

IMPACT OF GLOBAL FINANCIAL CRISIS ON INDIAN AVIATION INDUSTRY: A CASE STUDY OF AIR INDIA LIMITED

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ABSTRACT

The Civil aviation sector is the prime movers for the economic growth and the strategic element of the employment generation. The global financial crisis that was emerged due to failure of the major financial institutions had left the drastic impact over the world economy and as the aviation is an important part of the economy so it was heavily affected by the crisis. Negative growth rate, huge debt burden, high operating cost etc. have become the integral features of the airlines operating in India. The National carrier Air India is continuously reporting losses. The Global financial crises have spread to India through the financial channel, the real channel and the confidence channel. In this paper an attempt has been made to know the impact of global financial crisis on the financial performance and growth of Air India Limited. For this purpose the annual reports of Air India Limited from the period of year 2007-08 to 2013-14 have been analyzed and the impact has been measured by making the use of Multiple Regression Analysis. EBIT has been taken as the dependent variable and Aviation Turbine Fuel price, increasing payments to employees, passenger revenue and other expenses are treated as independent variable. The present study addressed the major causes of the negative growth of the Air India Limited.

KEYWORDS: Global Financial Crisis, Air India Limited, Financial Performance and Growth

INTRODUCTION

Global Financial Crisis and Civil Aviation Industry: An Overview

The fall of Lehman Brothers in New York followed by the European financial Crisis very shortly took the shape of the Global Financial Crisis in 2008. Negative GDP growth was experienced in 16 of G20 countries (sj. Lagarde, 2010) by the fourth quarter of year 2008. All over the world the impact of GFC on Civil Aviation Sector was estimated to be around US \$ 3.5 Trillion which was equivalent to 75% of the World's GDP (sj. Lagarde, 2010). Revenues slashed down by 7% after year 2001 and declined to 15% in 2009. In any economic downturn Civil Aviation would suffer than the most, as demand for air transport is pro cyclical.

The labor segment of this sector was severely affected by the GFC. The industry supported 31.9 Million Jobs globally in 2006 it created 5.5 million jobs directly (4.7 Millions in airlines and Airports, 8,00,000 in the civil aerospace sector and further 6.3 Million jobs via the purchases of goods and services in the airline supply chain, 2.9 Million jobs were created by the spending of employees and 17.1 Million through the impact of travel on tourism)

Causes of GFC

There were various causes that led to the Global financial crisis and the most prominent was failure of the financial Institutions at world level in March 2008 and the sudden failure of Lehman Brothers in September 2008. Investment made by various institutions in the risky securities lost much when the housing bubbles of U.S. and Europe

began to deflate between 2007-09. During the preceding years of crisis the credit conditions were made very lenient due to the competitive pressures and the government regulations which resulted into giant increase in the amount of sub-prime lending. Higher –risk lending had been accelerated by major US banks and government sponsored enterprises like Fannie Mae. With the relaxation of the net capital rule by US securities exchange commission in April 2004 the largest five investment banks were encouraged to dramatically increase their financial leverage and expansion of mortgage backed securities. In addition to this particularly from 2004-2007 which had been a boom period, mortgage underwriting standards declined gradually.

Loans were allowed to be made without appropriate reviews and documentation, which resulted into mortgage fraud. Unscrupulous lenders entered into a practice to provide unsafe secured loans for inappropriate purposes. The low cost loans were granted to the politicians for the purposes of gaining political favor (According to republican law makers).

As per spoken by US President Barak Obama irresponsibility was an important cause of the crisis. There was lack of capital and the system was overburdened with debt. Interest rates and trade deficit in US also contributed to the crisis as the bank lending was accelerated due to low interest rates, and large capital inflows due to trade deficits made funds for borrowing plentiful and relatively inexpensive.

