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An analysis of the causes of the bankruptcy of Transaero Airlines based on the DuPont Analysis ------ Comparative analysis with Aeroflot and Ural Airlines

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Abstract: This paper uses DuPont Analysis to conduct a comparative analysis of the financial data of Transaero Airlines in order to explore the causes of its insolvency. The author first briefly describes the possible causes of its bankruptcy, then use the DuPont Analysis to compare the return on equity, net profit margin, total asset turnover and equity multiplier of three airlines respectively, and finally find that there are many clues to the bankruptcy of Transaero Airlines due to its poor profitability, solvency and operating capacity.

1. Introduction

In October 2015, the former Russian largest private airline, Transaero Airlines, ceased operations and announced bankruptcy proceedings in September 2017. It was once Russia's second largest airline, whose passenger capacity is second only to Aeroflot. What led to the bankruptcy of this former aviation giant and the financial scandal, turned it the 'Enron Corporation' in Russia. In fact, Transaero Airlines may have deliberately misled banks and regulators over the years and manipulated its financial reports while accepting loans and state guarantees. Based on a study of the company's 2011-2014 financial reports, an employee of the company identified three key points that could indicate fraud: the first was the company's four-year continuous revaluation of brand, which was used to cover up its large losses and equity shortfalls; the second was a violation of accounting rules; and the third was the recalculation of financial indicators from previous reporting periods, in violation of international Financial reporting standards rules. From 2010 to 2014, the value of Transaero Airlines' brand has increased more than 94 times, from RUB 650 million to RUB 61.3 billion. In 2014, the value of intangible assets of company showed a most significant increase, from RUB 2.1 billion to RUB 61.3 billion, with a total financial result of RUB 44.65 billion for the period. However, without a revaluation of Transaero Airlines' brand, it would have made a loss of RUB 14.49 billion [1]. By the end of 2015, Transaero Airlines' liabilities had exceeded its assets by 25 times. However, Transaero Airlines did not make its due efforts on how to prevent bankruptcy. In 2016, Alexander Burdina, the former managing director of Transaero Airlines, and its chief accountant, Andrei Kovalev, committed an asset theft of 566 million roubles, which resulted in the airline owed severance pay, wages and compensation to over 6,000 employees. This incident has undoubtedly made things worse on the insolvency of Transaero Airlines.

The object of this paper is to provide a proper assessment of the financial position of Transaero Airlines since 2012 and to find the root of its bankruptcy in terms of financial. This paper uses the DuPont Analysis to analyse the financial condition of Transaero Airlines since 2012 and uses data from Ural Airlines and Aeroflot for a point-to-point comparison.

DuPont Analysis is a financial analysis method created and first used by the US company DuPont. Its most important feature is to combine a series of financial indicators together, using the progressive relationship between each indicator to reveal the inner connection between indicators to find the relevant factors affecting the change of a certain indicator, and to provide a reliable basis for company operators to control the change of the indicator with a positive direction. It provides a reliable basis for company managers to control changes in this indicator in a positive direction. The DuPont Analysis breaks down the return on equity into net profit margin, total asset turnover and equity multiplier, which represent profitability, operating capacity and solvency respectively. We can determine whether a company is in a high margin mode, a high turnover mode or a high leverage mode though these figures [2].

1.1. Comparative analysis of return on equity by the three companies

Return on equity is the percentage of net profit to owners' equity. This indicator reflects the income level of owners' equity and is used to measure the efficiency of a company's use of its own capital. The higher the indicator is, the higher the return from the investment will be. The indicator reflects the ability to earn a net profit on owned capital. There are two parts of an enterprise's assets: one is the investment of shareholders, i.e. owners' equity (which is the sum of shareholders' capital stock, enterprise's provident fund and retained earnings); and the other one is fund borrowed and temporarily occupied by the enterprise. Appropriate use of financial leverage can improve the efficiency of capital use. Too much borrowed capital increases the financial risk of the enterprise, but it generally helps to increase profitability; too little borrowed capital can reduce the efficiency of the use of capital. Return on equity is an important financial indicator to show how efficiently shareholders' funds are used. Generally speaking, an increase in debt will lead to an increase in the return on equity. In the DuPont Analysis, return oAn equity is one of the most comprehensive financial analysis indicators and is the core of the DuPont Analysis. Su Lihua believes that a return on equity between 15% and 40% is the most appropriate [3].

