operating\ Assets = Revenue_{t+1} \cdot \frac{1}{Turnover\ rate}}$$

The inverse turnover ratio is found based on the historical average. This leaves us with a turnover rate of 1.59 and the inverse turnover rate of 0.65 to be used in the forecasted period.

Whereby the following figures for the net operating assets are obtained:

Estimate Net operating assets	e2013	e2014	e2015	e2016	e2017	Terminal
Net operating Assets	24,217	24,921	25,654	26,370	27,546	28,736

Table 16 – Estimated net operating assets

In order to estimate the net financial liabilities, the financial leverage (FGEAR) needs to be determined. The average historical financial leverage of SAS is 2.09, while the current financial leverage is well above (presented in section 9.1.5). However, as the net interest-bearing debt includes SAS' large pension commitments of MSEK 6.600, and given these costs should not appear again (to the same extent) in the future, it is found unrealistic to use the current estimation. SAS long-term prospect is to have a financial leverage below 1[72], thus SAS is aiming at a debt/equity ratio of 50 percent. As the future debt/equity ratio is subject to opinion of future expectations and subject to great uncertainty it is deemed necessary to not use the current debt/equity ratio, but instead use SAS' target of 50 percent. This is supported by the fact that a valuation is concerned about the long-term prospects of the company and not the current market situation.

The net financial liabilities can then be calculated by using the following formula:

$$\boldsymbol{Net\ financial\ liabilties} = \left(\mathbf{1} - \frac{\mathbf{1}}{\mathbf{1} + \boldsymbol{FGEAR_t}}\right) \cdot \boldsymbol{Net\ operating\ assets}$$

This gives us the following numbers:

Estimate Net financial liabilities	e2013	e2014	e2015	e2016	e2017	Terminal
Net financial liabilities	8,072	8,307	8,551	8,790	9,182	9,579
FGEAR	0.5	0.5	0.5	0.5	0.5	0.5

Table 17 – Estimated net financial liabilities

With the net financial liabilities and net operating assets being calculated, the equity can be found by using a simple formula:

$$\boldsymbol{Equity = Net\ operating\ assets - Net\ financial\ liabilities}$$

The equities for the forecasted years are thus:

[72] SAS Group Annual Report 2011 with sustainability overview, p. 35

Estimate Equity	e2013	e2014	e2015	e2016	e2017	Terminal
Net operating Assets	24,217	24,921	25,654	26,370	27,546	28,736
Net financial liabilities	8,072	8,307	8,551	8,790	9,182	9,579
Equity	16,144	16,614	17,103	17,580	18,364	19,157

Table 18 – Estimated equity

8.6 Bullish Scenario

The bullish scenario differs from the base scenario by taking a more optimistic view on the future outlook of SAS. Unless it's specified below, the assumptions for the forecasted period remains the same as the base scenario.

Revenue

It is assumed that SAS will be able to capture 75 percent of the expected growth in CAGR and only experience a one percent market loss to competitors. Furthermore it is assumed that BNP will take on an additional increased average growth by 0.5 percent per year due to a sudden turnaround in the economy. ASK and thereof the capacity is assumed to see a further increase of one percent per year due to an improved utilization of the planes and routes.

This leaves a revenue growth of:

ASK Growth	e2013	e2014	e2015	e2016	e2017	weight
Sale of Widerøe (ASK Reduction)	-2.64%	-	-	-0.66%	-	*100%*
Capacity Increase	6.50%	3.00%	3.00%	3.50%	4.50%	*100%*
BNP	1.68%	1.68%	1.68%	1.68%	1.68%	*50%*
Market share loss	-1.00%	-1.00%	-1.00%	-1.00%	-1.00%	*100%*
CAGR increase	2.93%	2.93%	2.93%	2.93%	2.93%	*100%*
Annual Revenue Growth	**5.4650%**	**4.6050%**	**4.6050%**	**4.4450%**	**6.1050%**	

Table 19 – Annual Revenue growth

The growth rate for the terminal period will see an additional increase of one percent compared to the base case.

Expenses

As the jet fuel prices are quite sensitive to the world economic situation it is expected that the increased BNP (worldwide) would have a positive effect on the prices of jet fuel, which is why the jet fuel expenses are only estimated to increase by half of the base case increase. The payroll expenses are assumed to only increase by 1.5 percent, which will be lower than the expected inflation rate, this is on the basis that SAS will be able to succeed with new negotiations with the

unions. Due to favorable hedging, SAS are assumed to see an additional income resulting in a one percent increase to the average year over year historical average rate.

The company is also expected to see an improved credit rating, bumping them up to a *BB rating by S&P,* where the current annual return for the bonds with the same rating is 3.92 percent, which will result in the cost of secured debt to decrease by 3.22 percent points. This will result in the asset value to increase and thus also increase the obligation payments, while the interest expense will see a decrease. Overall the effect of the credit rating improvement will have a positive effect on the net result.

8.7 Bearish Scenario

As opposed to the base and bullish scenario, the bearish scenario has a more pessimistic view on the future outlook of SAS. Unless specified below, the same assumptions apply as for the base case.

Revenue

It is assumed that SAS will only be able to partake 25 percent of the expected CAGR growth. The capacity utilization due to unforeseen circumstances, such as postponed delivery of the planes will only see half of the increase as compared to the base scenario. BNP is also expected to be worse off than the base case expectations and will as a result be down on average by 0.5 percent each year. SAS' market loss is expected to go down with three percent each year.

This results in the following revenue development:

ASK Growth	e2013	e2014	e2015	e2016	e2017	weight
Sale of Widerøe (ASK Reduction)	-2.64%	-	-	-0.66%	-	*100%*
Capacity Increase	2.75%	1.00%	1.00%	1.25%	1.75%	*100%*
BNP	0.47%	0.71%	0.74%	0.75%	0.76%	*50%*
Market share loss	-3.00%	-3.00%	-3.00%	-3.00%	-3.00%	*100%*
CAGR increase	0.98%	0.98%	0.98%	0.98%	0.98%	*100%*
Annual Revenue Growth	**-1.45%**	**-0.32%**	**-0.29%**	**-0.69%**	**0.49%**	

Table 20 – Annual Revenue growth

Unlike the base and bullish scenario, it is not expected that the growth rate for the bearish scenario will not see an additional increase of one percent and the growth rate based on the forecasted average is thus expected to be negative at a rate of -0.45 percent.

Expenses

Payroll expenses are assumed to see a hike of additionally one percent compared to the base case on the grounds that SAS will not be able to move all of the intended administration positions to Stockholm. Maintenance costs are also estimated to see an increase of one percent, due to the fact that SAS will be forced to hold on to some of their old airplanes, because of the delayed delivery of new planes. Jet fuel prices will see a significant increase of 100 percent compared to the base case expenses, as there will be a shortage of jet fuel availability caused by instability in the macroeconomic environment along with SAS being forced to keep old and less fuel-efficient planes. The macroeconomic instability will also have an effect on SAS' hedging activities, which will experience an increase of one percent point (compared to base case) in relation to the revenue for each year.

It is further assumed that SAS will not be able to reach all of their goals with regards to their cost reduction target and will as such only be able to save 500 million SEK for the period 2013-2015.

