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Empirical and Financial Analysis for Prediction of Corporate Bankruptcy: A Holistic Review of Indian Aviation Sector

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Abstract:
The Indian aviation industry is growing at a very high rate and this growth rate has been estimated to sustain for the next 10 years, making India one of the largest aviation market in the entire world. There are several factors and government policies like the increase in number of low cost carriers, strategic partnerships and initiatives by various airlines, government policies promoting foreign direct investment (FDI). In this research paper we aim to present a scenario analysis of four major players of the Indian aviation industry by conducting a financial and comparative analysis for the year FY2013. The year 2013 was a difficult year for Indian aviation with kingfisher reporting huge losses along with other airlines. Only airline to have had a good year was Indigo which reported profits during the same time. Financial ratio analysis can prove to be very crucial in understanding the reasons behind such differences in the performance of these major Indian aviation companies and to comprehend the factors that lead to such performance. The financial ratios of four major players in the Indian aviation industry vis-à-vis IndiGo Airlines, SpiceJet Airlines, and Kingfisher Airlines were compared with the average industrial ratios, thus providing inferences on the financial health and performance of these companies with respect to the industrial standards. We also did comparative study of diverse financial ratios of all these four major players for the year ending March 2013 in order to understand the reasons behind the success or failure of a particular company in a particular department as compared to others over time.

Keywords: *Indian Aviation, Financial Ratios, IndiGo, SpiceJet, Jet, Kingfisher*

1. Introduction and Literature Review

Aviation industry basically deals with the production, development and operations of aircrafts and airlines in a particular country. The growth in the Indian aviation economy has led to an increase of over 8% in India's GPD and this high growth rate has been estimated to sustain for the next 10 years, which will make India one of the biggest aviation market in the entire world. It is divided into two broad categories: Civil aviation and Military aviation. Civil aviation refers to both the commercial and private flights used by the commuters whereas military aviation refers to the use of military aircraft and other flying machines by the military forces of India. International Air Transport Association has claimed that currently India is the fastest growing market in the entire world in aviation [ix]. Currently India is the ninth largest aviation market in the world and is estimated to be the third largest by end of 2020. Ministry of Civil Aviation is responsible and accountable for civil aviation in the country whereas Ministry of Defense deals with military aviation. There are currently 20+ operational airlines in India with SpiceJet, IndiGo, Air India and Jet Airways having a major chunk of the market.

Indian civil aviation industry is growing at a very high rate and according to Indian Brand Equity Foundation, it will become the largest civil aviation market in the entire world [9]. In India, domestic passenger traffic for January 2016 was 7.66 million which is growing at a CAGR of 23%. More than 1.5 lakh aircraft movements have been reported at all the Indian airports combined. International and domestic aircraft movements rose to 10.6 per cent and 17.5 per cent, respectively, in January 2016. According to Centre for Asia Pacific Aviation (CAPA), Indian domestic air traffic is expected to increase to 100 million by the end of financial year 2017. The profit for the FY 16 for Indian airlines has been projected to be INR 8100 Crore which places India amongst the five fastest growing aviation markets globally.

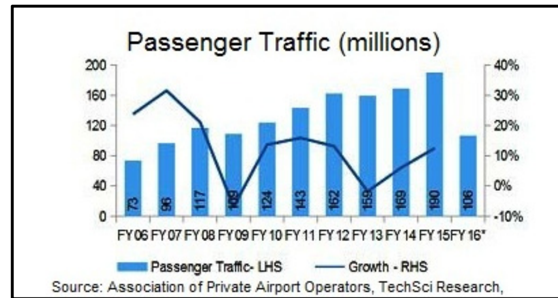


Figure 1

There have been several major drivers for the growth of this market. This has been possible only due to the various initiatives taken by the Indian Ministry of Civil Aviation.

*Foreign direct investment:*FDI in Indian domestic airlines has significantly increased due to the efforts of Ministry of Civil Aviation in India. Department of Industrial planning and promotion have reported infusion of USD 612.53 billion in the Indian aviation industry between April 2000 and December 2015. FDI of up to 49% has been allowed in domestic airlines by the foreign carriers by the Ministry of Civil Aviation, India. Foreign equity of even up to 100% is allowed in the development and creation of new aircrafts.

Low cost carriers: In recent times, several low cost carriers such as Go Air, Air Asia, and SpiceJet etc. have come up in the Indian market recently. India being a highly price sensitive market has benefitted a lot from the introduction of low cost carrier, however the association has been synergic with an increased profit for all the major carriers in India.

Strategic initiatives and partnerships: Recently various strategic initiatives have been taken up particularly by the Ministry of Civil Aviation, India to accelerate the growth of domestic civil aviation industry. At the International Civil Aviation Negotiations (ICAN), 2015 held in Antalya, Turkey Memorandum of Understanding (MoU) was signed for increased cooperation between Finland, Kazakhstan, Kenya, Sweden, Norway, Denmark, Oman and Ethiopia so as to get additional seats, sharing of airline codes and increased frequencies of flights in between India and partner countries. This would have led to improved relations between the countries as well ultimately leading to more infusion of FDI in our domestic aviation market. Advanced Systems (TASL) has signed a joint venture with American aircraft manufacturing major, Boeing, to establish a center of excellence for manufacturing aero-structures for Apache helicopter initially and collaborate on integrated systems development opportunities in India in the long term.

2. Financial Ratio

Financial statements like balance sheets, income statements (profit and loss statements) provide information about the financial position, performance and changes in financial position of a company that is useful to a wide range of users like investors, bankers, management and creditors in making economic decisions. A ratio analysis is a quantitative analysis of information contained in a company's financial statements. They help in linking the financial statements together and offer figures that are comparable between companies and across industries and sectors. However, financial ratios vary across different industries and sectors and comparisons between completely different types of companies are often not valid. In addition, it is important to analyze trends in company ratios instead of solely emphasizing a single period's figure. Since ratios can only be used for comparative analysis, they are very useful and efficient in describing the performance of a company over the years as compared to the other firms of similar nature. Ratios become all the more important when used to compare the trends in company ratios with the trends in industrial ratios, giving a clear image of how well its different divisions are performing among themselves in different years in comparison to the industrial average.

However, there a large number of ratios that can be used for analysis and some tend to be more relevant to study than others in a specific industry. This raises the issue of classifying financial ratios by reducing redundancies. [ii] [iv]

3. Methodology

We first looked at the annual reports of the four major players in the Indian aviation industry vis-à-vis IndiGo Airlines, SpiceJet Airlines, Jet Airways and Kingfisher Airlines for years ending March 2012, 2013 and 2014 in order to calculate their financial ratios across time. (Only 2012 and 2013 were considered for Kingfisher Airlines since its operations were shut down by 2014)

In order to draw inferences on the financial health and performance of these companies with respect to the industrial standards, these company ratios were compared with the average industrial ratios, calculated by considering almost all the players in the Indian aviation industry.

We also did comparative study of diverse financial ratios of all these four major players for the year ending March 2014 in order to understand the reasons behind the success or failure of a particular company in a particular department as compared to others over time.

