Process of the Study on The Influencing Factors of Airlines Stock Market

Shengning Li[1, *, †] and Jiayao Ling[2, †]

[1]College of Air Traffic Management, Civil Aviation University of China, Tianjin, 300300, China

[2]School of Economics, Guizhou University, Guiyang, 550000, China

*Corresponding author: 1102179144@qq.com

†Those authors contributed equally

Abstract. The outbreak of COVID-19 in 2020 has brought a huge shock to the world stock markets, especially to the airlines in the service industry. It can be seen that the occurrence of public emergencies is an important factor affecting the airline stock market, which will have a significant negative impact in the short term. In addition to that, due to the international business activities of airlines, exchange rates, and international fuel prices will also have a greater impact on the airline stock. Although airlines can reduce the impact of these factors through active control, the depreciation of domestic currency or the rise of international oil prices will still have a negative impact on the airline stock market in the short term.

Keywords: Exchange Rate; Fuel Price; COVID-19; Airline Stock.

1. Introduction

Before the epidemic, piston aircraft and utility aircraft shipments were in a fluctuating growth trend. And as global passenger traffic increases, investment in airline stocks has become a hot topic. Since most airlines are large international companies, airline stock prices tend to be influenced by a number of factors like exchange rates and oil prices, etc. In particular, the outbreak of COVID-19 has had a huge impact on the world economy and finance, and the impact on the aviation industry is even more devastating. The sharp drop in tourist numbers has put airlines and their stock markets in a bind. In fact, Fig.1, which shows the daily values of the New York Stock Exchange Arca Index from 2020 to 2021, indicates the huge impact of a pandemic on airline stocks [1].

In addition to public emergencies, like COVID-19 and wars, which can have a huge impact on airline stocks, other factors such as oil prices and exchange rates are also major factors affecting airline stocks. Fuel procurement costs often account for around 30% of an airline's total operating costs [2]. For most airlines, fuel prices, which are priced in dollars, are also affected by exchange rates. The research on the influencing factors of airline stock price is helpful to analyze the future trend of airline stock price and its risk, so as to determine the appropriate investment opportunity. Therefore, this paper aims to investigate the possible influencing factors of the airline stock market and mainly summarizes the influence of exchange rate, fuel price, and public emergencies on airline stock market, among which the public influence mainly takes the outbreak of COVID-19 as an example. This paper will cite the data and views in the literature to summarize the common conclusion.

The remainder of this paper is organized as follows: Section 2.1 introduces the influence of exchange rate on airline stick market; section 2.2 introduces the influence of fuel price on airline stock market and section 2.3 introduces the influence of COVID-19 on airline stock market.

2. Literature Review

The purpose of this research is to discuss the main factors affecting airline stock market through a literature review and provides examples for argumentation. 15 papers or books are reviewed in this paper; examples include the airlines in the U.S., China, Australia, and New Zealand. After examining and summarizing the common conclusions from relevant literature, we consider that exchange rate, world fuel price, and public emergencies are three main factors affecting airline stock returns. The result of the research proves that, in the short term, the depreciation of the domestic exchange rate will have a negative impact on the airline stock market. The rise in international fuel prices has a negative impact on the airline index and persists over time. Public emergencies like COVID-19 will have a negative impact on airline stock returns by influencing passenger turnover.

2.1 Influence of Exchange Rate on Airline Stock Market

An exchange rate refers to the rate of exchange between two different currencies. The value of each country's currency is different, and even the value of the same country's currency is different at different times [3]. It is often determined by the state of the country's economy and monetary policy. The international nature of airlines means that the business activities of airlines will involve different currency types and face the risk of exchange rate fluctuation [4]. In the study Geoffrey considered there are three reasons: 1) Both revenues and expenses are in multiple currencies. 2) Airlines often have debts denominated in multiple currencies. 3) The demand for inbound and outbound tourism will be affected by the exchange rate [5]. Most foreign debt is denominated in dollars. Take China's three major airlines (Air China, China Eastern Airlines, and China Southern Airlines) for example, in the year 2015, their debt to asset ratios of them have reached 68.9%, 79.8%, and 73.3% respectively [6]. In the data for 2015, 2016, and 2017, the asset-liability ratio of 2015 is the highest. One of the main reasons is that China's central bank devalued the yuan against the dollar in August 2015, and brought an exchange loss to the three major airlines. Although such large airlines have some ability to adjust to exchange rate fluctuations, in the short term they still have a negative impact on their stock market.