Figure 1: Comparative analysis of return on equity by the three companies [4]

As shown in Figure 1, Transaero Airlines's return on equity was -130.04%, -10.98% and -168.66% from 2012-2014, respectively, which indicates that Transaero Airlines has been making serious losses since 2012. Transaero Airlines's return on equity in 2015 was 232.27%, not because Transaero Airlines started to make a profit in 2015, but because its retained earnings were no longer sufficient to cover its losses and it became insolvent. At the same time, 2015 was also the year in which Transaero Airlines was declared to stopped operations, the beginning of the fall of the airline giant. In contrast, Aeroflot's return on equity from 2012 to 2017 was -11.19%, 10.28%, 0.89%, -59.15%, 76.69% and -2.17% respectively. Although the company's return on equity exceeded the most reasonable range in 2015 and 2016, it returned to a reasonable range in 2017. It can be said that this fluctuation in the return on equity is within manageable limits. Ural Airlines' return on equity from 2013-2017 was 1.98%, 22.51%, -26.96%, 41.94%, -8.51% respectively, and its return on equity was within the most reasonable range. We can say that Ural Airlines has the best return on equity among the three companies.

1.2. Comparative analysis of net profit margin by the three companies

Net profit margin, which is the percentage of net profit to sales revenue, is used to measure an enterprise's ability to generate sales revenue over a certain period of time and reflects the amount of net profit generated per dollar of sales revenue. Generally speaking, the larger the net profit margin is, the stronger the profitability of the enterprise will be. However, we cannot say that a larger net profit margin is better because we must take the growth in sales and the movement in net profit of the enterprise into consideration. An enterprise must increase its sales revenue while correspondingly earning more net profit in order to keep the net profit margin remaining the same or increasing. In business, we can find that the expansion of sales is not necessarily accompanied by a proportionate increase in net profit, or perhaps even negative growth, due to the significant increase in costs and expenses. Blindly expanding production and sales may not bring more revenue for the enterprise. Therefore, by analyzing the rise and fall of net profit margin, we can encourage enterprises to improve their management and profitability while expanding their sales. Dong Zikun believes that the best range for net profit margin is between 20% and 30%, and that any enterprise with net profit margin above 20% is a good one [5].

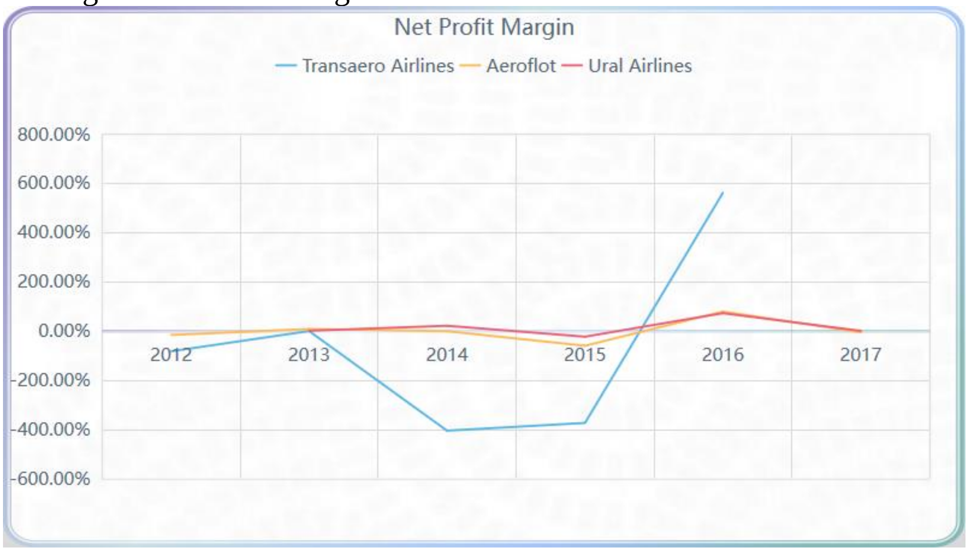

Figure 2: Comparative analysis of net profit margin by the three companies [4]