8.8 Conclusion on Forecasting

The financial performance and results can be further assessed in the forecasted statements in appendix 5, 6 and 7. However, the below gives an overview of how three key financial drivers compare in each of the scenarios:

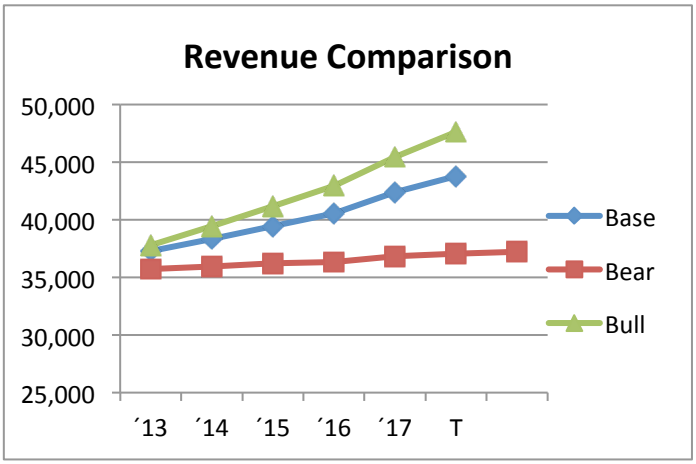

Figure 9 - Revenue comparison - Source: Own making

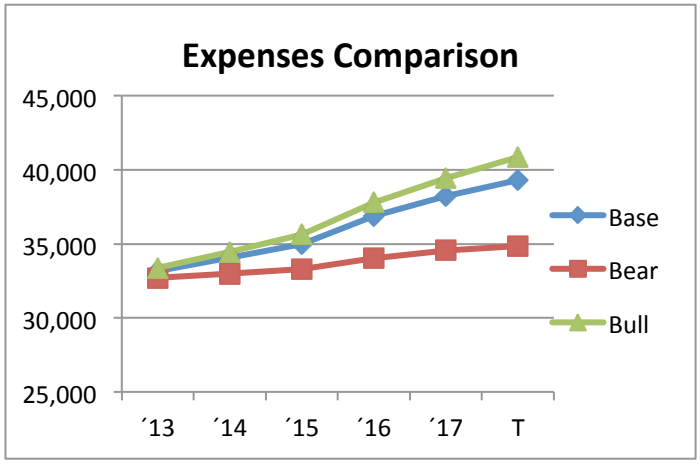

Figure 10 - Expenses comparison - Source: Own making

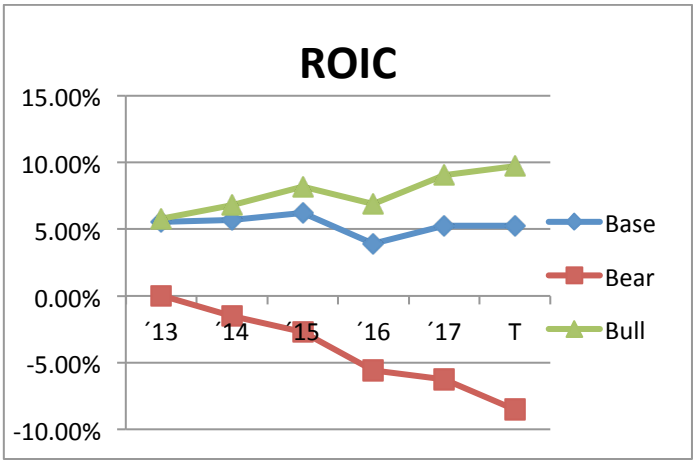

Figure 11 - ROIC Comparison - Source: Own making

Figure 9, 10 and 11 illustrates how the revenue, expenses and ROIC are expected to develop for the three scenarios. As can be expected, the revenue and expenses are somewhat correlated, which are natural to expect for an aviation company as SAS, given more traffic translates into more revenue and higher expenses are needed in order to fulfill the increased demand. The ROIC is only really at attractive levels in the bullish scenario, while it in the base scenario is not significantly higher than lower risk obligations and an investor would be better off by making alternative and perhaps safer investments.

9. Valuation

There are many ways how a valuation of a company can be performed, but generally speaking they can be distinguished between direct and indirect present value models. This thesis will value SAS by using two indirect present value models; the DCF-model and EVA model. The approach of indirect present value models are characterized in that they value the entire company, the value of equity is then determined by subtracting the market value of the company's interest-bearing debt, whereas the direct present value models will value the equity directly (hence the name).

The chosen DCF- and EVA-model is based on the fact that both models measure the value from its operating activities, regardless of its financial activities. It is thus assumed that SAS only creates value for its shareholders only by its core business. If both models are based on the same forecasted assumptions, they value estimate given by them will be the same. The EVA model can then profitably be used to control the value estimate calculated by the DCF model.

The company's weighted average cost of capital (WACC) is used as the discount rate, which is why it is first necessary to estimate WACC. It should be noted that it would be a theoretical value of WACC, which are subject to change when comparing and accounting for market conditions and practices. The estimated value of WACC will be further assessed in the sensitivity analysis.

9.1 WACC

The weighted cost of capital consists of the owners' required rate of return, the value of equity, loan interest rates and net interest-bearing debt and is thus an expression of the required return from both the owners and lenders. WACC can be expressed using the following formula[73]:

$$\frac{NIBD}{NIBD + EQ} \cdot K_d \cdot (1 - t) + \frac{EQ}{NIBD + EQ} \cdot K_e$$

Formula variables:

NIBD = Net interest-bearing debt

EQ = Equity

t =Tax

K_e *= Cost of equity*

K_d *= Cost of debt*

9.1.1 Owners' required rate of return

The cost of equity is a measure of the required rate of return on equity that owners can achieve by making alternative investments with similar risk. For the purpose of estimating the owners' required rate of return, the Capital Asset Pricing Model (CAPM) will be used, which shows the relationship between risk and expected return of a stock or portfolio. The model is expressed by the following formula:

$$K_e = r_f + \beta_{EQ} \cdot (r_m - r_f)$$

[73] Regnskabsanalyse for beslutningstagere, p. 151

Formula variables:

K_e = *Cost of equity*

r_f = *Risk-free interest rate*

r_m = *Return of the market portfolio*

β_{EQ} = *Systematic risk of equity*

9.1.2 Risk free rate

The risk-free interest rate is an expression of what an investor can get in return without taking on any perceived risk. As a basic assumption a government bond of a western European country, such as Denmark, with a 10-year maturity is perceived to be risk-free. On that basis the risk free rate can be determined as having the same interest rate as the Danish government's 10-year bond. Currently the effective bond amounts to 2.05 percent as per August 2013. However, this is a very crude way of estimating the risk-free interest rate, and it can lead to significant differences in the final valuation. It is attempted to take this into account in the sensitivity analysis.

9.1.3 Estimating Beta

The systematic risk of equity, also called beta, is a measure of the share's volatility relative to the market portfolio and therefore indicates how risky a stock is. The general relationship between beta and the systematic risk is shown below:

β = 0 Risk-free investment
β < 1 Investment with less risk than the market portfolio
β = 1 Investment with risk as the market portfolio
β > 1 Investment with more risk than the risk portfolio

There are several means to estimate the beta value for a company, with the most typical method being doing a regression analysis of the historical correlation between the company stock returns and the market portfolio's equity returns. Alternatively, the beta value is estimated by making a qualitative assessment of the company's operational and financial risks, as the beta value is a function of the operating and financial risk.[74]

[74] Regnskabsanalyse for beslutningstagere, p. 238

In order to determine the beta value, estimates for beta has been used from Proinvestor, Bloomberg, Financial Times and Reuters. The beta value is then determined by taking a simple average of the already found beta values, which are believed to have come from reliable sources:

Beta	Proinvestor	FT	Reuters	Bloomberg	Average
Value	0.93	1.06	1.06	1.36	1.10

Table 21 – Beta values

On the basis of the above, the beta is estimated to be 1.10. However, if we don't include Bloomberg and only take the average of the rest, the average beta value is 1.02, and that would imply that the risk associated with investing in SAS is only marginally higher than the market portfolio. As discussed in the strategic and financial analysis, SAS are at a substantial risk and competing in a cyclical industry, which is dependent and thereof subject to uncertainty against oil price- and exchange rate fluctuations. It is of the author's opinion that this risk should be reflected properly in the valuation of the company, which is why only the Bloomberg data will be used as basis for estimating the beta value.

9.1.4 Estimating Risk Premium

The market portfolio's risk premium reflects the compensation that investors require for the risk associated with the investment. The risk premium is calculated as the difference between the return on market portfolio and the return on risk-free investments (risk-free rate).

In practice, the risk can be determined in two ways, either by using the ex-post method or by using the ex-ante method. The ex-post method uses a backward orientated perspective and examines the historical differences between the return on the market portfolio and the return on risk-free investments. Conversely, the ex-ante method uses a future perspective and examines forecasts from analysts about the company's future economic development, which is then used for calculating the risk premium of the market portfolio.

For this thesis it is assumed that the market portfolio's risk premium is estimated to be 4.5 percent, which is based on SKAT's recommendation to use a market risk premium of 4.5 percent as a starting point for a valuation in connection with transfer pricing[75]. This is also in conjunction with general assumptions, which states that the market risk premium is between 4-5 percent and thus it is

[75] http://www.skat.dk/SKAT.aspx?oId=1813219&vId=208529&tree=expand

assessed that the estimated value of the risk premium is reasonable and can be used to calculate the owner's required rate of return.