In the year 2014, the appreciation of the U.S. dollar pushed most airlines' dollar-denominated costs up 10% to 15% when converted into local currencies. For most airlines, their foreign currency exposure is mainly in U.S. dollars. Also, some big airlines will store considerable amounts of dollars to cover the risk of exchange rate changes. The rise of the foreign exchange rate or the decline of the domestic exchange rate will directly lead to an increase of the operating costs of airlines. And the company's operating profit margin and stock return will be affected; in addition, it would have a negative impact on airline stock prices [4].

The fluctuations of exchange rates have a two-way impact on the consumption demand of domestic and foreign tourists [5]. The rise of the domestic exchange rate increases the purchasing power of tourists, which is a positive stimulus for outbound tourism. According to Greenwood and Yeoman (2006), when the pound rose to 1.97 to the dollar, the proportion of British visitors to the United States rose by nearly 2%. Correspondingly, a decline in the domestic exchange rate will lead to an increase in the cost of outbound travel for tourists. The number of tourists participating in international travel will decrease accordingly. Among them, vacation trips with high leisure are more likely to be affected by fluctuations in exchange rate than business trips [4]. The two-way impact of exchange rates on domestic and foreign travelers makes it impossible to predict the sign of currency exposure relating to customers' needs [5].

In general, exchange rates affect airline stocks by directly affecting the airlines' operating costs and the level of foreign debt. Most of those operating costs consist mainly of fuel and aircraft purchases, often denominated in dollars. The impact of the exchange rate change will be more pronounced on non-U.S. carriers [4]. A fall in the domestic exchange rate will increase airlines' operating costs and increase the level of foreign debt to some extent. And it will have a negative impact on airline stock markets. However, airlines can reduce their exposure to such fluctuations in exchange rates through active management [6]. Also, exchange rates indirectly affect airline earnings and thus stock markets by affecting passenger demand. For a country, a lower exchange rate can attract more foreign tourists while reducing the number of tourists traveling abroad. Therefore, we consider that it is difficult to predict the impact of changes in tourist demand on airline stock prices caused by exchange rate fluctuations.

2.2 Influence of Fuel Price on Airlines Stock

The cost of jet fuel has always been a huge expense for airlines, amounting to tens of billions of dollars every year. In the practical operation of airlines, aviation fuel expenditure firmly occupies more than 40% of the main business costs of the three major listed airlines in China, which is undoubtedly a huge burden for airlines [7]. Although airlines may recover some of their fuel costs by levying a fuel fee on customers, this income can only offset a percentage of the cost of jet fuel. And each trip's fare is mostly fixed, so it can't often change in response to short-term changes in oil costs. [8]. Therefore, the rise and fall of international oil all affect the listed airlines.

From a microscopic view, fluctuations in international crude oil prices will change the production costs of related enterprises and change the profit level, which have an impact on the stock price of enterprises; from a macroscopic view, international oil prices will affect a country's inflation and balance of payments, and reflected in the stock market. Specific two items are listed as follows [9].

The impact of international oil prices on consumption willingness: Under the condition that the country's total income is growing steadily if oil prices rise sharply, it will lead to an increase in consumer spending on oil prices, which will inhibit consumption in other areas, and when oil prices When there is a sharp rise, the production cost of enterprises increases rapidly, and the rise in the price of consumer goods will reduce the willingness of consumers to consume. When the overall willingness to consume declines, it will reduce the consumption expenditure of the overall society, thereby reducing the income expectations of various industries and affecting the stock market itself [10].

The impact of international oil prices on the production scale of enterprises: In the currently industrialized countries, oil, as the most important raw material for production, is needed by all walks of life. When oil prices rise sharply, mid and downstream enterprises are the first to be affected. Because they do not have much bargaining power over the upstream industry, the sharp rise in costs results in a sharp drop in profit margins. In order to continue operating, mid- and downstream enterprises can only be Downsizing, which will bring about a reduction in the overall industry. When the scale of the overall industry is reduced, it will bring about a sharp reduction in stock market expectations, causing the stock market to fall [11].

