Indian Aviation: Flying Through Turbulence

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ABSTRACT

Aviation has always been a thorny industry. There are very few companies that make millionaires out of billionaires. But Indian Aviation Industry has stood out to be quiet a risky venture since its inception. The situation turned more brutal since the great recession of 2008. The recession which started in developed countries like USA, soon spread to rest of the world. India was no exception. One of the worst affected sectors was the Aviation Industry in India. Rising crude oil prices and falling value of Indian rupee in terms of dollar were the main factors that affected the profitability of the industry. Falling rate of passenger arrival, high taxes and rising airport charges are other important factors that affected the profitability of the industry. Company that earned consistent profits. Indigo airlines remained unaffected from the wreckage.

A brief history of the sector is mentioned, followed by the transition bought by the then Finance Minister Dr Manmohan Singh through his liberalization policies in 1991 after the financial crisis that occurred in 1990. A detailed analysis is done of the entire industry with the help of the financial ratios. Financial ratios of the leading players have been studied from 2008-13. This is followed by multiple regressions where we tend to find the relationship among net profits and crude oil prices, rupee value and passenger arrival.

Key Words: Aviation Industry, GDP, Gross Profit, Net Profit
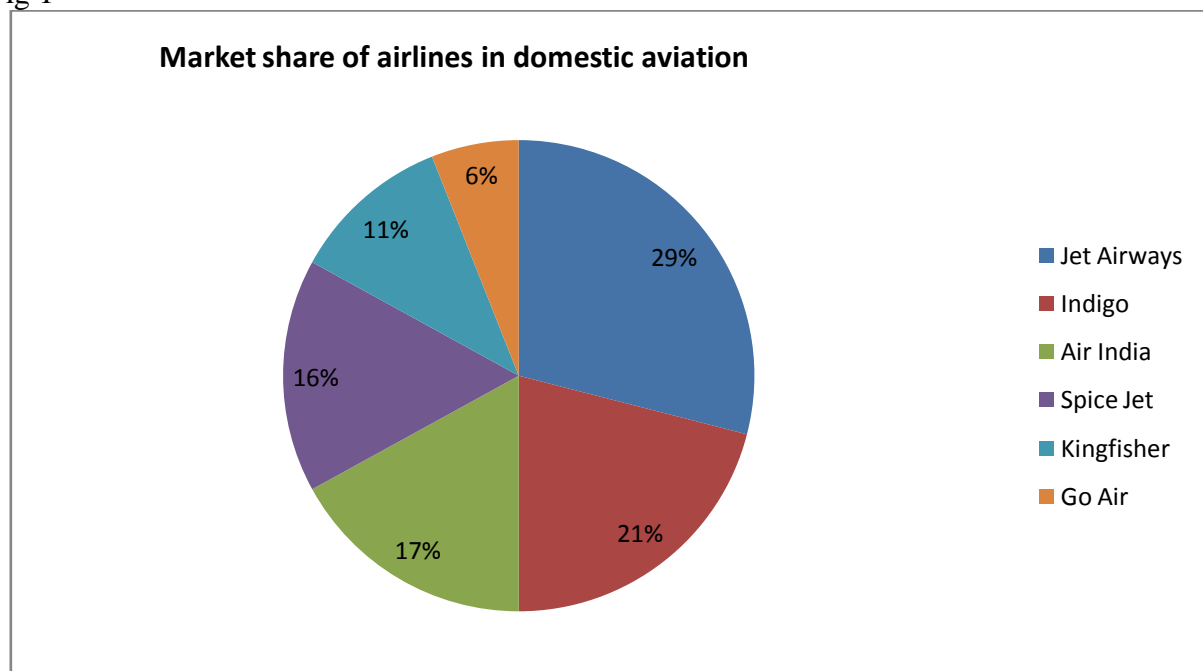
INTRODUCTION

A study conducted in 2012 said that Airline Industry contributes 0.5 per cent of India's GDP and supports 1.7 million jobs in the country. The study, conducted by Oxford Economics for the International Air Transport Association (IATA) recently, says aviation not only provided significant economic benefits to our economy and the citizens, but also critical assets on which modern globalized businesses depend. Aviation sector also contributes 87,500 as taxes. It is expected that India will emerge as world's third largest aviation market by 2020 and contribution to GDP will also increase to 5% of GDP. Airline Industry plays a vital role in economic development of a country. Aviation is viewed as a vital link not only for international travel and trade but also connects a nation to different parts of the country. Aviation sector is a critical part of the country and is a key factor that leads to development of tourism and trade, the opening up of inaccessible areas of the country and for providing stimulus to business activity and economic growth and development. Almost 35 % of exports from India & 97% foreign tourists to India arrive by air every year.

The history of airline industry in India began in 1912-13, with the inauguration of the first domestic air route between Delhi and Karachi. This was done by joint efforts of Indian and the imperial Airways, UK. Three years later, Tata Sons Ltd., started a regular airmail service between Karachi and Madras without any help from the government. At the time of independence, the number of air transport companies carrying both air cargo and passengers, was nine. These airlines were: Tata Airlines, Indian National Airways, Air service of India, Deccan Airways, Ambica Airways, Bharat Airways Misty Airways.