Based on the above estimates, the owners' required rate of return (K_e) can be calculated as follows:

$$K_e = r_f + \beta_{EQ} \cdot (r_m - r_f)$$

$$K_e = 2.05\% + \mathbf{0,93} \cdot (4.5\ \%) = 6.24\%$$

9.1.5 Capital Structure

An important variable in the calculation of the weighted average cost of capital (WACC) is the company's capital structure, that is, the ratio between debt and equity ratio. To estimate the ratio, the market values are used rather than the book values, since it is considered that these values provide a better and more accurate picture of the capital structure composition of a public listed company.

The market value of the company's equity is determined by multiplying the number of outstanding shares with the share price as per August 1st, 2013. To this is added the net interest-bearing debt in order to determine the value of the company. Net interest-bearing debt is assumed to be in market values so that the book value equals the market value.

The estimated capital structure is as follows:

Capital Structure	
Number of shares per December 31st, 2012	329,000,000.00
Shareprice per August 1st, 2013	12.90
Market value of equity	4,244,100,000.00
Net interest-bearing debt	16,670,910,152.80
Company Value	20,915,010,152.80
Share of equity	**20.29%**
Share of debt	**79.71%**

Table 22 – Capital Structure

The financial leverage of SAS is as per above numbers at a staggering 3.93 ratio. But given SAS' goals of reaching a leverage of 50 percent, the aforementioned ratio will not be used in the calculation of WACC, and as discussed in section 8.5, a leverage of 50 percent will be used instead.

9.1.6 Cost of Debt

The cost of debt is a measure of the financial commitment's required rate of return, and can be expressed using the formula below, which shows that the required return can be estimated as the sum of the risk-free rate plus a specific risk premium (r_s)

$$K_d = r_f + r_s$$

However, the cost of debt was already calculated in section 8.4.1 using the credit rating premium over LIBOR and given that SAS' current situation comes with some uncertainty, it is assessed that the higher rate best reflects SAS ability to borrow money. Thus, the cost of debt is 7.72 percent. The impact of a lower cost of debt will be discussed in the sensitivity analysis.

9.1.7 Tax Rate

As discussed in Section 8.4.1 the corporate tax rate is 22 percent.

9.1.8 Determining WACC

All variables included in the calculation of the WACC are now calculated and can be inserted into the formula below.

$$\boldsymbol{WACC = \frac{NIBD}{NIBD + EQ} \cdot K_d \cdot (1 - t) + \frac{EQ}{NIBD + EQ} \cdot K_e}$$

$$\boldsymbol{WACC = 0.5 \cdot 7.72\% \cdot (1 - 0.22) + 0.5 \cdot 8.17\% = 7.9\%}$$

The company's cost of capital is calculated to be 7.9 percent. It is assumed that the WACC is constant in the budget and terminal period.

9.2 Valuation using the DCF-Model

Based on the DCF model, the company is valued by discounting the future free cash flows to all investors at a discount rate equal to the weighted average capital costs. As previously highlighted, the DCF model is an indirect valuation model, which is why the value of equity is first obtained by subtracting the market value of the interest-bearing debt.

Valuation using the DCF model can be expressed using the formula below[76]:

[76] Regnskabsanalyse og værdiansættelse - en praktisk tilgang, p. 37

$$V_0 = \sum_{t=1}^{T} \frac{FCF_t}{(1+WACC)^t} + \frac{FCF_{T+1}}{WACC - g} \cdot \frac{1}{(1+WACC)^T}$$

where,

$$FCF_t = Net\ operating\ profit_t - \Delta Net\ operating\ assets_t$$

The DCF model is two-periodic, as the discounting of the future free cash flows are divided into the forecasted period (relating to the budget of future cash flows for 2013-2017) and into the terminal period (relating to cash flows generated for all eternity). It is assumed in the transition from the forecasted period to the terminal period, that the company is in a stable state and that all budget assumptions as a result follows a constant growth rate.

As discussed in the forecasting section, the growth rate in the terminal period is estimated to be 4.32 percent in the base scenario, 6.05 percent in the bullish scenario and lastly -0.45 percent in the bearish scenario.

Based on the calculated WACC and the free cash flows in the budget and the terminal period, the value of SAS are presented in the following:

9.2.1 Base Scenario

Growth Rate	4.32%
Discount factor	7.90%

Base Case Valuation - MSEK	2013	2014	2015	2016	2017	Terminal Year
Operating Profits	1,745	1,834	2,014	1,462	1,894	2,077
Changes Net operating assets	2,991	705	733	716	1,176	1,190
Free cash flow	-1,245	1,129	1,281	747	718	887
Discount Factor	1.08	1.16	1.26	1.36	1.46	0.05
PV of FCF	-1,154	970	1,020	551	491	16,949
Total PV of FCF	1,876.91					
PV of terminal value	16,948.93					
Enterprise Value	18,825.83	90.03				
Net-interest bearing debt	-16,670.91					
Equity Value	2,154.92					
SAS Share Price - SEK	**6.55**					

Table 23 – SAS' share price – Base scenario

The base case scenario is assessed to be the most realistic and probable future scenario for SAS. As the above table reveals, SAS' share price is calculated to be SEK 6.55, which is almost half the SEK 12.9 share price as of August 1st, 2013. This indicates that SAS' share price is overvalued by

SEK 6.35 It is noteworthy that 90.03 percent of the enterprise value of MSEK 18,825.83 stems from the terminal value.

9.2.3 Bullish Scenario

Growth Rate	6.05%
Discount factor	7.90%

Bullish Case Valuation - MSEK	2013	2014	2015	2016	2017	Terminal Year
Operating Profits	1,783	2,098	2,536	2,269	3,015	3,492
Changes Net operating assets	3,443	1,136	1,188	1,200	1,721	1,808
Free cash flow	-1,660	962	1,348	1,069	1,294	1,683
Discount Factor	1.08	1.16	1.26	1.36	1.46	0.03
PV of FCF	-1,539	826	1,073	789	885	62,046
Total PV of FCF	2,033.93					
PV of terminal value	62,045.54					
Enterprise Value	64,079.47	96.83				
Net-interest bearing debt	-16,670.91					
Equity Value	47,408.56					
SAS Share Price - SEK	**144.10**					

Table 24 – SAS' share price – Bull scenario

The bullish scenario presents a very optimistic outlook for SAS and as such the enterprise value has been calculated to be MSEK 64,079.47, which results in a share price of a staggering SEK 144.10. This is due to the very optimistic assumptions laid out in this scenario. It is of the author's opinion that this scenario is highly unlikely, which is also why it has a limited weighting. Compared to the base an even higher percentage (96.83 percent) of the value is derived from the terminal value.

9.2.4 Bearish Scenario

Growth Rate	-0.45%
Discount factor	7.90%

Bearish Case Valuation - MSEK	2013	2014	2015	2016	2017	Terminal Year
Operating Profits	463	108	-168	-825	-979	-1,487
Changes Net operating assets	1,826	-73	-67	-157	110	-103
Free cash flow	-1,363	181	-102	-668	-1,090	-1,384
Discount Factor	1.08	1.16	1.26	1.36	1.46	0.12
PV of FCF	-1,263	155	-81	-493	-745	-11,333
Total PV of FCF	-2,426.56					
PV of terminal value	-11,333.44					
Enterprise Value	-13,760.00	82.37				
Net-interest bearing debt	-16,670.91					
Equity Value	-30,430.91					
SAS Share Price - SEK	-92.50					

Table 25 – SAS' share price – Bear scenario

The assumptions presented in the bearish scenario will lead to SAS going bankrupt. A scenario, which is considered to be more likely than the bullish scenario, given the fact that SAS has in fact been on the verge of bankruptcy previously, and their financial results as well as challenges presented in the financial- and strategic analysis underlines that it is a probability that is closer to reality than the bullish scenario.

As a result, a negative enterprise and equity value is calculated, which ultimately result in a negative share price of SAS. However, as it is not possible for a share price to be negative, it will effectively be zero, implying that the company goes bankrupt.

9.2.5 Weighted Valuation

As highlighted in section 8.2, it is estimated that the weight distribution of the scenarios are based on the conviction that the base case scenario is the most likely future scenario, which is why it has a weighting of 70 percent. Bullish and bearish scenarios are weighted at respectively 5- and 25 percent. The value estimate is found by including the scenarios with their weighted probabilities in order to obtain a weighted average for an estimate of the share price.