From early 2007 to 2008, the oil importing countries were facing downfall as wealth began to flow in oil producing countries. There was instability in the price of oil over a decade that resulted in the increase of oil prices from \$50 to \$ 140; this was also a casual factor in the financial crisis. Probably oil prices were not the entire cause but it made a significant contribution to the downturn in the world economy. Not only this the terrorist attack on the world trade center also paralyzed the world economy and the effects of Panademic Influenza A (H1N1) in Mexico and USA along with some parts of Asia, Middle East, Europe and especially countries like Iceland, Ireland, Sweden, Norway, Netherland, Bulgaria and Italy were some countries where the virus made the presence felt in large number of people that also lead to the reduction in the total number of passengers (OPERA.G Marius, 2010)

Impact of GFC on Indian Aviation Sector

Airline sector has faced unprecedented turbulence due to the combination of economic crises, both globally and European crisis as well as the H1N1 epidemic, and the threat of terrorism and competition from the new carriers. All these factors had created blunders to the Aviation Industry all over the world. Airline cargo revenues dropped by 17% and transport carried by the carriers was 33.3 Million tons in comparison with 40.1 million tons in 2008. Similarly passengers dropped to 2.06 Million travelers (IATA, 2009). Due to crisis the petroleum prices rose above US\$ 140 that caused many airlines to suffer death. Brazil's economy, which is now the 3rd largest commercial aircraft producer in the world, had shown the positive impact on the global aviation (Fernando, 2010) during crisis. Like Brazil, China was also one of the countries that remained unaffected by the GFC which was due to its large domestic demand, a driving economy

Middle East Countries have also shown second highest traffic growth; the region had posted a 17.6 % growth in 2008-09. In India particularly there was a dominating growth of low cost carriers, which attributed to the country's strong economic growth. India shall be a global leader in few years. India's aviation sector has been producing a range of military air craft, including combat Jets, advance trainers and helicopters; it does not have a commercial aircraft industry (John, 2010). However, authorities predicted that the nation's commercial aviation sector will become fifth largest in the world shortly. Although rising fuel costs are posing continuous threat to the Indian Aviation. Frequent changes in the fuel prices during the time of crisis had added to the difficulties of number of airlines in India (IATA, 2012).

After the crisis the growth was shown in Asia Pacific region but in a very slow pace. The Global financial crisis posed a great risk to the profitability of the airlines. That downgraded its central forecast for the airline profits for future period. (IATA, 2011)

Air India and GFC

The history of Indian Civil Aviation began with the first domestic air route between Karachi and Delhi in December 1912. During the time of Independence there were 9 Air Transport companies which were carrying both Air Cargo and passengers in the Indian Territory (Bhatia, 2012). In 1948 the Indian government and Air India earlier known as TATA Airlines set up a joint sector company Air India International and Indian Airlines. With the nationalization of Indian Airlines and Air India in 1953, the Indian domestic civil aviation came under the purview of Government.

Thus, Airlines Corporation and Air India Limited came into existence in order to operate domestic and international long haul services. Nationalization was done with the objective to spur growth, promote economic activity, and to rush the assistance in times of calamities (Bhatia, 2012). Air India was the company which undertook the domestic flights only and the erstwhile Indian Airlines was operating the international routes. In year 2006-07 the GOI decided to merge both Air India and India Airlines with the objective to accelerate growth. Hence the National Aviation Company Limited formed as a result of the merger of both Air India and India Airlines. Thus began the decline of the National Carrier. The merger could not result in to success.

There were many disturbances, Air India Limited made a heavy loss of 15,92,733 Millions in 2007-08, further the situation was deteriorated due to the sudden U.S. economy distress due to fall of Leh man Brothers. Whole world's economy was shivered due to collapse of U.S. economy as well as European Crisis. Aviation Turbine Fuel prices were very unpredictable, due to excess of employees there was the burden of payments of salary to the surplus employees irrespective of steep decline in the earnings of the Air India Limited. To counter the situation Air India sold 4 aircrafts during March 2009 and 13 aircrafts in 2008. The aircrafts sold during 2007-08 were on sale and lease back basis. In total 21 aircrafts were sold between 2007 and 2009 for \$451.88 Million (according to Praful Patel former civil aviation minister of India). By 2009 Air India had sunk into a huge financial crisis. NACL had posted loss of around 22 billion in 2008 and 55 billion in 2009 along with debt burden of 160 billion and the loss goes on increasing up to 2010 which was 72.5 billion and 87 billion in 2011.