In early 1948, a joint sector company, Air India International Ltd., was established by the Government of India and Air India (earlier Tata Airline) with a capital of Rs 2 crore. Its first flight took off on June 8, 1948 on the Mumbai-London air route.. **It was headed by J.R.D. Tata, a visionary who had founded the first India airline in 1932 and he himself piloted its first flight takeoff**. The Aviation Industry after Independence was completely government owned. It got nationalized in 1953 when private airlines were not allowed, growth was restricted and cost structure was very high. The infrastructure was also not well developed for the industry.

The Aviation Sector contributes 33000 crores which is 0.5% of India's GDP and supports 1.7 million jobs in the country. A study conducted recently says that airline sector not only contributes to growing economic benefits but also provides the critical assets on which modern globalized business depends. It contributes 87,500 crores as social security and taxes. Aviation Sector contributes 14,700 crore through direct output and Rs. 10,700 crore indirectly through its supply chain. It contributes Rs. 58,200 crore through tourism, which increased its overall contribution to Rs. 91.200 crores which makes it 1.5% of GDP. It supports 2,76,000 jobs directly; 8,41,000 jobs indirectly through its supply chain and 6,05,000 jobs through spending by employees of the sector. It has an extensive air transport network consisting of 357 routes connecting major Indian airports to rest of the world.

Fig 1

Market share of airlines in domestic aviation

- Jet Airways — 29%
- Indigo — 21%
- Air India — 17%
- Spice Jet — 16%
- Kingfisher — 11%
- Go Air — 6%

Source: Ministry of Civil Aviation

It was only after the economic reforms of 1991 when liberalization in India was also extended to airline sector as well. Air Corporation Act, 1953 repealed and thus allowed private players to enter the market. The sector was highly dominated by the government. In 1991, economic reforms took place leading to deregulation and opening of the economy to foreign traders. The reforms soon extended to aviation sector in 1993. There was opening up of the domestic sector, disinvestment of the two public sector airlines. Privatization took place and new private airlines started operations. They were permitted to operate 75% of the domestic share in the industry. The infrastructure was also developed during this period. Indian carriers were allowed to compete on international routes. There was a fall in landing charges.

LITERARTURE REVIEW

Indian Aviation Industry is one of the fastest growing markets in the world. But nowadays it is in the news due to different reason. The industry has registered huge loose since regression of 2008.

B. Bhargava Teja(May,2012) in his article, "Resurgence Strategy to Navigate Indian Aviation in the Liberalization Saga" has focused on the objective that global recession has severely affected the aviation industry forcing it to go under looses. Liberalization policies in this sector were intended to achieve high economic growth through the process of globalization and by improving the infrastructure facilities. However, the policy of liberalization that led to the opening up of the economy has forced the aviation sector to navigate through turbulence. The emergence of private companies during this period adversely affected the national

carrier(Air India and Indian Airlines) by consistently restricting its seat occupancy even while the private players were also lagging behind adequate Passenger Load Factor (PLF).

The data related to crude oil imports, refining capacity of aviation fuel, and various taxes levied by the government are investigated. The passenger arrival and departure data pertaining to both national and private carriers during the peak period of liberalization when GDP touched its maximum level, are also analyzed. According to the research, oil prices, unfriendly tax structure of the government and passenger load factor are the main reasons that lead to slowdown in the aviation industry in India. The researcher has deeply studied and analysed these factors with the help of data pertaining to them.

John F. O'Connell (2013) in his article "An investigation into the core underlying problems of Indian airlines" has examined the causes of poor performance among India's incumbent carriers. The Indian Aviation Industry has been going through a turbulent phase over the past many years, facing multiple and difficulties through which carriers are continuously underperforming financially. Backed by statistical analysis of secondary data, this paper concludes that restrictions on foreign ownership, outdated regulatory policies of the government and overtaxed fuel, overlain by industry wide overcapacity issues are the major contributing factors.

Centre for Asia Pacific Aviation, in their research paper, "Indian Aviation: A Review of 2010 and outlook for 2011 focuses on transformation that Indian Aviation Industry went through since liberalization. The article explains in detail the condition of the industry before liberalization in 1991, post liberalization, recession of 2008 and the financial status of the economy after recession. The article focuses on the most significant strategic development in the Indian domestic market, i.e; it is rapidly turning low cost. An operating model which did not exist in the Indian market until 6 years ago, could account for almost 70% of the domestic capacity within the next 2-3 quarters. This is due to the decision taken by carriers such as Jet Airways and Kingfisher Airlines to reconfigure the majority of their domestic aircrafts to operate at low cost. The article also explains in detail the financial status and strategy of leading players in the market to overcome crisis and get back to normal after the recession.

