Proposed acquisition of Norwegian Air Shuttle by Ryanair

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Abstract

The European airline industry can be characterized by being a very competitive, in the consolidation phase, with many Asian and Middle East competitors entering into this market. Therefore, there exist several moves airline companies are expected to make in the next couple of years. It is expected some activity from full-service carriers as in a attempt to enter into low-cost business segment, or low-cost carriers to expand into long-haul flight segment due to pressures on costs and profitability, and others. In this context, the current dissertation focuses on the potential deal between Ryanair and Norwegian Air Shuttle. This deal puts forward the entrance of the largest low-cost carrier into the long-haul segment, and an opportunity to expand to other regions as US. Given the conditions of two airlines, the synergies of 1637 million euros were forecasted and thus, it is proposed to Ryanair to pay a premium of 23,36% over the current share price to Norwegian Air Shuttle shareholders. This translates into the price per share of NOK 300 and the total transaction value of NOK 10 727,9 million, all paid in cash.

Resumo

Atualmente, a indústria aérea europeia é muito competitiva e na sua fase de consolidação. Existem muitos novos concorrentes da Ásia e Médio Oriente a entrar neste mercado. Assim, os *experts* nesta área esperam alguma dinâmica nesta indústria a nível de fusões e aquisições. Espera-se que alguns participantes que atualmente operam em segmento de transporte aéreo de pessoas de curtas-distâncias e baixo-custo (LCC), tentem entrar para o segmento de voos de longas-distâncias e vice-versa. Neste âmbito surge esta dissertação de mestrado, que propõe à Ryanair a ser pioneira e comprar a companhia aérea - Norwegian Air Shuttle. A Ryanair é a maior empresa de transporte de baixo-custo e provedora de voos de curta distância na Europa, e apresenta muito potencial para entrar neste segmento de voos de longa distância. Além disso, esta aquisição poderá facilitar a Ryanair a expandir a sua atividade para outras regiões. As potenciais sinergias foram calculadas e correspondem aos 1637 milhões de euros. Desta forma, sugere-se que a Ryanair pague 300 coroas norueguesas por ação (em prêmio por ação de 23,36%), o que corresponde ao valor total da transação de 10 727,9 milhões de coroas, tudo a pagar em *cash*.

Acknowledgements

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CONTENTS

INTRODUCTION

The present dissertation is an analysis and proposal of the potential deal that can occur in the airline industry between Ryanair and Norwegian Air Shuttle. Therefore, this dissertation comprises two main goals. The first one resides in contextualizing the deal, assessing the strategic rationale of it as well as to account the potential financial benefits that may arise. The second objective consists in valuing firms on a stand-alone basis, looking for potential synergies that may come up from the combination of the two businesses and finally, agree on transaction terms.

The European airline industry can be characterized by being very fragmented, with some large companies and many medium ones, with more firms entering the market and competing for market share. Recently, some Middle-East and Asian companies entered into this market intensifying, even more, the competition. For that reason, many airline companies are looking for partnerships in order to consolidate their positions or to explore new markets in other regions.

In the first section, we conduct a literature review about some valuation methods and some important topics related to the mergers and acquisitions (M&A) field, namely types of mergers, trends, methods of payment and others topics.

Section two concentrates on the European airline industry in order to contextualize the deal. Some opportunities and threats are identified and explored. In addition, it is presented the forms that companies use to take advantage of these opportunities, as well as the ways that use to overcome threats. Specifically, Brexit that it is expected to have a large impact on the airline industry. Thus, it is necessary to study its implications.

The following two sections present detailed firm analysis as well as a valuation of Norwegian Air Shuttle and Ryanair on the stand-alone basis. In here, it is used DCF method and forward Market Multiples. We also present the evolution of the market share price and compare it to the share price obtained through different methods.

The last two sections include analysis of the merged firms with and without synergies included, calculation of synergies and, the discussion of the transaction process. In this last part, the financing options and potential execution risks are reviewed.

LITERATURE REVIEW

1.1. Mergers and Acquisition

Sometimes firms operate in a very turbulent environment, and in order to continue improving its operating activities, they seek for alternatives. This can pass by joining the other market participants. For instance, can form strategic alliances or joint ventures, create contractual relationships or proceed to minority investments (Bruner, 2004). The alternative option consists in pursuing a merger or an acquisition (M&A), which resides in combining two companies to create one larger and more efficient later on. Thus, the turbulent environment is the main source of M&A activity even if its success or failure depends on the transaction terms agreed and mostly, on the way the deal is conducted and implemented (Bruner, 2004).

A turbulent environment we observe during the periods of high uncertainty due to higher competition, progress (advances) in technology and social trends, as well as industry consolidation (Ashkenas et al. 1997). The purchase of one company (target) by the other (buyer) is considered as the simplest "strategy for growth" because it gives access to new markets and simultaneously helps the buyer to get access to new skills and capabilities (Rappaport and Sirower, 1998).

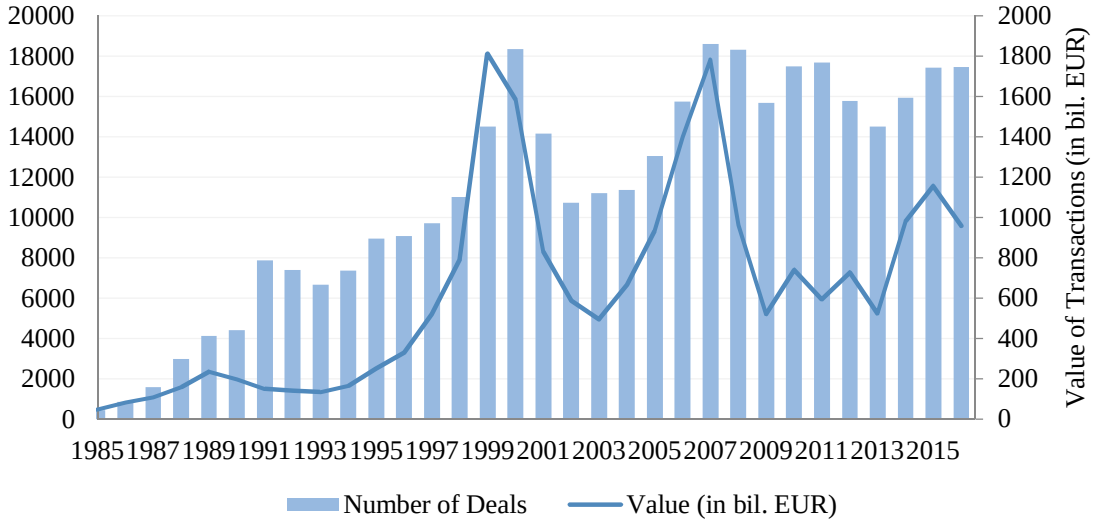
1.1.1. Reasons to enter into M&A

Many articles about mergers and acquisitions state different reasons why this industry is so big and what actually motivates the companies to follow the paths of the merger or acquisition.

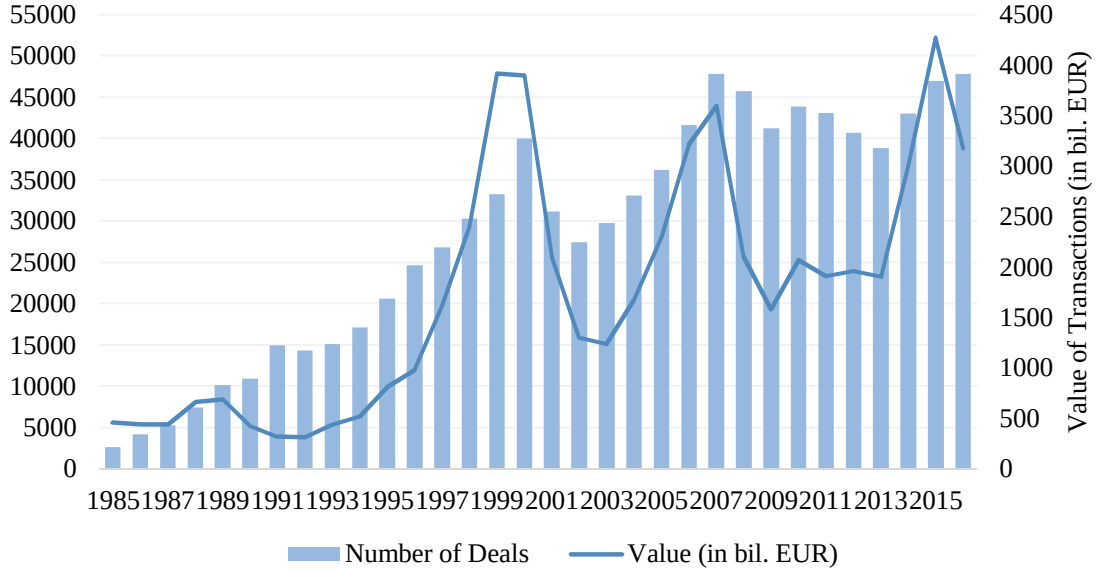
One of the biggest reasons is the caption of synergies. Synergies can be defined as the present value of future improvements in cash flows after the transaction (Eccles et al. 1999). They may result from higher efficiency and companies (when combined) can achieve cost savings, revenue improvements, process improvements, and tax shields (Eccles et al. 1999). Beyond this value creation, companies also look for market consolidation, diversification and growth opportunities. This is only possible if the market presents favorable market circumstances.

1.1.2. Analysis and Trends

The Institute for Mergers, Acquisitions and Alliances (IMAA) offers statistical data about mergers and acquisitions across different regions and industries, from 1985 until present days. Graphs 1 (M&A Europe) and Graph 2 (M&A worldwide) show that, during the period of analysis, M&A activity has been increasing worldwide both in a number of deals and in its value. It is possible to observe on the graphs below the relationship between the deals activity and the values of the transactions, from 1985 and 2016. Moreover we verify that the activity comes in waves.



Graph 1: The mergers and acquisitions evolution (in number of deals and value of transactions per year) in Europe between 1985 and 2016 (Source: Institute for Mergers, Acquisitions and Alliances, imaa-institute.org).



Graph 2: The mergers and acquisitions evolution (in number of deals and value of transactions per year) Worldwide between 1985 and 2016 (Source: Institute for Mergers, Acquisitions and Alliances, imaa-institute.org).

By analyzing closely M&A activity during the past year 2016, we can verify it was the second best value (accounted for a total of $3,6tn) since the 2007-2008 crisis. Due to this and to huge political uncertainties surrounding the world FT (2017) expects that 2017 will be a very interesting year in terms of potential takeovers. Looks like this uncertainty period (related with political shocks – election of Donald Trump, Brexit, and the defeat of major Italian constitutional referendum) instead of putting away deals, it is instead attracting these. The low growth prospects that the companies are facing, push those to look for ways to improve growth, for instance by buying rivals and/or expanding into new geographies. Additionally, low-interest rates seem to persist.

The airline transportation segment is a part of the industry of Transportation & Infrastructure, which in terms of M&A has been quite active. For instance, among the sample of 91 different industries, T&I deals had achieved 1653 billion EUR, representing 2,97% of the whole sample value (IMAA website, 2017).

1.1.3. Methods of Payment

The means of payment is an important factor to consider in a merger or acquisition because it may have some influence on the value created to shareholders in the transaction (Rappaport and Sirower, 1999). As mergers and acquisitions activity has increased in last three decades, methods of payment had also changed along years (Boone et al. 2014). Boone et al (2014) verified that companies use more and more the mix of stock and cash in the transaction, and that this combination is already treated in form of separate payment category.

When the deal involves a cash payment, the transfer of ownership is relatively simple. However when it comes to stock deals, sometimes it may become difficult to find who the target it is and who the buyer it is (Rappaport and Sirower 1999). In the cash deals, acquiring shareholders bear all risk associated with the realization of synergies expected. This type of transactions usually sends a positive reaction to the market because it demonstrates that the acquirer believes it shares are undervalued and that there exists a strong possibility to achieve synergies.

Concerning to the stock transaction, instead of the acquirer giving to the target shareholders the amount agreed in cash, they give stock. Of course, the acquirer will need

to decide whether it needs to issue more shares or offer fixed value of shares of the newly combined firm (Rappaport and Sirower, 1999). The cash deal has an advantage as it gives to the target shareholders the possibility to stay in the company after the transaction, participate in potential synergies that will result, and also share risks of not materializing synergies (Rappaport and Sirower 1999). Authors conclude that this type of payment is more used in large deals, where the risk for acquired shareholders is much bigger. Boone and her colleagues (2014) conclude that in fact, stock payments increase when there is a huge valuation uncertainty regarding to the target and buyer as well. Another important aspect of the stock transaction is an impact that sends to the capital markets. It mostly indicates that acquirers' shares are overvalued and that management is not very confident about the probability of success (it shares risks with target shareholders) (Rappaport and Sirower, 1999).

In mixed payments, the buyer gives to target firm shareholders the choice between stock and cash (Boone et al. 2014). Authors also find that the use of this combination of stock and cash has tripled from 10% (in the 1990s) to 30% in 2013, whereas the opposite happened to the other two methods.

To finance the deal, the acquirer has the possibility to issue new shares and as the consequence, the value added will be shared amount more shareholders, reducing the amount for each of them (old shareholder will bear the cost) (Rappaport and Sirower, 1999). The way to not decrease this value added for old shareholders is by offering some stake to acquired firm shareholders, saying that potential value of shares will be bigger if synergies are realized (Rappaport and Sirower, 1999).

Finally, to take the decision regarding the mean of payment, management should decide on three issues: decide if acquirers' shares are under or overvalued, establish the risk associated with the not realization of synergies and finally, think about stock price behavior before closing the deal (Rappaport and Sirower, 1999).

1.1.4. Synergies

The synergies can be defined as an additional value created by a combination of two different entities (Damodaran, 2005). This increase in value results from opportunities that arise from combining two companies, and that would not exist if the firms continued

to operate separately. Synergies can allow according to Eccles et al. (1999): cost reductions, revenue enhancements, process and efficiency improvements, tax savings and financial engineering.

Cost savings is the synergy where company succeeds more since it can control them, and measure costs and deviations internally (Sirower & Sahni, 2006). This results largely in the extinction of some unneeded functions, jobs, and facilities, or even the achievement of economies of scale, since the company starts to have larger purchasing power (Eccles et al. 1999). By the other side, revenue enhancements are harder to control due to its dependence on external factors, such as competitors, clients, macroeconomic conditions, and others (Sirower & Sahni, 2006). Another operational synergy is the possibility to retain the best people and practices in company, and the transference of core competencies.

Regarding financial synergies, these appear when acquirer gains access to lower borrowing rate without affecting its credit rating. It might come from tax savings.

1.2. Valuation Approaches

To value business, several valuation methods exist and thus, the question that arises is which one of them is more reasonable and more accurate to apply to value one specific company. In the current section, we will discuss the classical Discounted Cash Flow (DCF) approach, Adjusted Present Value, and Relative Valuation approach.

1.2.1. Discounted Cash Flow

This is the most popular method to value the company. It emerged in the 1970s and according to it, the value of business equals to expected future cash flows discounted at the weighted-average cost of capital (WACC) (Luehrman, 1997). There also exists another way to value named Adjusted Present Value (APV).

If working with WACC method, the DCF can be comprised of two steps. In the first step, the statements of profit and loss, financial position, and cash flows are projected with at least five years out (Kaplan, 1996). As it requires estimation of future income and other items, it requires a high level of detail. The second step centers on the development of a

valuation model and computation of free cash flows (Free Cash Flows to the Firm), using the following equation:

$$FCFF = EBIT(1 - T) + D\&A - CAPEX - Investment\ in\ Working\ Capital \quad (1)$$

These future free cash flows are then discounted to time 0 at WACC:

$$WACC = K_E \times \frac{E}{V} + K_D \times (1 - T) \times \frac{D}{V} \quad (2)$$

In this equation K_E corresponds to the cost of equity calculated through Capital Asset Pricing Model (CAPM) using the equation:

$$K_E = R_f + \beta_E \times (R_M - R_f) \quad (3)$$

Regarding the K_D, this is a cost of debt and T corresponds to the tax rate. As it is possible to verify, the taxes are subtracted from the cost of debt, and for that reason the cost of debt needs to be adjusted to the tax shields. WACC rate assumes stable financial structure during explicit period and reflects the time value of money and the cash flows risk. Therefore, it is possible to conclude that WACC works better when managers have an objective of having stable debt-to-capital ratio over the long period (Luehrman, 1997).

1.2.2. Adjusted Present Value

Myers (1974) proposes Adjusted Present Value approach which tries to resolve some limitations of WACC. This approach helps to know more than just if NPV is positive or not. It considers cash flows from different business units and financing strategies (Luehrman, 1997).

To use APV first it is necessary, as in DCF, to forecast cash flows and then discount them as the company was fully equity financed, i.e. discount at the unlevered cost of capital (Kaplan, 1996). Afterwards, given the financing strategy company is going to follow, it is necessary to estimate and discount all financing benefits (tax shields) to t=0 (Kaplan 1996).

1.2.3. Relative Valuation

Relative Valuation in practice is the most used method. It simply consists on looking in on a specific industry for companies with similar characteristics to the one that we are trying to value, then compute some of theirs multiples as well as find the value of the underlying company based on benchmark multiples (Lie and Lie, 2002).

Market Multiples

There are many reasons why the use of market multiples in the financial industry is so large (Kaplan and Ruback, 1996). One of them consists on its relative simplicity and its intuitiveness because simply says that similar firms should have comparable characteristics. Additionally, it has an advantage of implying fewer assumptions to value the firm.

To go further with relative valuation, it is necessary to find the "peer group" of the firm (Holthausen and Zmijewski, 2012). Peer group is composed by companies with similar characteristics. Sometimes finding the adequate comparable companies may constitute an obstacle due to differences the firms may present and also an adjustment that needed in particular in the financial variables (Holthausen and Zmijewski, 2012). They can differ significantly in terms of size, activity, growth prospects, risks, and others issues.

Once the peer group is defined, we can proceed to step two of finding suitable multiples. Several authors in finance literature try to explain to what extent some multiples provide valuation close to market values.

Most multiples, generally, involve a combination of different firm variables such as enterprise value, the market value of equity, EBIT, EBITDA, revenues, debt and others (Holthausen and Zmijewski 2012). According to authors multiples will depend from company to company due to business features.

According to Holthausen and Zmijewski (2012), EV/EBITDA is one of the market multiples most utilized to value the firm and despite that, they conclude this multiple is actually not the most "reliable". EV/earnings, in reality, outperform EV/EBITDA.

Transaction Multiples

Transaction comparables in valuation also revealed to be an important tool for valuing corporate assets. This method consists in looking at similar transactions that occurred in the industry and at which prices transactions were completed (Kaplan and Ruback, 1996). This helps to understanding better the market, namely the competitors' behaviors and trends of the industry.

1.2.4. Conclusion

The analysts usually opt for using market multiples or transaction multiples (Bancel and Mittoo, 2014). Regardless that, Kaplan and Ruback (1996) found that in fact, DCF performs better than the comparable method. The transaction multiples are very important as they give an idea about transactions values and premiums paid, and whether the market is hot or not.

ANALYSIS OF EUROPEAN AIRLINE INDUSTRY

2.1. Industry Overview

Both Ryanair and Norwegian Air Shuttle, represent European airline industry and therefore in order to frame the underlying transaction, is essential to conduct some analysis of the airline industry. The air transport industry has been important for the world since it creates value for consumers, investors, governments, and broader economies according to IATA 2016 Mid-year report and IATA 2016 End-year report. According to the same source, in 2014 and 2015, the expenses on air transport accounted for 1% of global GDP, and in 2016 accounted for 0,9%. Regarding the RPKs, which is one of the industry main drivers, have been growing since 2014, and even above the world GDP.

The main issues that firms in this industry are obliged to deal with are the large number of competitors and the price pressure (SAS Annual Report 2015/2016). Moreover, in this industry companies support a high proportion of fixed costs out of total costs and the fuel costs are the primary source of company operational costs. Besides that, companies usually generate revenues closer to departure and are affected by a large number of third parties subcontractors and authorities.