As the situation of Flag Carrier was getting worsen the union cabinet in 2010 approved Rs 800 crore equity infusion in the same fiscal year, the whopping bailout of Rs. 7,000 crore as soft loan and Rs. 5000 crore as equity infusion as the first bailout for the ailing National carrier. In 2011, Praful Patel willingly participated in the financial restructuring plan of the National carrier Air India after which ICICI bank moved to refinance the long term debt. The lenders of Air India in Feb 2012 approved its corporate debt restructuring plan worth Rs.18000 crore out of which Non-Convertible debentures worth Rs.7400 crore guaranteed by the government were to be issued and decided to provide fresh cash credit of Rs. 2200 crores. These funding approvals helped Air India to cut short its accumulated losses to 39,890 Million in the year 2013. Air India is operating in an unviable business model due to the Impact of Financial crisis (CAPA, aviation Outlook 2012-13). There are many challenges for the airlines operating in India as the aviation economics is currently not favorable. It has resulted in a weak financial performance of airlines due to rising ATF prices and weak currency. In the present study an attempt has been made to analyze the impact of the factors that were affected due to the Global financial crisis for e.g. ATF prices, low passenger revenue, increasing payments bill and other expenses on the earnings of Air India Limited.

Literature Review

Several papers related to the impact of Global financial Crisis on the Airline Industry have been studied. Some focused on the labor relation issues others were related to operational efficiency.

Paul. Cuckoo in one of their study published in Forbes India, 29 Nov 2013 titled "*Indian carriers hit air pocket, losses Mount*" have discussed about the tough times faced by the Indian carriers and pointed on the two biggest carriers by fleet size Jet Airways and Air India that are bleeding the most Jet Airways has lost Rs. 1400 crore in the first two quarters of 2013-14 more than it has earned in last 10 years. The national carrier on the other hand has projected losses of Rs. 4000 Crore for the year, while spice Jet has lost Rs. 609 Crore in the first six months of the fiscal. They presented through their article that Airlines are struggling to stay profitable, domestic capacity is rapidly shifting to the low cost model, but it seems that charging for meals and baggage aren't enough to offset higher fuel prices and a depreciating rupee.

In year 2012 Gerain Harvey in their final report titled "*The Impact of financial crisis on labor in the Civil Aviation Industry*" investigated the impact of the global financial crisis on labor in the civil aviation industry. It was found that GFC leads to the collapse of air traffic and passenger revenues that resulted in the severe economic uncertainty. The crisis was resulted in the job reduction programs and alterations to work in many airlines like United Airlines, American Airlines, Northwest Airlines, Delta Airlines, US Airways, Air India and Jet Airways. Other than this many airlines had reduced the working time and pay freezes had also been implemented. At Air India about 15000 employees were asked to take leave without pay for between 3-5 years. Recruitment freeze, voluntary redundancy, non-renewal of temporary contracts, and unpaid holiday leave were the most common cost cutting measures adopted by the airlines all through the world.

In the same year (2012) Pinto Rosette. Oshma through their research paper titled "*Impact of Global Recession on Indian Airline Industries*" have analyzed the impact of recession on operation of Indian Airlines Industry and the reforms that were undertaken by government of India to curb recession on Airline Industry. The data of 10 airline companies were taken for the purpose of analysis Air Sahara, Cathay pacific Airways, Emirates Airlines, Go Air, Indian Airlines, Indigo, Jet Airways Private Ltd., Lufthansa German Airlines, Qatar Airways and Spice Jet Airlines. Researcher had worked on the total thriftiness of the Airline Industry with respect to the operations and towards the progress of Indian Airline Industry by implementation of Government reforms. The data collected through the questionnaire was being tested through T- Test and it was found that there was no significant impact of the global recession on the operations of the aviation industry as well as on the government reforms.

In 2010, Oprea. G Marius in the paper "*The effects of GFC on the Air Transport of passengers in Europe and in Romania*" analyzed the essential aspects regarding the Global Economic crisis on Aviation and tried to highlight the indirect effects of the crisis on tourism. It was found that crisis had led to a decrease in the number of tourists especially business tourist and tourists of holiday trips. The study concluded with the findings that, crisis encouraged the formation of alliances, Consolidations and Niche Players along with the increased concentration towards the emergence of Low cost carriers.