The weighted valuation is shown in Table 26:

Weighted Valuation	Probability	Share price
Base scenario	70%	6.55
Bullish scenario	5%	144.10
Bearish scenario	25%	-
Weighted value	**100%**	**11.79**

Table 26 – Weighted valuation – share price

The weighted value is SEK 11.79, which is a little under the traded value, implying that the SAS share price as of August 1st, 2013 is overvalued by SEK 1.11.

9.3 Valuation using the EVA-model

In contrast to the DCF model, the Economic Value Added (EVA) model is based on the company's book value of net operating assets and discounts the future residual profits from the operations. The residual profits are expressed by taking the operating profits after tax less net operating assets' cost of capital, which is equal to the costs associated with capital generation (WACC).

The valuation using the EVA model can be expressed by using the following formula:

$$V_0 = Net\ operaing\ assets_0 \sum_{t=1}^{T} \frac{RIDO_t}{(1+WACC)^t} + \frac{RIDO_{T+1}}{WACC - g} \cdot \frac{1}{(1+WACC)^T}$$

where,

$$EVA_t = Net\ operating\ profit_t - (WACC \cdot Net\ operating\ assets_{t-1})$$

Similar to the DCF model, the EVA model is based on discounted future value creation, where WACC is used as the discount rate. Assumptions for the terminal period and growth factor (g) are unchanged compared to the valuation of the DCF model.

Based on the above, the value of SAS for all scenarios can be calculated using the EVA model as shown in appendix 8. It can be concluded that the EVA model provides the same value estimates as the DCF model.

10. Sensitivity Analysis

The valuation of SAS using both the DCF- and EVA model is dependent on several factors that have the potential to affect the final estimate. The applied factors and assumptions are based on own assessments, so the final estimate may be subject to great uncertainty. It is attempted to take this into account in a sensitivity analysis in which the consequences of changes in the WACC will be reflected.

The theoretically calculated estimate of WACC can be subject to great uncertainty. The estimated value of WACC which is estimated to be 7.9 percent and reflects the required return for both owners and lenders, and hence the return required by the average investor in SAS. The level of the calculated estimate is judged to be somewhat low, in light of the company's high operating and financial risk. It can therefore be assumed that the average investor is not satisfied with a return equal to the calculated estimate.

The changes in WACC and the effect of it on the share price in the scenarios are illustrated in the below table:

Sensitivity Analysis	WACC - 1 %	WACC	WACC + 1%
Scenario	6.9%	7.9%	8.9%
Base Scenario	30.17	6.55	-6.75
Bullish Scenario	384.17	144.10	72.52
Bearish Scenario	-99.05	-92.50	-87.42

Table 27 – Sensitivity analysis on WACC

Table 27 indicates that relatively small changes of + / - one percent in WACC translates into great variations in the share prices. A lower WACC will result in a higher enterprise value due to the increase in the present value of the terminal period. Conversely, a higher WACC will lead to a lower enterprise value and thereof a lower share price. It is estimated that the theoretical estimate of WACC is calculated correctly, which is why the presented estimates of the share prices in the different scenario can be considered as reliable.

The weighting that has been applied can also affect the ultimate share price significantly, as will be illustrated in the below table:

Weighting	Variation 1	Variation 2	Variation 3
Base Scenario	33%	50%	66%
Bullish Scenario	33%	50%	13%
Bearish Scenario	33%	0%	24%
Share price, SEK	**49.71**	**75.32**	**22.34**

Table 28 – Sensitivity analysis on weighting

Since the weighting is based on subjective assumptions throughout the analyses, it is a factor that adds to the uncertainty of the calculated share price, as it is not given that a different person would have come up with the same assumptions and thus arrived at the same values as the author.

To summarize, the sensitivity analysis shows a clear picture of how minor changes to the WACC and weighting of the different scenarios can lead to significant changes in the share price. This emphasizes the fact, that these two factors themselves are elements of uncertainty in both the DCF- and EVA model.

11. Conclusion

This thesis aims to conduct a strategic analysis and historical financial analysis of SAS, in order to do a valuation of the company as of August 1st, 2013. The purpose of the valuation is to support potential investors in their decision making as well as to assess whether the stock price of SAS is over- or undervalued. In order to do so, the following question was asked as a central part of the problem statement:

- "What is the intrinsic value of SAS share as of August 1st, 2013?"

To answer the above question it was important to understand what kind of company SAS is, their origin and the importance of the company in the societies it is operating is. SAS is what can be defined as a structural and systematic important company in Denmark, Sweden and Norway, as the company connects the people in the countries with basically the entire globe as well as acting as a gateway for the outside world. There is no doubt that the infrastructural importance of the Scandinavian airline carrier is crucial to the three countries, and were SAS to go bankrupt during the recent crisis, it would have had a very negative affect on people within the countries.

Several factors significantly influence SAS' behavior and maneuver room at the macro and industry level, as was summarized in the SWOT analysis. The PESTEL and Porter's five forces analyses revealed that the company is particularly exposed to economic factors, as the entire industry is still affected by the financial crisis, with the industry being characterized by declining earnings and high fixed operating costs, as well as the consumers' lack of willingness to buy the premium products of which SAS historically has earned a lot of money from. The were some positives however, such as the technological advancements with more fuel efficient planes, which should lower the running costs of a fleet, as SAS gets around to replace their planes. IATA's forecast for passenger growth was another positive, as the industry organization is expecting to see double-digit growth within the next decade.

Before addressing the key problem, a number of questions were asked in order to arrive at a position to answer it:

- Which areas of SAS are contributing to their financial troubles?

A number of factors are causing the financial woes SAS has experienced in the past few years. The financial crisis has resulted in the consumers opting for cheaper seats, rather than the more

comfortable but more expensive ones. Increased competition from the low-cost carriers such as Norwegian and EasyJet has eaten into SAS' market shares, and the company has found it difficult to reduce their operating costs. In fact, SAS unit costs are amongst the highest in the industry, with the main driver behind being their payroll expenses. Related to the payroll, the reorganized financial result is affected by the incorporation of their pension commitments following the regulation change of the IAS 19. With the figure being included, the equity of SAS in 2012 is lowered by a significant extent. Lastly, the older fleet of SAS has an impact on the capacity that is available to SAS and higher maintenance and fuel costs associated with having an ageing fleet.

The profitability of SAS has been negative in recent years and the financial analysis only revealed small signs of improvement. This is outlined by the fact that the revenue has gone down, the return on equity, return on invested capital and the profit margins are negative throughout the analyzed period (except for 2011) and the company is having a hard time utilizing its resources and its capital as is illustrated by the low asset turnover rate.

- How is the competitive situation of SAS?

The industry is characterized by an intense price competition. There is a lack of loyalty amongst the consumers and they are not reluctant to change suppliers to meet their need of lower prices. Consumers do have a variety of substitute products to choose from, which are more prevalent over shorter distances. Business consumers have the added flexibility that technology provides, as they can attend meetings over i.e. teleconference facilities. Finally, the bargaining power of the suppliers can also be considered to be in the higher end. All of these factors are characteristics of an industry with a low profitability. The low cost carriers have played a significant part in the development of the industry, as their focus on lower prices and lower fixed costs has enabled them to capture market shares from more traditional airline carriers like SAS, which is also why they are better off financially. Ultimately they have forced the traditional carriers to rethink their strategy.

- What is the future outlook of SAS?

Based on the strategic and financial analyses as well as assumptions about the future, three likely scenarios were developed in order to factor in probable outcomes for the future of SAS. All scenarios consisted of a forecasted period of 5 years plus a terminal period. The forecasted statements were used as a basis for valuating the company using both the DCF- and EVA-model valuation models, with the discounted factor calculated to be 7.9 percent.

The forecasted statements in the different scenarios revealed, that much depends on SAS' ability to succeed with their 4Excellence and 4XNG strategies. If SAS are able to establish all its planned routes, upgrade their airplane fleet, find ways to increase utilization, and perhaps most importantly, lower their unit costs, the company does posses the capabilities to keep on flying. But as the forecasted statements and the valuation revealed, even if SAS manages to succeed with the aforementioned factors, the company will not overnight turn into a profitable corporation, the company needs to be trimmed and renewed in order to be competitive given the threats its facing from mainly the low cost carriers.

The internal analysis identified three resources or capabilities that provides SAS with sustained competitive advantages. These resources and capabilities (SAS brand, grandfather rights and route network) are what SAS should build upon in order to turn the SAS into a profitable company.