Zhang Hui-Yun and Zhu Mei-Gui(September,2011) in their article, "An empirical research on the relation between the air transportation and economic growth", focused on the objective that economic growth was a major factor that lead to growth of the Aviation Industry in India. Civil aviation transportation industry is an important sector in the Indian economy, and plays an important role in the development of economy. The relationship of the development of civil aviation and economic growth has become research focus in research and industry field from a long period of time. This paper is based on the co-integration theory in econometrics, through establishing the long-run equilibrium equation and the error correction model, and by adopting the statistics of Gross Domestic Product and the total turnover of air transport, in order to inculcate an empirical study on the relationship between the air transport and economic growth in India. The results show that economic growth can significantly and actively promote the development of civil aviation, on the contrary, the development of civil aviation has a strong catalytic role on economic growth. Finally, the paper analyzes the reasons for the results, and gives some recommendations and suggestions.

ICRA Limited (March, 2012) in their research paper, "Indian Aviation Industry-
Through turbulent times, FDI relaxation alone not a game changer" focused on various factors that were responsible for the crisis in aviation industry post recession in 2008-09. The Indian Aviation Industry has been going through a bad phase over the past many years facing various problems – higher oil prices and limited pricing power contributed by industry wide over capacity and periods of subdued demand growth. The challenges faced by the airline operators are related to high debt burden and liquidity constraints. Improved financial profile would also allow these companies to focus on improving long term viability through differentiated customer service. Over the long period the operators need to focus on improving their individual cost structure, through rationalization at all levels including mix of fleet and routes, aimed at cost efficiency. It also requires return of pricing power through better alignments of capacity to demand growth. The article deeply analyses these factors that led to crisis by taking into consideration gross growth sales, fuel cost, PAT from 2009-11 and various other factors.

Directorate General of Civil Aviation (DGCA), in their report has mentioned various data related to aviation industry. Statistics related to passenger data, market share and seat factor, flight cancellation, air transport and aircraft are taken into consideration. Data pertaining to market share of various companies in the industry, capacity versus demand and passenger load factor were also useful in making the project.

Dr Geraint Harvey & Professor Peter Turnbull (2009) in their research paper, "Sect oral coverage of the global economic crisis" focused on various factors that led to global crisis in the airline industry in India. The aviation is an economic pillar of the world economy and is an important source of employment and income. The world earlier experienced an aviation catastrophe following the 9/11 attacks in the U.S. Immediate consequences included the collapse of air traffic and passenger revenues that produced severe economic uncertainty and slowdown. The industry has now suffered another shock by recent global financial crisis. The ILO through this report has examined the effects of the crisis on the aviation industry, particularly the extent to which its labour market has suffered from job losses and cost-cutting measures implemented by the airline companies. This report explains the crisis directly struck employment in the aviation industry, recording deep job losses in the millions. It also examines the importance of labour relations, the manner in which job losses have been managed .The report emphasizes that ILO can play an important role in making policies by which airline companies implement models to improve working conditions in their industry. This report aimed at monitoring the dynamics of the crisis in different sectors, understanding the implications for employment and working conditions, and developing policy for constituents in line with the ILO's Global Jobs Pact.

O.R. Pinto in his research paper "Impact of global recession on Indian Airlines Industry" has focused on how global recession lead to downfall of Aviation Industry in India. This paper attempts to analyze the impact of recession on operations of Indian Airline industry and to analyse the policies that were undertaken by Government of India to curb recession on Airline Industry.

THEORETICAL FRAMEWORK

During Independence, the sector was monopolized by government. The two government airlines Air India (international) and Indian Airlines (domestic) were the only Indian carriers. Both carriers operated with relatively old aircraft and inefficient work practices. There was no focus on developing traffic and the market grew at low rates. The airfares were so high that it could be afforded only by the upper class and super rich people. In 1993-95, the first steps in domestic aviation deregulation were taken allowing private airline entry, first as air taxis and then as scheduled operators. However, the government was still focused on protecting the state-owned carriers and a slew of under-capitalised and underprepared start-ups entered and then mostly exited the market. The sector was dogged by political interference in matters like fleet purchase, posting of employees, route selection, etc. In 1995-2003, the deregulation of the economy that started during 1980s and proceeded more aggressively after the economic reforms of 1991. It also led to opening up of the aviation sector. During this time, several new airlines like Damania, Jet, and Sahara started operations.