As shown in Figure 2, Transaero Airlines' net profit margin from 2012-2015 was -81.25%, 0.92%, -403.48% and -372.06% respectively, and we found that sales revenue fluctuated slightly and remained high in its financial reports. This well confirmed the costs and expenses of Transaero Airlines are high, which have led to its continued losses and low profitability. The net profit margin of Aeroflot from 2012-2017 was -15.01%, 9.31%, 0.34%, -58.87%, 80.2% and -4.35% respectively, which shows the average profitability of Aeroflot. By reviewing Aeroflot's financial reports, we found that its sales revenue increased year by year during the period 2012-2017, but there is a larger fluctuation on its net profit. Therefore, the company's profitability is average. In contrast, Ural Airlines' net profit margin from 2013-2017 was 2.18%, 22.38%, -21.95%, 73.48% and 1.65% respectively. It is clear that Ural Airlines' net profit margin are the most stable among these three companies.

1.3. Comparative analysis of the total asset turnover by the three companies

Total asset turnover is the ratio of net sales revenue to average total assets of an enterprise in a certain period, which is an indicator of the comparison between the scale of asset investment and sales level. Total asset turnover reflects the speed of flow of all assets from input to output during the enterprise's operation, and reflects the quality of management and efficiency of the enterprise's total assets. The comparative analysis of this indicator can reflect the operational efficiency and changes in the total assets of an enterprise, discover the gap between the enterprise and similar enterprises in terms of asset utilization, and promote the enterprise to improve its product market share and improve the efficiency of asset utilization. Lu Cheng and Lin Chuqi believe that the utilization efficiency of an enterprise's assets is the best when the total asset turnover is between 80% and 100% [6].

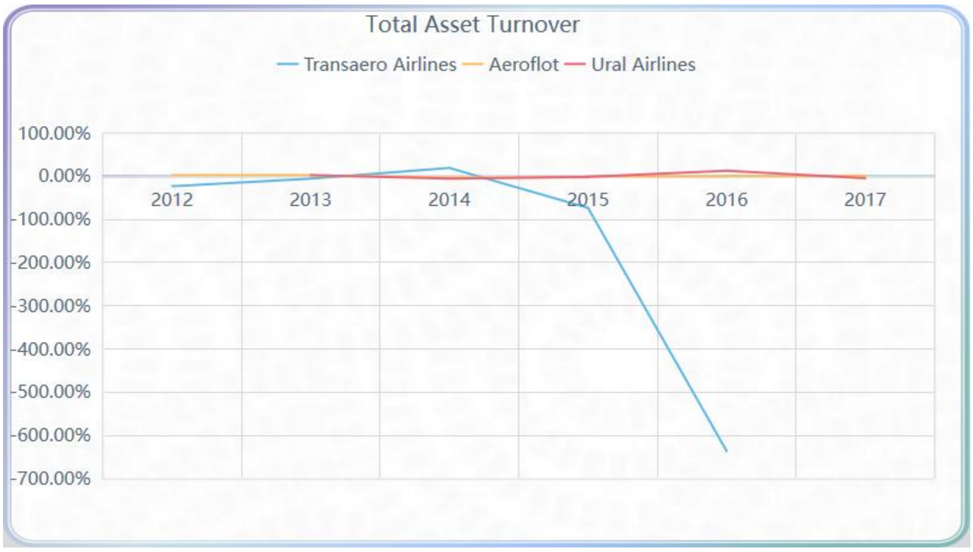

Figure 3: Comparative analysis of the total asset turnover by the three companies [4]

As shown in Figure 3, Transaero Airlines' total asset turnover from 2012-2015 was -23.2%, -5.59%, 19.25% and -73.23% respectively, from which we can see that Transaero Airlines has low quality asset management, inefficient use of assets and poor operating capacity. This could render the company insolvent. In contrast, Aeroflot's operating capacity from 2012-2017 was 2.61%, 1.98%, -2.86%, -0.27%, 0.62% and 0.11% respectively, and from these figures we can see that Aeroflot's quality of asset management and efficiency in the use of assets remain similarly low, but much better than Transaero Airlines'. Ural Airlines' total asset turnover from 2013-2017 was 2.62%, -5.53%, -1.41%, 12.77% and -4.63% respectively. These figures prove that its asset management quality and asset use efficiency are slightly higher than Aeroflot's, but still far from the desired operating capacity of 80%.