Obviously, the forecasting is subject to great uncertainty as it is largely based on assumptions. In order to account for such uncertainties a sensitivity analysis was carried out to see just how much the valuation would have changed if calculated with other factors. It went to support the view, that there are determents, which can greatly influence the final result.

With that being said, it was found that the intrinsic value of one SAS share as of August 1st, 2013 was SEK 11.79. Thus, indicating that the SAS share was overvalued by SEK 1.11, corresponding to MSEK 365.

12. Discussion

12.1 Methods and models applied

In this thesis the method of valuation chosen has been the indirect equity value approaches, the DCF- and EVA-models. Despite the fact that the models are considered to be the most useful in practice, they are also subject to some uncertainties. The models can be criticized for being too static and lacking flexibility, since they don't take into account changes because of the constant assumptions in the terminal period. The present value of the terminal value often constitutes the vast majority of the business value, indicating a relatively large uncertainty in the valuation of the terminal period. In addition the changes will rarely be symmetrical, since they will often move in different directions as a result of for instance the capital structure of the company. Furthermore, the

sensitivity analysis showed a clear picture of how relatively small changes in the discount rates can affect the valuation results.

It would have been beneficial to use other valuation models to support the valuation based on the capital value-based models. One example is the use of multiples and real options. Multiples are (as opposed to absolute valuation models) a relative valuation model and are used primarily to support the outcome of the capital value-based models. Real options can also be used to support the capital value-based models, as real options is a method that is more flexible and better able to manage the uncertainties. Real Options can thus offset the considerable uncertainty associated with the capital value-based models, which appears when there is only one estimate of the company's value.

The purpose of the sensitivity analysis was to reflect the impact of changes in WACC. The analysis could also have highlighted the valuation uncertainties by looking at changes in other variables, such as the growth factor (g) in the terminal period, other operating profit after tax, return on assets, profit margin and asset turnover ratio**.**

With that being said however, it is estimated that the methodology and various models used in this thesis results in an accurate picture of the valuation of SAS, which is also why the abovementioned methods have not been applied.

12.2 Subsequent events

During the writing of the dissertation, SAS presented their financial results for 2013. As it was necessary to work with a cut-off date of August 1st, any information that arrived after the cut-off date, including the financial results of 2013, have not been taken into consideration into the valuation of the company. However, it will be presented in the following how the information and results after August 1st 2013, would have affected the valuation of SAS, where it to be included:

- 2013-09-19: SAS issues unsecured bonds for MSEK 1,500 with a coupon rate of nine percent and four years to maturity in 2017, in order to refinance its outstanding bonds. [77]
- 2013-09-30: The announced sale of 80 percent of shares in Widerøe is completed, with the remaining to be divested in 2016.[78]

[77] http://se.yhp.waymaker.net/sasgroup/release.asp?id=269207
[78] http://se.yhp.waymaker.net/sasgroup/release.asp?id=269213

- 2013-10-03: SAS signs an agreement with Airbus to deliver long haul aircraft consisting of 4 A330-300 planes for delivery in 2015/2016 and 8 A-350's to be delivered from 2018 with an option for 6 additional A350 long haul carriers. The list price of the deal is estimated at USD 3.3 billion.[79]

- 2013-11-20: SAS signs an agreement with charter company Apollo to fly its customers from 17 different locations in Sweden, Norway and Denmark. The deal is estimated to be worth SEK 910 million.[80]

- 2013-12-19: SAS reports 2013 financial results, where the company for the first time in several years is able to present a profit of MSEK 179. Other key figures are[81]:
  - Revenue MSEK 42,182
  - Cash flow from operating activities MSEK 1,028
  - EBIT margin 3.3%
  - SAS traffic increase by 3.8%
  - Income before tax and nonrecurring items: MSEK 775

- 2014-01-27: Group Annual Report of fiscal year 2013 is made available[82]

- 2014-02-03: SAS launches next-generation EuroBonus with additional benefits across the various bonus levels, as well as introduction of a new level for those who travel most called EuroBonus Diamond.[83]

Having presented the most notable developments of SAS since the cut-off date it is clear that one significant event stands out, which is the presentation of the 2013 financial results.

The sale of Widerøe was already accounted for in the forecasted period, since the divestment was already planned and laid out in the 2012 annual report. So with SAS, going ahead with the plans will have no effect on the valuation. The planes presented for the order and delivery of new planes after the cut-off date however, would have affected the forecasting assumptions with regards to the expected growth rate in the forecasted period and specifically the terminal period, since SAS has a

[79] http://se.yhp.waymaker.net/sasgroup/release.asp?id=269218
[80] http://se.yhp.waymaker.net/sasgroup/release.asp?id=269239
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large number of the planes arriving beyond 2018. The same applies for the Apollo deal, which would also have had a positive effect on the expected traffic revenue, which in turn would have increased the profit margin. Likewise, given the higher growth rate in the terminal period, the valuation of the company would have been more favorable.

The expansion of the SAS loyalty program; EuroBonus is seen as a good step towards retaining customers, but as it is difficult to asses whether it will lead to more traffic, it will have to be evaluated over the next few years to determine whether it's a success. On this basis it would have no impact on the valuation of SAS.

The issuance of new corporate bonds is seen as SAS acknowledging the fact, that their equity capital was hard pressed and in need of a cash injection, as was also mentioned in the thesis, with regards to SAS having little maneuver room for new investments. The high coupon rate supports the fact presented in the thesis, that SAS is a risky company to invest in, however it would enable SAS to potentially lower their cost of secured debt, as they get around to refinance some of their current obligations. As such, the bonds would have had a slightly positive effect on the valuation of the company.

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Appendix 1 – Official Income Statements

MSEK	2008	2009	2010	2011	2012
Revenue	53,195	44,918	40,723	41,412	35,986
Payroll expense	-18,153	-17,998	-13,473	-13,092	-11,584
Other operating expenses	-31,791	-25,912	-25,210	-23,741	-22,105
Leasing costs for aircraft	-2,282	-2,319	-1,815	-1,560	-1,342
Depreciation, amortization and impairment	-1,591	-1,845	-1,867	-2,413	-1,426
Share of income in affiliated companies	-147	-258	12	28	32
Income from the sale of share in subsidiaries and affiliated companies	0	429	-73	0	400
Income from the sale of aircraft and buildings	4	-97	-239	12	-247
Operating Income	**-765**	**-3,082**	**-1,942**	**646**	**-286**
Income from other holdings of securities	0	0	-263	-1,469	0
Financial income	654	304	186	224	96
Financial expense	-933	-645	-1,041	-1,030	-1,055
Income before tax	**-1,044**	**-3,423**	**-3,060**	**-1,629**	**-1,245**
Tax	28	803	799	-58	260
Net income for the year from continuing operations	**-1,016**	**-2,620**	**-2,261**	**-1,687**	**-985**
Income from discontinued operations	-5305	-327	43	0	0
Net income for the year	**-6,321**	**-2,947**	**-2,218**	**-1,687**	**-985**
Exchange rate differences on translation of foreign operations, net after tax	-336	27	-121	127	-29
Cash flow - hedging reserve, net after tax	-1848	970	469	-445	-263
Total Comprehensive Income	**-8,505**	**-1,950**	**-1,870**	**-2,005**	**-1,277**

Appendix 2 – Official Balances

ASSETS, MSEK	2008	2009	2010	2011	2012
Fixed Assets					
Intangible Assets	1,092	1,296	1,414	1,693	1,922
Tangible Fixed Assets					
Land and building	513	439	375	491	353
Aircraft	11,037	13,087	12,652	11,866	11,220
Spare engines and spare parts	1,185	1,299	1,393	1,367	1,349
Workshop and aircraft servicing equipment	220	161	90	76	110
Other equipment and vehicles	318	192	130	123	117
Investment in progress	232	158	118	66	34
Prepayments relating to tangible fixed assets	627	238	24	155	160
	14,132	**15,574**	**14,782**	**14,144**	**13,343**
Financial fixed assets					
Equity in affiliated companies	622	358	294	317	325
Other holdings of securities	5	234	23	23	23
Pension funds, net	9,658	10,286	10,512	11,355	12,232
Deferred tax asset	921	1,159	1,187	1,340	597
Other long-term receivables	410	729	2,379	1,011	1,250
	11,616	**12,766**	**14,395**	**14,046**	**14,427**
Total fixed assets	**2,684**	**29,636**	**30,591**	**29,883**	**29,692**
Current assets					
Expendable spare parts and inventories	820	758	678	705	687
Current receivables	1,851	1,581	1,277	1,275	1,311
Accounts receivable	479	92	3	6	3
Receivables from affiliated companies Other receivables	2,661	4,780	2,901	2,574	1,399
Prepaid expenses and accrued income	1,009	1,058	839	934	872
	6	**7,511**	**502**	**4,789**	**3,586**
Cash and cash equivalents					
Short-term investments	3,872	3,691	3,281	2,842	366
Cash and bank balances	1,911	498	1,762	966	2,423