Fig 2
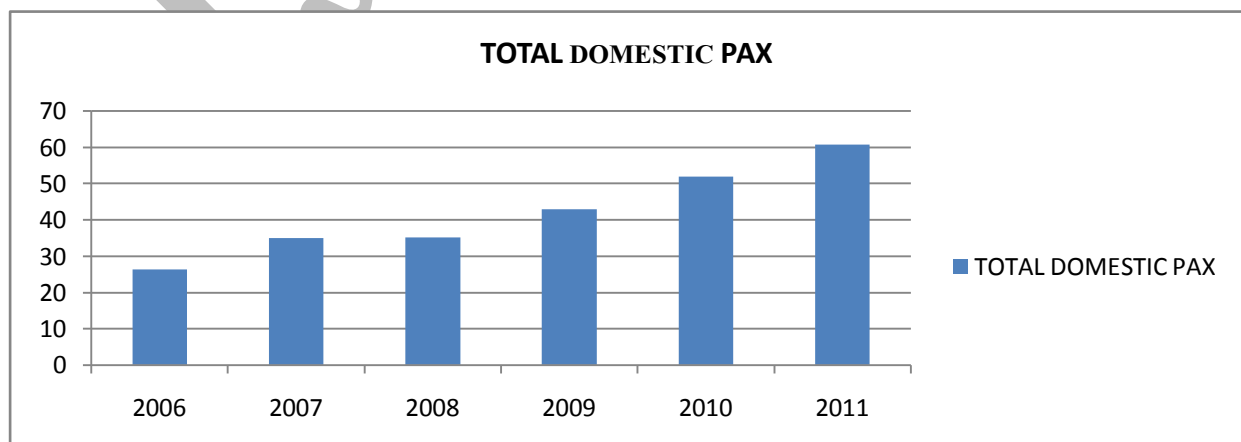
Source: Annual Budget, 2010-11

Despite the fact that the as a whole, economy performed well during this period, aviation continued to show limited and slow growth. Aviation was largely untouched by the economic reforms and planning of the government in power as there was little strategic direction for the industry. The years 2003-2006 experienced unprecedented change. With the arrival of Ministers of Civil Aviation on both sides of parliament that recognised the importance of aviation in the economic growth for the development of business, trade and tourism, the industry saw dramatic reforms.

Privatization took place and industry opened hands for many new companies. The arrival of the low cost airlines in India with the launch of Air Deccan, and subsequently Spice Jet, Indigo and Go Air led to beginning of a new era in the aviation industry. Placement of orders for 111 new aircraft for Air India and Indian Airlines took place. There was increase in foreign direct investment in certain sectors of the industry. It was during this time when traffic started to accelerate at double digit rates, both domestic and international, levels never before seen in India, highlighting an increase in demand for travel.

Figure 3

EMPLOYEMNT IN AVIATION SECTOR
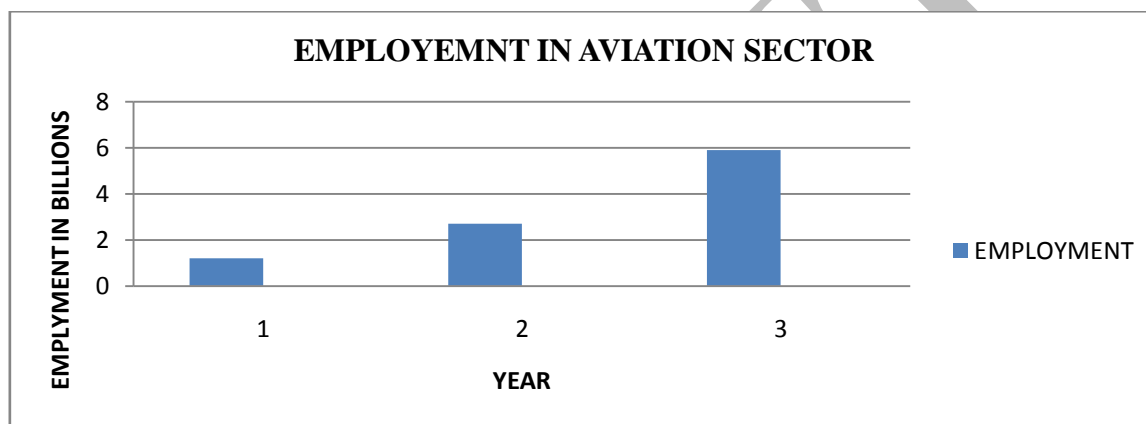
Source: Business Standard

In 2006-07, traffic continued to accelerate further, to levels approaching 40% in 2007. However it was at this stage that the realities hit home – although traffic was buoyant, yields were being slashed through overcapacity and fragmentation of the industry, and costs were increasing because of the poor state of airport infrastructure and a shortage of human resources. The orders placed by Indian companies saw capacity being introduced at the rate of 6 to 7 aircraft a month, whereas the actual growth in demand was closer to three aircraft. Beside from the disequilibrium between supply and demand, the rate of growth was simply too great for the industry to handle. The rapid rise in capacity at a time when the airport modernisation program was yet to deliver the required upgraded infrastructure meant that airports and airways were highly congested, increasing airline operating costs and leading to fall in revenues. With inadequate access to airport infrastructure, airlines were unable to get a significant competitive edge over other means of travel, thereby excluding huge parts of the still-untapped market. During this period, demand for skilled pilots and engineers were also greater than the supply leading to a sharp fall in wages, and in some cases grounding of aircraft due a shortage of staff and pilots.

RESEARCH METHODOLOGY

Research methodology is considered as the nerve of the project. Without a proper well organized research plan, it is impossible to complete the project and reach to any conclusion.

According to Ker linger, "Research Design is a plan, conceptual structure, and strategy of investigation conceived as to obtain answers to research questions and to control variance.