The various financial ratios calculated can be classified mainly into four categories:

1. Liquidity Ratios: Liquidity ratios also termed as short-term ratios are used to measure a firm's ability to meet its current liabilities. It also signifies the extent of convertibility of firm's assets into money to pay for its short term obligations. We have calculated and compared Current Ratio for our analysis.

Current Ratio = Current Assets / Current Liabilities

2. Solvency Ratios: Solvency ratios are a measure of a firm's ability to repay its long term debts. These ratios give strong knowledge about the financial health and viability of a business. There are several solvency ratios but we have considered Interest Coverage Ratio for our analysis

Interest Coverage ratio = Operating Profit /Interest

3. Efficiency Ratios: Efficiency ratios also termed as turnover ratios are indicative of a firm's efficiency and effectiveness to vitalize its assets in a business. Turnover means the number of times assets are converted or turned into sales. These ratios also tell us about the rate of asset conversions.
4. Profitability Ratios: Profitability stands for the profit earning capacity of any firm/business. Profitability ratios are therefore a measure of the overall efficiency or performance of a business. For our analysis, we have considered Expense Ratio and Operating Profit Ratio.

Expense Ratio = Particular Expense/Net Sales
Operating Profit Ratio = Operating Profit/Net Sales
DuPont Analysis = New Profit Margin × Investment Turnover [ii] [iv] [viii]

3.1. Kingfisher Airlines

Kingfisher Airlines was established in 2003. It was owned by the Bengaluru based United Breweries Group. The airline started commercial operations in 9 May 2005 with a fleet of four new Airbus A320-200s. It started its international operations on 3 September 2008 by connecting Bangalore with London. Ever since the airline commenced operations in 2005, it reported losses. After acquiring Air Deccan, Kingfisher suffered a loss of over ₹10 billion (US$150 million) for three consecutive years. Until December 2011, Kingfisher Airlines had the second largest share in India's domestic air travel market. In December 2011, for the second time in two months, Kingfisher's bank accounts were frozen by the Mumbai Income Tax department for non-payment of dues. By early 2012, the airline accumulated losses of over ₹70 billion (US$1.1 billion) with half of its fleet grounded. Kingfisher's position in top Indian airlines on the basis of market share had slipped to last from 2 because of the crisis. Indian tax body also stated that Kingfisher Airlines is delinquent. On 20 October 2012, Kingfisher's license was suspended by the Directorate General of Civil Aviation after it failed to address the Indian regulator's concerns about its operations. On 25 February 2013, its international flying rights and domestic slots were scrapped by the Indian aviation authorities. Kingfisher Airlines' fleet with a total of 64 carriers mainly consisted of ATR 42, ATR 72 and Airbus A320 family aircraft for domestic and short haul services and Airbus A330-200s for international long-haul services. [i] [iii] [x]

4. Analysis of Kingfisher Airlines

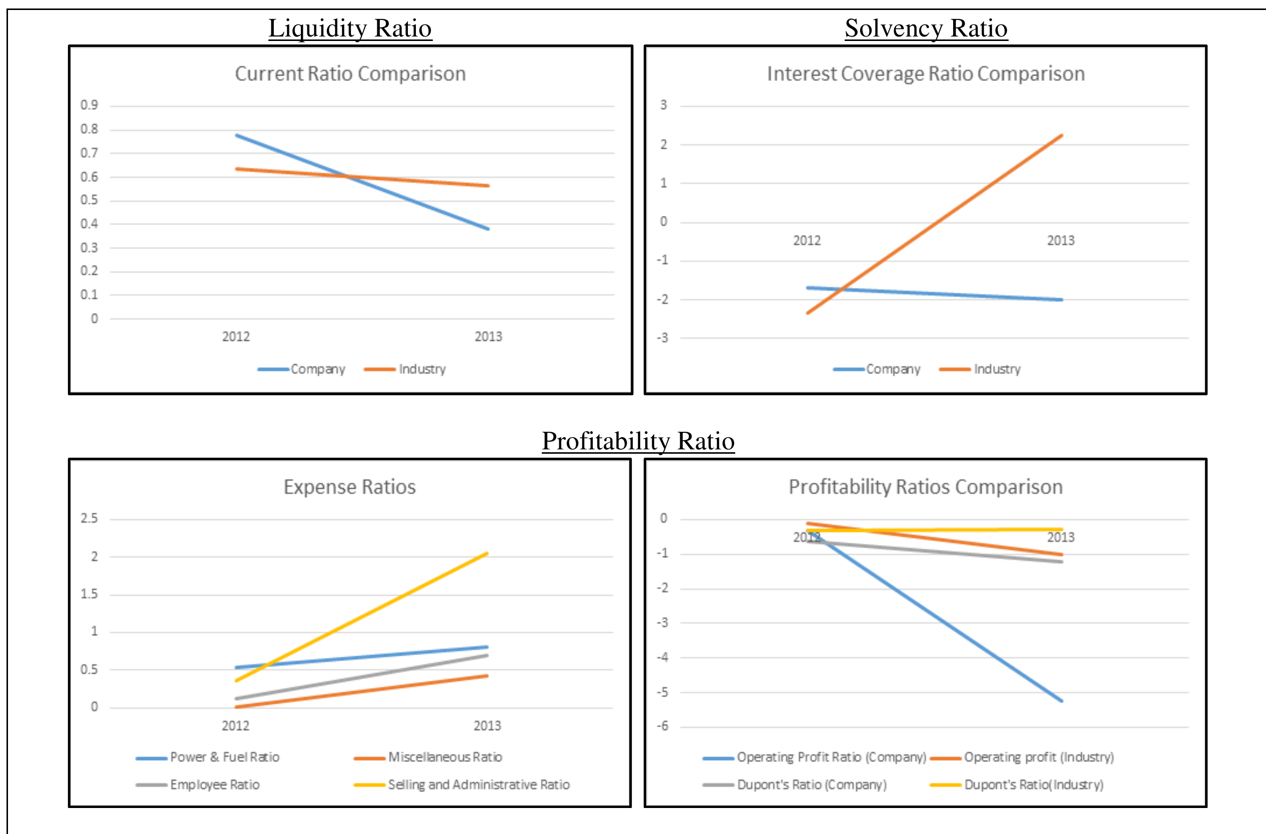


Figure 2

4.1. Financial Summary

Current assets divided by current liabilities, called as Current Ratio (CR) is a measure of short term financial liquidity of a firm. In 2012, the company's CR was at 0.78 as compared to the industrial average of 0.63. In 2013, the CR reached to its lowest levels of 0.38 and hence reached below the industrial average of 0.56. It clearly shows that company's current liabilities kept on increasing. Also the company kept on decreasing its investment in current assets. Both these factors collectively hampered its ability to meet its short term expenses to a great extent.