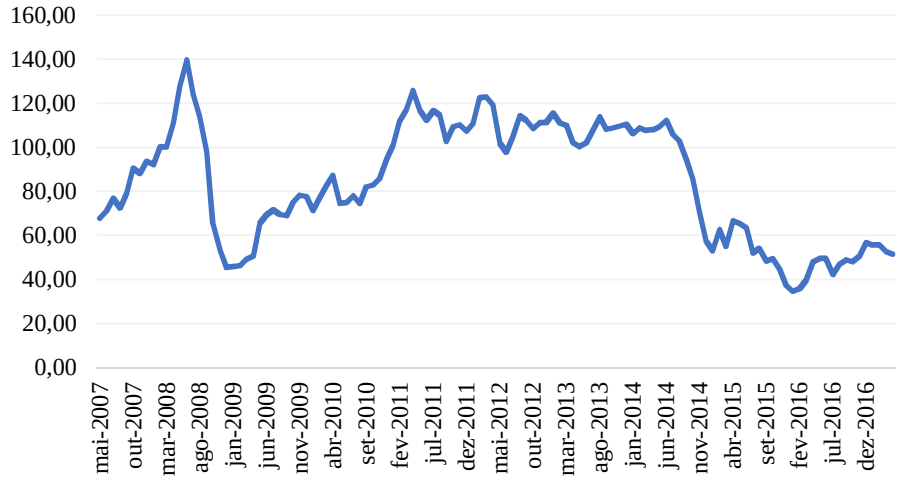
The liberalization of European airline industry came into force in 1997 and as a result of, Ryanair and Easyjet grew considerably. One decade after, in March of 2008, the Open-Skies Agreement between the EU and the US took place, and it has been considered as a decisive point for worldwide airline industry (Cento, 2008).

Nowadays, the airline industry is facing more threats related to the terrorist attacks, uncertainty about the evolution of fuel prices, tight regulations, not clear policies of new US President and finally, uncertainties about the Brexit. The consequences of UK exiting the EU are largely unknown, especially which implications it can have for UK air transport in terms of traffic to and from the European Union members (IATA, 2017). Some consequences of Brexit we already feel today, as slower economic growth in the UK and Europe and devaluation of sterling in regard to other currencies. The International Air Transport Association (IATA) studied potential consequences that may arise from this event and found three possible outcomes from negotiations, which obviously have different degrees of risk and complexity:

1) UK becomes a member of EEA (European Economic Area) in the same way as Norway, and gives total access to the Single Market;
2) OK and EU agree on some bilateral agreement, similar to bilateral agreement between Switzerland and EU;
3) Or, WTO relationship.

IATA expects that the year 2017 to be more challenging for European airlines as fuel prices are expected to grow. According to IATA website, the association outlooks the increase of the oil prices from $ 44,6 per barrel (in 2016) to $ 55,0 per barrel (Brent) in this year. This consequently will lead to increase the jet fuel prices. In 2016 jet fuel prices were on average $ 52,1 per barrel, and they are expected to reach $ 64,9 in 2017, representing an increase of 24,6% (IATA 2016 End-year report). To note that the impact of this rise in fuel costs in companies profitability, will also depend on hedging instruments companies have in place. Moreover, during the period in which the fuel costs were low, companies decided to invest in modern aircraft that are more efficient, and therefore, at the same time as fuel prices are expected to increase, the fuel efficiency is expected to improve by 1,5% in 2017.

The oil prices have varied considerably during the past 10 years (Graph 3), reaching the lowest value in January of 2016.



Graph 3: Evolution of Ice Brent Crude Oil Closing Prices (2007-2016); (Source: Data Retrieved From Thompson Reuters)

Finally, when looking at European airline industry and its margins, IATA forecasts that net post-tax profit is going to drop in 2017 to $ 5,6 billion, representing $ 5,65 per passenger and only 2,9% of revenue.

2.2. Overview of relevant airline company types

The airline industry has two main segments: passengers transport and cargo. Norwegian Air Shuttle and Ryanair provide to its customers only passengers transportation, and therefore only this one will be analyzed further on.

In terms of business models, currently exists two prevalent business models in the airline industry: Full-Service Carriers (FSC) and Low-Cost Carriers (LCCs). These types differ according to the service level provided and the distance of flights (short or long hauls). Moreover, each business model can be characterized by having different network configurations: hub-and-spoke in case of FSCs and point-to-point in LCCs (Lordan et al, 2016).

The FSCs are composed by the airlines that provide both medium and long-haul flights, and medium-high service level. Some examples of FSCs operating in the European market are Lufthansa, AIG, TAP, and Air France – KLM. These use hub-to-spoke networks, which consist on using the central airport or some main airports, called hubs, and that are connected to other airports (Lordan et al, 2016). Hence, to fly from one secondary airport to another, it is necessary to pass through the main hub. Whereas the LCCs', also called as no frills carriers, their main goal consists in offering mainly short haul flights, on point-to-point network configuration. This means that one specific airline company has several airports, connected to each other (Lordan et al, 2016). Hence to travel from one airport to other, it is not necessary to pass by a central hub, leading to shorter travel time. In the European market, exist two largest LCCs, namely Ryanair and Easyjet.

We find it important to mention that in European market also exist some hybrid companies, which combines characteristics of the previous two types. For instance, Norwegian Air Shuttle is a low-cost carrier. Recently, has forced an entrance into the long-haul market, and providing medium-low service to its clients.

2.3. Consolidation of airline industry in Europe

Worldwide the air transport industry is considered as one of the most dynamic and competitive industries (Lordan et al, 2016). Particularly, European airline industry is fragmented when compared to US airline industry and today, it is facing many challenges due to the current tough competitive environment, namely with many participants entering and starting forming partnerships in order to consolidate its position and capture demand (Canelas and Ramos, 2016).

The industry participants are being challenged by the increasing of the competition. Many have entered into the European market (Middle Eastern and Asian FSCs companies as Etihad) and fight for its market share in this market. Especially, we verify that the growing competition for long-haul traffic is squeezing the profitability of FSCs (Canelas and Ramos, 2016). Likewise, more and purer LCCs are expanding into long-haul flight segment due to pressures on costs and profitability. Another option passes by LCCs trying to cover all gaps in LCCs segment and potentially expand to new areas such as Eastern Europe. Thus, strategically, several airlines are studying some strategic moves in order to not to lose its efficiency, agility, and clients in the European market, through collaboration techniques or even mergers and acquisitions (Canelas and Ramos, 2016).

As an example, we have Air France and KLM Royal Dutch Airlines that merged in 2004 and Lufthansa acquired 100% of Germanwings in 2009. We also have as an example, the International Airlines Group (AIG) which was formed in 2011 as a result of the merger of British Airways and Iberia. Some years later, IAG decides to enforce and consolidate its position in the European market and acquired Vueling and Aer Lingus. On groups' website we can read that:

"The airline industry is moving gradually towards consolidation though some regulatory restrictions still prevail. IAG's mission is to play its full role in future industry consolidation both on a regional and global scale."

Moreover, the SAS decided to buy Danish airline company Cimber (in 2015), and then in early 2017, it decided to sell it to Irish regional operator Cityjet. Beyond that, the Wizz Air, which is the largest low-cost airline in Central and Eastern Europe and one of Europe's leading low-cost airlines, has been following a strategy of expansion and the Finnair has entered into Asian airline market, and now is growing fast in that area.

In 2016, the Norwegian Air Shuttle obtained approval to fly to the US (they already flew to some Asian countries) starting its long-haul plan of expansion. In early 2017, Norwegian Air Shuttle announced partnerships with two biggest LCCs airlines in Europe, Easyjet and Ryanair, so they can also take advantage of the European market, as well as offer to passengers combined flights.

Therefore, it is possible to conclude that there has been quite a lot activity in European airline industry, and further strategic moves are expected to happen in the near future.

2.4. Motives for M&A in airline industry

One needs to understand why airline companies enter into M&A deals, so to frame the current deal proposal and its reasons. The first reason is that pursuing merger is considered as a form of "rapidly achieving external corporate expansion and growth" (Merkert and Merrel, 2012). Authors review what forces incentivize this type of deals in the airline sector. Authors pointed out that some reasons are more related to revenues/costs improvements and others to the cash flows and profits. Thus, they summarize these costs in 6 categories: higher efficiency and reduced costs, higher market share and revenues, less competition, access to airport slots and facilities, access to aircraft and more appealing to customers.

The airlines should also focus their attention on the related potential risks and disadvantages that may result. These common risks that exist may arise from different corporate cultures, potential costs that might come from the transaction, incompatibility of products/services that companies provide, synergies that cannot be realized, and others (Merkert and Merrel, 2012). Moreover, some barriers can appear due to the political, economic regulatory and national identity issues. Some authors affirm that both companies should have similar business models and corporate culture (Lenartowicz et al, 2013).

In this deal proposal, we are considering M&A in LCCs segment and therefore it is necessary to find which factors effects the low-cost airlines. Lenartowicz et al (2013) interviewed experts in LCCs M&A activity and found that "network growth, to remove competition, gain access to new markets, and relieve economic pressure were the main drivers". Regarding the potential target, this should present some specific characteristics,

being the main the following ones: fleet compatibility, corporate culture and network advantages (Lenartowicz et al, 2013).

2.5. Deal rationale within the industry trends

After analyzing air transport industry, and some transactions that took place recently we can affirm that more activity is expected in next years. Given the recent partnership formed between Norwegian Air Shuttle and main LCCs (EasyJet and Ryanair), we consider that the acquisition of NAS by Ryanair is justifiable.

The first reason is that many competitors in European market just put more and more price pressure and cost efficiency and companies need or to become more efficient or grow in term of revenues or both. Thus LCCs need to start filling the gaps in LCCs market and/or start entering into long-hauls. It should be noted, that Ryanair has flights to 207 destinations in 34 countries, and has some own airports in many countries and serves cities that many airlines do not have the capacity to do. Moreover, it provides flights for two continents (Europe and North Africa). On the other hand, NAS serves fewer airports than Ryanair in Europe and Africa. However, this company already flies to US, Caribbean and Asia (long-route flights) and recently has announced that it is expanding into Argentina. Therefore the deal rationale is:

- Ryanair gains access to continents where NAS operates, boosting the company growth (Appendix 2);
- Elimination of some costs by cutting off common coverage in some less used airports;
- NAS gains access to all airports (Appendix 1) where Ryanair operates and increases purchasing power that holds with their suppliers. This might result in a reduction of costs and even lower flight prices for its' customers.

FIRM ANALYSIS

Ryanair is an Irish air transport company, it is the largest European short-hauls and low-cost carrier company operating. In early 2017, it started to seek for new opportunities in long-haul segment. By the other side, Norwegian Air Shuttle it is also a low-cost carrier (LCC) however it is a provider of flights for both short and long hauls. As opposite to Ryanair, Norwegian Air Shuttle seeks to provide low-medium service level to its passengers.

To justify and endorse deal rationale is indispensable to understand both airline companies involved in the transaction, in terms of operating activities, drivers of costs and revenues and other financial indicators, social issues that surround companies, and risks and opportunities.

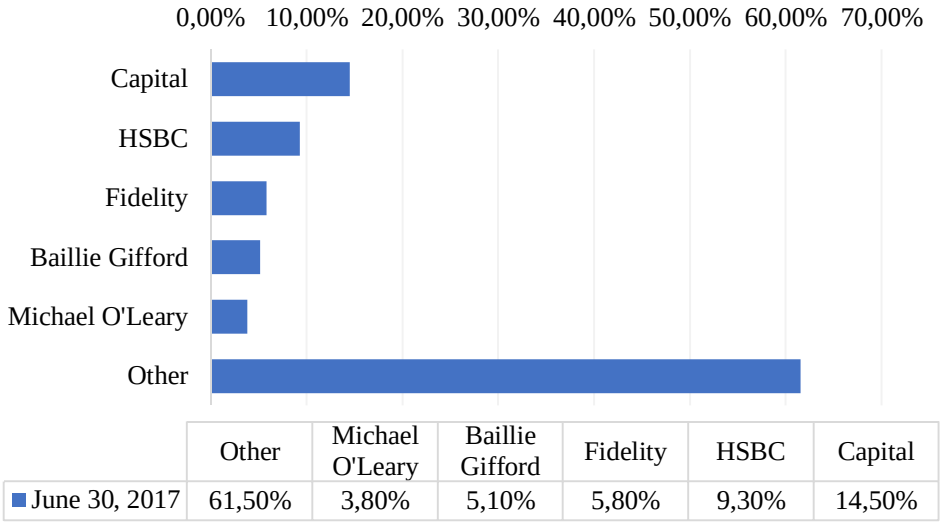
3.1. Ryanair

Ryanair is Europe's low fares and low-cost carrier company that served almost 120 million passengers in 2017 and flying to over 207 destinations in 34 countries. The firm was created in 1985 in Ireland and since then it has been expanding in terms of passengers and employees, aircraft and new destinations. It acquired Buzz Air in 2003 boosting the successful development of new routes and creating of new bases.

Nowadays, Ryanair has 1800 routes across countries of Europe and North Africa, flies to 34 countries, has 86 bases and operates in 207 airports (of these 110 are Primary ones) (Appendix 1).

3.1.1. Ownership Structure

To understand better the organization, we also can look at its ownership structure. Ryanair (ticker RYA.I) has six major shareholders: Capital, HSBC, Fidelity, O'Leary, Baillie Gifford & Co. The rest of shareholders detain much lower piece of the company, except company directors and executive officers (detain 4,6% as of 30 June 2017). Moreover, the company shares are traded on Irish Stock Exchange Market and London Stock Exchange.

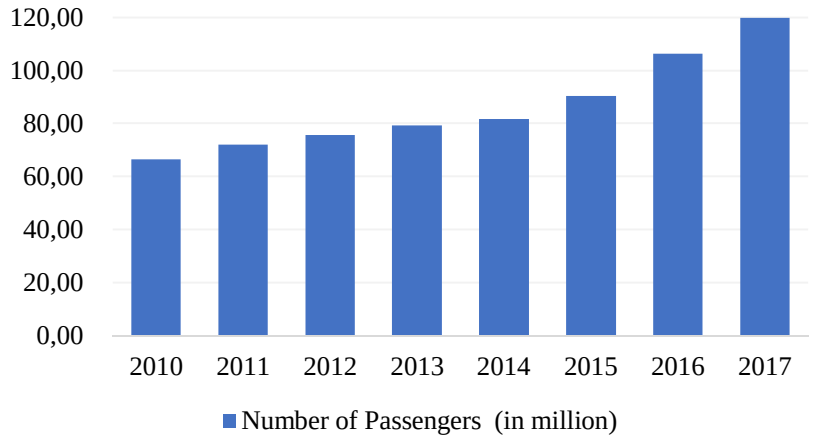


	Other	Michael O'Leary	Baillie Gifford	Fidelity	HSBC	Capital
June 30, 2017	61,50%	3,80%	5,10%	5,80%	9,30%	14,50%

Graph 4: Breakdown of Ryanair major shareholders (Source: Ryanair Annual Report 2017).

3.1.2. Operating Revenues

This airline company classifies revenues in scheduled revenues and ancillary revenues. These both sources of revenues are driven by the number of passengers that use company services that have been increasing over the years as it is illustrated in the following figure.



Graph 5: Historical number of passengers of Ryanair (Source: Ryanair Annual Reports).

The scheduled revenues are obtained directly through passengers booked, and its' value has also been increasing over the years, as a result of a yearly increase of the passenger volumes on existing routes and the successful launch of new bases. Concerning the ancillary revenues, these can be unfolded in non-flight scheduled, in-flight sales and Internet-related proceeds. Moreover, the ancillary revenues have been gaining more and more important in terms of absolute values along years on total operating revenues of Ryanair. To understand better these two types of company operating revenues, we decided to illustrate these in terms of revenue per passenger booked. When analyzing the data presented below we verify that, on average, the scheduled revenues per passenger and the ancillary revenues per passenger had increased from 2010 until 2017.

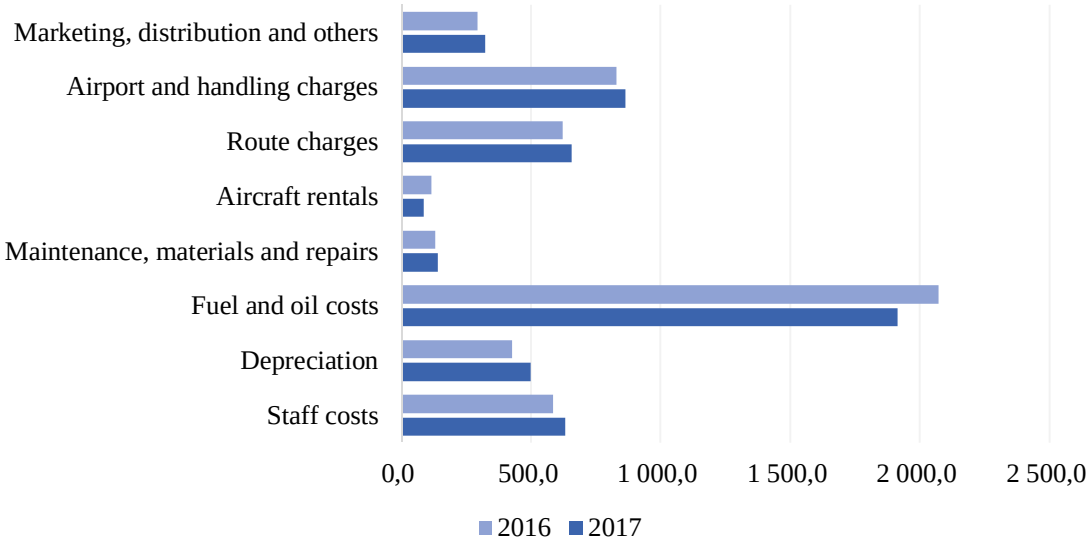
Graph 6: The Evolution of Operating Revenues per Passenger Booked during period 2010-2017 of Ryanair. (Source: Ryanair Annual Reports)

Even though the scheduled revenues decreased, the total Ryanair revenues of the year increased as a result of an increase in ancillary revenues. This shows that non-ticket related revenues are getting more and more importance along years.

3.1.3. Operating Expenses

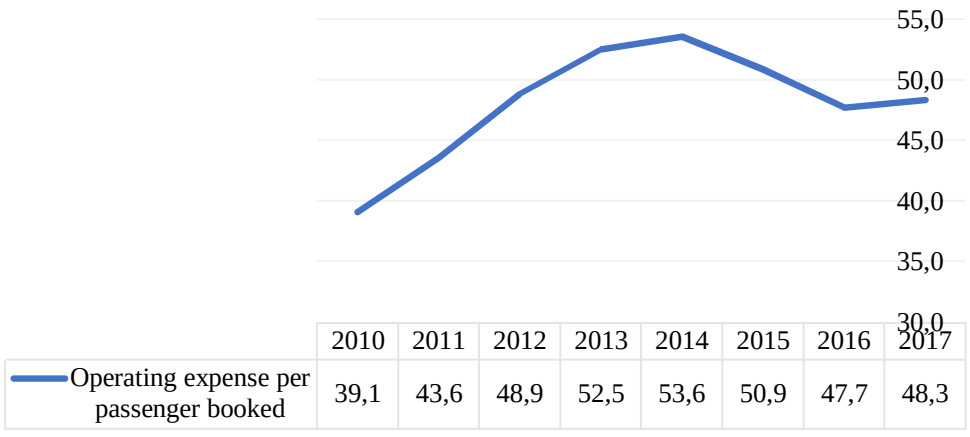
In terms of operating expenses, the company classifies these as the ones that are directly linked up to revenues. By its' values, it's plausible to conclude that Ryanair main costs are the fuel and oil costs. The airport and handling charges, route charges and fixed costs

with staff also account for a big part of total costs. To note that almost all of these items grew during past year not only because of macroeconomic factors as inflation but also are the result of 18% traffic growth and the settlement of more new primary airports to the airline company network.



Graph 7: The classification of the operating expenses of Ryanair, in millions of euros. (Source: Ryanair Annual Reports).

Because the overall operational expenses of Ryanair grew slightly during past year (Graph 7), the expenses per passenger grew also as expected.



	2010	2011	2012	2013	2014	2015	2016	2017
Operating expense per passenger booked	39,1	43,6	48,9	52,5	53,6	50,9	47,7	48,3

Graph 8: The evolution of operating expense per passenger booked from 2010 to 2017 of Ryanair in euros (Source: Ryanair Annual Reports).