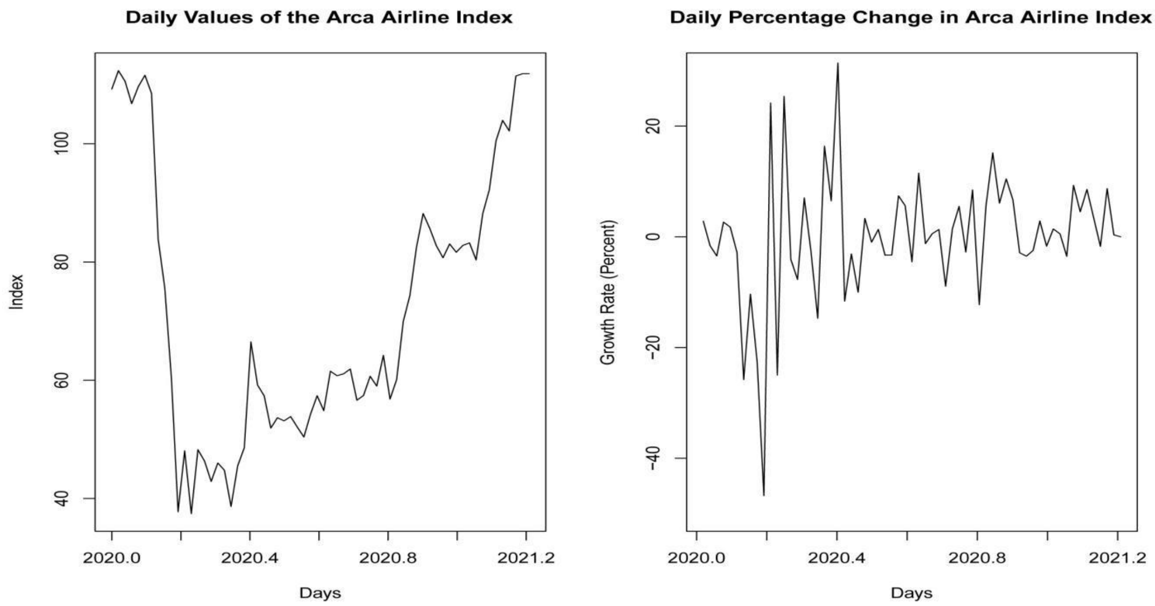
A specific analysis report about soaring fuel prices can explain how it affects the stock. On April 13, 2011, the airline's financial survey report released by the International Air Transport Association showed that airline shares fell 10% due to soaring oil prices. Fuel costs have been rising since the fourth quarter of last year, and in 2011, the airline industry was unable to curb the slump in profits caused by rising fuel prices, even with increased revenue.

Airline shares are set for a 3% gain overall this year. High oil prices have eaten into airline profits, with the Bloomberg Global Airline Index down 4% in nearly a month. Airline shares fell 10%. Under the pressure of soaring fuel costs, passenger revenue and fares continued to rise. Average fares rose 7% between September 2010 and February 2011. American Airlines passenger yield rose 3% from a year earlier. Jet fuel prices rose 70% year-on-year, while the average international fare rose 7%. In 2010, most airlines recouped the cost of rising fuel costs. However, in recent months this year, airlines have been unable to recover their costs. Fuel costs have soared, passenger load factors have dropped significantly, and airlines' ability to recover costs has been severely weakened [11].

In view of the above, we can draw that changes in international oil prices have a negative impact on the aviation index, and the impact on the aviation index gradually increases over time and is persistent.

2.3 Influence of COVID-19 on Airlines Stock

The outbreak of COVID-19 that began in various parts of the world at the end of 2019 is a major public health emergency with the largest impact and the widest range of people in modern times, which has dealt a heavy blow to the normal operation of the world economy. As an important means of transportation to promote economic exchanges and personnel flow, the air transport industry has not only made daily production and operation activities unsustainable under the severe impact of COVID-19 but also had a significant impact on the stock of relevant airlines in the capital market [1].



Source: Data collected from Yahoo Finance

Fig. 1 Arca Airline Index [1]

Taking China as an example, in order to reduce the import risk of the epidemic spreading internationally, more than 70 countries including the United States, Japan, and South Korea have announced various levels of entry restriction measures, and the number of international flights has been further reduced. The prevention and control policies caused by the sudden outbreak of public health emergencies will have a significant impact on passenger turnover.

The air transport industry is a capital-intensive cyclical industry that is closely related to the operation of the macro economy. When the macro-economy is improving, social and economic exchanges are frequent, and the demand for business travel and tourism increases, it will drive the development of the air transport industry, and vice versa. At present, China is in the process of economic structural transformation and consumption upgrading. With the improvement of residents' consumption capacity, the demand for the air transportation industry continues to increase, and the national passenger turnover has steadily increased.