The type of research would be mainly descriptive in nature where we have analyse the financial crisis of aviation industry in India from 2008-13.The data that has been collected for the study is mainly secondary in

nature. It has been collected from various sources like Financial Journals, Internet, Annual Reports of the leading companies, reports of planning commission, articles published by various newspapers, published literature, etc. The tools such as ratio analysis, pie-charts and bar charts have been used to support and prove theoretical views. Data was analysed using Excel. Use of regression and correlation has also been done to prove theoretical views.
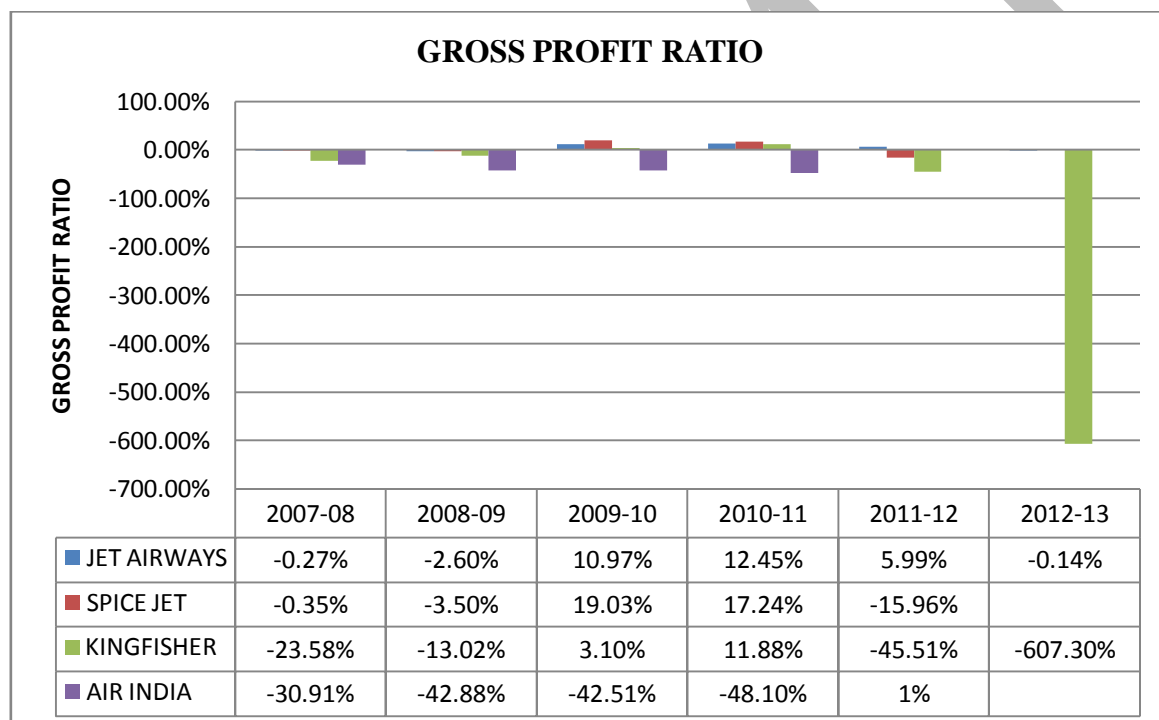
DATA ANALYSIS AND INTERPRETATION
"One's journey through life involves a series of changes - some major and many minor. Even though change has always been a part of life it seems that change is happening faster than ever before".
 This holds true in current context. The year 2008-09 saw unprecedented volatility and turmoil in the global market. A series of problems also appeared in the domestic front. Aviation industry was no exception. To prove this, financial ratios of the leading players have been taken out from 2008-13.