3.1.4. Analysis of key financial items

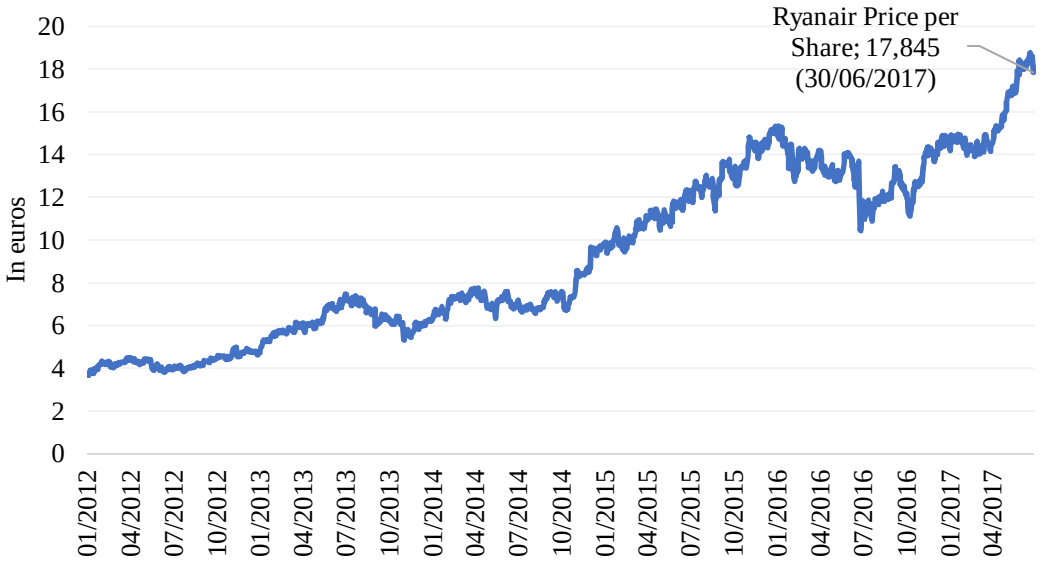
It also important to look at some company main financial items and its evolution during the past 5 years. When looking at EBIT, one of the main indicators of margin, it is possible to observe positive and increasing margins during the period 2012-2017. The same applies to the net income. Ryanair presented the annual net income of at least 10% out of total revenues of the year.

Concerning the earnings per share (EPS), these fell from 2016 (€116,26 cents) to 2017 (€105,30 cents) when looking at Table 1 presented on the next page. However, if we exclude the effect of exceptional accounting gain of €317,5m on the sale of Aer Lingus shareholding of FY2016, the EPS accounts for €92,59 cents in FY 2016. Therefore, as expected, due to share buyback program in course since 2006 together with good performance of Ryanair, made EPS as well as price per share (PPS) increasing along years (Graph 9).

In terms of market perception of company equity, we can see it was always well above its book value (Table 1). Therefore, investors' perception about the business and the future prospects have been and continues to be very positive.

3.1.5. Evolution of Ryanair Price Per Share

We find important to illustrate the evolution of the market price of Ryanair since 2012. The evolution were positive and price per share grew considerably during this period. The share price reached the value of 17,845€ per share in the end of June 2017, reaching the market cap of 22 590,40m euros. Moreover, since year 2012 the stock price have been increasing 32,61% on average per annum (Graph 9). Therefore, this shows that the past years have been quite rewarding for Ryanair shareholders.



Graph 9: The evolution of RYANAIR PPS 01/02/2016 – 30/06/2017) (Source: Irish Stock Exchange website www.ise.ie/).

Ryanair (in million of €)	**FY2012**	**FY2013**	**FY2014**	**FY2015**	**FY2016**	**FY2017**
Operating Revenues	4390,2	4884,0	5036,7	5654,0	6535,8	6647,8
% growth	20,96%	11,25%	3,13%	12,26%	15,60%	1,71%
EBITDAR	1083,1	1146,0	1111,9	1530,0	2002,5	2117,6
% margin	24,67%	23,46%	22,08%	27,06%	30,64%	31,85%
EBITDA	992,4	1047,8	1010,4	1420,6	1887,4	2031,5
% margin	22,60%	21,45%	20,06%	25,13%	28,88%	30,56%
EBIT	683,2	718,2	658,6	1042,9	1460,1	1534,0
% margin	15,56%	14,71%	13,08%	18,45%	22,34%	23,08%
Net Income/loss	560,4	569,3	522,8	866,7	1559,1	1315,9
% margin	12,76%	11,66%	10,38%	15,33%	23,85%	19,79%
EPS (in € cent)	38,03	39,45	36,96	62,59	116,26	105,30
Average Staff	8438	9059	9501	9586	10926	12438
End-year Fleet	294	305	297	308	341	383
Total Assets	9001,0	8943,0	8812,1	12185,4	11218,3	11989,7
Total Equity	3306,7	3272,6	3285,8	4035,1	3596,8	4423,0
Total Debt	3625,2	3498,3	3083,6	4431,6	4023,0	4384,5
Price per share year end (in €)	4,48	5,95	7,61	11,13	14,17	14,53
Market Capitalization	6618,1	8652,9	10888,3	15379,6	18587,7	18524,2
Total Shares in Issue	1478574915	1454262915	1431168915	1381812024	1312227195	1275328949

Table 1: Evolution of main financial items of Ryanair (2012-2017). (Source: Ryanair Annual Reports and Irish Stock Exchange website).

3.2. Norwegian Air Shuttle

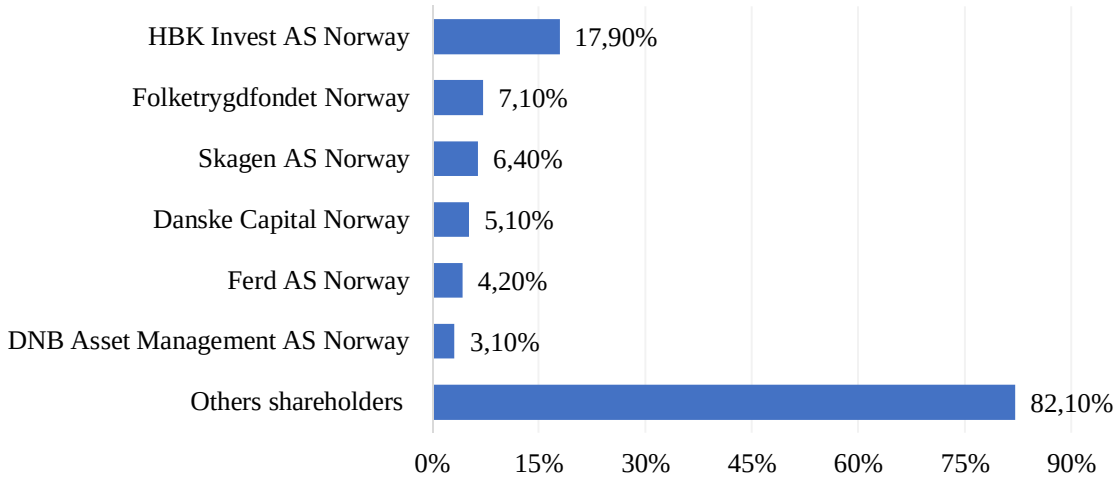
The company we propose to Ryanair to acquire is Norwegian Air Shuttle (NAS). Hence, in this section, we are going to conduct the same analysis for NAS in order to understand its historical operational and financial performances.

NAS is a low-cost carrier that provides low-medium service level to the clients of it services. It flies short-hauls and long-haul routes and is considered as the sixth largest low-cost carrier in the world. It offers more than 500 routes and over 150 destinations across Europe, North Africa, the Middle East, Thailand, the Caribbean and the US. The approval to fly to the US was recently obtained by Department of Transportation (Appendix 2).

In 2016, NAS was recognized as the “World’s Best Long Haul Low-Cost Airline” and “Best Low-Cost Airline in Europe”.

3.2.1. Ownership Structure

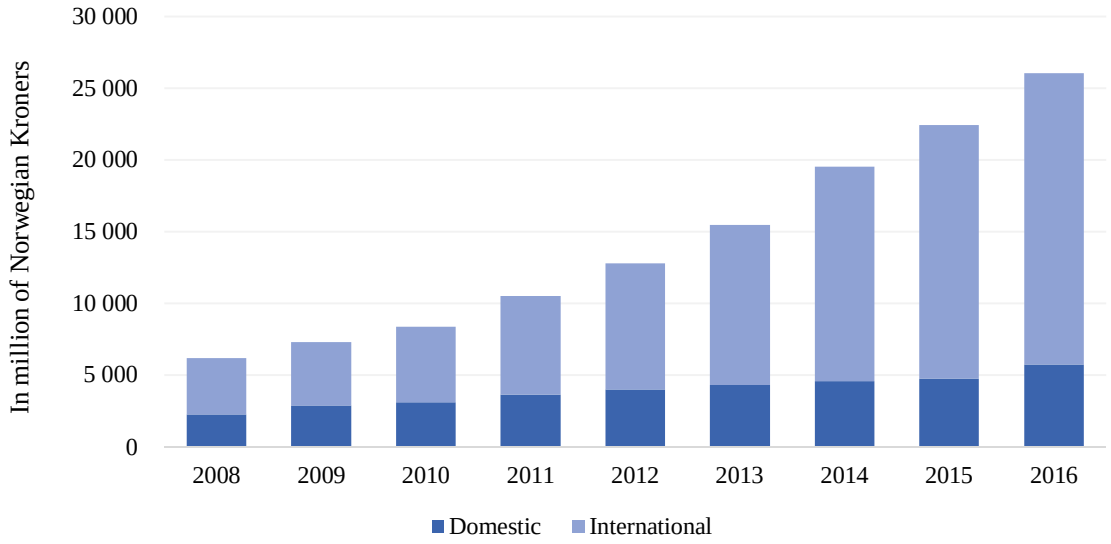
The company stocks are traded on OSLO BORS ASA since 2003, and the company had 35.759.639 of shares outstanding as of 30/06/2017. In order to understand better this airline, we start by presenting the ownership structure of NAS (ticker NWC.OL). In graph 10 we present major shareholders of Norwegian as of 30/06/2017. Briefly we conclude that HBK Invest AS is the largest NAS shareholder, detaining about 17,90% of company stock.



Graph 10: Breakdown of Norwegian Air Shuttle major shareholders (Source: NAS Interim Report for Q2).

3.2.2. Operating Revenues

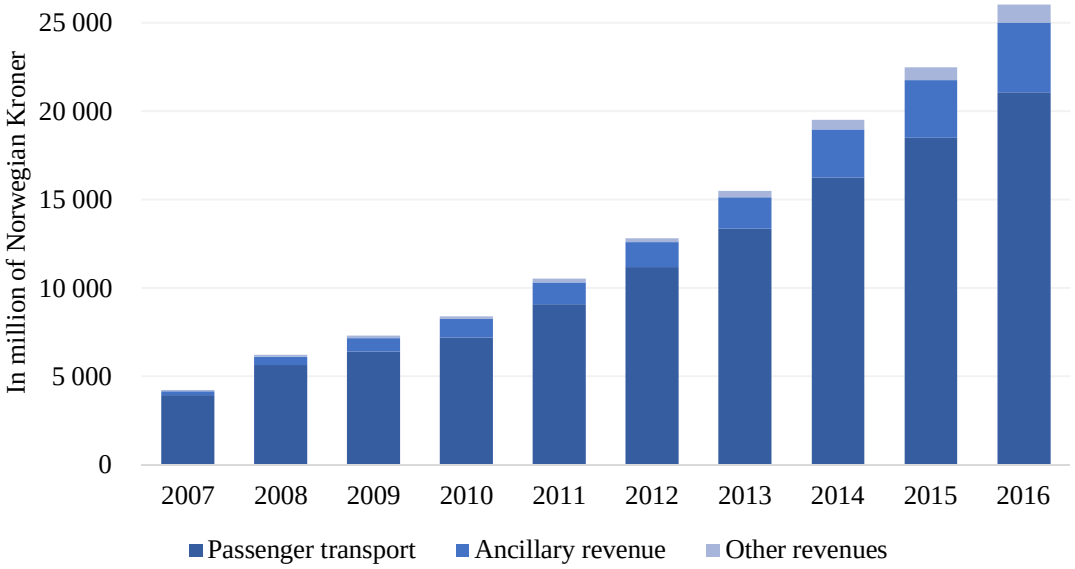
NAS operating revenue may be separated by geography (national and international) or by revenue type (passenger transport, ancillary revenues, and other income). In geographic terms, both domestic and international revenues have been increasing since 2008. However, it is important to emphasize that operating revenues from international geographies has been increasing faster because of the increase of passenger traffic openness to new routes to new destinations.



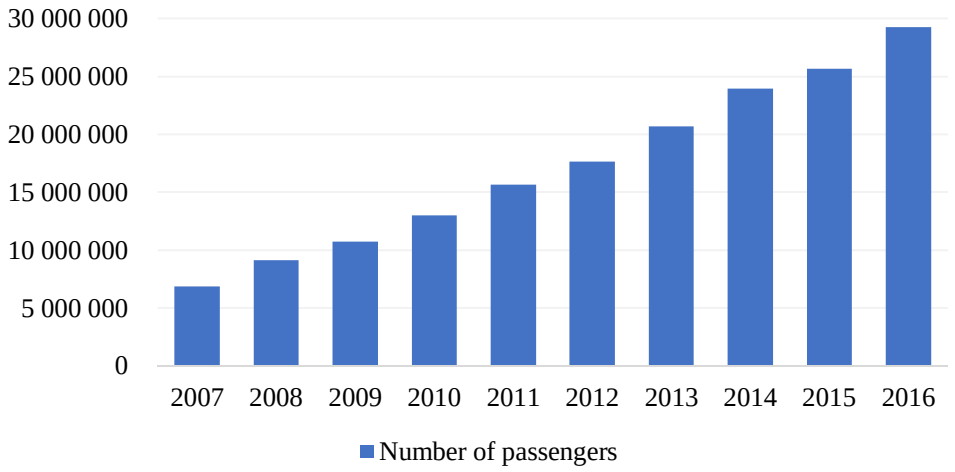
Graph 11: The evolution of operating revenues of Norwegian Air Shuttle by geography type (2008-2016) (Source: Norwegian Air Shuttle Annual Reports and Thompson Reuters).

The graph above displays that the international exposure has been more significant along years, and it's increasing its significance as years pass by. Only in 2016, it generated to NAS around 20.000m Norwegian kroners.

We also gather information on how the revenues are collected. The largest part of overall revenues comes from passenger transportation (Graph 12). Other source of revenues called the ancillary revenues, are composed of the sales of ticket-related products and services as revenues from baggage sales and seating and others. This type of revenues has been gaining more importance for NAS (Graph 12). Finally, the named other revenues, are composed of sales of items that are not directly related to an airline ticket, e.g. cargo and sales of third-party products. The positive evolution of revenues has happened due to the increasing number of passengers that prefer flying with NAS (Graph 13). In 2016, NAS transported 29,3m passengers.



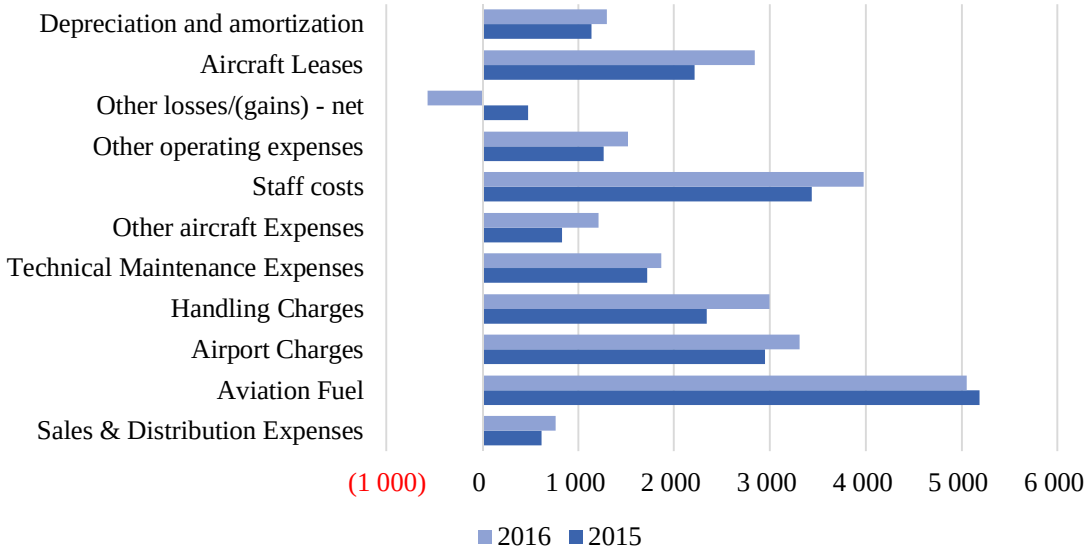
Graph 12: The evolution of operating revenues of Norwegian Air Shuttle by source (2007-2016) (Source: Norwegian Air Shuttle Annual Reports and Thompson Reuters).



Graph 13: The number of passengers transported by Norwegian Air Shuttle (2007-2016) (Source: Norwegian Air Shuttle Annual Reports).

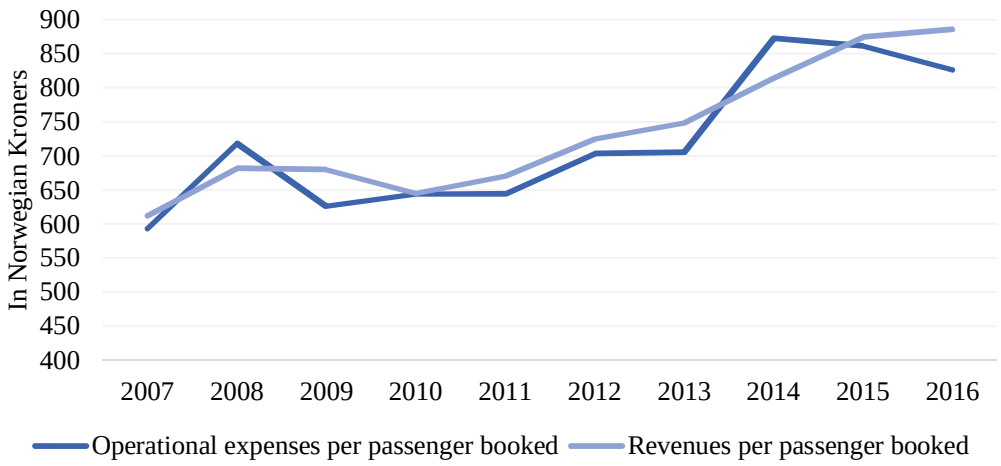
3.2.3. Operating Expenses

The firm has multiple sources of operational costs (Graph 14). Firstly there are the costs related to aircraft, fuel, the costs related to airports and staff costs. As normal, the largest sources of cost are directly related to the company activity, such as the aviation fuel, and airport and staff expenses. Secondly, NAS has also substantial expense with aircraft leases, which have increased considerably from 2015 to 2016. Note that the majority of costs, except aviation fuel, decreased during last year accompanied by increase in revenues.



Graph 14: The classification of the operating expenses of Norwegian Air Shuttle and comparison of operational expenses between year 2015 and year 2016. (Source: Norwegian Air Shuttle Annual Reports).

It is necessary to look at yearly operational expenses per passenger booked as it shows better whether the increase in costs was slow or not, and whether it happened as revenues increase. As per following graph we verify that although the overall operating costs increased from 2015 to 2016, the cost per passenger booked decreased in the same period. Moreover the revenue per passenger booked increased during past year. Threfore this may improve somehow Norwegian airline low margins (Graph 15).



Graph 15: The Evolution of operational expenses and revenue per passenger booked 2007-2016. (Source: NAS Annual Reports).