Interest Coverage Ratio or ICR measures the company's ability to pay interest on its borrowings. In 2012, the company had an ICR of -1.7 as compared to the industry's average ICR of -2.34. In 2013, the company's ICR further decreased from -1.7 to -2.00 while the industrial average improved from -2.34 to 2.25. The most important reason behind the company's constantly increasing negative ICR was the ever increasing debt which the company failed to repay. The company had a total debt of 8,657.64 crores and 2014, the company appeared as the country's top Non Performing Asset (NPA) after it has failed to repay loans of over Rs 4,000 crore borrowed mainly from state-owned banks. [iii]

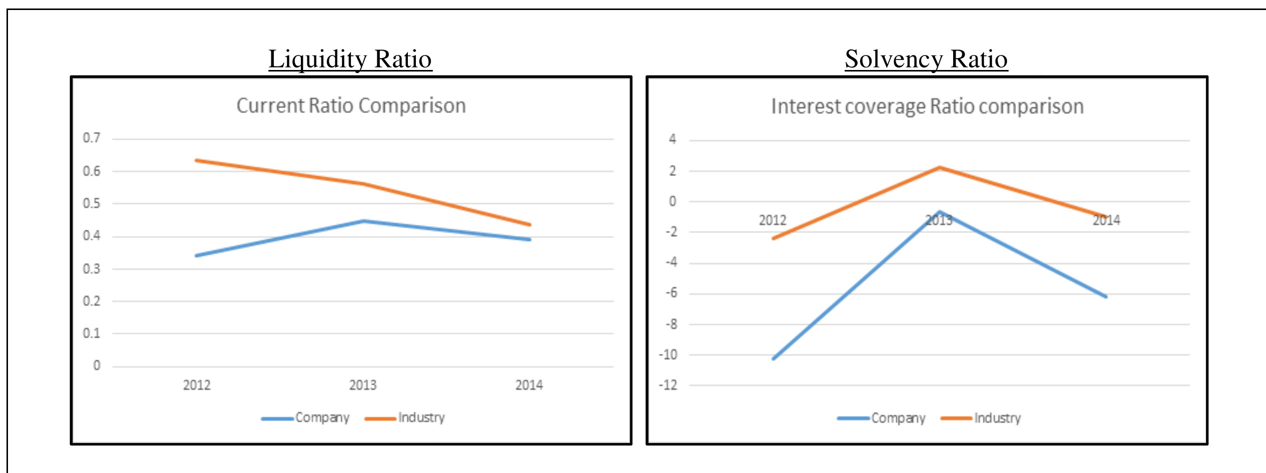
The DuPont analysis on Rate of Assets or ROA given by the product of Net Profit Margin and Investment Turnover indicates that the profitability of a company can be improved either by improving its net profit margin per rupee of sales or by generating more sales revenues per rupee of investment. In 2012, the company's ROA was at -0.63 as compared to the industrial average of -0.31. In 2013, the company's ROA stood at -1.23 whereas the industrial average rose to -0.27. This drastic fall in the company's ROA was due to the fact that the company tried to maintain high profit margins despite there being constant decrease in its sales and hence sales revenue.

The Operating Profit Ratio or OPR is a very useful tool to judge the operational efficiency of company and its operating managers, say production and sales managers. In 2012, the company's OPR was -0.33 whereas the industrial average was at -0.11. In 2013, the company's OPR took a huge plunge from -0.33 to -5.24. Also the industrial average dived from -0.11 to 1.00. This huge decrease in the OPR of the company was mainly due to its ever so increasing operational expenses. The selling and administration were greatly increased thus showing the company's managing inefficiency. Also the increase in other operational expenses vis-à-vis power & fuel, employee and other miscellaneous expenses contributed to the company's decreased OPR. [iii]

4.2. SpiceJet Airways

The origins of SpiceJet track back to February 1993 when ModiLuft was launched by Indian industrialist S K Modi, in technical partnership with the German flag carrier Lufthansa. The airline ceased operations in 1996. In 2004, raised funds and restarted operations as SpiceJet following the low-cost model. The first flight flew in May, 2005. By 2008, it was India's second-largest low-cost carrier in terms of market share. Indian media baron Kalanidhi Maran acquired 37.7% stake in SpiceJet in June 2010. The airline returned to making profits at the end of the year. In 2013, SpiceJet launched its first interline pact with Tigerair on 16 December 2013. In July 2014, SpiceJet announced up to 50 percent discount in air fares due to competition. In August 2014, SpiceJet became the second largest carrier in India's domestic market, in terms of passengers carried in the month of July, beating leading full service carrier Jet Airways for the first time in its operational history. In January 2015, the Sun group sold its entire shareholding to the airline's founder Ajay Singh and transferred control. In 2015, SpiceJet's operations experienced a significant turn-around with 93 percent of available seats on flights being filled and only 0.13 percent of scheduled flights canceled each month. The airline became profitable in the first three consecutive quarters of the year 2015, in contrast to the previous five quarters when it suffered losses. As of January 2016, it is the fourth largest airline in India in terms of passengers carried with a 13.1 percent market share. SpiceJet currently operates 306 flights daily to 35 Indian and 6 international destinations with a fleet strength of 41 flights. [i] [vii] [x]

5. Analysis of SpiceJet Airways



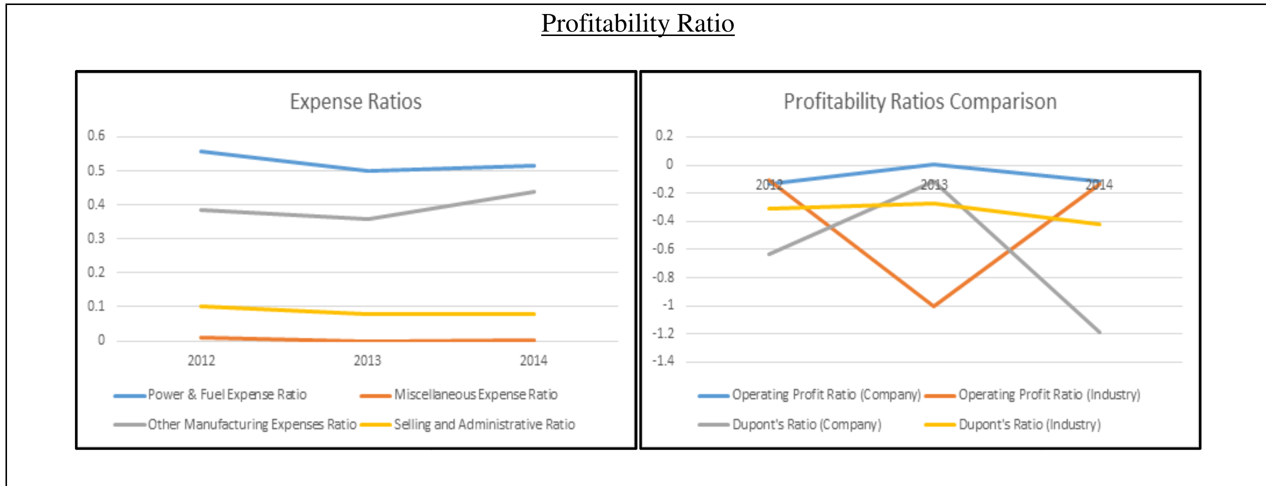


Figure 3

5.1. Financial Summary

Current assets divided by current liabilities, called as Current Ratio (CR) is a measure of short term financial liquidity of a firm. Company's Current Ratio is 0.34 as compared to 0.63 which is the industry average in 2012. Its CR had increased in 2013 to 0.45, still less than the industry average of 0.56 and then decreased to 0.39 in 2014 where the industry average also following a decreasing trend attains a value 0.43. This shows that the company has improved its ability to match its short term liabilities but is still behind the industry and is not able to manage its CL efficiently.