Gross Profit Ratio = (Gross Profit/ Net Sales) * 100
Fig 10

GROSS PROFIT RATIO

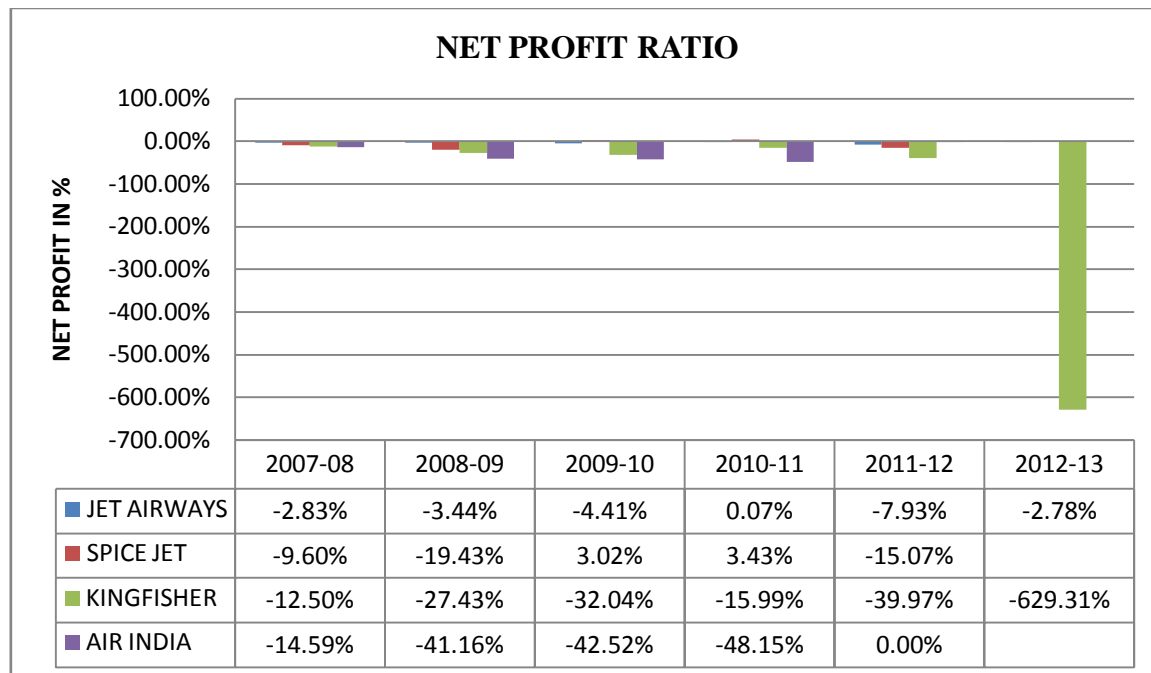|	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
■ JET AIRWAYS	-0.27%	-2.60%	10.97%	12.45%	5.99%	-0.14%
■ SPICE JET	-0.35%	-3.50%	19.03%	17.24%	-15.96%	
■ KINGFISHER	-23.58%	-13.02%	3.10%	11.88%	-45.51%	-607.30%
■ AIR INDIA	-30.91%	-42.88%	-42.51%	-48.10%	1%	

Source: Annual Reports

This ratio also has a downward trend indicating that the profitability of the industry has been declining. The leading players in the industry have been incurring huge losses especially Kingfisher Airlines. In 2012-13, it registered a gross profit ratio -607.3%. After Kingfisher, it was Air India which was incurring losses followed by Jet airways and Spice Jet. During this while, it was only Indigo Airlines which was earning consistent profits. However, we don't have data of Indigo as it is not a public limited company and hence don't provide data for public review. The sales revenue have been continuously increasing but the companies have been incurring huge looses which led to fall in profitability in the industry.
Net Profit Ratio = (Net Profits/ Sales) * 100

Fig 11

NET PROFIT RATIO

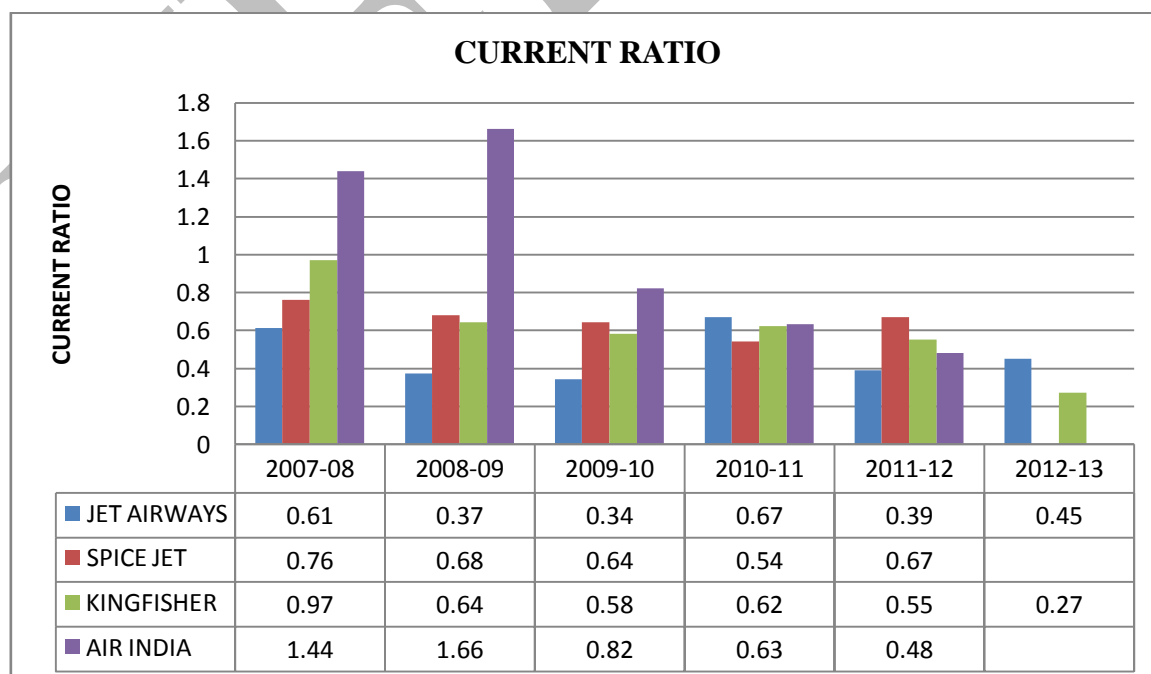|	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
■ JET AIRWAYS	-2.83%	-3.44%	-4.41%	0.07%	-7.93%	-2.78%
■ SPICE JET	-9.60%	-19.43%	3.02%	3.43%	-15.07%	
■ KINGFISHER	-12.50%	-27.43%	-32.04%	-15.99%	-39.97%	-629.31%
■ AIR INDIA	-14.59%	-41.16%	-42.52%	-48.15%	0.00%	