Assets held for sale	3,921	401	493	0	0
	9,704	459	5,536	3,808	2,789
Total current assets	16,524	12,859	11,234	9,302	7,062
TOTAL ASSETS	**43,364**	**42,495**	**41,825**	**39,185**	**36,754**
SHAREHOLDERS' EQUITY AND LIABILITIES, MSEK	**2008**	**2009**	**2010**	**2011**	**2012**
Shareholders' equity					
Share capital	1,645	6,168	6,612	6,612	6,612
Other contributed capital	170	170	337	337	337
Reserves	-718	279	627	309	17
Retained earnings	6,215	4,772	6,862	5,175	4,190
Total shareholders' equity attributable to Parent Company owners	**7,312**	**11,389**	**14,438**	**12,433**	**11,156**
Non-controlling interests	0	0	0	0	0
Total shareholders' equity	**7,312**	**11,389**	**14,438**	**12,433**	**11,156**
Long-term liabilities					
Subordinated loans	953	919	974	1,019	978
Bond loans	2,212	0	1,503	2,809	2,763
Other loans	10,535	6,809	6,866	6,179	5,260
Deferred tax liability	2,988	2,832	2,303	2,154	1,013
Other provisions	2,138	2,131	2,143	1,673	1,967
Other liabilities	334	378	143	55	130
	1,916	**13,069**	**13,932**	**13,889**	**12,111**
Current liabilities					
Current portion of long-term loans	872	5,742	1,383	2,309	1,403
Short-term loans	1,189	907	1,073	997	411
Prepayments from customers	7	13	16	24	0
Accounts payable	2,068	1,738	1,749	1,540	1,929
Tax payable	110	27	22	18	32
Unearned transportation revenue	3,299	3,227	3,598	3,453	4,292
Current portion of other provisions	148	852	657	428	1,186
Other liabilities	2,460	2,110	2,070	1,160	1,033
Accrued expenses and prepaid income	4,274	3,264	2,755	2,934	3,201
Liabilities attributable to assets held for sale	2,465	157	132	0	0

	16,892	**18,037**	**13,455**	**12,863**	13,487
TOTAL LIABILITIES	**36,052**	**31,106**	**27,387**	**26,752**	**25,598**
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES (INVESTED CAPITAL)	**43,364**	**42,495**	**41,825**	**39,185**	**36,754**

Appendix 3 – Reorganized Income Statements

MSEK	2008	2009	2010	2011	2012
Revenue	53,195	44,918	40,723	41,412	35,986
Payroll Expenses	-18,153	-17,998	-13,473	-13,092	-11,584
Other Operating Expenses	-31,791	-25,912	-25,210	-23,741	-22,105
EBITDAR according to annual report	**3,251**	**1,008**	**2,040**	**4,579**	**2,297**
Restructuring expenses	49	1,551	837	141	-
Spainair provision	0	0	0	229	-
Lawsuit expenses	357	0	991	31	28
Ash cloud expenses	0	0	700	0	0
USD Hedges in sale of planes income	0	0	0	-729	0
Eurobonus related income	0	0	0	-380	0
Renegotiations expenses	0	0	0	0	80
EBITDAR adjusted	**3,657**	**2,559**	**4,568**	**3,871**	**2,405**
Obligation leasing payments	-1,630	-2,008	-1,601	-1,352	-1,139
EBITDA	**2,027**	**551**	**2,967**	**2,519**	**1,266**
Depreciation, amortization and impairment	-1,591	-1,845	-1,867	-2,413	-1,426
EBIT	**436**	**-1,294**	**1,100**	**106**	**-160**
Tax on EBIT	**-12**	**304**	**-287**	**4**	**33**
NOPLAT	**424**	**-990**	**813**	**110**	**-127**
Secondary and non-recurring items:					
Share of income in affiliated companies	-147	-258	12	28	32
Income from the sale of share in subsidiaries and affiliated companies	0	429	-73	0	400
Income from the sale of aircraft and buildings	4	-97	-239	12	-247
Restructuring expenses	-49	-1,551	-837	-141	-
Spainair provision	-		-	-229	-
Lawsuit expenses	-357	-	-991	-31	-28

Ash cloud expenses	-	-	-700	-	-
USD Hedges in sale of planes income	-	-	-	729	-
Eurobonus related income	-	-	-	380	
Renegotiations expenses	-	-	-	-	-80
Secondary and non-recurring income before tax	-549	-1,477	-2,828	748	77
Tax on non-recurring items	15	346	738	27	-16
Cash flow - hedging reserve, net after tax	-1848	970	469	-445	-263
Seconday and non-recurring income after tax	**-2,382**	**-161**	**-1,621**	**330**	**-202**
Income from other holdings of securities	0	0	-263	-1469	0
Financial income	654	304	186	224	96
Financial expense	-933	-645	-1041	-1030	-1055
Interest expense on leases	-652	-311	-214	-208	-203
Net financial expense before tax	-931	-652	-1,332	-2,483	-1,162
Tax shield	25	153	348	-88	243
Exchange rate differences on translation of foreign operations, net after tax	-336	27	-121	127	-29
Net financial expenses	**-1,242**	**-472**	**-1,106**	**-2,445**	**-948**
Net Income from discontinued operations	-5,305	-327	43		
Net income	**-8,505**	**-1,950**	**-1,870**	**-2,005**	**-1,277**
Effective tax rate	*2.68%*	*23.46%*	*26.11%*	*-3.56%*	*20.88%*
Tax	*28*	*803*	*799*	*-58*	*260*

Appendix 4 – Reorganized Balance Sheets

MSEK	2008	2009	2010	2011	2012
Current Operational Assets					
Other long-term receivables	410	729	2,379	1,011	1,250
Expendable spare parts and inventories	820	758	678	705	687
Current receivables	1,851	1,581	1,277	1,275	1,311
Accounts receivable	479	92	3	6	3
Receivables from affiliated companies Other receivables	2,661	4,780	2,901	2,574	1,399
Prepaid expenses and accrued income	1,009	1,058	839	934	872
Cash & cash equivalents (2% of revenue)	1,064	898	814	828	720
	8,294	**9,896**	**8,891**	**7,333**	**6,242**
Current Operational Liabilities					
Prepayments from customers	7	13	16	24	0
Accounts payable	2,068	1,738	1,749	1,540	1,929
Tax payable	110	27	22	18	32
Unearned transportation revenue	3,299	3,227	3,598	3,453	4,292
Current portion of other provisions	148	852	657	428	1,186
Other liabilities	2,460	2,110	2,070	1,160	1,033
Accrued expenses and prepaid income	4,274	3,264	2,755	2,934	3,201
Liabilities attributable to assets held for sale	2,465	157	132	0	0
	14,831	**11,388**	**10,999**	**9,557**	**11,673**
Net Operating Working Capital	**-6,537**	**-1,492**	**-2,108**	**-2,224**	**-5,431**
Non-current Operational Assets					
Intangible Assets	1,092	1,296	1,414	1,693	1,922
Tangible Assets	14,132	15,574	14,782	14,144	13,343
Asset value of leased planes	16,300	20,078	16,005	13,518	11,392
Total non-current operational assets	**31,524**	**36,948**	**32,201**	**29,355**	**26,657**
Operating Invested Capital	**24,987**	**35,456**	**30,094**	**27,131**	**21,226**
Financial Assets					