Interest Coverage Ratio or ICR measures the company’s ability to pay interest on its borrowings. It is evident from the industry average that most of the airline are incurring a loss and hence lot able pay their interest payments. SpiceJet’s ICR suggest that with respect to its interest payment its EBIT has significantly improved from -10.21 to -0.63 from year 2012 to 2013 due to increase in passenger load factor but again reduces to -6.2 on account of increasing Fuel expenses and Manufacturing costs.

The DuPont analysis on Rate of Assets or ROA given by the product of Net Profit Margin and Investment Turnover indicates that the profitability of a company can be improved either by improving its net profit margin per rupee of sales or by generating more sales revenues per rupee of investment. Company has performed below industry standards in 2012 at -0.63 and in 2014 at -1.187 but raised significantly in 2013 to -0.11 on account of releasing new interline pact “Tigerair” and increased sales due to lowering of prices due to fierce market competition. [v][vii]

The Operating Profit Ratio or OPR is a very useful tool to judge the operational efficiency of company and its operating managers, say production and sales managers. As evident from the graph in the years 2012 and 2014 company saw a loss as did most the other airline companies. Industry average and company’s ratio nearly match showing a decent working but still witnessed a loss. In 2012 Company witnessed a loss of over 500 Cr on account of increasing global crude oil prices with operating profit ratio -0.13 but increased significantly to 0.001 and gained about 10 Cr in 2013. operating profit again decreased in 2014 to -0.113 (loss of 715 Cr) due to high fuel expenses (Crude oil price increased) and increasing manufacturing costs with which sales couldn’t cope up. Management needs to optimize their manufacturing expenses by either utilizing newer technologies or employing cheap techniques. [v]

5.2. Jet Airways

Jet Airways was incorporated as a limited liability company on 1 April 1992. It started commercial operations on 5 May 1993 with a fleet of four leased Boeing 737-300 aircraft from Malaysia Airlines.The airline was granted a scheduled airline status on 14 January 1995. On 12 May 1994, all the shares were transferred to Tailwinds International, whose equity capital was held by Naresh Goyal (60%), Gulf Air (20%) and Kuwait Airways (20%).In October 1997, as per the directive of Ministry of Civil Aviation forbidding foreign investment in passenger airlines, Goyal took control of the entire company. The airline launched its first international flight in March 2004 from Chennai and Colombo. The company was listed on the Bombay Stock Exchange and became public on 28 December 2004, with Goyal retaining 51% ownership of the stock. In January 2006 Jet Airways announced that it would buy Air Sahara for US$500 million in an all-cash deal, making it the biggest takeover in Indian aviation history. On 12 April 2007 Jet Airways agreed to buy out Air Sahara for INR14.5 billion (US$340 million). Air Sahara was renamed Jet Lite, and was marketed between a low-cost carrier and a full service airline. In August 2008 Jet Airways announced its plans to completely integrate Jet Lite into Jet Airways. On 8 May 2009 Jet Airways launched its low-cost brand, Jet Konnect. According to a PTI report, for the third quarter of 2010, Jet Airways (Jet + Jet Lite) had a market share of 22.6%in terms of passengers carried, thus making it a market leader in India. On 24 April 2013, Jet announced that they were ready to sell a 24% stake to Etihad for US$379 million. However, that date passed and the deal was further postponed. In August 2014, Jet Airways announced that it is discontinuing its low fare arm Jet Konnect and Jet Lite. On 1 December 2014, Jet Konnect was fully merged with Jet Airways, making it the third full service airline in India besides Air India and Vistara. In December 2015, Jet Airways announced the closure of its European scissors at Brussels Airport by March 2016 and opening of new hub at Amsterdam Schiphol Airport effective 27 March 2016. As of February 2016, it is

the second largest airline in India after IndiGo with a 21.2% passenger market share.It has a fleet of 116 aircrafts. Jet Airways serves 68 destinations including 48 domestic and 20 international destinations in 17 countries across Asia, Europe and North America. [i] [x]