In the Global financial Crisis Bulletin "Impact of the Economic Crisis on the Hospitality, Travel and Leisure industry" June 19, 2009, it was presented that the shrinking capital market, declined discretionary spending by both corporate and individual consumers and decreased discretionary passenger market led to the declining revenues of airlines.

It eventually resulted into the decreased occupancy ratio of domestic travelers to international travelers. Passengers reduced their unnecessary spending on the air fares due to steep decrease in business and consumer's confidence, industry profitability, increased volatile fuel costs, new security provisions static labor and reduced vacation times.

After reviewing few more research papers in this area it was discovered that though they focused on the financial crisis impact on airline industry all over the world, the impact of GFC on labor cost cutting, profitability of different airlines, but no study has focused specifically on Air India. So to fill the gap the present study explores the impact of GFC on Air India Limited taking ATF prices, Payments, Other Expenses and Passenger Revenue as independent variables and EBIT as dependent variable.

Objectives of the Study

- To study the Impact of Global Financial Crisis on the Financial Performance of Air India Limited.
- To identify the factors (Expenses & Revenues) that were affected most due to financial Crisis.
- To analyze the impact of those factors (Expenses & Revenues) on the Earnings/Losses of the Air India Limited.

Hypotheses

- **H01:** There is no significant impact of Increase in Aviation Turbine Fuel Prices on the EBIT of Air India Limited after the Global Financial Crisis.
- **H02:** There is no significant impact of Increase in Payment to Employees on the EBIT of Air India Limited after the Global Financial Crisis.
- **H03:** There is no significant impact of Increase in Other Expenses (Administrative Expenses, Repair and Handling Charges, Communication Charges and Insurance) on the EBIT of Air India Limited after the Global Financial Crisis.
- **H04:** There is no significant impact of Increase in the Passenger Revenue on the EBIT of Air India Limited after the Global Financial Crisis.

Research Methodology

The study is based on the secondary data, collected from authentic corporate websites, magazines, journals, annual reports and financial statements of Air India Limited for the year 2007-08 to 2013-14. To analyze the impact of Aviation Turbine Fuel price, Increasing payments to employees, passenger revenue and other expenses on the Earnings Before Interest and Tax, (EBIT) of Air India Limited Multiple Regression Model has been developed which predicts the impact of variables on the EBIT of Air India Limited. The variable EBIT which is to be predicted is the dependent variable is denoted by "Y" and the predictors (Aviation Turbine Fuel price, Increasing payments to Employees, Passenger revenue and Other Expenses) are independent variables or explanatory variables that are designated as X_1 X_2 X_3 & X_4 . As the number of explanatory variables is four so the relationship between the variables is explored by using Multiple Regression Model. Further the analysis has been done through the SPSS. **Sample:** "Air India Limited"

Data Analysis

$$\text{Regression Equation: } Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

$$\text{EBIT} = \beta_0 + \beta_1 \text{FUEL} + \beta_2 \text{PAYMENTS} + \beta_3 \text{REVENUE} + \beta_4 \text{OTHER} + \epsilon$$

Y is the value of dependent variable EBIT.

β_0 is the regression constant.

β_1 is the partial regression coefficient for independent variable “Aviation Turbine Fuel Price”

β_2 is the partial regression coefficient for independent variable “Payments to Employees”

β_3 is the partial regression coefficient for independent variable “Passenger Revenue”

β_4 is the partial regression coefficient for independent variable “Other Expenses”

Table 1: Model Summary

Model	R	Adjusted R Square	Durbin Watson	f	Sig
1	.992	.954	2.115	32.068	.030

The value of adjusted R^2 represents the portion of variation of the dependent variable. Y accounted for by the independent variables in regression model. The adjusted R^2 of ‘0’ indicates no relationship between the predictor’s variables in the Model and dependent variable whereas Adjusted R^2 of 1 indicates that 100% of the variability of dependent variable has been accounted for by the predictors. Here in the **Table 1** adjusted $R^2=95.4\%$ indicating a very strong predictability of a regression Model. That implies that a relatively high proportion of the variation of the dependent variable EBIT is accounted for by the independent variables (Aviation Turbine Fuel price, Increasing payments to Employees, Passenger revenue and Other Expenses) in this Regression Model.