The sudden outbreak of Covid-19, which interrupted the steady growth of the air transport industry, has dealt a particularly severe blow [12]. The outbreak of the epidemic coincided with the Spring Festival travel in 2020, which caused great pressure on national prevention and control and transportation. Due to safety considerations, many passengers actively or passively cancel the established air travel arrangements. The lack of passengers has led to a shortage of passengers on some flights. In order to reduce operating costs, airlines choose to cancel flights with fewer passengers. This further reduces passenger turnover; in addition, in order to avoid the widespread spread of the epidemic, many high-risk areas have been subject to traffic control measures, and some airports may be forced to close, further leading to a decline in passenger turnover [13].

At present, the main business income of airlines listed in China's capital market is mainly passenger transportation, supplemented by freight [14]. According to the annual reports of relevant listed airlines in 2019, among the three major state-owned airlines, Air China, China Eastern Airlines, and China Southern Airlines accounted for 93.63%, 91.26%, and 91.34% of their passenger revenue respectively; and among the private airlines, Spring Airlines, Juneyao Airlines, and China Airlines' passenger revenue accounted for 97.00%, 98.19%, and 97.39% respectively. It can be seen that although the operating income of airlines is still affected by factors such as air ticket prices and preferential policies, passenger turnover still affects the income level of airlines to a large extent [15].

Therefore, the cliff-like decline in passenger turnover due to various reasons caused by the new crown pneumonia epidemic will bring great operating pressure to airlines, which will affect the main business income of airlines, reduce their profitability, and ultimately affect the airlines stock returns.

3. Summary

This paper mainly analyzes the factors that affect airline stock prices from three aspects. There are three main aspects: exchange rate, oil prices, and the epidemic. Generally slightly different, but the central idea is to discuss together around the company's operating costs and passenger turnover.

No matter from which point of view, the cost is undoubtedly one of the factors that have the greatest impact on stock prices, especially fuel cost. As the main expense of aircraft (excluding the purchase cost of aircraft), the fuel purchase cost has long accounted for 30% of the total operating cost of airlines Left and right, the volatility of oil prices has a great impact on costs. In addition, oil prices are denominated in U.S. dollars. If the RMB appreciates, oil prices will be relatively cheaper. At the same time, it is also a great benefit for companies with foreign debt in US dollars, and it is a process of mutual benefit. Conversely, a devaluation of the renminbi will affect both parties.

In terms of exchange rates, as airlines are heavy asset companies, they have huge foreign debts. China's three major airlines have about 20-30 billion yuan in foreign debt in US dollars. Therefore, the exchange rate adjustment will bring huge profit fluctuations to the three airlines. Most domestic airlines buy and lease aircraft, loans, fuel, etc. in US dollars, and most of their profits are settled in RMB. The sharp rise in exchange rates will benefit airline performance.

In terms of turnover, the epidemic that has had the greatest impact on it in recent years is the outbreak of the new crown, and the entire direct industry worldwide has suffered setbacks. Aviation workers have been forced to leave their positions or have seen a dramatic decline in their pay, and even businesses and employees have gone bankrupt as a result of the sharp decline in passengers, idle aircraft, and forced job losses. For instance, flights into and out of China are constrained. Each corporation often only has one route to and from China. The Civil Aviation Administration will fine them if the number of confirmed passengers exceeds the allotted limit.

4. Conclusion

In general, the airline stock market is affected by many factors. This article mainly analyzes three main factors, namely the exchange rate, oil price, and the epidemic, but the stock price is not limited to these three factors. In the conclusion, it is found that the biggest impact on airline stock price is one of the biggest costs of airline operations. Oil prices, changes in international oil prices, and the supply of oil can easily affect the returns of airline stocks. No matter which factor, for investors, its influence is the same, that is, it affects investors' decision-making by affecting market sentiment. For company managers, these data and influences are important factors in helping the company to further generate benefits. However, the negative impact of these factors on airline stock can be carried out through appropriate responses. The main contribution of this paper is to help investors, operators and related researchers have a deeper understanding and research direction on the factors affecting airline stock prices, and then conduct a deeper exploration of each factor on this basis. It is believed that in the future, the research on the aviation industry market will no longer be as narrow as it is today, but will have a more standardized, multi-dimensional, and in-depth research model so that the market can play its greatest role.

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