6. Analysis of Jet Airways

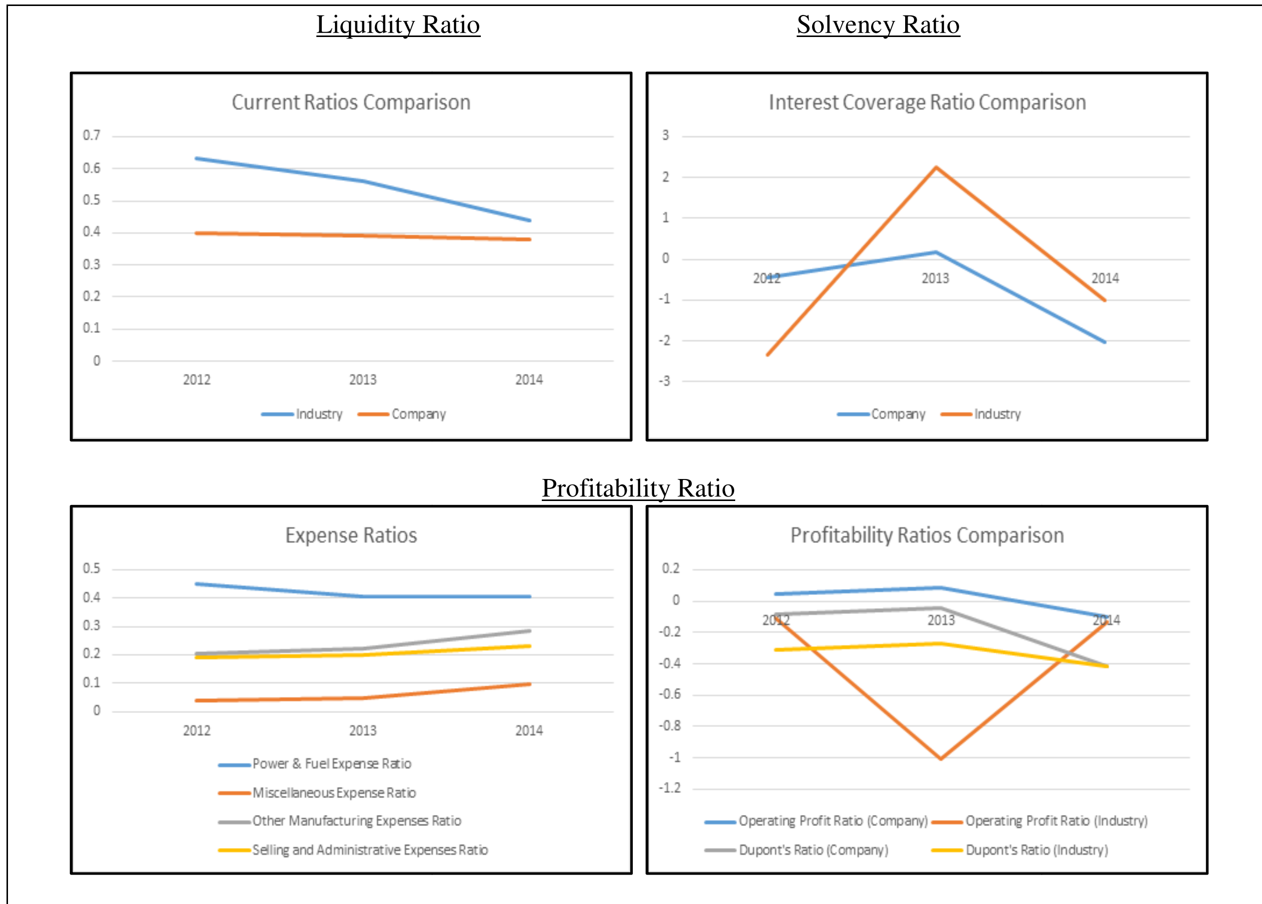


Figure 4

6.1. Financial Summary

Current assets divided by current liabilities, called as Current Ratio (CR) is a measure of short term financial liquidity of a firm. In 2012, the company's CR was 0.4 as compared to the industry's average of 0.634. In 2013, the company's CR remained at 0.39 as compared to the decreased industrial average of 0.562. In 2014, the company's CR still remained constant at 0.38 while the industrial average further decreased to 0.44. This constant nature of CR is a clear indication of the company's effort to maintain a certain minimum of current assets so as to meet their short term goals. Also its CR always remained below the industrial average which might be a reason for its decreased profitability.

Interest Coverage Ratio or ICR measures the company's ability to pay interest on its borrowings. In 2012, the company's ICR was at a negative value of -0.44 as compared to the low industrial average of -2.344, showing that the company's ability to repay its borrowings was better than the other market players. In 2013, the company's ICR returned to a positive value of 0.18 despite the major depreciation in rupee. But it remained well below the industrial average of 2.254. In 2014, when the industrial average took a huge dip from 2.254 to -0.99, the company too registered a dip in its ICR from 0.18 to -2.02. This was partly because of the indefinitely postponed Etihad deal.

The DuPont analysis on Rate of Assets or ROA given by the product of Net Profit Margin and Investment Turnover indicates that the profitability of a company can be improved either by improving its net profit margin per rupee of sales or by generating more sales revenues per rupee of investment. In 2012, the company's ROA was at a negative figure of -0.08 as compared to the industrial average of -0.31. In 2013, the company had a slight improvement in its ROA from -0.08 to -0.04 and remained higher than the industrial average of -0.27. This improvement can be accounted by the combined impact of higher yields and lower costs which the company achieved by offering large discounts on ticket prices, thus increasing sales revenues. In 2014, its ROA plunged to a great extent reaching as low as -0.42 and thus losing its lead over the industrial average which stood at -0.42 at that time.

The Operating Profit Ratio or OPR is a very useful tool to judge the operational efficiency of company and its operating managers, say production and sales managers. In 2012, the company's OPR stood at a positive value of 0.04 as compared to the industrial average of

-0.11. In 2013, the industrial average took a huge dip from -0.11 to 1.00 in response to the rupee depreciation but the company still registered a positive OPR of 0.09. This can be accounted by the decrease in power and fuel expenses achieved by the company during 2012-13. Also other operational expenses like manufacturing, selling, administrative expenses had marginal increase with respect to the sales during 2012-13. In 2014, as the market recovered from hit of rupee depreciation and when the industrial average rose from -1.00 to -0.13, the company again witnessed a huge decrease in its OPR due to substantial increase in its operational expenses vis-à-vis manufacturing, selling, administrative expenses. The company did maintain low and constant power and fuel expenses.

6.2. IndiGo Airlines

IndiGo was set up in early 2006 by Rahul Bhatia of Inter Globe Enterprises and Rakesh Gangwal, a United States-based NRI. IndiGo placed a firm order for 100 Airbus A320-200aircraft in June 2005 with plans to commence operations in mid-2006. IndiGo took delivery of its first Airbus aircraft on 28 July 2006, nearly one year after placing the order. It commenced operations on 4 August 2006 with a service from New Delhi to Imphal via Guwahati. By the end of 2006, the airline had six aircraft. Nine more aircraft were acquired in 2007 taking the total to 15. By December 2010, IndiGo replaced the state run flag carrier Air India as the third largest airline in India. It already had 17.3% of the market share, behind Kingfisher Airlines and Jet Airways. In January 2011, after completing five years of operations, the airline got permission to launch international flights. The airline launched international services in September 2011.On 17 August 2012, IndiGo became the largest airline in India in terms of market share (27%) surpassing Jet Airways, six years after operations commenced. In January 2013, IndiGo was the second fastest growing low-cost carrier in Asia behind Indonesian airline Lion Air. In order to reduce operational overhead, IndiGo operates only the Airbus A320 family of aircraft in its fleet. It generally purchases new aircraft. IndiGo announced an Rs.3200 crores initial public offering on 19 October 2015, scheduled to open on October 27, 2015.As of May 2016, IndiGo operates 679 daily flights to 40 destinations, 35 in India and 5 abroad. It has a fleet of 108 aircrafts. As of May 2016, it is the largest airline in India in terms of passengers carried with a 36.8% market share. [i] [x]