For Multiple Regression an analogous test makes use of F statistic. The overall significance of the Multiple Regression Model is tested with the Hypotheses.

$$H_0: \beta_1=\beta_2=\beta_3=\beta_4=0$$

H_a : At least one of the regression coefficients is $\neq 0$

Table 1 shows the analysis of variance (ANOVA) of the variables with f values of 32.068 (Sig. -.030) for EBIT which clearly shows that there is a strong relationship between the dependent variable EBIT and the independent variables (Aviation Turbine Fuel price, Increasing payments to Employees, Passenger revenue and Other Expenses) at 5 % levels.

Table 2: Coefficients

Model	Unstandardized Coefficients		Standard Coefficients	T Value	Sig Value
	B	Std. Error			
Constant	331620.306	42831.856		7.742	.016
Fuel	-.836	.181	-.869	-4.613	.044
Employee	-.810	1.345	-.764	-6.551	.023
Revenue	.053	.126	.080	.421	.715
Others	-.174	.044	-.666	-3.923	.059

As the value of EBIT is dependent on more than one independent variable so the partial regression coefficient occurred. The partial coefficients are analogous to β_0 which is the slope of regression model. The partial regression coefficients and the regression constant of a multiple regression model are population values and are unknown.

$$Y \text{ (EBIT)} = \beta_0 + (-.869) x_1 + (-.764) x_2 + (.080) x_3 + (-.666) x_4 + \epsilon$$

The coefficient of X_1 (Fuel) is (-.869), which means that a 1 unit increase in the fuel price would result in a predicted increase of (-.869)* Rs 1000=Rs 869 in the EBIT of Air India Limited, all other variables being held constant the addition in a unit ATF prices results in a predicted increase of Rs. 869(Per Unit) of Loss.

The coefficient of X_2 (Payments to Employees) is (-.764), which means that a 1 unit increase in the Payments to Employees would result in a predicted increase of (-.764) *Rs 1000=Rs.764 in the EBIT of Air India Limited, all other variables being held constant the addition in a unit to Payments to Employees results in a predicted increase of Rs. 764 (Per Unit) of Loss.

The coefficient of X_3 (Passenger Revenue) is (.080), which means that a 1 unit increase in the Passenger Revenue would result in a predicted decrease of (.080) *Rs 1000=Rs.80 in the EBIT of Air India Limited, all other variables being held constant the addition in a unit to Passenger Revenue results in a predicted decrease of Rs. 80 (Per Unit) of Loss.

The coefficient of X_4 (Other Expenses) is (-.666), which means that a 1 unit increase in the other expenses would result in a predicted increase of (-.666) *Rs 1000=Rs.666 in the EBIT of Air India Limited, all other variables being held constant the addition in a unit to other expenses results in a predicted increase of Rs. 666 (Per Unit) of Loss.

RESULTS

On the basis of analysis following are the results of the study:

Hypotheses	Significant Value at 5% Confidence Level	Result
There is no significant impact of Increase in Aviation Turbine Fuel Prices on the EBIT of Air India Limited after the Global Financial Crisis	.044	Rejected
H02: There is no significant impact of Increase in Payment to Employees on the EBIT of Air India Limited after the Global Financial Crisis.	.023	Rejected
H03: There is no significant impact of Increase in Other Expenses (Administrative Expenses, Repair and Handling Charges, Communication Charges and Insurance) on the EBIT of Air India Limited after the Global Financial Crisis.	.715	Accepted
H04: There is no significant impact of Increase in the Passenger Revenue on the EBIT of Air India Limited after the Global Financial Crisis.	.059	Accepted

Findings

Firstly on the basis of analysis it was found that increase in Aviation Turbine Fuel prices has a direct and same directional impact on the EBIT of Air India limited which is in negative figures since its merger in 2007 and additionally due to the impact of GFC. The another variable under the study is Payment made to the employees which is also impacting the EBIT in same direction, after the Merger of Air India Limited and Erstwhile Indian Airlines there was very surplus of employees in the new merged National Aviation Company and soon after the merger the Airline was affected badly due to the Global Financial crisis that burdened it with the loads of huge payments made to the employees. As a result the earnings of the company got lowered and turned into negative figures due to rise in expenses related to the employees and revenues got lower due to low passenger load factor.