Source: Annual Reports

The financial statements of the individual companies shows that the net profit ratio of the company has fallen drastically. This indicates that the companies failed to maintain their operational efficiency. As the sales kept increasing, it was not matched by similar increase in profits leading to fall in the ratio over the years. If compared, Kingfisher incurs maximum losses in the industry. In 2009, it incurred 1608 crores looses and in 2011, it was 1027 crores. It was followed by Jet Airways and then Air India and Spice Jet.

Current Ratio = Current Assets/ Current Liabilities

Fig 12

CURRENT RATIO

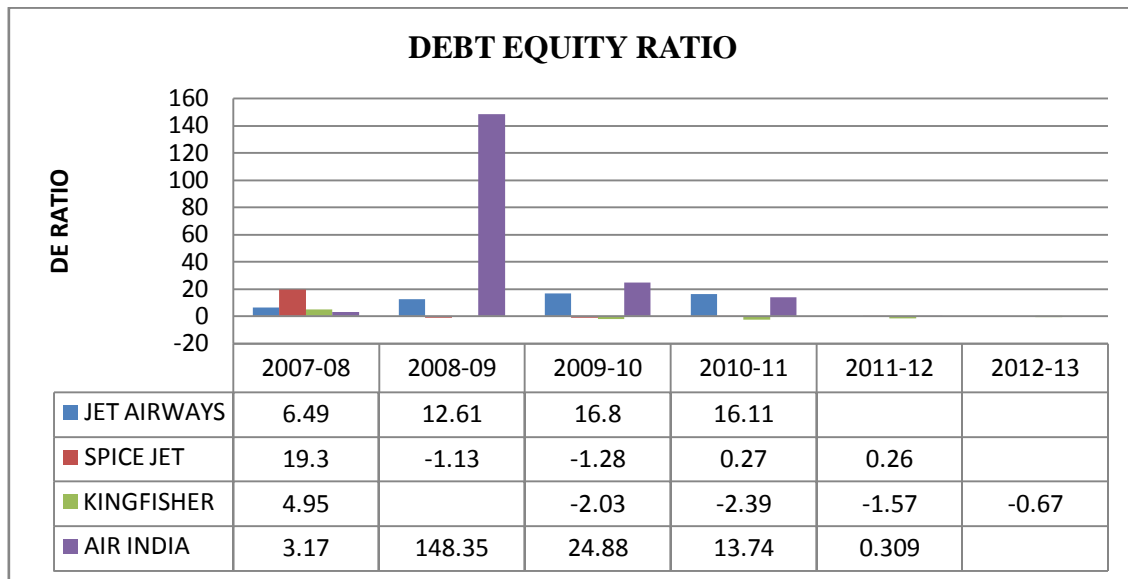|	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
■ JET AIRWAYS	0.61	0.37	0.34	0.67	0.39	0.45
■ SPICE JET	0.76	0.68	0.64	0.54	0.67	
■ KINGFISHER	0.97	0.64	0.58	0.62	0.55	0.27
■ AIR INDIA	1.44	1.66	0.82	0.63	0.48	

Source: Annual Reports

The ideal ratio is said to be 2:1. The annual reports show that none of the companies were able to maintain their current ratio to the ideal level. The company with worst current ratio is Jet Airways closely followed by Kingfisher, Spice Jet and then Air India. None of the players were having enough liquidity. Air India was still

at a better position as it is owned by the government. This implies that liquidity position of the company detoriated in the last 5 years.