7. Analysis of IndiGo Airlines

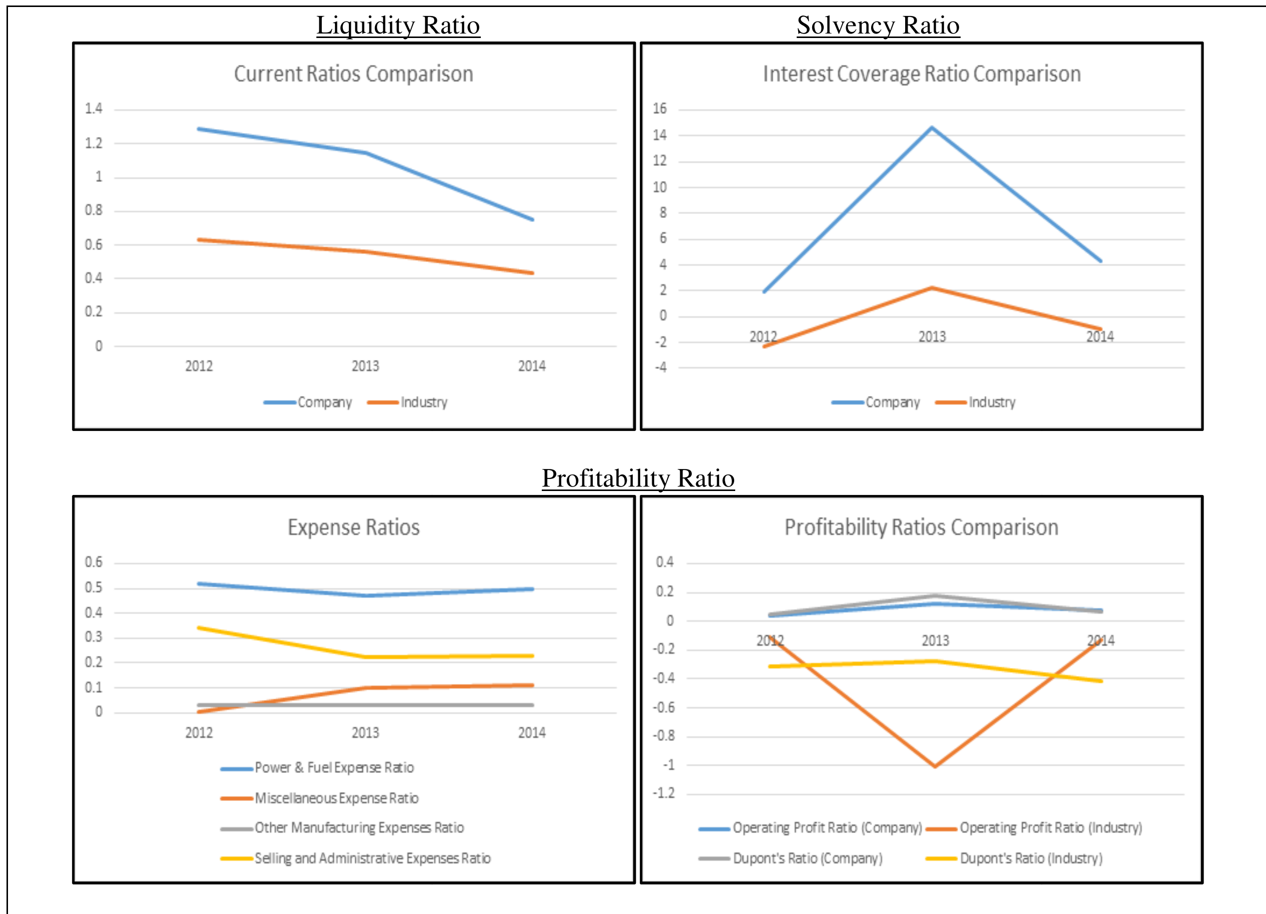


Figure 5

7.1. Financial Summary

Current assets divided by current liabilities, called as Current Ratio (CR) is a measure of short term financial liquidity of a firm. IndiGo enjoys a good CR throughout the comparison period. With CR 1.29 and industry average 0.634 in 2012 which reduced to 1.15(Industry average 0.523) in 2013 is a safe zone to operate in without the possibility of liquidation. CR significantly reduced to 0.75(Industry average 0.432) in 2014 due to increasing Current Liabilities (CL). It follows the industry trend of decreasing CR but have significantly higher CR as compared to industry average showcasing its under-utilization of CA and constantly increasing CL. As evident from the graph CR decreases tremendously between 2013 and 2014 and hence CL needs to be managed properly.

Interest Coverage Ratio or ICR measures the company's ability to pay interest on its borrowings. In 2012, the company had healthy ICR of 1.88 as compared to the industrial average of -2.34. In 2013, the company's ICR further increased to 14.68 as compared to the very low industrial average of 2.254. In 2014, the company witnessed a decrease in its ICR from 14.68 to 4.26 due to rupee depreciation, cut-throat competition and high jet fuel costs. The company has been successful in maintaining a positive ICR in the three years of comparison. This has been possible by the earning high operational profits through low cost structure, high passenger load factor, and significant yield difference among low fare airlines, stronger corporate acceptance and most important, superior delivery model due to operational excellence.

The DuPont analysis on Rate of Assets or ROA given by the product of Net Profit Margin and Investment Turnover indicates that the profitability of a company can be improved either by improving its net profit margin per rupee of sales or by generating more sales revenues per rupee of investment. IndiGo has enjoyed a healthy DuPont ratio with 0.05 in 2012 increasing to 0.18 in 2013 as compared to industry average of -0.3 in 2012 to -0.27 in 2013. IndiGo is able to sustain such figures on account of high operating profits (189 Cr in 2012 and 1151 Cr in 2013) and good investment turnover values. DuPont ratio decreases in 2014 to .06, consistent with the industry average due to lower profits (over 800 Cr operating profit in 2014) and growing expenses of the firm.

The Operating Profit Ratio or OPR is a very useful tool to judge the operational efficiency of company and its operating managers, say production and sales managers. In 2012, the company had a low positive OPR of .03 as compared to the negative industrial average of -0.11. This was possible due to the better operational management of the company. In 2013, the company witnessed an increase in its OPR from 0.03 to 0.12 whereas the industrial average took a huge dip from -0.11 to -1.00. This improvement in its performance can be accounted to its efficient expense management. The company successfully decreased operational expenses vis-à-vis power & fuel, selling & administrative, manufacturing expenses. In 2014, the company's OPR decreased from 0.12 to 0.07 whereas the industrial average increased from -1.00 to -0.13. This decrease in OPR was mainly due to a drastic increase in its miscellaneous expenses and other operational expenses. The company has been able to achieve constant positive OPRs due to its operational management in terms of fuel cost reduction, low average fleet age, single class and single aircraft type policy and the crucial sale and leaseback policy of the company.

8. 2013 Year Comparative Analysis

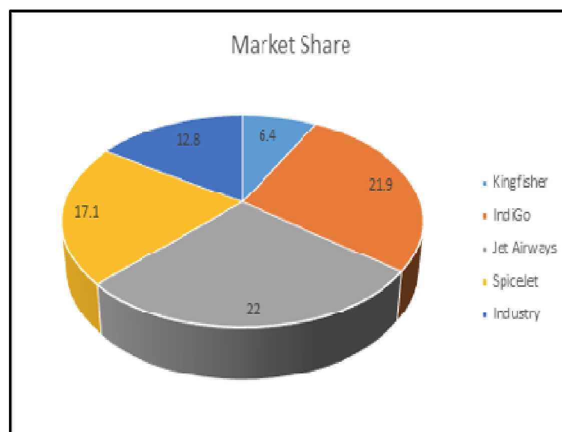


Figure 6

In 2013 market share of kingfisher dropped from 6.4% to 0% and IndiGo's market share rose to 29%. Jet airways continued to contain their strong position with 22% market share followed by spice jet at 17.1%. The airline industry in India was going through a difficult phase on the account of rising oil prices and limited pricing power contributed by the industry overcapacity and periods of subdued demand growth. Airline operators were having a turbulent phase over high debts burden and liquidity constraints. Most of the operators in Indian aviation industry needed significant equity infusion to showcase a meaningful improvement in their statements. [xi] Long term viability and brand building through different customized approach should have been there main focus, but was only achievable by improving their financial profile. These operators over long term needed to improve their cost structure, aimed at cost efficiency through mix of fleets and routes at all levels. For long term viability operators required return from pricing power through better alignment of capacity to the critical demand growth. In the following pages a comparative study of the 4 major airlines in the Indian aviation industry is done.