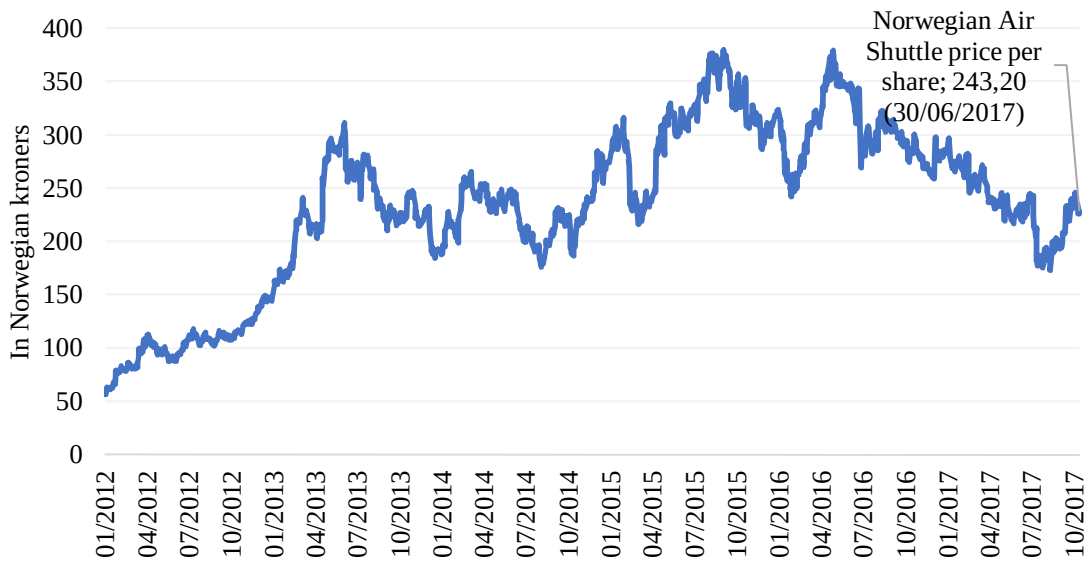
3.2.4. Analysis of key financial items

The Table 2 presents the firm's main financial items retrieved from Annual Reports of NAS and Thompson Reuters during the period 2012-2016. We confirm that company was struggling with margins in previous years. For instance, when considering the operational margin EBIT, we observe it has been low and negative in year 2014. We also point out that in some years, we have positive EBITDAR but then the company has large fixed costs related to aircraft leases, thus sending the EBITDA margin to negative amounts.

Consequently, the EPS values (Appendix 5) have been very unstable during the period of analysis. In terms of market perception of company equity, the market capitalization during last three years has always been above the equity book value.

3.2.5. Evolution of Norwegian Air Shuttle Price per Share

In the end of June of 2017, the price per share stood at 243,20 NOK (Oslo Stock Exchange) and Norwegian had the market cap of 8 696,7m NOK. The market share price is more volatile in case of Norwegian than for Ryanair. As opposite to Ryanair, the NAS price suffered great variations since 2012, but overall it has been increasing on average 30,39% p.a. (Graph 16).



Graph 16: The evolution of NAS PPS on Oslo Stock Exchange (2012-2017) (Source: Yahoo Finance).

In millions of Norwegian Kroner	**2012**	**2013**	**2014**	**2015**	**2016**
Operating Revenues	12841,0	15511,0	19540,0	22483,5	25950,6
% growth	21,96%	20,79%	25,98%	15,06%	15,42%
EBITDAR	1804,0	2716,0	1183,0	3686,5	5854,1
% margin	14,05%	17,51%	6,05%	16,40%	22,56%
EBITDA	771,0	1432,0	-663,0	1473,5	3012,2
% margin	6,00%	9,23%	-3,39%	6,55%	11,61%
EBIT	386,0	902,0	-1411,0	340,5	1716,4
% margin	3,01%	5,82%	-7,22%	1,51%	6,61%
Net Income/loss	457,0	323,0	-1070,0	246,5	1135,0
% margin	3,56%	2,08%	-5,48%	1,10%	4,37%
EPS (in Norwegian kroner)	13,08	9,15	-30,42	6,99	31,75
Full-time staff	2705	3507	4375	4576	5796
End-year Fleet	68	85	95	99	118
Total assets	11 920,0	14 763,0	22 708,0	31 634,0	37 762,7
Total Equity	2 421,0	2 751,0	2 109,0	2 965,0	4 049,0
Total Debt	5 692,0	6 917,0	14 117,0	20 842,0	24 936,5
Mid-market price per share (in NOK)	143,90	188,20	276,20	323,70	287,0
Market Capitalization	5025,7	6617,5	9 711,8	11 405,1	10 263,0
Total Common Shares Outstanding	34 924 769	35 162 139	35 162 139	35 233 540	35 759 639

Table 2: The evolution of main financial items of NAS (2012-2016). (Source: NAS Annual Reports and Thompson Reuters).

VALUATION

In this section, we will make an attempt to validate the underlying transaction.

The final goal consists in determining the price per share of both companies on a stand-alone basis and merged, using different valuation methods in order to take an investment decision. We start valuation with the estimation window of eight years for Ryanair (fiscal year ending 31/03) and for Norwegian Air Shuttle AS (fiscal year ending 31/12). After that period, the forecasts are considered to be very uncertain, and therefore we assume perpetuity.

Moreover, valuations on stand-alone basis are made in currencies used in firm annual reports, i.e. Ryanair uses Euros as a currency and Norwegians Air Shuttle uses Norwegian kroners. On consolidation basis, Norwegian results will be translated to euros at spot rate S(EUR/NOK) of 9,58708NOK (30/06/2017) (Appendix 7).

To value both companies on stand-alone perspective, and given the literature review, the two methods to be used are: DCF (WACC to discount FCFF) and Comparable Market Multiples.

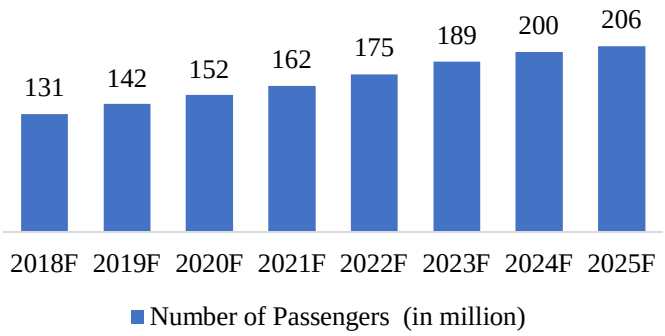
4.1. Ryanair

We start with DCF valuation and after, will continue with the relative valuation method.

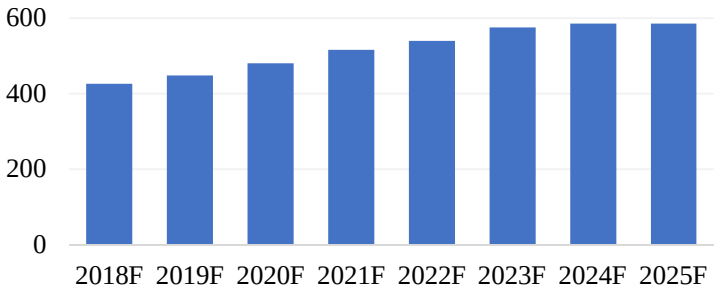
4.1.1. Discounted Cash Flow Model

4.1.1.1. Total Operating Revenues

The total operating revenues of Ryanair are divided into two categories: revenues from tickets sold and ancillary revenues. To forecast both types of revenues, the forecasted number of passengers by Ryanair until the year 2025 will be used (Graph 17). We also present the aircraft number Ryanair management is expecting to have between 2018-2025 (Graph 18).



Graph 17: The goal established by Ryanair in terms of number of passengers (2018-2025). (Source: Ryanair Annual and Interim Reports).



Graph 18: The number of airliners Ryanair is expecting to have between 2018-2025. (Source: Ryanair Annual and Interim Reports).

Scheduled Revenues

The operational revenues forecast is the crucial part of the valuation since the ones constitute the main source of income. Historically, Ryanair has presented large and

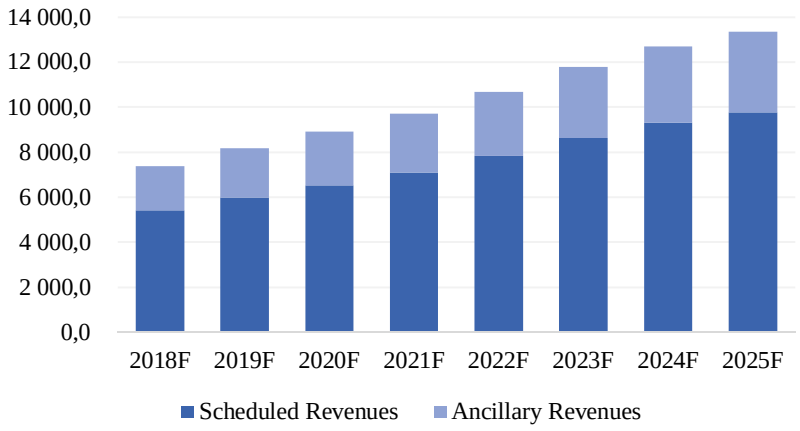
growing revenues, mainly due to increase in passenger number. As the consequence, to forecast the revenues for the following eight years we are going to use the disclosed number of passengers the Ryanair is searching to achieve by year by 2024, and for the year 2025, we assume 3% of growth in passenger number.

The total scheduled revenues during the forecasting period result from the product between the scheduled revenues per passenger booked and a number of passengers served. For that, we need to consider also the evolution of scheduled revenues per passenger booked in the previous section, and for future assume it will be 2,0%[1] per year.

Ancillary Revenues

For ancillary revenues, we follow the same logic as for scheduled revenues. We take an assumption that the revenue per passenger will grow at the inflation rate[1].

Summing up, we estimate the following evolution of the total operating revenues (graph 19):



Graph 19: The forecasted revenues of Ryanair (2017-2025) (Source: Own Calculations).

4.1.1.2.Total Operating Expenses

Regarding the forecast of operating expenses, we followed the following approach:

[1] Source: https://data.oecd.org/price/inflation-forecast.htm .

- Depreciation: over the past 3 years, the depreciation rate remained relatively stable. On average, it stood at 6,87%, and therefore we assume it will continue to remain at 6,87% of PPE;
- Fuel and oil costs: These costs are directly related to revenues, and accordingly if revenues increase, the fuel costs should naturally increase too. We consider the three year average of percentage of total revenues for 2018 (31,90% for FY18) and assume that the percentage will decline until 28,00%.
- For the rest of operating expense categories, we assumed these items will grow at average growth rate of last three years.

Summing up, our forecasts of amounts of total operating yearly expense are the following:

	2017A	2018F	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Total Operating Expense	5 114	5 911	6 362	6 912	7 505	8 285	9 168	10 046	10 908
% of revenues	76,92%	79,84%	77,72%	77,34%	77,24%	77,39%	77,74%	78,92%	81,57%

Table 3: Forecasted total operating expenses in euros and as percentage of revenues. (Source: Own Calculations).

4.1.1.3. Cost of Capital

In order to proceed with the calculation of the cost of capital, we need to consider the following variables: the cost of equity, cost of debt, equity and debt ratios, beta, market risk premium, risk-free and tax rate.

Firstly, concerning the computation of the cost of equity, we use as risk-free rate the yield of 0,466% of German Government Bund 10y[2], and as Beta, we use 1,04[3]. Finally, for market risk premium we use the one provided for Ireland by Fernandez (2017) of 6,70%. Overall we obtain the cost of equity of 7,43% (Appendix 8).

Secondly, Ryanair cost of debt in 2017 stood at 1,49% (March 31) (Source: Ryanair Annual Report 2017). This interest rate corresponds to the weighted average interest rate obtained by the company in different types of debt in use.

[2] Retrieved from Thompson Reuters (30/06/2017).
[3] Retrieved from Thompson Reuters

The Statutory rate of Irish corporation tax is 12,50%, nevertheless, the company has paid on average only 10,58% (mean rate of past 3 years). We consider the legal tax rate in our forecasts. Therefore, we get the after-tax cost of debt of 1,30% (Table 4).

Cost of debt	1,49%
Irish Tax rate	12,50%
After-tax cost of debt	1,30%

Table 4: Net cost of debt as of 31/03/2017 (Source: Ryanair Annual Report 2017).

Items related to long-term debt and its current maturities were projected based on the information provided in annual reports. Therefore we consider debt amount of EUR4.569,7m (current and non-current debt, including capital leases) as of 31/03/2017, and Debt/Assets of 16,72%.

Summarizing, we obtain the weighted-average cost of capital of 6,41% (Appendix 9).

4.1.1.4.Capital Expenditures and Net Working Capital

The working capital results from subtracting the current liabilities from the current assets. With the goal of calculating the Working Capital (Appendix 12) needs for the future, we do not include items such as the cash and cash equivalents, the short-term debt and other investments in its calculation.

As for the capital expenditures forecasting, the company annual reports state historical values. We conduct the forecast and define that it will decrease to 6%, converging to the depreciation rate (Appendix 13).

We present forecasted income statements and statements of financial position (2018-2025) in Appendix 10 and 11 respectively.

4.1.1.5. Free Cash Flows to the Firm

Given the income statement and balance sheet projections, we continue with the calculation of FCFF.

(4) FCFF = EBIT (1-T) + Depreciations – Changes in Working Capital - CAPEX

For that, we consider the growth rate of 1,50% after 2025 (inflation rate forecasted by Bergin et al (2016)) and WACC of 6,41%. Summarizing, the results obtained are the following (also in Appendix 14):

	2018F	2019F	2020F	2021F	2022F	2023F	2024F	2025F
FCFF	(37,8)	468,8	492,9	731,7	780,9	1 076,5	1 429,9	1 551,6
TV								32 082,0

WACC	6,41%	
PV(TV)	19 518,1	81%
PV(FCFF)	4 542,0	19%
EV	24 060,1	100%
Debt	4 569,7	
Cash	1 224,0	
Equity	20 714,4	
PPS	16,24	

Table 5: Forecasted FCFF Ryanair (Source: Own Computations).

The stock price at 30/06/2017 stood at 18,845€, what indicates that according to DCF approach, Ryanair share price is overvalued by the market in about 16,04%.

Next it is possible to visualize the stock price changes in relation to changes in growth rate and cost of capital. We conclude the stock price is sensitive to changes in two variables.

		Growth Rate						
	16,24	**0%**	**0,50%**	**1%**	**1,50%**	**2%**	**2,50%**	**3%**
WACC	**5%**	17,69	19,61	22,01	25,10	29,22	34,98	43,63
	5,50%	15,53	17,05	18,91	21,23	24,22	28,20	33,78
	6%	13,74	14,96	16,44	18,23	20,48	23,37	27,22
	6,41%	12,49	13,53	14,76	**16,24**	18,06	20,35	23,30
	6,50%	12,23	13,23	14,42	15,84	17,58	19,76	22,55
	7%	10,94	11,78	12,75	13,90	15,27	16,96	19,06

Table 6: Sensitivity analysis of Price per Share to changes in growth rate and WACC (Source: Own Computations).

4.1.2. Comparable Multiples Method

The initial list of airlines considered we retrieved from Thompson Reuters (Appendix 15), as well as their respective forward multiples.

Given company business, we chose the peer group of three companies: EasyJet, Norwegian Air Shuttle and Southwest Airlines. The first two companies are the European

low cost carriers, being EasyJet the main competitor of Ryanair in the LCC segment in Europe. Norwegian is also a low-cost carrier, by instead on focusing on Western Europe, it operates more at North o Europe. Finally, the Southwest Airlines is the largest American airline company that launched a low-cost carrier business model, which some years after was adopted by Ryanair in Europe.

In terms of market multiples, we find necessary to use forward multiples, as these usually perform better than simple multiples (Liu et al, 2002).

Identifier	Company Name	Forward EV/EBITDA	Forward EV/EBIT	Forward EV/Sales	Forward P/E	Forward P/B
EZJ.L	EasyJet plc	5,91	8,54	0,76	10,99	1,43
NWC.OL	Norwegian Air Shuttle ASA	7,91	18,74	0,93	8,42	3,00
LUV	Southwest Airlines Co	6,08	8,45	1,45	13,72	3,77
	Average	6,63	11,91	1,05	11,04	2,73
RYA.I	Ryanair Holdings PLC	8,11	10,65	2,58	12,48	4,42
Price Per Share from Relative Valuation			11,19		10,69	

Table 7: Peer group multiples (Source: Thompson Reuters and Own Calculations).

By the Table 7, we find that Ryanair outperform its peers in terms of Forward EV/EBITDA, Forward EV/Sales, Forward P/B. Therefore, due to these differences, it does not seem correct to use these multiples to estimate relationship between Ryanair and its peer group.

In this way, we only take into account Forward EV/EBIT and Forward P/E. The first multiple suggests us the price per share of 11,19€ (below the current market price) and the second point out the price per share of 10,69€ (once again, below the current market price).

4.2. Norwegian Air Shuttle

In this part, the stock price of Norwegian Air Shuttle is going to be determined using two different methods, and after, will be compared to the one quoted on Oslo Stock Exchange.

4.2.1. Discounted Cash Flow Method

To use DCF, the financial projections of revenues, operating expenses, debt and other items of the company are produced, for the next eight years.

4.2.1.1. Total Operating Revenues

NAS, as mentioned above, has three types of revenues: Scheduled Revenues, Ancillary Revenues, and Other Revenues.

Scheduled Revenues

The NAS revenues are driven by three elements: ASK, Yield and Load Factor.

Driver	Formula	Measures
Available Seat Kilometers (ASK)	$Distance\ flown \times number\ of\ available\ seats$	The number of seats available. Measures the capacity.
Yield	$Revenue/RPK$	A measure of average fare per kilometer. Measures the efficiency.
Load factor	RPK/ASK	Describes the utilization of available seats. Measures the efficiency.
Revenue Passenger Kilometers (RPK)	$Distance\ flown \times number\ of\ seats\ occupied$	The volume of passengers carried by airline.
RASK	$Revenues/RPK$	The ticket revenue per available seat kilometer.

Table 8: The operating metrics of NAS (Source: Ryanair Annual Reports).

Based on the operational metrics described above, we are going to forecast the Scheduled Revenues.

To estimate the ASK, we take into account the number of the fleet the NAS is expecting to have operational in 2017, 2018 and 2019 (NAS Annual Report 2016). And from this

point and given the historical trend, we assume the number of aircraft will grow on average 4,50% per year, i.e. some will depreciate and simultaneously company will look for its substitution. To mention the life expectancy of the body of the aircraft is 25 years for the majority of airline aircraft (NAS Annual Report 2016). Consequently we project the following number of airplanes:

	2017F	**2018F**	**2019F**	**2020F**	**2021F**	**2022F**	**2023F**	**2024F**
Aircraft	149	178	228	238	249	260	272	284

Table 9: The forecast of the number of aircraft for NAS (Source: NAS Annual Report 2015 and 2016, and own assumptions).

With the goal of estimating ASK, we make one assumption about the number of ASK per fleet. We see the last three years and obtain the average of 492 million, and assume it constant over next years. We also assume the load factor is going to stand on 85% (3-year average).

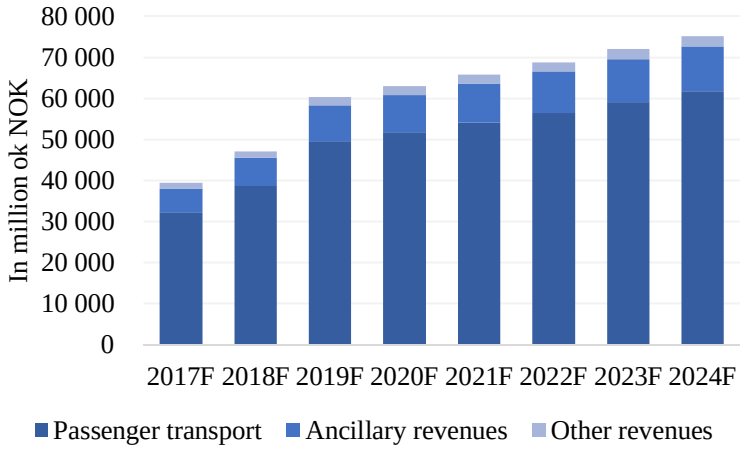
	2017F	**2018F**	**2019F**	**2020F**	**2021F**	**2022F**	**2023F**	**2024F**
ASK	73 271	87 531	112 119	117 036	122 446	127 855	133 756	139 657
ASK per fleet	492	492	492	492	492	492	492	492
RPK	62 254	74 370	95 261	99 439	104 035	108 631	113 644	118 658
Load Factor	85,0%	85,0%	85,0%	85,0%	85,0%	85,0%	85,0%	85,0%
RASK	0,44	0,44	0,44	0,44	0,44	0,44	0,44	0,44
Yield	0,52	0,52	0,52	0,52	0,52	0,52	0,52	0,52
Scheduled Revenues	32 415	38 724	49 601	51 776	54 169	56 562	59 173	61 784
%growth	53,66%	19,46%	28,09%	4,39%	4,62%	4,42%	4,62%	4,41%

Table 10: Forecasted operational metrics and scheduled revenues of NAS. ASK and RPK in million; RASK and Yield in NOK; Scheduled Revenues in millions of NOK (Source: Own Calculations).

Ancillary Revenues and Other Revenues

We look at the values of ancillary revenues and find no patterns in data, and therefore make an attempt to project this item as the fixed percentage of scheduled revenues. We observed its evolution during the last three years and verified that, on average, it was 17,70% of scheduled revenues. We take this value as the reference for our estimation.