Due to the financial crisis and the terrorists attack the Airline business was affected badly due to decline in passenger leading to lower revenue. But since 3 years Government of India is providing aid to the flag carrier Air India due to which the load factor has increased and boasting the revenue generation. Through the present study it was found that there is a negative relation between the passenger revenue and the EBIT of Air India as revenues are in positive figures whereas EBIT is negative so It reflects that with the increase in the revenue of Air India the loss shall reduce. Other expenses have very less impact on the EBIT of Air India Limited. EBIT of is highly affected by the rise in the Aviation Turbine Fuel Prices in comparison to payments to employees.

SUGGESTIONS

On the basis of the above findings the researchers made some suggestions:

- Government of India should make decisions to reduce the various taxes on the import of fuel that makes it expensive and finally unaffordable.
- In order to further improve the EBIT, Air India's management will have to curtail down its surplus employees. This will surely have a positive impact on the cost reduction.
- Air India Ltd. may go for privatization if not fully at least a partial one can be carried out through disinvestments. This will bring in funds to run the airline instead of government constantly raiding the customer.
- Moreover procurement of more and more Dreamliner's must be done as they are helpful in reducing the costs.
- Air India should rely on the importance of social media such as Facebook, twitter, iPhone, texting and others as the marketing tools this can help thousands of passengers to keep themselves acquainted with the flight schedules and delays on regular basis. This will surely improve the customer service of Air India Limited.
- In addition to these services, special promotions, sales, new destinations and latest strategy move must be shared by the public so that the frequency of appearance of Air India Limited could be much stronger among the potential passengers. A strong marketing strategy will result into revenue generation of Air India Limited.
- Air India must try the every possible effort to establish customer loyalty by providing complete passenger service, including the best possible service from start to finish, efficient reservations including hotels, onward connections and vehicle rentals and minimum baggage handling errors.
- Air India has shown improvement in terms of operational as well as financial parameters in year 2013-14 that is contributed through an increase in passenger revenue which has raise to Rs. 14,300 Crore in 2013-14 from Rs. 12494.44 Crore in 2012-13. Reshaping the development of multiple airport systems in metropolitan areas and of the Niche Airports, Commercialization, propelling integrated carriers and rearranging handling through E- Commerce and Ticketing will help Air India to perform in a positive direction of revenue generation. With the recent inclusion of Air India Limited into the Star Alliance we can expect better performance from the National Carrier.

CONCLUSIONS

Air India Limited is suffering loss due to the unpredictable rise in the ATF fuel prices, followed by salaries paid to the employees. The study was undertaken to know the impact of global financial crisis on the financial performance of Indian aviation industry. For this purpose EBIT was taken as the dependent variable and ATF prices, employee salaries, revenue and other expenses were taken as independent variable. To find the impact of the independent variable on the dependent variable a multiple regression model was run on the SPSS software. The results of the analysis were that ATF prices, employee salary and revenue had a significant impact on the EBIT of Air India Limited since 2007, when the global financial crises came into existence. Whereas the impacts of other expenses like Administrative Expenses, Repair and Handling Charges, Communication Charges and Insurance was found to be insignificant.

Limitations of the Study

- The study has focused only on Air India Limited. It did not consider other Airlines in India that were also affected badly due to GFC like Kingfisher Airlines.
- The study has ignored the impact of various other factors on the EBIT like cost of material and other direct expense.
- Annual reports of year 2007-08 to 2012-13 were studied in detail, whereas the data related to the EBIT, ATF prices, Passenger Revenue and other expenses for the year 2013-14 has been taken from different sources because of non-availability of the 2013-14 Annual report.

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