- Financial Comparison:

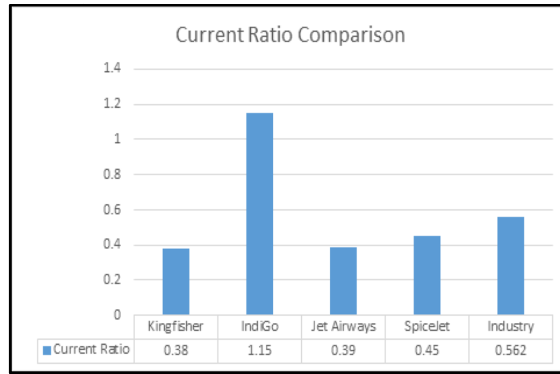


Figure 7

Current Ratio: In 2013, the three major players of the industry vis-à-vis Kingfisher, SpiceJet and Jet airlines worked in the same index of Current Ratio (CR). All three of these companies were working below the industrial CR average of 0.56. This has a direct implication that the companies were spending very less on their current assets and had quite high current liabilities to be accounted for. It's highly probable that these companies might not be able to meet their short term borrowings. SpiceJet (0.45) had better CR than the other two companies i.e. Kingfisher (0.38) and Jet (0.39) airlines. IndiGo airlines were a stand out when it came to CR. Its CR (1.15) was very high as compared to the industrial average of 0.56. This clearly demonstrates that the company was not managing its current assets in an efficient manner and had either too much inventory or too much unused cash. Even with such exorbitant amount of debts industry average manages to stay at 0.562 and companies are controlling their day-to-day operations. All major airlines should work to significantly improve their situation whereas IndiGo should manage their excess cash more efficiently to cope up with the increasing burden due to increased market share.

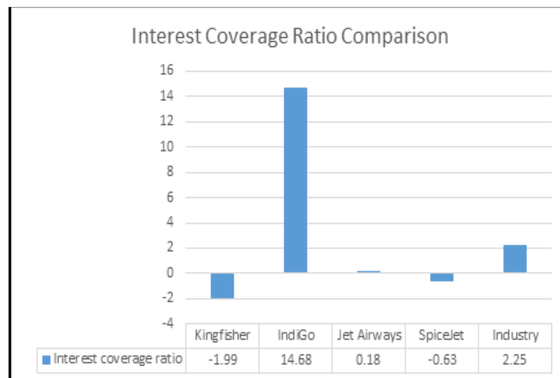


Figure 8

8.1. Interest Coverage Ratio

In 2013, the industrial average of Interest Coverage Ratio (ICR) stood at 2.25. Kingfisher Airlines had a low IRC of -1.99 owing to the high debts and thus the losses it faced. Also it had to pay high interest rates. SpiceJet also had a negative ICR of -0.63 owing the high levels of depreciation in rupee and high fuel prices. All these factors caused quite high losses to the company. Jet Airways did succeed in maintaining a low but positive CR of 0.18. This was possible due the proposed Etihad deal which would have increased the company's profits and also Jet Airways concentrated well on revenues, costs and network side, which resulted in the airline making profits for the first time since the rupee depreciation. IndiGo Airlines had a very high CR of 14.68. This was way high than the industrial average. It maintained very low debts and ensured high profits. The poor performance of other players in the market and its better operational management in terms of cost cutting resulted in higher sales and thus higher profits.

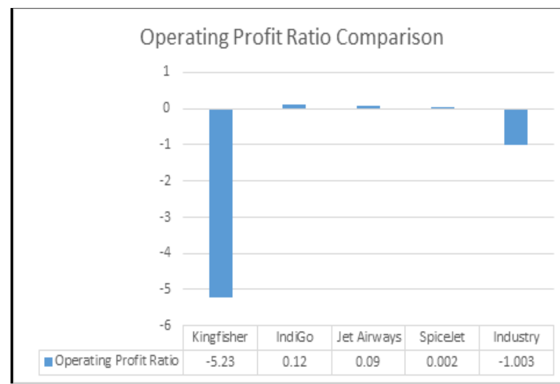


Figure 9

8.2. Operating Profit

In 2013, the industrial average of Operating Profit Ratio (OPR) stood at -1.00 implying that the profit margins in the industry were very low. Kingfisher Airlines had the worst OPR in the entire industry. Their OPR stood at -5.24 which was very low compared to the industrial average. Their expansion policy which resulted in huge debts and losses along with the weak operational management of the company was one of the reasons for this low OPR. Kingfisher Airlines was also stung by the aggressive price cutting by other market players and high cost of landing fees and airline taxes. All these factors placed the company under great debts and thus low OPR. Both Jet Airways and SpiceJet benefited from the downfall of Kingfisher Airlines. Also the price cutting strategy adopted by these companies helped them to have a low but positive OPR. IndiGo Airlines enjoyed the highest OPR i.e. 0.12. The company saved a lot by its aggressive fuel price hedging. Also the use of same type of aircrafts saved a lot of operational expenses of the company. The sale & leaseback strategy which reduced financial pressure on the firm and ensured low average fleet age. All these factors along with the downfall of Kingfisher Airlines were responsible for its high OPR.

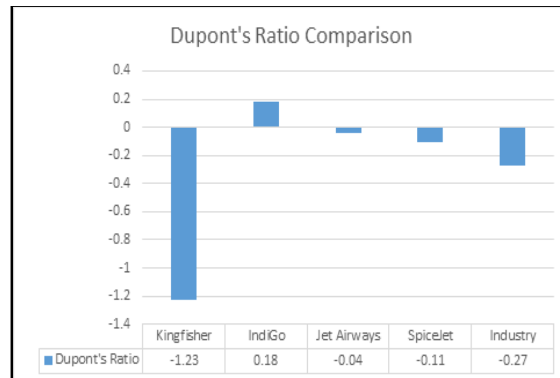


Figure 10

8.3. DuPont's Ratio

2013 was a tough year for the Indian aviation industry which is evident from the industry average of -0.27. Kingfisher was the biggest loss maker of all the major operators in the Indian market which resulted in their bankruptcy. Jets Airways and SpiceJet even though did not perform well on investor's money, DuPont ratios being -0.04 & -0.11 yet shows signs of improvement and hence may results in positive values. IndiGo the only airline with a positive DuPont ratio of 0.18 performed significantly well as compared to industry average of -0.27. Aviation sector in India was never profitable (until very recently when IndiGo managed to put positive figures for a quarter). Every single airline that existed were bleeding money and Kingfisher was a part of it. This was simply because aviation sector was only nascent, required huge investments and other significant factors.

9. Conclusion

9.1. Jet Airways

In 2013 Jet Airways made a deal with Etihad Airways, under which the Abu Dhabi-based airline picked up 24 per cent stake in financially-crunched Jet Airways for Rs. 2,058 crores. [xi] Apart from this, Etihad Airways also paid almost INR 425 crores in exchange for London Heathrow Airport slots of Jet Airways. They had also committed to invest another INR 910 crores to buy out Jet Airway's frequent flier programme. Etihad also agreed to procure funding worth $300 million to reduce Jet's debt burden. [xi] This partnership will offer a combined network of more than 130 destinations worldwide. This deal would act as a major savior for Jet Airways, whose owner was always opposed to foreign airlines investing in Indian carriers.