Concerning the other revenues, we follow the same reasoning and fix percentage at 4,04%.



Graph 20: The Forecasted Operating Revenues of Norwegian Air Shuttle (Source: Own Computations).

4.2.1.2. Total Operational Expenses

NAS organizes costs in categories as disclosed in Appendix 16. To estimate different items of operating expenses, and based on historical, we follow the following procedure:

- Directly Related Operating Expenses: During last 5 years the evolution of operating expenses out of total operating revenues (in percentage) was the following:

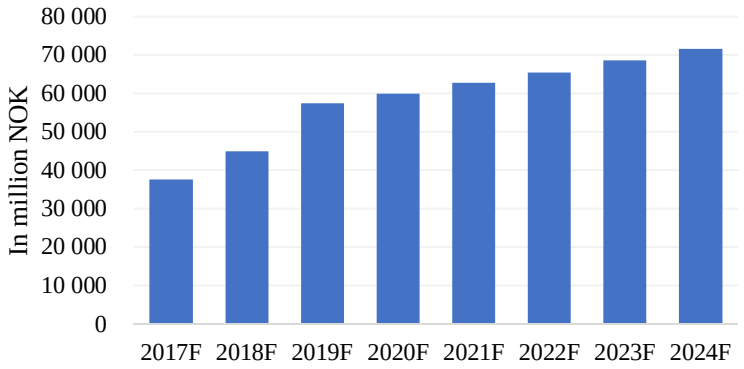
Year	2012	2013	2014	2015	2016
Total Operating Expenses (% Total Operating Revenues)	71,12%	73,30%	78,61%	70,45%	69,46%

Table 11: Norwegian Air Shuttle expenses expressed as percentage of revenues (Source: Norwegian Air Shuttle Annual Reports).

  The items that are part of group Directly Related Operating Expenses, were forecasted as a fixed percentage (average of past 3 years) of total directly related expenses (Appendix 17);
- Depreciation: We decided to assume depreciations as fixed percentage (5,50%) of PPE (our assumption is based on the historical evolution of depreciation as percentage of PPE);

- Payroll: As for payroll forecast, it did not vary much as percentage of total revenues. Therefore we assume it will position itself at same level as in previous years (15%) (more detailed in Appendix 17);
- As per other operating expenses and Other losses/(gains) we assumed 5,50% and 0,96% respectively.

Summing up, we project the following total operating expenses:



Graph 21: The Evolution of Total Operating Expenses 2017-2024 (Source: Own Computations).

4.2.1.3. Cost of Capital

To compute WACC, once again we need the following items: the cost of equity, cost of debt, equity, and debt ratios, beta, market risk premium, risk-free and tax rate.

With regard to the risk-free interest rate, we use 1,655% which corresponds to the Norwegian Government Bond with a maturity of 10 years retrieved from Thomson Reuters at date 30/06/2017. The equity beta of 1,03 was also retrieved from Thomson Reuters and as Norwegian market risk premium we use rate of 6,10% (Fernandez et al, 2017). Finally, we obtain the cost of equity of 7,94%.

As for the cost of debt, we use the interest rate of 2,75% used in previous year (Source: Norwegian Air Shuttle Annual Report 2016). The legal Norwegian Corporate Rate stands on 27%. Therefore, after-tax cost of debt corresponds to 2,01% (Table 12).

Cost of debt	2,75%
Norwegian Corporate Tax Rate	27,00%
After-tax cost of debt	2,01%

Table 12: Net cost of debt as of 31/12/2016 (Source: Norwegian Air Shuttle Annual Report 2016).

Concerning the debt outstanding, at 31/12/2016 it was equal to NOK 24 936,51m. For purpose of computing the cost of capital, we consider the target ratio of D/A of 74,14%.

Summarizing, given the variables, the cost of capital (WACC) obtained resumes in 3,54%. Comparing these cost of debt with the cost of debt given by Norwegian in last year annual report – of 5,70%, we decide to use the one indicated by the company in order to take more a conservative approach.

4.2.1.4.Capital Expenditures and Net Working Capital

The capital expenditures (CAPEX) covers all expenditures incurred by the company to acquire or/and update of physical assets (Appuhami, 2008). In this case, capital expenditures by Norwegian correspond to the acquisition of new aircraft and improvements of quality of the current ones. As we predict the company is going to continue investing. By the year 2024, we forecast investment in new aircraft will be more or less at the same level as depreciations (Appendix 21), i.e. at the same time as aircraft loses its economic value, the company makes additional investment so to replace it with a new one.

For calculation of the net working capital for Norwegian, we do not include items such as the cash and cash equivalents, the short-term debt and other investments. Our results are resented in Appendix 20.

The other financial statements for the period 2017-2024 (Income Statement and Balance Sheet) we disclose in Appendices 18 and 19 (in domestic currency). In our forecasts we assume the company will not distribute any dividends, due to continuous investment plans (NAS Annual Report 2016).

4.2.1.5. Free Cash Flow to the Firm

In the same way as we computed for Ryanair, we are going to compute Operational Cash Flow and Free Cash to the Firm for NAS (Appendix 22).

Regarding the Norwegian Air Shuttle recommendation to use the growth rate of 0% on valuations beyond 8 years, we do not follow it because recently, the company entered into new business unit – long-haul segment (it launched flights to new destinations – US).

We decided to use the norwegian expected inflation rate. Norges Bank (2017) expect inflation rate to be higher than 1,50%[4] at the end of 2020 and therefore we consider 1,50% as a growth rate in Norwegian Air Shuttle valuation.

Finally, given forecasted variables we obtain the Enterprise Value of NOK 32 068,0m. After taking out the net debt of NOK 22 612,9m, we stand with equity of NOK 9 455,1m. Therefore the price per share is of NOK 264,41 (number of shares is 35759639). Considering the S(EUR/NOK, 30/06/2017) of 9,58708 kroners we obtain the equity value of 986,2€.

	2017	2018F	2019F	2020F	2021F	2022F	2023F	2024F
FCFF	(6 787,4)	(5 030,4)	(4 467,8)	2 070,9	2 152,4	2 270,7	2 363,2	2 492,2
								60 227,3
WACC	5,70%							
PV(TV)	38 653,9	120,54%						
PV(FCFF)	(6 585,9)	-20,54%						
EV	32 068,0	100,00%						
Debt	24 936,5							
Cash	2 323,6							
Equity	9 455,1							
PPS	264,41							

Table 13: Forecasted FCFF Norwegian Air Shuttle in NOK (Source: Own Computations).

Given the market price per share at 30/06/2017 of 243,20 NOK, and given the price per share obtained through DCF method, we conclude that Norwegian Price per share is 8,02% undervalued by the market.

[4] See in http://static.norges-bank.no/contentassets/b36f0051784546c5a56ce612036e9c4c/mpr_2_17.pdf?v=11/30/2017133657&ft=.pdf

We decided to test the sensitivity of price per share to variations in the growth rate and WACC, as in the previous case.

		Growth Rate								
	264,41	0,00%	0,30%	0,60%	0,90%	1,20%	1,50%	1,80%	2,10%	2,50%
	3,54%	687,53	830,32	1002,25	1213,24	1478,31	1821,30	2282,49	2935,72	4392,37
	4,00%	467,39	574,74	701,04	851,78	1034,82	1261,80	1550,67	1930,77	2674,07
	4,50%	279,93	361,22	455,01	564,44	693,76	848,95	1038,62	1275,71	1702,48
WACC	5,00%	131,09	194,31	266,16	348,53	443,90	555,62	688,28	848,40	1121,66
	5,70%	-31,82	14,26	65,76	123,70	189,36	**264,41**	351,00	452,02	616,18
	6,00%	-89,47	-48,81	-3,64	46,85	103,65	168,03	241,60	326,49	462,31
	6,50%	-173,08	-139,70	-102,92	-62,20	-16,87	33,90	91,15	156,21	258,14

Table 14: Sensitivity analysis of Price per Share (in NOK) to changes in growth rate and WACC (Source: Own Computations).

By the Table 14 we conclude that share price is very sensitive to two variables. If we have considered the growth rate and cost of capital recommended by the company, we would obtain the negative price per share of 31,82 kroners.

4.2.2. Comparable Multiples Method

The initial list of airlines considered we retrieved from Thompson Reuters (Appendix 15), as well as their respective forward multiples.

For NAS, we encompass the following four airlines as peer group: SAS, Easyjet, Finnair and Wizz Air. The majority of these fly domestically and internationally in the same way as Norwegian airline, in both short and long hauls. Beyond that, these companies had seen new opportunities and trends in the market and started their own expansion plans.

Secondly, we use the respective multiples and obtain the following price per share estimates:

Identifier	Company Name	Forward EV/EBITDA	Forward EV/EBIT	Forward EV/Sales	Forward P/E	Forward P/B
WIZZ.L	Wizz Air Holdings PLC	1,35	1,59	0,25	10,16	1,94
EZJ.L	easyJet plc	5,91	8,54	0,76	10,99	1,43
SAS.ST	SAS AB	2,98	5,44	0,24	5,62	0,49
FIA1S.HE	Finnair Oyj	1,28	2,15	0,12	6,61	0,69
	Average	2,88	4,43	0,34	8,35	1,14
NWC.OL	Norwegian Air Shuttle ASA	7,91	18,74	0,93	8,42	3,00
Price Per Share from Relative Valuation					227,92NOK	

Table 15: Peer group multiples (Source: Thompson Reuters and Own Computations).

By table 15, we also find that Norwegian airline outperforms its peers in terms of Forward EV/EBITDA, Forward EV/EBIT, Forward EV/Sales and Forward P/B. Therefore, due to this, it does not seem correct to use these multiples to estimate relationship between Norwegian airline and her peer group. The only multiple that still make sense to use, is P/E ratio, what corresponds to the price per share of 227,92 kroners. This is below the current market price (30/06/2017) of 243,20 kroners.

4.3. Valuation Summary

We resume the results of a valuation of both companies on the following table:

	Ryanair (30/06/2017)	NAS (30/06/2017)
Market Prices		
Price Per Share	17,845 EUR	243,20 NOK
Number of Shares	1 275 328 949	35 759 639
DCF Valuation		
Target Price	16,24 EUR	264,41 NOK
Equity Value	20 714,4m EUR	9 455,1m NOK
Relative Valuation		
Target Price	10,69-11,19 EUR	227,92NOK
Equity Value	14270,43 – 13636,20m EUR	8150,39mNOK

Table 16: Summary of Ryanair and NAS Valuation Results (Source: Own Computations).

By the previous table we conclude that Ryanair share price is overvalued by the market.

And for Norwegian Air Shuttle, we conclude that price per share is undervalued in regard to DCF price per share, and overvalued to the price obtained using comparable multiples valuation method.

VALUATION MERGED

5.1. Merged firm without synergies accounted

Section five analyzes the acquisition of NAS by Ryanair, without considering synergies and integration costs, and after considering. Therefore we first translate the Norwegian Air Shuttle financial information forecasted to euros at S(EUR/NOK, 30/06/2017) of 9,58708 (Appendix 7). Afterwards, we simply sum items of income statement, statement of financial position and others items, in order to obtain financial statements of the new merged firm.

Summarizing, the merged company value (equity value) results in 21700,6m of euros, which corresponds to sum of stand-alone company equity values (DCF).

For purpose of projection of merged company Income Statement and Statement of Financial Position without considering any synergies, and because NAS fiscal year ends at 31/12 and Ryanair ends at 31/03, we are going to sum NAS results of the year 2017 with Ryanair year 2018 (See Appendices 23 and 24).

5.2. Potential synergies

To continue with the acquisition, the transaction should create value for shareholders, otherwise, it is a waste of resources and time. Therefore it is necessary to quantify the value to be created (synergies), as well as the date of its accomplishment.

Many authors study the area of synergies, but only some of them talk about some specific mergers and synergies achieved. Schosser and Wittmer (2015) study the sub-types of cost and revenue synergies in different airline mergers, and which factors influence the ones (Appendix 25). The authors discuss also synergies estimates across three regions: Europe, US, and Latin America. According to them, the estimated synergies are around 2,5-2,7% of combined revenues in Europe, the lowest ones across these three regions. Moreover, in Europe, larger part is related to cost savings, instead of revenue enhancements as in other two regions, i.e. at least 60% are cost synergies (Schosser and Wittmer, 2015).

In current transaction, it’s going to be hard to estimate potential synergies with accuracy as there exist small amount disclosed information by companies already been involved in

such transactions. We just had access to total synergies estimated and realized in some previous airline transactions presented by Merkert and Morrel (2012) (Appendix 26).

We take the suggestion of Schosser and Wittmer (2015), that the synergies are going to be realized during first five years at a fixed percentage of 2,6% of yearly merged revenues, and project our own:

	2019F	2020F	2021F	2022F	2023F
	31/12/2019	31/12/2020	31/12/2021	31/12/2022	31/12/2023
Synergies (as 2,6% of yearly revenues)	340,68	396,13	423,56	457,19	493,37
PV (Synergies)	1637,0				

Table 17: Synergy Estimation 2019-2023.

The synergies are discounted at 6,38% (Appendix 27).

To note that merged firm first fiscal year is going to be 2018, and that synergies are going to start accounted for from the second year.

The integration costs are also considered because the process of combination of operations of both companies is costly. The integration costs include all expenses with transaction, contracts restructuring, administrative costs, IT restructuring, and others. Some of these costs sometimes may be hard to foresee, and therefore we assume a fixed percentage of synergies – 10% (163,7m €).

Moreover, given total synergies, at least 60% of that value are cost synergies, and the rest constitute revenue enhancements and network synergies.

5.3. Merged firm including synergies

Given the firm value without considering any synergies and integration costs, and given the present value of synergies and integration costs (assumption: 10% of synergies) and financial synergies (from paying lower corporate tax rate for Norwegian), we estimate the merged firm value of EUR 23173,9 million.

Values in Euros	Equity Value
Merged firm equity value without synergies	21700,6
Present value of net operating synergies	1 473,3
Merged firm equity value with synergies	23173,9

Table 18: Calculation of the equity value of the Merged Firm (Source: Own Computations).

TRANSACTION PROCESS

In current section, some transaction issues are going to be examined as the mean of payment to be used, the percentage of NAS that should be acquired by Ryanair, the premium to offer and others.

6.1. Mean of Payment and Premium

Given the analysis conducted in section three, Ryanair is highly liquid and thus makes sense to the company to make a cash offer to NAS shareholders.

In this part, we are going to compute the threshold maximum price Ryanair can pay for Norwegian Air Shuttle with the goal of gaining control over the firm. In the tables below the computations are summarized and presented in both:

Calculation of the maximum price per share	
NAS equity value using DCF[5]	986,24m EUR (=9455,1mNOK)
Total net synergies	1473,3m EUR
NAS equity value using DCF and total net synergies[5]	2259,6mEUR (23579,9mNOK)
Number of Shares	35 759 639
Maximum Price per Share to offer	659,40 NOK

Table 19: Calculation of the Maximum Price the Ryanair Should Pay to Norwegian Air Shuttle Shareholders (Source: Own Calculations).

We find that maximum price per share should not exceed 659,40 kroners. We suggest to the company to make an offer of 300 Norwegian kroners per share (Table 20), that is the price that stands among the maximum price and the one obtained using DCF method. In this way, the premium offered stands on 13,46% above the DCF price, and 23,36% above the current price per share.

[5] At S(EUR/NOK)=9,58708 (30/06/2017)

	NOK
Maximum price per share to offer	659,40
DCF PPS	264,41
Current PPS	243,20

Table 20: Norwegian Air Shuttle price per share summary (Source: Own Calculations and Thompson Reuters).

6.2. Industry regulation issues and other risks related

Beyond the uncertainty coming from Brexit and other social matters happening in Europe nowadays, specific regulation should be taken into account. Some years ago, Ryanair tried unsuccessfully to buy Aer Lingus. The deal was blocked by the European Commission blocked it due to the fact that two companies together would detain about 80% of Irish market, causing some competitive issues

Beyond that, shareholders may not be interested in the deal, as there may be some better strategy of growth for the following years, only known for internal parts of interest.

CONCLUSION

In recent years, the competition in European airline sector has intensified, as a result, many companies entered into M&A deals in order to consolidate its position or enter into a different segment of the business. Other companies started to look for opportunities in Asia, South America, and other regions. In line with this trend, this dissertation explores the potential deal that can create value and contribute to the consolidation of this industry.

During this dissertation have explored the reasoning behind this deal proposal of Ryanair buying Norwegian Air Shuttle, as well as benefits for both airlines. This deal appears to be the form to consolidate its position in the European market, increase profitability in the long-run and an opportunity to expand to new regions. All this in order to continue to satisfy passenger needs, provide them more routes, destinations and good service level at a low-cost. Moreover, at the same time, this deal should create additional value to all stakeholders, including shareholders, which should be measurable – synergies.

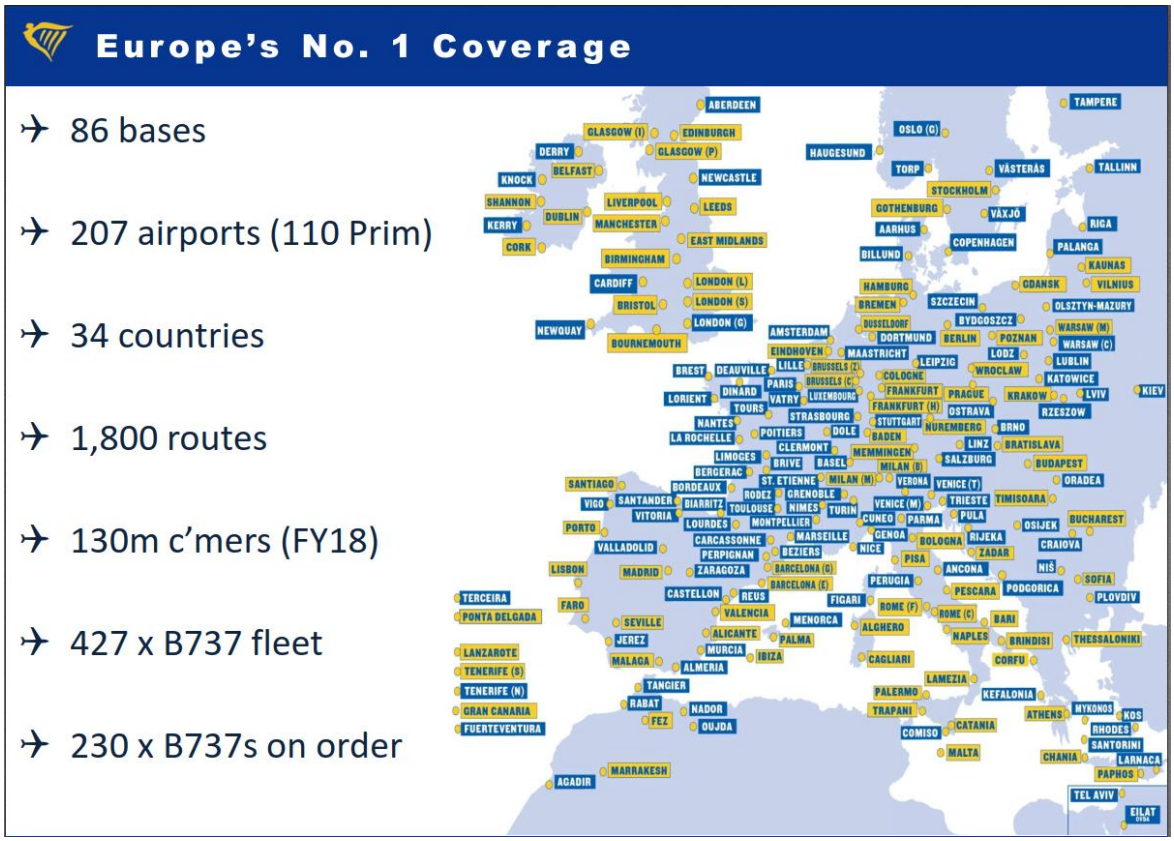
As estimated using DCF method, the Ryanair equity value is 20714,4m euros and Norwegian Air Shuttle is 9455,1m Norwegian Kroner (approximately 986,2m euros). Therefore, is plausible to affirm that Ryanair is considerably larger than Norwegian airline. To note that Ryanair is the largest low-cost carrier in Europe whereas Norwegian airline is concentrated on Scandinavian Peninsula, currently trying to expand in the low-cost segment in Europe and recently started offering flights to the US.