1.4. Comparative analysis of the equity multiplier by the three companies

The equity multiplier is the number of times total assets equal to shareholders' equity. The equity multiplier indicates the degree of indebtedness of a company and reflects the extent to which the company uses financial leverage to conduct its business activities. The larger the equity multiplier is, the smaller the proportion of the capital invested by shareholders in the company's total assets will be, and the more indebted the enterprise will be. At this time, the company will have more leveraged benefits, but the risk is also higher; conversely, the smaller the equity multiplier is, the larger the proportion of the capital invested by shareholders in the company's total assets will be, and the less indebted the enterprise will be. At this time, the company will have less leveraged benefits, but correspondingly less risk. Chen Yingying believes that the normal range for the equity multiplier is generally between 2 and 3 [7].

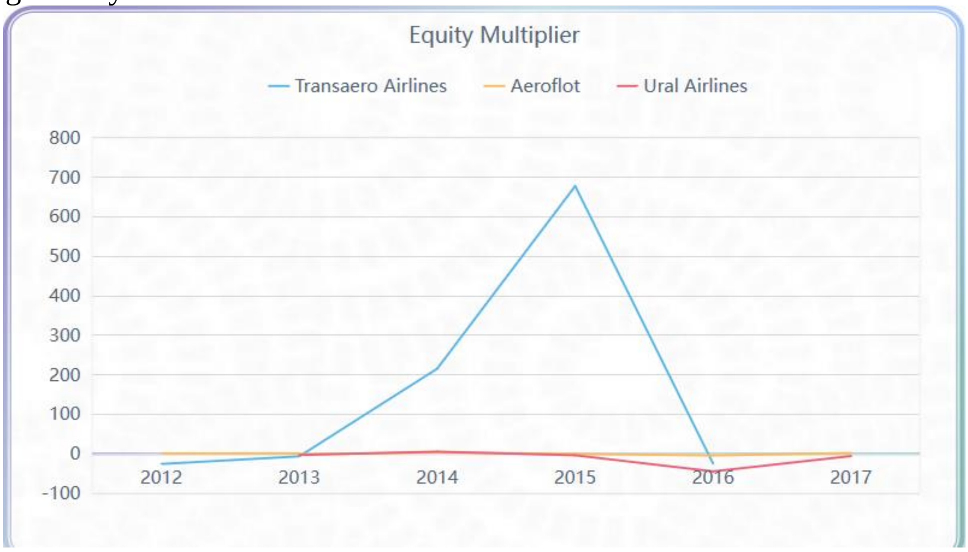

Figure 4: Comparative analysis of the equity multiplier by the three companies [4]

As shown in Figure 4, Transaero Airlines' equity multipliers from 2012-2015 was -25.58, -6.31, 215.58 and 677.56 respectively. From the figures of 2012-2013, it is clear that Transaero Airlines is insolvent and the company is on the verge of bankruptcy, but its equity multipliers of 2014-2015 have shot up, which may be caused by the aforementioned revaluation of Transaero Airlines' brand, which resulted in an infinite increase in the value of its intangible assets. We can assume that Transaero Airlines engaged in financial report fraud during this period. In contrast, Aeroflot's equity multipliers from 2012-2017 was 1.22, 1.22, 3.41, -0.01, -4.13 and 2.07 respectively. These figures demonstrate that Aeroflot's equity multiplier is largely within manageable limits, although occasionally insolvent, its financial leverage and risk levels are just right. Turning to Ural Airlines' equity multiplier, the features from 2013-2017 was -2.81, 5.66, -3.6, -44.3 and -5.52 respectively, which indicate that Ural Airlines has slightly higher financial leverage and more debt. It is clear that Aeroflot has the best control of financial leverage and financial risk.

2. Conclusion

In summary, Transaero Airlines is highly suspect of financial fraud with poor solvency, profitability and operating capacity. Through the DuPont Analysis, we can foresee that there are clues to the bankruptcy of Aeroflot and that its financial situation has been in a lot of trouble since at least 2012. As for Aeroflot, its profitability and operating capacity are average, but it has a good solvency due to its well-controlled equity multiplier. Ural Airlines is the best financially positioned of the three airlines, with better operating and profitability, but its financial leverage is high and its debt servicing capacity is average. This may also be due to the company's growth strategy of adopting a high leverage model.

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