9.2. SpiceJet

SpiceJet's revenue grew by 13 per cent in 2013-14 primarily driven by 8 per cent increase in the overall passenger traffic. The domestic traffic grew by around 3 per cent year-on-year to 11.5 million. On a low base, international passenger traffic carried grew by 98 per cent y-o-y to 1.1 million. However, the company's operating margins further weakened to a negative 13.5 per cent in 2013-14 compared to a negative 3.5 per cent in 2012-13. Weak PLFs, steep rupee depreciation and higher ATF prices impacted margins. The ATF prices, which constitute for about 53 per cent of the operating costs, rose 6 per cent during 2013-14. The rupee depreciated by a steep 11 per cent during the year, which further hit the profitability (as about 70 per cent of the operating costs are dollar linked). Also, the operating margin was impacted due to 590 bps y-o-y increase in operating expenses (excluding aircraft fuel, staff, selling and distribution) largely due to higher maintenance and repairs. SpiceJet managed to pare its total debt to Rs 15 billion in 2013-14 from 17 billion in 2012-13, aided by equity infusions of about Rs 2 billion by the promoter during the year, though that was insufficient. Hence, on account of the dismal operating performance, the net loss increased significantly to Rs 10 billion in 2013-14 compared to Rs 1.9 billion in 2012-13. The auditor's without issuing qualifying opinion have raised the issue of 'going concern'. This is because SpiceJet accumulated losses in 2013-14 exceed 50% of its net worth. [x]

9.3. IndiGo

IndiGo announced a net profit of Rs. 700 crores where most airlines continued to suffer losses. [xi] Following were the reason behind their success:

Operational Aspect:

- *Single model of aircraft:* IndiGo's whole fleet consists of Airbus A320 aircraft while SpiceJet, Air India, and Jet Airways etc. use more than 3 types of aircrafts thereby increasing hiring, training and upgradation costs. [xii] While IndiGo has achieved greater flexibility by making use of the same crew from pilots to flight attendants to the ground force thereby reducing costs.
- *Single travelling class:* Having only Economy class helps them save expenditure of time, money and crew on privilege passengers. They also don't need to maintain expensive lounges and exclusive services at airports further reducing costs.
- *Fuel:* Domestic Taxes on fuel can be as high as 30 % with an 8.2 % excise duty which results in fuel accounting for about 45 % of total operating costs for Indian airlines as compared to the global average of 30 %. [xiii] IndiGo try to save fuel by making use of latest fuel saving technology i.e. software to optimize flight planning for minimum fuel burning routes and altitudes which are embedded in the aircraft
- *Route Optimization:* IndiGo operates over a lesser number of destinations than its competitors but with a higher frequency - with a fleet of 78 planes for 36 destinations while for E.g. SpiceJet flies to 46 destinations with 58 planes. [xiv]
- *Strategic marketing:* Amount spend on IndiGo's advertising was very less as compared to their competitors, they relied on strategies such as word of mouth for their marketing. IndiGo advertised heavily when they started their international operations and also when Kingfisher was losing balance, with catchphrases like 'Let the bad times roll… Fly IndiGo in good times and in bad times.' which was very similar to Kingfisher's tagline 'Fly the good times.' This move was criticized but it helped its advertising campaign

9.3.1. Financial Aspects

- *Debt:* IndiGo airlines in 2013 practically no debt however the scenario is way different for other airlines - Air India, Jet Airways and SpiceJet all have huge debts which were taken to finance expansions. Reason behind Jet's 24% stake sale to Etihad was the massive debt of more than 123.03 billion rupees it had. Even Kingfisher's major financial problems originated from their debt of more than 75 billion Rupees. SpiceJet has a relatively smaller debt of 16.45 billion rupees. A large debt leads to a considerable portion of revenue going to service the debt and hence hindered the airlines performances
- *Sale and Leaseback:* Leaseback is a transaction wherein the owner sells an asset and leases it back for a long-term. Therefore, one continues to be able to use the asset but no longer owns it. IndiGo has been able to better leverage this transaction by placing bulk orders for aircraft thereby gaining an estimated amount of $5 million per plane. In 2005, InterGlobe Enterprises placed an order for 100 Airbus A320's during the 2005 Paris Air show at which point IndiGo didn't even exist. A bulk order helped gain a better bargaining capability with the manufacturer while buying and ensure better returns when the aircraft are later sold using Leaseback agreements. [xv]

9.4. Kingfisher

The downfall of Kingfisher Airlines is widely credited to Mr. Mallya - his tactics and professional behavior. Following are a few reasons behind their huge losses:

- *Aviation sector in India:* It was never profitable for any airline until very recently when IndiGo managed to declare profits in 2013. Every airline in the Indian aviation sector was bearing huge losses and kingfisher was no different. This was simply because aviation sector was only nascent and required huge investments, traveling by aircraft was only limited to upper class hence market penetration was very far from saturation. Yet this situation is changing to various low cost airlines lining up to eat the market share.
- *Air Deccan Acquisition:* Kingfisher's acquisition of Air Deccan was a bad move which they acquired for 550 crores running with losses more than 500 crores to enter the international space which finally turned out to be a bad move. [xvi]

- *Excessive expenditures:* As evident from IndiGo's success who were managing their finances very well, kingfisher paid their staff exorbitantly, which was very high as compared to others and hence resulted in unnecessary losses. [xvi]
- *High ATF cost:* It again added to the already wounded airline. At one point ATF cost went as high as 150 $ per barrel. [xviii]
- *Personal motives & interests:* Mr. Mallya's personal interest in IPL maybe one of the reason for Kingfisher's losses, Capital which could have been allotted for kingfisher was diverted towards IPL.
- *Mismanagement:* Management plays a key role in deciding a company's future, making Siddharth Mallya the CEO of Kingfisher only added to their misery. [xvii]

The Indian aviation industry is facing significant operational and non-operational challenges as evident from their performances over the years.

- Sales Growth: After a strong comeback in 2010, the pax growth has been steady over the last few years due to moderate economic growth and low industrial activity. Besides, an intense competitive environment which has been created by domestic LCC players are rapidly gaining market share, and Air India who is trying to retain its market share have resulted in price wars which at times had resulted in low cost pricing, lower yields and neutralized sales growth for the airlines. On international routes, the yields have remained low due to weaker economic conditions and severe competition from global airlines. [xviii]
- Rising ATF Prices & Steep Rupee Depreciation: The aviation industry has been extremely impacted by the significant increase in Aviation-Turbine Fuel (ATF) prices which went up 57% in last 18 months (reference 2012). As Indian Carriers don't hedge fuel prices and have showcased limited ability to charge fuel expenses due to irrational and undisciplined pricing dictated by competition rather than costs or demand in the Indian aviation industry. Besides, the steep rupee depreciation of ~18.7% in CY11 which was partly reversed through 7.3% YTD appreciation in CY12, presents concerns for the operators as apart from fuel costs. Substantial portion of operating costs like lease rentals, maintenance, etc. are US currency dependent and hence presents concerns. [xviii]
- Profit Margins: With combined impact of moderating pax growth, reduced yields due to excessive competition, rising ATF prices, heavy rupee depreciation, rising debt levels and interest costs, the profitability margins of the aviation industry in India have been severely impacted. As per Centre for Asia Pacific Aviation (CAPA), Indian operators could be posting staggering losses of approx. $2.5 billion in FY12 & USD1.65 billion in FY2013, worse than the losses of 2008-2009 when crude oil prices touched to $150 per barrel & traffic was declining. [xviii]

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