According to the current market conditions and company specific and economic perspectives for the next years we projected the financial statements for the newly merged airline company. The synergies are expected to arise from cost savings, revenue improvements, and other sources, resulting in 1637m euros.

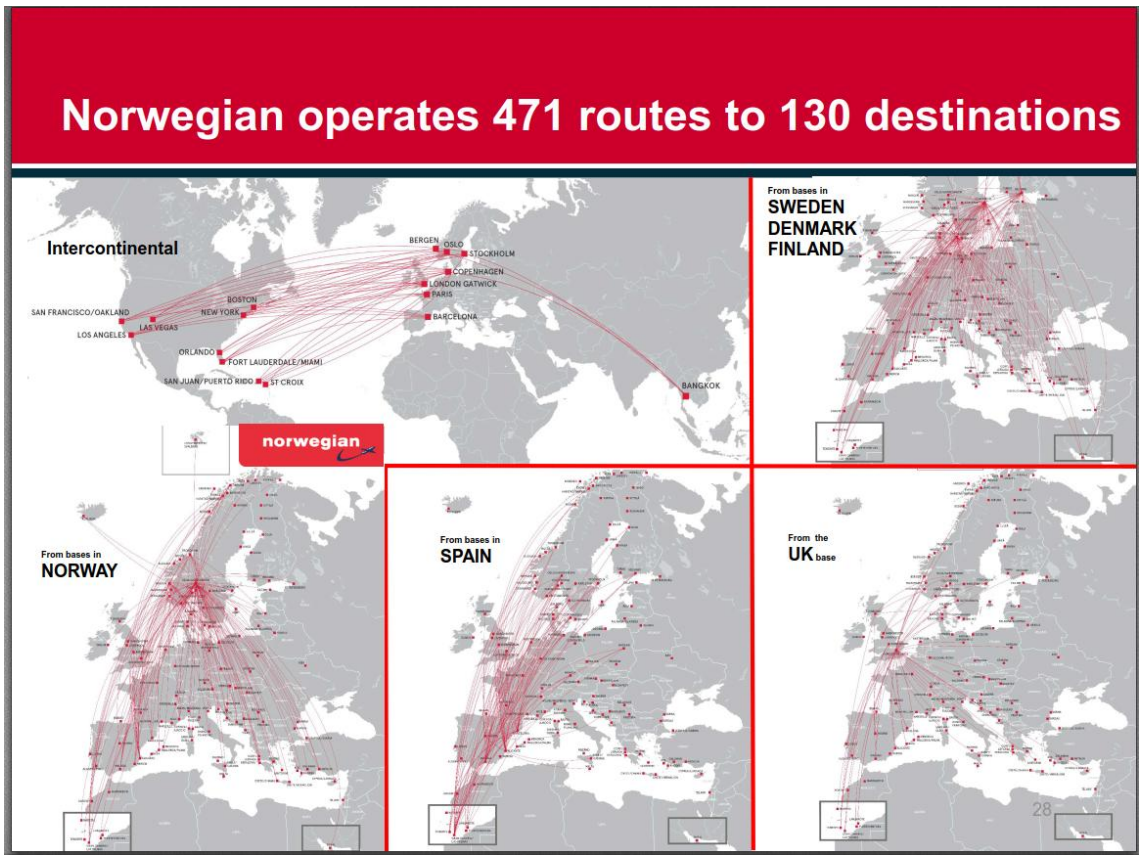
From these estimates, the proposed premium to be paid is 23,36% over the current price per share, resulting in this way in price per share of NOK 300 (equal to 31,29€ at EUR/NOK spot rate of 9,58708) to be paid to Norwegian Air Shuttle shareholders, therefore translating into a total transaction amount of 10.727,9m NOK (approximately 1.119m EUR), all paid in cash.

APPENDICES

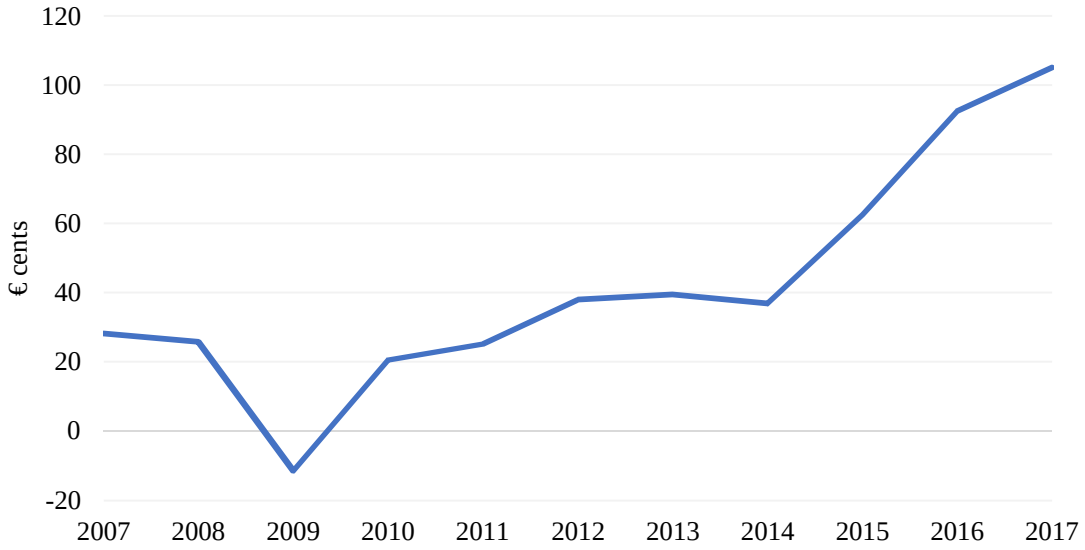
Appendix 1: Map of Ryanair Airports and Destinations at the end of FY2017 (Source: FY2017 Presentation, https://investor.ryanair.com/results/fy-17-results/).



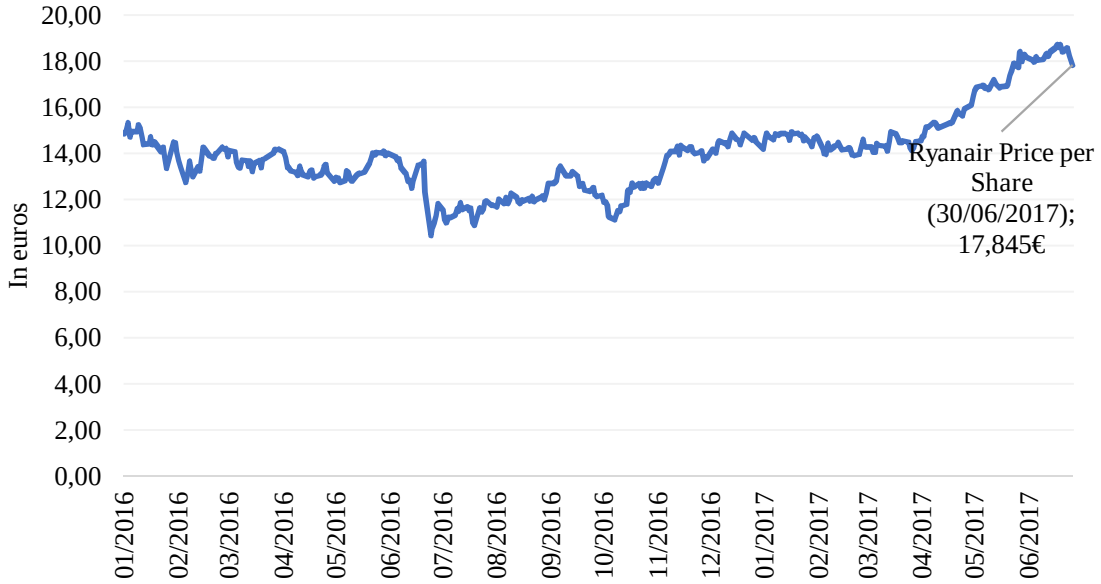
Appendix 2: Map of Norwegian Air Shuttle Airports and Destinations at the end of FY2017 (Source: Norwegian Air Shuttle AS Annual Report 2016, https://www.norwegian.com/uk/about/company/investor-relations/reports-and-presentations/).



Appendix 3: The evolution of Ryanair EPS[6] (2007-2017) (Source: Ryanair Annual Reports, https://investor.ryanair.com/results/).

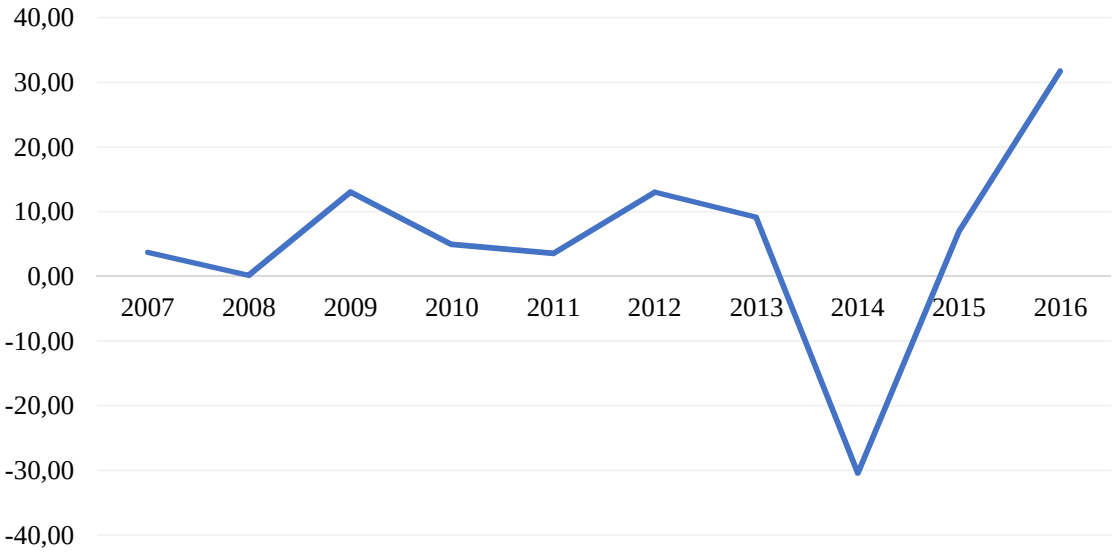


Appendix 4: The evolution of Ryanair price per share (01.01.2016-30.06.2017) (Source: Irish Stock Exchange, www.ise.ie).

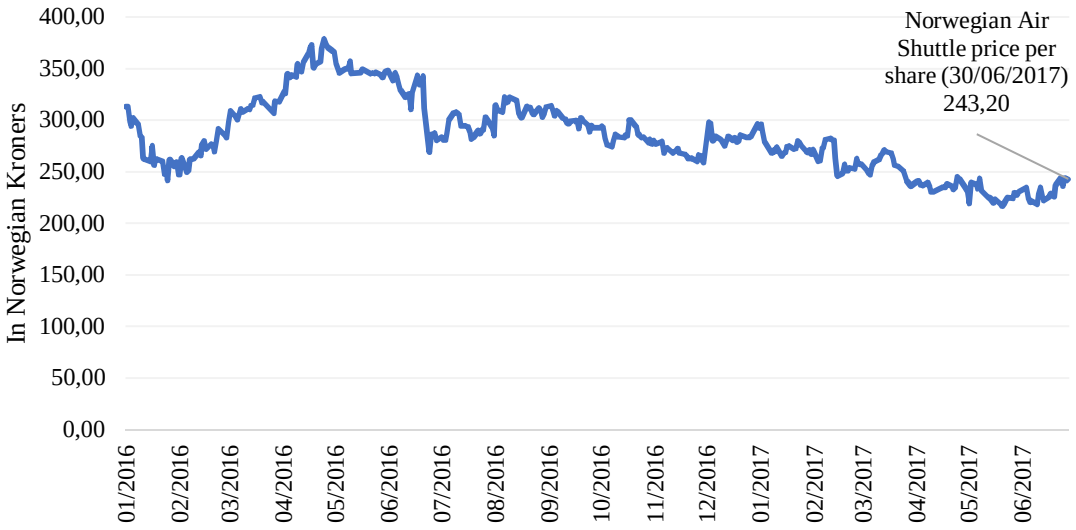


[6] Excluding the effect of exceptional accounting gain of €317,5m on the sale of Aer Lingus shareholding in FY2016.

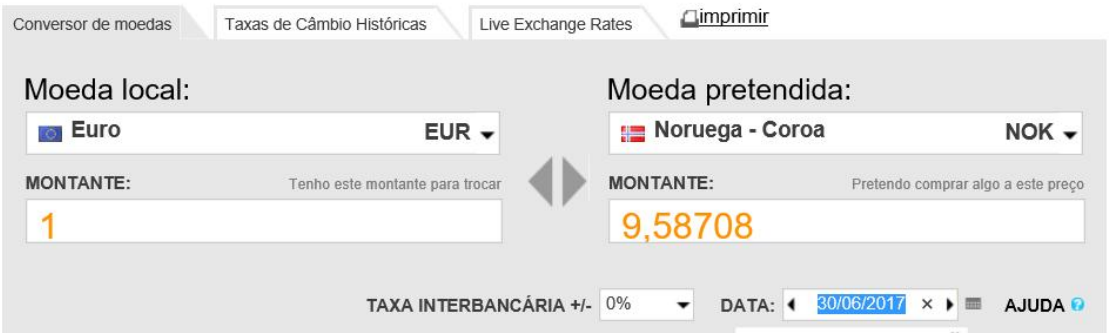
Appendix 5: The evolution of Norwegian Air Shuttle EPS (2007-2016) (Source: Norwegian Air Shuttle Annual Reports, https://www.norwegian.com/uk/about/company/investor-relations/)



Appendix 6: The evolution of Norwegian Air Shuttle price per share (01.01.2016-30.06.2017) (Source: Oslo Børs Stock Exchange, https://www.oslobors.no/)



Appendix 7: The spot rate S(EUR/USD) at 30.06.2017 (Source: www.oanda.com)



Appendix 8: Ryanair cost of equity calculations (Source: Own Calculations).

Cost of Equity Calculations		Variables Source
Risk Free Rate	0,466%	German Government Bund 10 years; Bid Yld Thompson Reuters (Retrieved on 30-06-2017)
Equity Beta	1,04	http://www.reuters.com/finance/stocks/overview?symbol=RYA.I
Market Risk Premium	6,70%	Market risk premium for Ireland (Fernandez et al, 2017)
Cost of Equity	7,43%	= Risk free rate + Equity Beta * Market Risk Premium

Appendix 9: Ryanair cost of capital (WACC) calculations (Source: Own Calculations).

WACC Calculations	
Cost of equity	7,43%
After-tax cost of debt	1,49%
Market Cap	22 758,25
Long-term debt (31/03/2017)	4 569,70
D/V	16,72%
E/V	83,28%
WACC	6,41%

Appendix 10: Forecasted Income Statement 2018-2025 of Ryanair (Source: Own calculations)

Annual, in Millions of Euros								
	2018F	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Period End Date	**31/03/2018**	**31/03/2019**	**31/03/2020**	**31/03/2021**	**31/03/2022**	**31/03/2023**	**31/03/2024**	**31/03/2025**
Scheduled Revenues	5 421,7	5 994,5	6 545,0	7 115,1	7 839,8	8 636,3	9 321,8	9 793,5
Ancillary revenues	1 981,9	2 191,3	2 392,6	2 601,0	2 865,9	3 157,1	3 407,6	3 580,1
Total Revenue	**7 403,7**	**8 185,9**	**8 937,6**	**9 716,1**	**10 705,7**	**11 793,4**	**12 729,4**	**13 373,5**
Staff costs	702,7	780,0	865,8	961,1	1 066,9	1 184,3	1 314,6	1 459,2
Fuel and oil costs	2 362,0	2 455,8	2 591,9	2 720,5	2 997,6	3 302,2	3 564,2	3 744,6
Maintenance, materials and repairs	150,9	161,4	172,7	184,8	197,7	211,6	226,4	242,2
Route charges	708,0	764,5	825,4	891,2	962,3	1 039,1	1 121,9	1 211,4
Airport and handling charges	969,0	1 085,7	1 216,4	1 362,9	1 527,1	1 711,0	1 917,1	2 148,0
Marketing, distribution and others	383,1	455,3	541,2	643,2	764,5	908,6	1 080,0	1 283,6
EBITDAR	**2 128,1**	**2 483,3**	**2 724,2**	**2 952,3**	**3 189,6**	**3 436,7**	**3 505,2**	**3 284,4**
Aircraft rentals	96,0	107,0	119,3	133,0	148,3	165,3	184,3	205,5
EBITDA	**2 032,1**	**2 376,3**	**2 604,8**	**2 819,3**	**3 041,3**	**3 271,4**	**3 320,9**	**3 078,9**
Depreciation	552,9	580,1	622,8	668,1	699,2	744,5	757,5	757,5
EBIT	**1 479,2**	**1 796,2**	**1 982,0**	**2 151,1**	**2 342,1**	**2 526,8**	**2 563,4**	**2 321,4**
Finance income	4,7	6,1	7,1	8,2	10,6	13,0	16,5	21,5
Finance expense	(60,5)	(57,1)	(50,4)	(43,7)	(36,9)	(30,2)	(23,5)	(16,7)
Foreign 60xchange (loss)/gain	(0,7)	(0,7)	(0,7)	(0,7)	(0,7)	(0,7)	(0,7)	(0,7)
Total Other Expense	**(56,5)**	**(51,7)**	**(44,0)**	**(36,2)**	**(27,0)**	**(17,9)**	**(7,7)**	**4,1**
Net Income Before Taxes (EBT)	**1 422,7**	**1 744,5**	**1 938,0**	**2 115,0**	**2 315,1**	**2 509,0**	**2 555,7**	**2 325,5**
Provision for Income Taxes	176,4	215,6	238,3	258,8	282,1	304,5	308,6	278,0
Net Income After Taxes	**1 246,3**	**1 528,9**	**1 699,7**	**1 856,1**	**2 032,9**	**2 204,4**	**2 247,1**	**2 047,6**
Net Income	**1 246,3**	**1 528,9**	**1 699,7**	**1 856,1**	**2 032,9**	**2 204,4**	**2 247,1**	**2 047,6**

Appendix 11: Forecasted Balance Sheet 2018-2025 of Ryanair (Source: Own calculations)

Annual, in Millions of Euros								
	2018F	**2019F**	**2020F**	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**
Period End Date	**31/03/2018**	**43 555**	**31/03/2018**	**31/03/2018**	**31/03/2018**	**31/03/2018**	**31/03/2018**	**31/03/2018**
Non-current assets (€ Millions)								
Property, plant and equipment	8 042,5	8 438,1	9 059,6	9 718,9	10 170,9	10 830,1	11 018,5	11 018,5
Intangible assets	46,8	46,8	46,8	46,8	46,8	46,8	46,8	46,8
Available for sale financial assets	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Derivative financial Instruments	23,0	23,0	23,0	23,0	23,0	23,0	23,0	23,0
Total non-current assets	**8 112,3**	**8 507,9**	**9 129,4**	**9 788,7**	**10 240,7**	**10 899,9**	**11 088,3**	**11 088,3**
%Total assets	*61,44%*	*60,36%*	*60,52%*	*60,61%*	*58,79%*	*57,65%*	*54,88%*	*50,98%*
Current assets								
Inventories	3,3	3,7	4,0	4,3	4,8	5,3	5,7	6,0
Other assets	199,1	220,1	240,3	261,2	287,8	317,1	342,3	359,6
Current tax	0,3	0,4	0,4	0,5	0,5	0,6	0,6	0,6
Trade receivables	71,4	78,9	86,1	93,6	103,2	113,7	122,7	128,9
Derivative financial instruments	532,8	589,1	643,2	699,2	770,5	848,7	916,1	962,4
Restricted cash	12,2	13,5	14,7	16,0	17,7	19,5	21,0	22,1
Financial assets: cash>3 months	2 904,5	2 904,5	2 904,5	2 904,5	2 904,5	2 904,5	2 904,5	2 904,5
Cash and cash equivalents	1 368,3	1 778,3	2 062,6	2 383,1	3 089,0	3 798,0	4 803,0	6 278,1
Total current assets	**5 091,9**	**5 588,5**	**5 955,9**	**6 362,6**	**7 177,9**	**8 007,2**	**9 115,9**	**10 662,1**
% Total assets	*38,56%*	*39,64%*	*39,48%*	*39,39%*	*41,21%*	*42,35%*	*45,12%*	*49,02%*
Total assets	**13 204,3**	**14 096,4**	**15 085,3**	**16 151,2**	**17 418,6**	**18 907,2**	**20 204,1**	**21 750,4**

