FINANCIAL FORECAST OF EUROPEAN AIRLINE UNDER THE IMPACT OF COVID-19

MSc. Finance Capstone Public Project Summary

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Summary

Upon the request from Concorde Értékpapír Zrt, hereby referred as the "Client," I, a CEU MSc. Finance student, hereby referred as the "Researcher," have conducted this project to study the impact brought by the current COVID-19 pandemic to the major airline companies within Europe. After a few rounds of communication, a scope of this study to analyze the financial loss of four major airlines (Ryanair, Wizz Air, EasyJet, and Lufthansa) has been agreed mutually by the Researcher and the Client.

Project objective

The Primary objective of this study is to quantify the forecasted financial loss by the end of 2020 base on several scenarios, which involves passenger number record, revenue breakdown, change in operating cost, cash reserve, and operation resume plan if applicable, etc. as key factors. The scenarios are constructed with regard to the forecast of the announced operating capacity, tourism and business travel trend, and the rate of operation recovery in load factor of each airline. The general methodology is to examine whether the cash reserve would be able to cover the operating loss, which can be calculated with the forecasted traffic revenue less the forecasted fixed and variable operating costs in each case scenario. It is also worth noting that people might have lost faith in travelling even after the government restrictions were lifted. This factor would only slow the recovery and bring more financial stress to European airline companies.

Difficulties

At the beginning of model construction, the selected ideal key indicators in aviation industry are revenue passenger-kilometers (RPKs), available seat-kilometers (ASKs), and possible cost per passenger or cost per seat levels. Nevertheless, due to the impact of pandemic, airline groups are busy with damage control. Publication of financial year annual results have been delayed for some companies. Also, in order to be as precise as possible on the forecasted results, it is preferred to use quarterly and monthly financial data given the fact that the numbers would vary even further between peak and low seasons. It would be quite inconvenient to break down RPKs and ASKs if companies do not publish their results each quarter.

After the consultation with both the client and the academic advisor, a model based on monthly passenger traffic and load factor record proves to be viable. Firstly, all target airlines have published traffic results along with load factor records on their website. Also, the assumption in each forecasted scenario shows different operating capacity, which can be calculated by applying "passenger traffic record" divided by "load factor." With the calculated monthly operating capacity in 2019, forecasted operating capacity in 2020 can be quantified in the form of passenger traffic record. After estimating the average fare level per passenger, Revenue forecast is a simple multiplication problem.

Forecast methodology

Step 1: Locate traffic data for the past 3 years

Monthly passenger traffic data and load factor for the last 3 years are available online.

Step 2 and 3: Locate quarterly average Revenue and EBIT per passenger

Use the last 3 years' quarterly revenue, EBIT to find out quarterly average revenue and EBIT. Then break down to monthly revenue and EBIT according to the proportion of passengers in each month of the quarter.

Step 4 and 5: Determine the possible change of operating expense

We are focusing on Revenue and EBIT instead of Net income because all airlines are facing major changes in their cost structure, we are hoping to set aside Operation expenses from revenue forecast and adjust the changed OPEX at the end when we test the liquidity. Therefore, Salary expenses are refined in step 4 with details. Base on the news and press release, we gather information such as layoffs, pay cuts, and apply the change to the 2019 calendar year OPEX results.

Except for salary cost, we separate the rest OPEX into 2 parts, fixed and variable. Since the scenarios construction are based on different levels of operational capacity and the recovery rate of the load factor, it is reasonable to think that fixed costs such as aircraft rental, lease, financial charges, staff cost, depreciation and so on, show little change with regard to either operational capacity or load factor. But variable costs, such as airport fee, ground handling, navigation, maintenance, etc., would be more directly in line with operational capacity. Also, a lump sum of gain or loss can be placed here under fixed costs as well. Then we calculate the proportion of each variable cost and reapply the costs into a monthly basis proportionally. It is worth noting that the forecasted fuel expenses in 2020 will be discounted 10% according to the client's information on fuel price forecast. Also, maintenance is split into 50% fixed and 50% variable in consideration that grounded aircraft also has fixed maintenance requirement.

Step 6: Scenario criteria construction

The most uncertain part of the model is to create scenario criteria. We took consideration of announced scheduled operating capacity, the cost level and the possible minimum fare level, passengers' faith, government restrictions and decrees, marketing strategy of airlines, pressure from competitors, etc., hoping to reach closer to the future reality.

The general direction of 4 scenarios show progression of both economic and passenger faith recovery. Scenario 1a and 1b is relatively pessimistic, which falls under that category that the market downturn continues throughout the year, and there is little faith for passengers to fly again. But scenario 1b suggests there are more business travels in the last quarter as business starts slowly rebooting. Scenario 2a and 2b suggests faster market recovery as government restrictions were lifted. Also, scenario 2b shows more business travel in last quarter of 2020.

Step 7: Fare level per passenger forecast

Base on the records found in Step 2 and 3, it is possible to forecast the average minimum fare level dividing the quarterly Revenue less EBIT accordingly by passenger number record. The assumption is in consideration that airlines may be willing to seize more market share by operating on a zero EBIT base as long as the variable costs are covered by revenue. But on top

of the minimum fare level, 1 or more higher fare levels can be applied in more optimistic scenarios, which varies between different airlines. For example, even though EasyJet is a low-cost airline, there are articles suggesting that their fare level is not cheap at the moment. It is rational to think that was due to the higher cost component during the summer season and the UK government restriction of sealing the middle seats.

Step 8: Current cash reserve

Cash reserve consists of cash and cash equivalent of the companies, along with the possible loans and aids externally. Also, a few airlines have not the most updated annual reports, but from the company press release, we can somehow find sources of their current cash level. Also, Loans and aids have become a key source to survive the pandemic downturn for some companies.

Step 9: Examining liquidity

In the scenario forecast, we used the 2019 monthly passenger number/ monthly load factor, which gives the monthly operational capacity of 2019. Then multiplying it with the forecasted operating capacity and load factor for a passenger number forecast in each month of 2020. Base on the fare level setting in the scenarios, multiplying the passenger number with the fare level accordingly to forecast the monthly revenue in 2020. On the cost side, since we have forecasted the monthly operation capacity in 2020, with monthly variable costs calculated in step 5, it is possible to forecast all variable costs in each scenario.

Finally, revenue minus fixed OPEX minus variable OPEX equals to operating profit. If it is negative (True in most cases), add the cash reserve to see whether and how long the company can last.

Project outcome and benefit

After examining the forecasted scenarios of each airline company, a mutual understanding regarding the current financial position of aviation industry in general has been reached by the

client and researcher. Both parties agree with the direction of forecasted financial disaster for legacy airlines in Europe, but also are thrilling to find out that the low-cost air carriers could possibly be more resistant to the market downturn by seizing more market share while legacy carriers are suffering from liquidity risks. The entire valuation process has further strengthened the researcher's understanding of valuation methods and the familiarity of reviewing annual reports and financial statements. Most importantly, it has been a fruitful learning experience of encountering practical problems and reach resolution.

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