Deferred tax asset	921	1,159	1,187	1,340	597
Equity in affiliated companies	622	358	294	317	325
Other holdings of securities	5	234	23	23	23
Short-term investments	3,872	3,691	3,281	2,842	366
Cash and bank balances (Excess Cash)	847	-400	948	138	1,703
Pension funds, net	9,658	10,286	10,512	11,355	12,232
Assets held for sale	3,921	401	493	0	0
	19,846	**15,729**	**16,738**	**16,015**	**15,246**
Financial Liabilities					
Subordinated loans	953	919	974	1,019	978
Bond loans	2,212	0	1,503	2,809	2,763
Other loans	10,535	6,809	6,866	6,179	5,260
Debt from leased planes	16,300	20,078	16,005	13,518	11,392
Current portion of long-term loans	872	5742	1383	2309	1403
Short-term loans	1189	907	1073	997	411
Deferred tax liability	2,988	2,832	2,303	2,154	1,013
Other provisions	2,138	2,131	2,143	1,673	1,967
Other liabilities	334	378	143	55	130
IAS19 pension adjustment					6600
	37,521	**39,796**	**32,393**	**30,713**	**31,917**
Net Financial Liabilities (Net interest-bearing debt)	**17,675**	**24,067**	**15,656**	**14,698**	**16,671**
IAS19 pension adjustment					-6600
Equity	**7,312**	**11,389**	**14,438**	**12,433**	**4,555**
Net interest-bearing debt + Equity (Invested Capital)	**24,987**	**35,456**	**30,094**	**27,131**	**21,226**

Appendix 5 – Leasing calculations

Leasing, MSEK	2008	2009	2010	2011	2012	e2013	e2014	e2015	e2016	e2017
Cost of Debt	4%	1.55%	1.34%	1.54%	1.78%	7.72%	7.72%	7.72%	7.72%	7.72%
Leasing costs for aircraft	2,282	2,319	1,815	1,560	1,342	1,667	1,766	1,675	1,450	1,219
Asset life in years	10	10	10	10	10	10	10	10	10	10
Asset value	16,300	20,078	16,005	13,518	11,392	9,407	9,966	9,453	8,183	6,879
Lease liabilities										
Debt	16,300	20,078	16,005	13,518	11,392	9,407	9,966	9,453	8,183	6,879
Interest expense	652	311	214	208	203	726	769	730	632	531
Obligation payment	1,630	2,008	1,601	1,352	1,139	941	997	945	818	688
Lease payment	2,282	2,319	1,815	1,560	1,342	1,667	1,766	1,675	1,450	1,219

Leasing costs for aircraft, SAS Annual Reports under "Leasing commitments"
Cost of debt, SAS Annual Reports under "other loans"

Bull Scenario:

Leasing, MSEK	2008	2009	2010	2011	2012	e2013	e2014	e2015	e2016	e2017
Cost of Debt	4%	1.55%	1.34%	1.54%	1.78%	4.50%	4.50%	4.50%	4.50%	4.50%
Leasing costs for aircraft	2,282	2,319	1,815	1,560	1,342	1,667	1,766	1,675	1,450	1,219
Asset life in years	10	10	10	10	10	10	10	10	10	10
Asset value	16,300	20,078	16,005	13,518	11,392	11,497	12,179	11,552	10,000	8,407
Lease liabilities										
Debt	16,300	20,078	16,005	13,518	11,392	11,497	12,179	11,552	10,000	8,407
Interest expense	652	311	214	208	203	517	548	520	450	378
Obligation payment	1,630	2,008	1,601	1,352	1,139	1,150	1,218	1,155	1,000	841
Lease payment	2,282	2,319	1,815	1,560	1,342	1,667	1,766	1,675	1,450	1,219

Appendix 6 – Forecasted figures (base scenario)

Forcasted Income Statement

MSEK	2013	2014	2015	2016	2017	Terminal Year
Revenue	**37,256**	**38,340**	**39,468**	**40,569**	**42,378**	**44,20**
Payroll Expenses	-11,584	-11,816	-12,052	-12,293	-12,539	-12,79
Other Operating Expenses	**-21,212**	**-21,859**	**-22,531**	**-24,187**	**-25,266**	**-26,35**
Jet fuel	-8,364	-8,655	-8,958	-9,259	-9,725	-10,07
Maintenance	-2,096	-2,157	-2,221	-2,283	-2,384	-2,48
Cost reductions (restructuring)	1,000	1,000	1,000			
All other operating expenses	-11,752	-12,046	-12,351	-12,645	-13,156	-13,79
EBITDAR	**4,460**	**4,666**	**4,885**	**4,089**	**4,573**	**5,06**
Obligation leasing payments	-941	-997	-945	-818	-688	-87
EBITDA	**3,519**	**3,670**	**3,940**	**3,270**	**3,885**	**4,18**
Depreciation, amortization and impairment	-1,282	-1,319	-1,358	-1,396	-1,458	-1,52
EBIT	**2,238**	**2,351**	**2,582**	**1,875**	**2,428**	**2,66**
Tax on EBIT	-492	-517	-568	-412	-534	-58
NOPLAT	**1,745**	**1,834**	**2,014**	**1,462**	**1,894**	**2,07**
Secondary and non-recurring items:						
Share of income in affiliated companies	30	30	30	30	30	3
Secondary and non-recurring income before tax	30	30	30	30	30	3
Tax on non-recurring items	7	7	7	7	7	
Cash flow - hedging reserve, net after tax	-145	-150	-154	-158	-165	-17
Seconday and non-recurring income after tax	**-109**	**-113**	**-117**	**-122**	**-129**	**-13**
Financial income	236	243	250	257	269	28
Financial expense	-832	-856	-881	-906	-946	-98
Interest expense on leases	-726	-769	-730	-632	-531	
Net financial expense before tax	**-1,322**	**-1,382**	**-1,361**	**-1,280**	**-1,209**	**-70**
Tax shield	-291	-304	-299	-282	-266	-15
Exchange rate differences on translation of foreign operations, net after tax	-48	-49	-51	-52	-54	-5

Net financial expenses	**-1,661**	**-1,736**	**-1,711**	**-1,614**	**-1,529**	**-91**
Net income	**-24**	**-15**	**186**	**-273**	**236**	**1,02**
Effective tax rate	*22%*	*22%*	*22%*	*22%*	*22%*	*22%*
Forcasted Balance Sheet						
Net operating Assets	24,217	24,921	25,654	26,370	27,546	28,73
Net financial liabilities	8,072	8,307	8,551	8,790	9,182	9,57
Equity	16,144	16,614	17,103	17,580	18,364	19,15
Net interest-bearing debt + Equity (Invested Capital)	**24,217**	**24,921**	**25,654**	**26,370**	**27,546**	**28,73**
Free Cash flow						
Operating Profits	1,745	1,834	2,014	1,462	1,894	2,07
Changes Net operating assets	2,991	705	733	716	1,176	1,19
Free cash flow	**-1,245**	**1,129**	**1,281**	**747**	**718**	**88**
ROIC	6.76%	6.90%	7.39%	5.08%	6.41%	6.76%

Appendix 7 – Forecasted figures (bullish scenario)

Forcasted Income Statement

MSEK	2013	2014	2015	2016	2017	Terminal Year
Revenue	**37,953**	**39,700**	**41,529**	**43,374**	**46,023**	**48,805**
Payroll Expenses	-11,584	-11,758	-11,934	-12,113	-12,295	-12,479
Other Operating Expenses	**-21,627**	**-22,669**	**-23,759**	**-25,860**	**-27,439**	**-29,097**
Jet fuel	-8,200	-8,342	-8,488	-8,631	-8,848	-9,008
Maintenance	-2,096	-2,157	-2,221	-2,283	-2,384	-2,384
Cost reductions (restructuring)	1,000	1,000	1,000			
All other operating expenses	-12,331	-13,170	-14,050	-14,946	-16,206	-17,705
EBITDAR	**4,741**	**5,273**	**5,835**	**5,401**	**6,289**	**7,228**
Obligation leasing payments	-1,150	-1,218	-1,155	-1,000	-841	-1,073
EBITDA	**3,592**	**4,055**	**4,680**	**4,401**	**5,448**	**6,155**
Depreciation, amortization and impairment	-1,306	-1,366	-1,429	-1,492	-1,583	-1,679