	2018F	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Period End Date	**31/03/2018**	**43 555**	**31/03/2018**	**31/03/2018**	**31/03/2018**	**31/03/2018**	**31/03/2018**	**31/03/2018**
Current liabilities								
Trade payables	260,6	281,9	307,3	334,6	371,9	413,5	456,5	499,5
Accrued expenses and other liabilities	2 509,0	2 713,7	2 958,0	3 221,5	3 580,0	3 980,6	4 394,7	4 808,6
Current maturities of debt	455,9	455,9	455,9	455,9	455,9	455,9	455,9	455,9
Current tax	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Derivative financial instruments	564,6	624,3	681,6	741,0	816,5	899,4	970,8	1 019,9
Total current liabilities	**3 796,2**	**4 081,7**	**4 408,8**	**4 759,0**	**5 230,2**	**5 755,4**	**6 283,9**	**6 789,9**
% Total liabilities	*44,88%*	*45,96%*	*47,00%*	*47,84%*	*49,25%*	*50,29%*	*52,17%*	*52,35%*
Non-current liabilities								
Provisions	154,7	154,7	154,7	154,7	154,7	154,7	154,7	154,7
Derivative Financial Instruments	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6
Deferred Tax	473,1	473,1	473,1	473,1	473,1	473,1	473,1	473,1
Other creditors	12,4	12,4	12,4	12,4	12,4	12,4	12,4	12,4
Non-current maturities of debt	4 018,6	4 157,0	4 329,7	4 545,2	4 747,3	5 047,1	5 118,9	5 538,5
Total non-current liabilities	**4 661,4**	**4 799,8**	**4 972,4**	**5 187,9**	**5 390,1**	**5 689,9**	**5 761,7**	**6 181,3**
% Total liabilities	*55,12%*	*54,04%*	*53,00%*	*52,16%*	*50,75%*	*49,71%*	*47,83%*	*47,65%*
Total Liabilities	**8 457,6**	**8 881,5**	**9 381,2**	**9 946,9**	**10 620,3**	**11 445,3**	**12 045,6**	**12 971,2**
% Assets	*64,05%*	*63,01%*	*62,19%*	*61,59%*	*60,97%*	*60,53%*	*59,62%*	*59,64%*

	2018F	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Period End Date	**31/03/2018**	**43 555**	**31/03/2018**	**31/03/2018**	**31/03/2018**	**31/03/2018**	**31/03/2018**	**31/03/2018**
Shareholders' equity								
Issued share capital	7,3	7,3	7,3	7,3	7,3	7,3	7,3	7,3
Share premium account	719,4	719,4	719,4	719,4	719,4	719,4	719,4	719,4
Other undenominated capital	2,7	2,7	2,7	2,7	2,7	2,7	2,7	2,7
Retained earnings	3 881,3	4 349,4	4 838,7	5 338,9	5 932,9	6 596,5	7 293,1	7 913,8
Other reserves	136,0	136,0	136,0	136,0	136,0	136,0	136,0	136,0
Shareholders' E**quity**	**4 746,7**	**5 214,9**	**5 704,1**	**6 204,3**	**6 798,3**	**7 461,9**	**8 158,5**	**8 779,2**
% Assets	*35,95%*	*36,99%*	*37,81%*	*38,41%*	*39,03%*	*39,47%*	*40,38%*	*40,36%*
Total Liabilities and Shareholders' Equity	**13 204,3**	**14 096,4**	**15 085,3**	**16 151,2**	**17 418,6**	**18 907,2**	**20 204,1**	**21 750,4**

Appendix 12: Forecasted Working Capital 2018-2025 of Ryanair (Source: Own Calculations)

(Annual, in Millions of Euros)	2018F	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Trade receivables	71,4	78,9	86,1	93,6	103,2	113,7	122,7	128,9
%Revenues	*0,96%*	*0,96%*	*0,96%*	*0,96%*	*0,96%*	*0,96%*	*0,96%*	*0,96%*
Other assets	199,1	220,1	240,3	261,2	287,8	317,1	342,3	359,6
%Revenues	*2,69%*	*2,69%*	*2,69%*	*2,69%*	*2,69%*	*2,69%*	*2,69%*	*2,69%*
Inventory	3,3	3,7	4,0	4,3	4,8	5,3	5,7	6,0
%Revenues	*0,04%*	*0,04%*	*0,04%*	*0,04%*	*0,04%*	*0,04%*	*0,04%*	*0,04%*
Derivative Financial Instruments	532,8	589,1	643,2	699,2	770,5	848,7	916,1	962,4
%Revenues	*7,20%*	*7,20%*	*7,20%*	*7,20%*	*7,20%*	*7,20%*	*7,20%*	*7,20%*
Current tax	0,3	0,4	0,4	0,5	0,5	0,6	0,6	0,6
%Revenues	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0,00%*
Restricted cash	12,2	13,5	14,7	16,0	17,7	19,5	21,0	22,1
%Revenues	*0,16%*	*0,16%*	*0,16%*	*0,16%*	*0,16%*	*0,16%*	*0,16%*	*0,16%*
Total Current Assets	**819,1**	**905,6**	**988,8**	**1074,9**	**1184,4**	**1304,8**	**1408,3**	**1479,6**
Variation in Assets	**-241,5**	**-86,5**	**-83,2**	**-86,1**	**-109,5**	**-120,3**	**-103,6**	**-71,3**
Trade payables	260,6	281,9	307,3	334,6	371,9	413,5	456,5	499,5
%Operating expense	*4,85%*	*4,85%*	*4,85%*	*4,85%*	*4,85%*	*4,85%*	*4,85%*	*4,85%*
Accrued expenses and other liabilities	2509,0	2713,7	2958,0	3221,5	3580,0	3980,6	4394,7	4808,6
%Operating expense	*46,71%*	*46,71%*	*46,71%*	*46,71%*	*46,71%*	*46,71%*	*46,71%*	*46,71%*
Current tax	6,0	6,0	6,0	6,0	6,0	6,0	6,0	6,0
Derivative Financial Instruments	564,6	624,3	681,6	741,0	816,5	899,4	970,8	1019,9
%Revenues	*7,63%*	*7,63%*	*7,63%*	*7,63%*	*7,63%*	*7,63%*	*7,63%*	*7,63%*
Total Current Liabilities	**3340,3**	**3625,8**	**3952,9**	**4303,1**	**4774,3**	**5299,5**	**5828,0**	**6334,0**
Variation in Liabilities	**784,4**	**285,5**	**327,1**	**350,2**	**471,3**	**525,2**	**528,5**	**506,0**
Change in Working Capital	542,85	198,99	243,91	264,08	361,77	404,84	424,92	434,73

Appendix 13: Forecasted Capital Expenditures 2018-2025 of Ryanair (Source: Own Calculations).

	2018F	2019F	2020F	2021F	2022F	2023F	2024F	2025F
CAPEX	(1 342,19)	(1 483,99)	(1 620,26)	(1 554,58)	(1 605,86)	(1 474,18)	(1 145,65)	(802,41)
% Revenues	21,81%	21,81%	21,81%	16,00%	15,00%	13,00%	10,00%	6,00%

Appendix 14: Forecasted FCFF 2018-2025 of Ryanair (Source: Own Calculations).

Annual, in millions of Norwegian Kroners		2018F	2019F	2020F	2021F	2022F	2023F	2024F	2025F
	EBIT	**1 479,2**	**1 796,2**	**1 982,0**	**2 151,1**	**2 342,1**	**2 526,8**	**2 563,4**	**2 321,4**
-	taxes	184,9	224,5	247,8	268,9	292,8	315,9	320,4	290,2
=	**EBIT(1-T)**	**1 294,3**	**1 571,6**	**1 734,3**	**1 882,3**	**2 049,3**	**2 211,0**	**2 242,9**	**2 031,2**
+	Depreciation	552,9	580,1	622,8	668,1	699,2	744,5	757,5	757,5
=	**Operating CF**	**1 847,2**	**2 151,7**	**2 357,1**	**2 550,4**	**2 748,6**	**2 955,5**	**3 000,4**	**2 788,7**
-	Change in WorkingCapital	542,9	199,0	243,9	264,1	361,8	404,8	424,9	434,7
-	CAPEX	1 342,2	1 484,0	1 620,3	1 554,6	1 605,9	1 474,2	1 145,6	802,4
=	**FCFF**	**(37,8)**	**468,8**	**492,9**	**731,7**	**780,9**	**1 076,5**	**1 429,9**	**1 551,6**
	TV								32 082,0
	g	1,50%							
	WACC	6,41%							
	PV(TV)	19 518,1	81%						
	PV(FCFF)	4 542,0	19%						
	EV	24 060,1	100%						
-	**Debt**	4 569,7							
+	**Cash**	1 224,0							
=	**Equity**	20 714,4							
	#shares (mn)	1 275 328 949							
	Price per Share (PPS)	16,24							

Appendix 15: List of Airline Companies and its forward multiples as of 30/06/2017 (Source: Thompson Reuters).

Identifier	Company Name	Forward EV/EBITDA	Forward EV/EBIT	Forward EV/Sales	Forward P/E	Forward P/B
RYA.I	Ryanair Holdings PLC	8,11	10,65	2,58	12,48	4,42
EZJ.L	easyJet plc	5,91	8,54	0,76	10,99	1,43
AIRF.PA	Air France KLM SA	2,43	6,67	0,26	3,45	2,59
ICAG.L	International Consolidated Airlines Group SA	3,42	5,48	0,61	6,39	1,59
LHAG.DE	Deutsche Lufthansa AG	2,42	5,28	0,25	5,80	1,05
WIZZ.L	Wizz Air Holdings PLC	1,35	1,59	0,25	10,16	1,94
NWC.OL	Norwegian Air Shuttle ASA	7,91	18,74	0,93	8,42	3,00
SAS.ST	SAS AB	2,98	5,44	0,24	5,62	0,49
AB1.DE	Air Berlin PLC			0,32		-0,05
FIA1S.HE	Finnair Oyj	1,28	2,15	0,12	6,61	0,69
ICEAIR.IC	Icelandair Group hf	3,70	7,22	0,64		
LUV	Southwest Airlines Co	6,08	8,45	1,45	13,72	3,77

Appendix 16: Norwegian Air Shuttle operating expense categories and assumptions used (Source: Norwegian Air Shuttle Annual Reports).

Expense Category	Items that are included in each category	Forecast assumption
Directly Related Operating Expenses	Sales & Distribution Expenses, Aviation Fuel, Aircraft Leases, Airport Charges, Handling Charges, Technical Maintenance Expenses, Other Aircraft Expenses.	70% of total operating revenues
Payroll	Wages & Salaries, Social Security Tax, Pension Expenses, Employee Stock Options, Other Benefits, Hired Crew Personnel.	15% of total operating revenues
Depreciation, amortization and impairment		5,50% of tangible assets
Other operating expenses		5,50% of total operating revenues
Other losses/(gains) – net		0,96% of total operating revenues

Appendix 17: Norwegian Air Shuttle directly operating expenses items and items included in payroll (Source: Norwegian Air Shuttle Annual Reports).

Directly related operating expenses (% revenues)	**70%**
Sales & Distribution Expenses	4,21%
Aviation Fuel	28,03%
Aircraft Leases	15,77%
Airport Charges	18,33%
Handling Charges	16,62%
Technical Maintenance Expenses	10,35%
Other aircraft Expenses	6,69%

Payroll	**15%**
Wages & Salaries	46,94%
Social Security Tax	7,92%
Pension Expenses	6,24%
Employee Stock Options	0,35%
Other Benefits	4,72%
Hired Crew Personnel	33,82%

Appendix 18: Forecasted Income Statement 2017-2024 of Norwegian Air Shuttle (Source: Own calculations).

Annual, in Millions of Norwegian Kroners

	2017F	2018F	2019F	2020F	2021F	2022F	2023F	2024F
Period End Date	**31/12/2017**	**31/12/2018**	**31/12/2019**	**31/12/2020**	**31/12/2021**	**31/12/2022**	**31/12/2023**	**31/12/2024**
Passenger transport	32 414,7	38 723,6	49 601,0	51 776,4	54 169,5	56 562,5	59 173,1	61 783,6
Ancillary revenue	5 737,2	6 853,8	8 779,0	9 164,1	9 587,6	10 011,2	10 473,2	10 935,3
Other revenues	1 308,3	1 562,9	2 002,0	2 089,8	2 186,4	2 282,9	2 388,3	2 493,7
Total operating revenue	**39 460,1**	**47 140,3**	**60 382,0**	**63 030,3**	**65 943,5**	**68 856,6**	**72 034,6**	**75 212,6**
Sales & Distribution Expenses	1 024,5	1 223,9	1 567,6	1 636,4	1 712,0	1 787,7	1 870,2	1 952,7
Aviation Fuel	9 384,3	11 210,8	14 359,9	14 989,7	15 682,5	16 375,3	17 131,1	17 886,9
Airport Charges	5 034,9	6 014,8	7 704,3	8 042,2	8 413,9	8 785,6	9 191,1	9 596,6
Handling Charges	4 000,7	4 779,4	6 121,9	6 390,4	6 685,8	6 981,1	7 303,3	7 625,5
Technical Maintenance Expenses	2 724,1	3 254,3	4 168,4	4 351,2	4 552,3	4 753,4	4 972,8	5 192,2
Other aircraft Expenses	1 609,0	1 922,1	2 462,0	2 570,0	2 688,8	2 807,6	2 937,2	3 066,8
Staff costs	5 919,0	7 071,0	9 057,3	9 454,5	9 891,5	10 328,5	10 805,2	11 281,9
Other operating expenses	2 170,3	2 592,7	3 321,0	3 466,7	3 626,9	3 787,1	3 961,9	4 136,7
Other losses/(gains) - net	160,5	160,5	160,5	160,5	160,5	160,5	160,5	160,5
EBITDAR	**7 432,9**	**8 910,9**	**11 459,0**	**11 968,6**	**12 529,2**	**13 089,8**	**13 701,3**	**14 312,9**
Aircraft Leases	3 844,7	4 593,0	5 883,2	6 141,2	6 425,0	6 708,9	7 018,5	7 328,2
EBITDA	**3 588,2**	**4 317,8**	**5 575,8**	**5 827,4**	**6 104,1**	**6 380,9**	**6 682,8**	**6 984,7**

D&A	1 627,4	1 938,3	2 232,2	2 331,7	2 435,6	2 544,3	2 657,8	2 776,4
EBIT	**1 960,8**	**2 379,5**	**3 343,6**	**3 495,7**	**3 668,5**	**3 836,6**	**4 025,0**	**4 208,4**
Interest Income	56,5	56,5	56,5	56,5	56,5	56,5	56,5	56,5
Interest Expense	(877,3)	(1 044,8)	(1 221,9)	(1 276,1)	(1 333,1)	(1 392,3)	(1 454,6)	(1 519,2)
Net foreign exchange (loss) or gain	35,5	35,5	35,5	35,5	35,5	35,5	35,5	35,5
Appreciation cash equivalents	7,1	7,1	7,1	7,1	7,1	7,1	7,1	7,1
Impairment available-for-sale financial assets	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Hedge inneficiency	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Fair Value Adjustment LT Deposits	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Other financial items	(6,8)	(6,8)	(6,8)	(6,8)	(6,8)	(6,8)	(6,8)	(6,8)
Net financial items	**(784,9)**	**(952,4)**	**(1 129,5)**	**(1 183,7)**	**(1 240,7)**	**(1 299,9)**	**(1 362,2)**	**(1 426,8)**
Profit/loss from associated companies	124,7	124,7	124,7	124,7	124,7	124,7	124,7	124,7
Gain from Sale of Subsidiaries	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Other Income	37,2	37,2	37,2	37,2	37,2	37,2	37,2	37,2
EBT	**1 337,9**	**1 589,1**	**2 376,0**	**2 473,9**	**2 589,7**	**2 698,6**	**2 824,8**	**2 943,5**
Income tax expense (income)	361,2	429,1	641,5	668,0	699,2	728,6	762,7	794,7
Net Income	**976,6**	**1 160,0**	**1 734,5**	**1 806,0**	**1 890,5**	**1 970,0**	**2 062,1**	**2 148,7**

Appendix 19: Forecasted Balance Sheet 2017-2024 of Norwegian Air Shuttle (Source: Own calculations).

Annual, in Millions of Norwegian Kroners								
	2017F	**2018F**	**2019F**	**2020F**	**2021F**	**2022F**	**2023F**	**2024F**
Period End Date	**31-12-2017**	**31-12-2018**	**31-12-2019**	**31-12-2020**	**31-12-2021**	**31-12-2022**	**31-12-2023**	**31-12-2024**
Non-current assets								
Intangible assets	215,1	215,1	215,1	215,1	215,1	215,1	215,1	215,1
Deferred tax asset	241,5	241,5	241,5	241,5	241,5	241,5	241,5	241,5
Aircraft, parts and installation on leased aircraft	28 993,1	34 636,0	39 969,5	41 768,2	43 647,7	45 611,9	47 664,4	49 809,3
Equipment and fixtures	90,6	92,9	95,3	97,8	100,3	102,9	105,5	108,2
Buildings	290,5	297,9	305,6	313,4	321,4	329,7	338,1	346,8
Financial assets available for sale	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Investment in associate	82,9	82,9	82,9	82,9	82,9	82,9	82,9	82,9
Prepayment to aircraft manufacturers	651,4	778,2	996,8	1 040,5	1 088,6	1 136,7	1 189,1	1 241,6
Other receivables	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total non-current assets	**9 192,1**	**10 981,2**	**12 672,2**	**13 242,4**	**13 838,4**	**14 461,1**	**15 111,8**	**15 791,9**
%Assets	892,6	1 066,3	1 365,8	1 425,7	1 491,6	1 557,5	1 629,4	1 701,3
Current assets								
Inventory	180,6	215,8	276,4	288,5	301,9	315,2	329,7	344,3
Trade and other receivables	4 190,1	5 005,6	6 411,7	6 692,9	7 002,2	7 311,6	7 649,0	7 986,5
Derivative financial insctruments	537,1	641,7	821,9	858,0	897,6	937,3	980,6	1 023,8
Hedged item - firm commitments	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Financial assets available for sale	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Cash and cash equivalents	2 992,7	3 800,8	6 568,0	8 333,7	10 214,7	12 144,4	14 194,3	16 297,0
Total current assets	**7 900,6**	**9 663,9**	**14 078,0**	**16 173,1**	**18 416,5**	**20 708,5**	**23 153,6**	**25 651,6**
%Assets	16,27%	16,65%	20,10%	21,68%	23,18%	24,52%	25,80%	26,95%
Total assets	**48 550,3**	**58 056,0**	**70 022,7**	**74 600,6**	**79 443,9**	**84 447,6**	**89 731,5**	**95 190,1**
%growth	28,57%	19,58%	20,61%	6,54%	6,49%	6,30%	6,26%	6,08%
Current liabilities								
Short term part of borrowings	6 417,1	6 417,1	6 417,1	6 417,1	6 417,1	6 417,1	6 417,1	6 417,1
Trade and other payables	5 073,8	6 056,3	7 717,5	8 055,3	8 426,0	8 797,5	9 202,0	9 607,2
Air traffic settlement liabilities	6 230,6	7 437,1	9 477,0	9 891,8	10 347,1	10 803,2	11 299,9	11 797,5
Derivative financial instruments	131,2	156,8	200,8	209,6	219,3	229,0	239,6	250,1
Tax payable	23,9	28,6	36,6	38,2	40,0	41,8	43,7	45,6
Total current liabilities	**17 876,6**	**20 095,8**	**23 849,1**	**24 612,0**	**25 449,5**	**26 288,5**	**27 202,2**	**28 117,5**
% Total liabilities	41,10%	38,79%	38,47%	38,02%	37,62%	37,22%	36,85%	36,48%
Non-current liabilities								
Pension obligation	148,1	148,1	148,1	148,1	148,1	148,1	148,1	148,1
Provision for periodic maintenance	1 757,1	2 092,5	2 447,3	2 555,8	2 670,0	2 788,6	2 913,3	3 042,8
Other long term liabilities	112,2	133,6	156,2	163,1	170,4	178,0	186,0	194,2
Deferred tax	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Borrowings	23 604,1	29 335,5	35 397,7	37 250,9	39 202,9	41 228,6	43 359,7	45 571,2
Derivative financial instruments	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Financial lease liability	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Total non-current liabilities	**25 621,4**	**31 709,7**	**38 149,4**	**40 117,9**	**42 191,5**	**44 343,3**	**46 607,1**	**48 956,3**
% Total liabilities	58,90%	61,21%	61,53%	61,98%	62,38%	62,78%	63,15%	63,52%
Total Liabilities	**43 498,0**	**51 805,5**	**61 998,4**	**64 729,9**	**67 641,1**	**70 631,8**	**73 809,3**	**77 073,7**
%Assets	89,59%	89,23%	88,54%	86,77%	85,14%	83,64%	82,26%	80,97%
Shareholders' equity								
Share capital	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
Share premium	1 268,7	1 306,8	1 346,1	1 386,6	1 428,3	1 471,2	1 515,4	1 561,0
Other paid-in equity	110,6	110,6	110,6	110,6	110,6	110,6	110,6	110,6
Other reserves	773,1	773,1	773,1	773,1	773,1	773,1	773,1	773,1
Retained earnings	2 895,9	4 055,9	5 790,4	7 596,4	9 486,9	11 456,9	13 518,9	15 667,7
Shareholders' equity	**5 052,3**	**6 250,5**	**8 024,2**	**9 870,7**	**11 802,9**	**13 815,8**	**15 922,1**	**18 116,4**
Non-controlling interest	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Total Equity	**5 052,3**	**6 250,5**	**8 024,2**	**9 870,7**	**11 802,9**	**13 815,8**	**15 922,1**	**18 116,4**
% Assets	10,41%	10,77%	11,46%	13,23%	14,86%	16,36%	17,74%	19,03%
Total Liabilities and Shareholders' Equity	**48 550,3**	**58 056,0**	**70 022,7**	**74 600,6**	**79 443,9**	**84 447,6**	**89 731,5**	**95 190,1**

Appendix 20: Forecasted Working Capital 2017-2024 of Norwegian Air Shuttle (Source: Own Calculations).

	2017F	2018F	2019F	2020F	2021F	2022F	2023F	2024F
Trade receivables	4 190,1	5 005,6	6 411,7	6 692,9	7 002,2	7 311,6	7 649,0	7 986,5
%Revenues	10,62%	10,62%	10,62%	10,62%	10,62%	10,62%	10,62%	10,62%
Inventory	180,6	215,8	276,4	288,5	301,9	315,2	329,7	344,3
%Revenues	0,46%	0,46%	0,46%	0,46%	0,46%	0,46%	0,46%	0,46%
Derivative financial instruments	537,1	641,7	821,9	858,0	897,6	937,3	980,6	1 023,8
%Revenues	1,36%	1,36%	1,36%	1,36%	1,36%	1,36%	1,36%	1,36%
Total Current Assets	**4 907,9**	**5 863,1**	**7 510,0**	**7 839,4**	**8 201,7**	**8 564,1**	**8 959,3**	**9 354,6**
Variation	**(1 438,2)**	**(955,2)**	**(1 646,9)**	**(329,4)**	**(362,3)**	**(362,3)**	**(395,3)**	**(395,3)**
Trade payables	5 073,8	6 056,3	7 717,5	8 055,3	8 426,0	8 797,5	9 202,0	9 607,2
%Operating Expenses	13,53%	13,53%	13,53%	13,53%	13,53%	13,53%	13,53%	13,53%
Air traffic settlement liabilities	6 230,6	7 437,1	9 477,0	9 891,8	10 347,1	10 803,2	11 299,9	11 797,5
%Operating Expenses	16,62%	16,62%	16,62%	16,62%	16,62%	16,62%	16,62%	16,62%
Tax payable	23,9	28,6	36,6	38,2	40,0	41,8	43,7	45,6
%Revenues	0,06%	0,06%	0,06%	0,06%	0,06%	0,06%	0,06%	0,06%
Derivative Financial Instruments	131,2	156,8	200,8	209,6	219,3	229,0	239,6	250,1
%Revenues	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%	0,33%
Total Current Liabilities	**11 459,6**	**13 678,8**	**17 432,0**	**18 194,9**	**19 032,5**	**19 871,5**	**20 785,2**	**21 700,4**
Variation	(2 817,7)	(2 219,2)	(3 753,2)	(762,9)	(837,6)	(839,0)	(913,7)	(915,3)
Net Working Capital	**1 379,5**	**1 264,0**	**2 106,3**	**433,5**	**475,2**	**476,6**	**518,5**	**520,0**

Appendix 21: Forecasted Capital Expenditures 2017-2024 of Norwegian Air Shuttle (Source: Own Calculations).

	2017F	2018F	2019F	2020F	2021F	2022F	2023F	2024F
CAPEX	**(8 466,6)**	**(7 441,8)**	**(7 034,5)**	**(2 379,2)**	**(2 486,0)**	**(2 597,7)**	**(2 714,4)**	**(2 836,3)**
%Revenues	21,46%	15,79%	11,65%	3,77%	3,77%	3,77%	3,77%	3,77%
%Tangible Assets	22,17%	16,31%	13,36%	4,32%	4,32%	4,32%	4,32%	4,32%

Appendix 22: Forecasted FCFF 2017-2024 of Norwegian Air Shuttle (Source: Own Calculations).

Annual, in millions of Norwegian Kroners		2017F	2018F	2019F	2020F	2021F	2022F	2023F	2024F
	EBIT	1 960,8	2 379,5	3 343,6	3 495,7	3 668,5	3 836,6	4 025,0	4 208,4
-	**taxes**	529,4	642,5	902,8	943,8	990,5	1 035,9	1 086,8	1 136,3
=	**EBIT(1-T)**	1 431,4	1 737,1	2 440,8	2 551,9	2 678,0	2 800,7	2 938,3	3 072,1
+	**Depreciation**	1 627,4	1 938,3	2 232,2	2 331,7	2 435,6	2 544,3	2 657,8	2 776,4
=	**Operating CF**	3 058,8	3 675,4	4 673,0	4 883,6	5 113,7	5 345,0	5 596,0	5 848,5
-	**Change in WorkingCapital**	1 379,5	1 264,0	2 106,3	433,5	475,2	476,6	518,5	520,0
-	**CAPEX**	8 466,6	7 441,8	7 034,5	2 379,2	2 486,0	2 597,7	2 714,4	2 836,3
=	**FCFF**	**(6 787,4)**	**(5 030,4)**	**(4 467,8)**	**2 070,9**	**2 152,4**	**2 270,7**	**2 363,2**	**2 492,2**
	TV								**60 227,3**
	g	1,50%							
	WACC	5,70%							
	PV(TV)	38 653,9	120,54%						
	PV(FCFF)	(6 585,9)	-20,54%						
	EV	32 068,0							
-	**Debt**	24 936,5							
+	**Cash**	2 323,6							
=	**Equity**	9 455,1							
	#shares (mn)	35 759 639							
	Price per Share (PPS)	264,41							

Appendix 23: Forecasted Income Statement of merged company, without considering synergies and integration costs (Source: Own Computations).

Annual As Reported in Millions of Euros

	2018F	2019F	2020F	2021F	2022F	2023F	2024F	2025F
Period End Date	**31/03/2018**	**31/03/2019**	**31/03/2020**	**31/03/2021**	**31/03/2022**	**31/03/2023**	**31/03/2024**	**31/03/2025**
Passenger transport	8 802,8	10 033,7	11 718,8	12 515,8	13 490,1	14 536,2	15 493,9	16 237,9
Ancillary revenue	2 580,4	2 906,2	3 308,3	3 556,9	3 866,0	4 201,3	4 500,1	4 720,7
Other revenues	136,5	163,0	208,8	218,0	228,1	238,1	249,1	260,1
Total operating revenues	**11 519,7**	**13 102,9**	**15 235,9**	**16 290,6**	**17 584,1**	**18 975,6**	**20 243,1**	**21 218,7**
Staff costs	1 320,1	1 517,5	1 810,6	1 947,3	2 098,6	2 261,6	2 441,6	2 636,0
Fuel and oil costs	3 340,8	3 625,1	4 089,7	4 284,0	4 633,4	5 010,2	5 351,1	5 610,3
Maintenance, materials and repairs	602,8	701,4	864,3	906,7	953,0	1 000,2	1 051,5	1 103,7
Route charges	814,8	892,1	988,9	1 061,9	1 140,9	1 225,5	1 317,0	1 415,1
Airport and handling charges	1 911,4	2 211,6	2 658,6	2 868,4	3 102,1	3 355,6	3 637,6	3 944,4
Marketing, distribution and others	609,5	725,7	887,6	1 004,8	1 142,8	1 303,7	1 493,2	1 715,1
Other losses/(gains) - net	16,7	16,7	16,7	16,7	16,7	16,7	16,7	16,7
EBITDAR	**2 903,4**	**3 412,8**	**3 919,4**	**4 200,7**	**4 496,5**	**4 802,1**	**4 934,3**	**4 777,4**
Aircraft Leases	497,0	586,1	733,0	773,6	818,5	865,1	916,4	969,9
EBITDA	**2 406,4**	**2 826,6**	**3 186,4**	**3 427,1**	**3 678,0**	**3 936,9**	**4 017,9**	**3 807,5**
Depreciation, amortization and impairment	722,7	782,3	855,7	911,4	953,3	1 009,9	1 034,7	1 047,1
EBIT	**1 683,8**	**2 044,4**	**2 330,8**	**2 515,8**	**2 724,7**	**2 927,0**	**2 983,2**	**2 760,4**

Finance income	10,6	12,0	13,0	14,1	16,5	18,9	22,4	27,4
Finance expense	(152,0)	(166,1)	(177,8)	(176,8)	(176,0)	(175,4)	(175,2)	(175,2)
Foreign exchange (loss)/gain	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
Total Other Expense	(138,4)	(151,1)	(161,8)	(159,6)	(156,4)	(153,5)	(149,8)	(144,7)
Profit/loss from associated companies	13,0	13,0	13,0	13,0	13,0	13,0	13,0	13,0
Other Income	3,9	3,9	3,9	3,9	3,9	3,9	3,9	3,9
EBT	**1 562,2**	**1 910,2**	**2 185,8**	**2 373,0**	**2 585,2**	**2 790,4**	**2 850,3**	**2 632,6**
Income tax expense (income)	195,3	238,8	273,2	296,6	323,1	348,8	356,3	329,1
Net Income	**1 367,0**	**1 671,4**	**1 912,6**	**2 076,4**	**2 262,0**	**2 441,6**	**2 494,0**	**2 303,5**

Appendix 24: Forecasted Balance Sheet of the merged company, without considering synergies and integration costs (Source: Own Computations).

Annual As Reported in Millions of Euros	2017F	2018F	2019F	2020F	2021F	2022F	2023F	2024F
Period End Date	**31/03/2017**	**31/03/2018**	**31/03/2019**	**31/03/2020**	**31/03/2021**	**31/03/2022**	**31/03/2023**	**31/03/2024**
Non-current assets (€ Millions)								
Property, plant and equipment	12 065,3	13 237,0	14 592,3	15 499,7	16 211,1	17 141,3	17 612,7	17 908,6
Intangible assets	69,2	69,2	69,2	69,2	69,2	69,2	69,2	69,2
Available for sale financial assets	8,6	8,6	8,6	8,6	8,6	8,6	8,6	8,6
Derivative financial Instruments	23,0	23,0	23,0	23,0	23,0	23,0	23,0	23,0
Deferred tax asset	25,2	25,2	25,2	25,2	25,2	25,2	25,2	25,2
Investment in associates	67,9	81,2	104,0	108,5	113,5	118,6	124,0	129,5
Other receivables	93,1	111,2	142,5	148,7	155,6	162,5	170,0	177,5
Total non-current assets	**12 352,4**	**13 555,5**	**14 964,9**	**15 883,1**	**16 606,3**	**17 548,4**	**18 032,8**	**18 341,6**
%Total assets	67,62%	67,27%	66,84%	66,37%	64,60%	63,32%	61,00%	57,90%
Current assets								
Inventories	22,2	26,2	32,8	34,4	36,3	38,2	40,1	41,9
Other assets	199,1	220,1	240,3	261,2	287,8	317,1	342,3	359,6
Current tax	0,3	0,4	0,4	0,5	0,5	0,6	0,6	0,6
Trade receivables	508,4	601,0	754,9	791,8	833,6	876,3	920,5	961,9
Derivative financial instruments	588,8	656,0	728,9	788,7	864,1	946,5	1 018,4	1 069,2
Restricted cash	12,2	13,5	14,7	16,0	17,7	19,5	21,0	22,1
Financial assets: cash>3 months	2 904,5	2 904,5	2 904,5	2 904,5	2 904,5	2 904,5	2 904,5	2 904,5
Cash and cash equivalents	1 680,5	2 174,8	2 747,7	3 252,4	4 154,5	5 064,7	6 283,6	7 977,9
Total current assets	**5 916,0**	**6 596,5**	**7 424,3**	**8 049,5**	**9 098,9**	**10 167,3**	**11 530,9**	**13 337,8**
% Total assets	32,38%	32,73%	33,16%	33,63%	35,40%	36,68%	39,00%	42,10%

Total assets	**18 268,4**	**20 152,0**	**22 389,2**	**23 932,6**	**25 705,2**	**27 715,6**	**29 563,7**	**31 679,4**
Current liabilities								
Trade payables	789,9	913,6	1 112,3	1 174,8	1 250,8	1 331,1	1 416,3	1 501,6
Accrued expenses and other liabilities	3 158,9	3 489,4	3 946,5	4 253,3	4 659,3	5 107,5	5 573,4	6 039,2
Current maturities of debt	1 125,2	1 125,2	1 125,2	1 125,2	1 125,2	1 125,2	1 125,2	1 125,2
Current tax	8,4	8,9	9,8	9,9	10,1	10,3	10,5	10,7
Derivative financial instruments	578,3	640,7	702,6	762,9	839,4	923,3	995,8	1 046,0
Total current liabilities	**5 660,8**	**6 177,8**	**6 896,4**	**7 326,2**	**7 884,8**	**8 497,5**	**9 121,3**	**9 722,7**
% Total liabilities	43,56%	43,25%	43,52%	43,87%	44,61%	45,17%	46,20%	46,28%
Non-current liabilities								
Provisions	337,9	372,9	409,9	421,3	433,2	445,5	458,5	472,0
Derivative Financial Instruments	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6
Deferred Tax	473,1	473,1	473,1	473,1	473,1	473,1	473,1	473,1
Other creditors	24,1	26,3	28,7	29,4	30,2	31,0	31,8	32,7
Non-current maturities of debt	6 480,7	7 216,9	8 021,9	8 430,7	8 836,5	9 347,5	9 641,7	10 291,9
Pension obligation	15,5	15,5	15,5	15,5	15,5	15,5	15,5	15,5
Total non-current liabilities	**7 333,9**	**8 107,4**	**8 951,7**	**9 372,5**	**9 791,0**	**10 315,2**	**10 623,2**	**11 287,8**
% Total liabilities	56,44%	56,75%	56,48%	56,13%	55,39%	54,83%	53,80%	53,72%
Total Liabilities	**12 994,7**	**14 285,2**	**15 848,1**	**16 698,7**	**17 675,8**	**18 812,7**	**19 744,4**	**21 010,5**
% Assets	71,13%	70,89%	70,78%	69,77%	68,76%	67,88%	66,79%	66,32%

Shareholders' equity								
Issued share capital	7,7	7,7	7,7	7,7	7,7	7,7	7,7	7,7
Share premium account	851,7	855,7	859,8	864,0	868,4	872,9	877,5	882,2
Other undenominated capital	14,2	14,2	14,2	14,2	14,2	14,2	14,2	14,2
Retained earnings	4 183,3	4 772,5	5 442,7	6 131,2	6 922,4	7 791,5	8 703,2	9 548,1
Other reserves	216,7	216,7	216,7	216,7	216,7	216,7	216,7	216,7
Shareholders' equity	**5 273,7**	**5 866,8**	**6 541,1**	**7 233,9**	**8 029,4**	**8 903,0**	**9 819,3**	**10 668,9**
% Assets	28,87%	29,11%	29,22%	30,23%	31,24%	32,12%	33,21%	33,68%
Total Liabilities and Shareholders' Equity	**18 268,4**	**20 152,0**	**22 389,2**	**23 932,6**	**25 705,2**	**27 715,6**	**29 563,7**	**31 679,4**

Appendix 25: Cost and revenue synergy classifications for airlines (retrieved from Schosser and Wittmer, 2015).

Table 1: Cost synergy classification for airlines

Cost synergy	Cost lever	Source
Labor costs	• Elimination of redundancies	(Evripidou, 2012; Merkert & Morrell, 2012)
Network optimization	• Elimination or reduction of inefficient hubs and routes • Higher aircraft utilization	(Caves, Christensen, & Tretheway, 1984; Evripidou, 2012; Hansson et al., 2001; Merkert & Morrell, 2012)
Fuel & Materials	• Reducing redundant capacity • Higher bargaining power through joint procurement	(Evripidou, 2012; Götsch & Albers, 2005; Hansson et al., 2001; Merkert & Morrell, 2012)
Maintenance & Training	• Fleet standardization	(Hansson et al., 2001; Merkert & Morrell, 2012)
Infrastructure	• Joint infrastructure • Reduction of redundant infrastructure	(Götsch & Albers, 2005; Hansson et al., 2001)
Fees (Landing, ground handling, overflight)	• Bargaining power	(Hansson et al., 2001)
Sales and Marketing	• Elimination of duplicate sales functions • Rationalization of corporate volume agreements and commissions	(Hansson et al., 2001; Merkert & Morrell, 2012; Rajasekar & Fouts, 2009)
IT systems	• Development of joint IT systems	(Merkert & Morrell, 2012)
Lower financing & capital costs	• Increase of credit rating • Lower leasing fees	(Götsch & Albers, 2005)

Table 2: Revenue synergy classification for airlines

Revenue synergy	Revenue lever	Source
Access to new markets (slots, traffic rights)	• More flights possible • Less regulatory restrictions	(Götsch & Albers, 2005; Hansson et al., 2001; Merkert & Morrell, 2012; Rajasekar & Fouts, 2009)
Larger network	• Higher customer attractiveness	(Fritz, 2005; Götsch & Albers, 2005; Hansson et al., 2001; Rajasekar & Fouts, 2009)
Combination of frequent flyer programs	• Higher customer attractiveness	(Götsch & Albers, 2005; Hansson et al., 2001; Rajasekar & Fouts, 2009)
Harmonized pricing	• Higher margins	(Fritz, 2005; Götsch & Albers, 2005; Merkert & Morrell, 2012)
Increased market power	• Higher margins	(Götsch & Albers, 2005; Merkert & Morrell, 2012)
Joint market analysis	• Better fulfillment of customer needs	(Götsch & Albers, 2005)

Appendix 26: Total synergy targets from M&A Transactions (retrieved from Merkert and Morrel, 2012).

Table 2
Synergy targets from recent M&A transactions. Source: Goldman Sachs.

Merging airlines	Total synergies	% of revenue
Southwest Airlines/AirTran Airways	US$400 m	3
LAN/TAM	US$400 m	4
United Airlines/Continental Airlines	US$1.2 bn	4
British Airways/Iberia	US$600 m	3
Delta Air Lines/Northwest Airlines	US$2.0 bn	6

Appendix 27: WACC of new merged firm (Source: Own Computations).

		% of Total Equity Value
WACC Ryanair	**6,41%**	**95,46%**
WACC Norwegian	5,70%	4,54%
WACC merged	6,38%	

Appendix 28: Summary of potential acquirers and targets (Source:Merkert and Morrel, 2012).

Table 8: Summary of motives

Airline	Merger Motive	Competitive advantage	Operating ratio (2011)	Aggregate Op.margin (2008 -2011)	Potential merger role
Ryanair	Market access	Strong position	116%	11.90%	Acquirer
easyJet	Strengthen position	Strong position	108%	5.14%	Acquirer
airberlin	Strengthen position	Germany	94%	-1.58%	Acquirer / Partner
Norwegian	Growth	Scandinavia	104%	2.53%	Partner / Target
Vueling	Growth	Iberia	101%	3.98%	Target
Aer Lingus	Niche	Long-haul	104%	1.61%	Target
WIZZ Air	Growth	East Europe	100%	Not available	Target
flybe	Niche	Aircraft size	100%	-1.06%	Target
germanwings	Niche	Lufthansa Group	93%	-3.10%	LH asset realisation

Source: Financial data – FlightGlobal, 2012

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