EBIT	**2,286**	**2,690**	**3,251**	**2,909**	**3,865**	**4,476**
Tax on EBIT	-503	-592	-715	-640	-850	-985
NOPLAT	**1,783**	**2,098**	**2,536**	**2,269**	**3,015**	**3,492**
Secondary and non-recurring items:						
Share of income in affiliated companies	30	30	30	30	30	30
Secondary and non-recurring income before tax	30	30	30	30	30	30
Tax on non-recurring items	7	7	7	7	7	7
Cash flow - hedging reserve, net after tax	-148	-155	-162	-169	-179	-190
Seconday and non-recurring income after tax	**-111**	**-118**	**-125**	**-133**	**-143**	**-154**
Financial income	241	252	263	275	292	309
Financial expense	-847	-887	-927	-969	-1,028	-1,090
Interest expense on leases	-517	-548	-520	-450	-378	-
Net financial expense before tax	**-1,124**	**-1,183**	**-1,184**	**-1,144**	**-1,114**	**-780**
Tax shield	-247	-260	-260	-252	-245	-172
Exchange rate differences on translation of foreign operations, net after tax	-49	-51	-53	-56	-59	-63
Net financial expenses	**-1,420**	**-1,494**	**-1,498**	**-1,451**	**-1,418**	**-1,015**
Net income	**251**	**486**	**913**	**686**	**1,454**	**2,323**
Effective tax rate	22%	22%	22%	22%	22%	*22%*
Forcasted Balance Sheet						
Net operating Assets	24,669	25,805	26,994	28,193	29,915	31,723
Net financial liabilities	8,223	8,602	8,998	9,398	9,972	10,574
Equity	16,446	17,203	17,996	18,796	19,943	21,149
Net interest-bearing debt + Equity (Invested Capital)	**24,669**	**25,805**	**26,994**	**28,193**	**29,915**	**31,723**
Free Cash flow						
Operating Profits	1,783	2,098	2,536	2,269	3,015	3,492
Changes Net operating assets	3,443	1,136	1,188	1,200	1,721	1,808
Free cash flow	**-1,660**	**962**	**1,348**	**1,069**	**1,294**	**1,683**
ROIC	6.78%	7.67%	8.93%	7.58%	9.60%	10.52%

Appendix 8 – Forecasted figures (bearish scenario)

Forcasted Income Statement

MSEK	2013	2014	2015	2016	2017	Terminal Yea
Revenue	**35,464**	**35,352**	**35,250**	**35,009**	**35,178**	**35,02**
Payroll Expenses	-11,932	-12,289	-12,658	-13,038	-13,429	-13,83
Other Operating Expenses	**-20,779**	**-20,711**	**-20,650**	**-21,005**	**-21,107**	**-21,01**
Jet fuel	-8,693	-9,298	-9,950	-10,619	-11,687	-12,53
Maintenance	-2,117	-2,201	-2,288	-2,375	-2,506	-2,64
Cost reductions (restructuring)	500	500	500			
All other operating expenses	-10,468	-9,713	-8,912	-8,011	-6,914	-5,84
EBITDAR	**2,754**	**2,352**	**1,942**	**966**	**642**	**17**
Obligation leasing payments	-941	-997	-945	-818	-688	-87
EBITDA	**1,813**	**1,355**	**997**	**147**	**-46**	**-70**
Depreciation, amortization and impairment	-1,220	-1,216	-1,213	-1,204	-1,210	-1,20
EBIT	**593**	**139**	**-216**	**-1,057**	**-1,256**	**-1,90**
Tax on EBIT	-131	-31	48	233	276	41
NOPLAT	**463**	**108**	**-168**	**-825**	**-979**	**-1,48**
Secondary and non-recurring items:						
Share of income in affiliated companies	30	30	30	30	30	3
Secondary and non-recurring income before tax	30	30	30	30	30	3
Tax on non-recurring items	7	7	7	7	7	
Cash flow - hedging reserve, net after tax	-493	-491	-490	-487	-489	-48
Seconday and non-recurring income after tax	**-456**	**-455**	**-453**	**-450**	**-452**	**-45**
Financial income	225	224	224	222	223	22
Financial expense	-792	-789	-787	-782	-786	-78
Interest expense on leases	-726	-769	-730	-632	-531	
Net financial expense before tax	**-1,293**	**-1,335**	**-1,293**	**-1,191**	**-1,094**	**-56**
Tax shield	-285	-294	-285	-262	-241	-12
Exchange rate differences on translation of foreign operations, net after tax	-46	-45	-45	-45	-45	-4
Net financial expenses	**-1,623**	**-1,674**	**-1,623**	**-1,499**	**-1,379**	**-72**
Net income	**-1,617**	**-2,020**	**-2,245**	**-2,773**	**-2,811**	**-2,66**

Effective tax rate	22%	22%	22%	22%	22%	22%
Forcasted Balance Sheet						
Net operating Assets	23,052	22,979	22,912	22,756	22,866	22,76
Net financial liabilities	7,684	7,660	7,637	7,585	7,622	7,58
Equity	15,368	15,319	15,275	15,170	15,244	15,17
Net interest-bearing debt + Equity (Invested Capital)	**23,052**	**22,979**	**22,912**	**22,756**	**22,866**	**22,76**
Free Cash flow						
Operating Profits	463	108	-168	-825	-979	-1,48
Changes Net operating assets	1,826	-73	-67	-157	110	-10
Free cash flow	**-1,363**	**181**	**-102**	**-668**	**-1,090**	**-1,38**
ROIC	0.03%	-1.51%	-2.71%	-5.60%	-6.26%	-8.51%

Appendix 9 – EVA Model

Base Case Valuation - MSEK	2013	2014	2015	2016	2017	Terminal Year
Operating Profits	1,745	1,834	2,014	1,462	1,894	2,077
Normal Profits	1,677	1,913	1,969	2,027	2,083	2,176
EVA	69	-80	45	-564	-190	-99
Discount Factor	1.08	1.16	1.26	1.36	1.46	0.05
PV of EVA	64	-68	36	-416	-130	-1,885
Total PV of EVA	-515					
PV of terminal value	-1,885					
Book value of NOA	21,226					
Enterprise Value	18,826					
Net-interest bearing debt	-16,671					
Equity Value	2,155					
Share price	**6.55**					

Bullish Case Valuation - MSEK	2013	2014	2015	2016	2017	Terminal Year
Operating Profits	1,783	2,098	2,536	2,269	3,015	3,492
Normal Profits	1,677	1,949	2,039	2,132	2,227	2,363
EVA	106	149	497	137	788	1,128
Discount Factor	1.08	1.16	1.26	1.36	1.46	0.03
PV of EVA	98	128	396	101	538	41,592
Total PV of EVA	1,262					
PV of terminal value	41,592					
Book value of NOA	21,226					
Enterprise Value	64,079					
Net-interest bearing debt	-16,671					
Equity Value	47,409					
Share price	**144.10**					

Bearish Case Valuation - MSEK	2013	2014	2015	2016	2017	Terminal Year
Operating Profits	463	108	-168	-825	-979	-1,487
Normal Profits	1,677	1,821	1,815	1,810	1,798	1,806
EVA	-1,214	-1,713	-1,984	-2,635	-2,777	-3,293

Discount Factor	1.08	1.16	1.26	1.36	1.46	0.12
PV of EVA	-1,125	-1,471	-1,579	-1,944	-1,899	-26,968
Total PV of EVA	-8,018					
PV of terminal value	-26,968					
Book value of NOA	21,226					
Enterprise Value	-13,760					
Net-interest bearing debt	-16,671					
Equity Value	-30,431					
Share price	**-92.50**					

Appendix 10 – Credit rating

Research | Ratings | Family Tree | Peer Group | Market Signals

Rating Class Detail | Debt List | Issuer Outlook

Export Results:2

Class	Rating	Date	Action	Watch Status
LT Corporate Family Ratings (Foreign)	Caa1	13 Sep 2013	RATING AFFIRMATION	Not on Watch
Probability of Default	Caa1-PD	13 Sep 2013	RATING AFFIRMATION	Not on Watch

Rating Class History: LT Corporate Family Ratings (Foreign)

Multiple Ratings*
Single Rating

*This debt class has multiple ratings. For more details, check the Debt List.

Export Results: 12

Date	Currency	Rating	Action
13 Sep 2013	foreign	Caa1	RATING AFFIRMATION
12 May 2010	foreign	Caa1	CONFIRMED
11 Feb 2010	foreign	Caa1	On Watch - Possible Downgrade
12 Nov 2009	foreign	Caa1	Downgrade
17 Aug 2009	foreign	B3	Downgrade
07 Nov 2008	foreign	B2	Downgrade
23 Jun 2005	foreign	B1	Upgrade
25 May 2005	foreign	B2	Downgrade
25 Jan 2005	foreign	B1	On Watch - Possible Downgrade
27 May 2004	foreign	B1	Downgrade
05 Mar 2004	foreign	Ba3	On Watch - Possible Downgrade
05 Mar 2004	foreign	Ba3	New