Debt Equity Ratio= Debt/ Equity
Fig 13

DEBT EQUITY RATIO

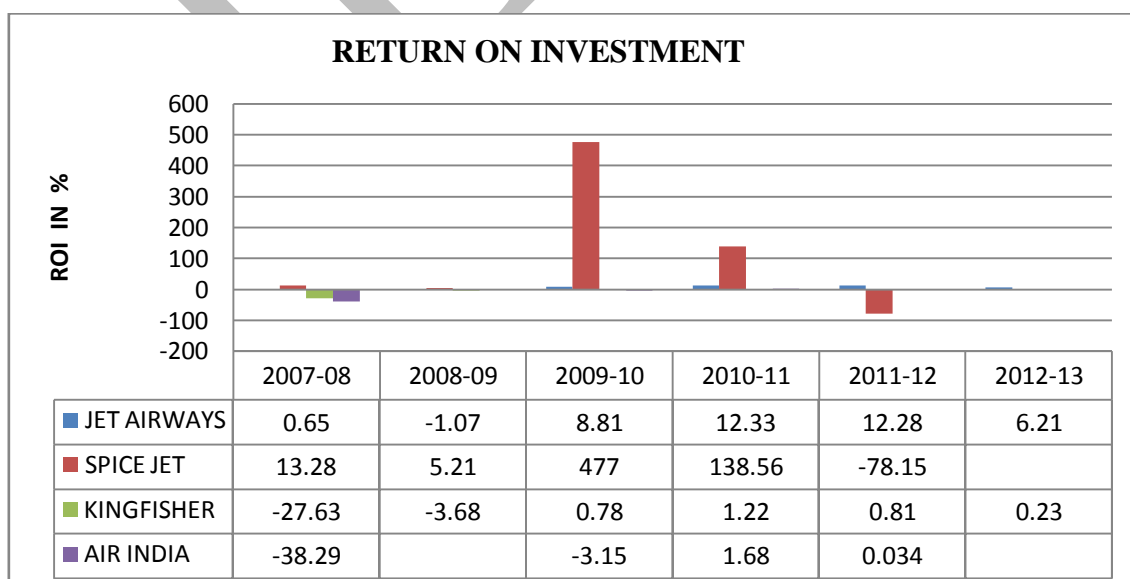|	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
■ JET AIRWAYS	6.49	12.61	16.8	16.11		
■ SPICE JET	19.3	-1.13	-1.28	0.27	0.26	
■ KINGFISHER	4.95		-2.03	-2.39	-1.57	-0.67
■ AIR INDIA	3.17	148.35	24.88	13.74	0.309	

Source: Annual Reports

The ideal ratio is 2:1 which means that debt should always be twice of equity. However, we can see that none of the company could achieve this ideal condition. This ratio indicates the extent to which the company depends upon outsiders for its existence. The falling trend of the ratio implies use of more equity than debt which is not a good sign. This is because debt is considered to be less costly and thus reduces the overall cost of investing. The falling trend implies that more of equity is used and thus the overall cost of capital went up.

In 2012-13, Air India did not issue any debentures and hence the ratio cannot be computed. We can see that in some years DE Ratio went negative which shows negative equity. It means that companies take loans and the assets are used as guarantee. Over the years, the value of assets depreciates leading to negative equity which is hazardous for a company. The annual reports of the companies show that most of the company are under high debts.

ROI = (Net Profits/ Shareholder's Fund) * 100
Fig 14

RETURN ON INVESTMENT

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
■ JET AIRWAYS	0.65	-1.07	8.81	12.33	12.28	6.21
■ SPICE JET	13.28	5.21	477	138.56	-78.15	
■ KINGFISHER	-27.63	-3.68	0.78	1.22	0.81	0.23
■ AIR INDIA	-38.29		-3.15	1.68	0.034	

Source: Annual Report

The ratio shows a downward trend for the entire industry. As the entire industry is going into looses, the ratio also kept on falling. In case of Spice Jet, the capital also went down and the company was also going into looses. So, the ROI ratio kept of falling. In case of Jet Airways, the share capital was constant at 86.33 crores but profits kept on falling and the company even incurred looses. In case of Kingfisher, the share capital went up from 363.91 crores in 2009 to 1361.83 crores in 2013. The looses also kept on increasing. The ratio even turned negative which implies looses incurred by the respective companies. This shows that none of the companies were able to maintain their efficiency level in maintain the profits.

A detailed study of the sector shows that the profits of the industry are deeply affected by three factors:

➢ Crude oil prices
➢ Depreciating value of rupee
➢ Fall in number of passengers

In order to determine how these three factors affect the industry's profits, we have conducted regression. We have conducted multiple regressions to check the relationship among net profits and crude oil, value of rupee and passenger arrived. Here passenger arrival is taken as X1 variable, crude oil as X2 variable, rupee value as X3 variable and net profits jointly earned by three leading private airlines namely Jet Airways, Kingfisher and Spice Jet is taken as Y variable which is dependent upon the former three variables.

Fig 15

YEAR	NET LOSSES(Y)	PASSENGER ARRIVAL(X1)	CRUDE OIL(X2)	RUPEE VALUE(X3)
2007-08	974.3	53.49	99.76	39.92
2008-09	1012.08	49.5	46.02	50.73
2009-10	2681.16	54.5	78.02	46.23
2010-11	3673.12	64.5	110.72	45.12
2011-12	5602.97	70.2	123.61	49.1545
2012-13	6991.68	67.5	106.45	54.4815

Source: Annual

Reports of Companies, government budget (2012), Indian Oil Corporation, RBI website

As price of crude oil increases, the losses of the industry kept on falling over the years. The net profits have an inverse relationship with depreciating value of rupee. The growth rate of passenger arrival in India by air was also increasing a slow rate. The net looses of the sector has fallen from 974.3 crores in 2007-08 to 6991.68 crores in 2012-13. The looses have increased by 6 fold in 5 years which is an alarming situation for the industry as well as for the economy. We have conducted F test to check the overall significance of the model. Further, we have also conducted individual t test to check individual effect of each variable on the net profits,. We have used Excel to conduct regression.

Fig 16
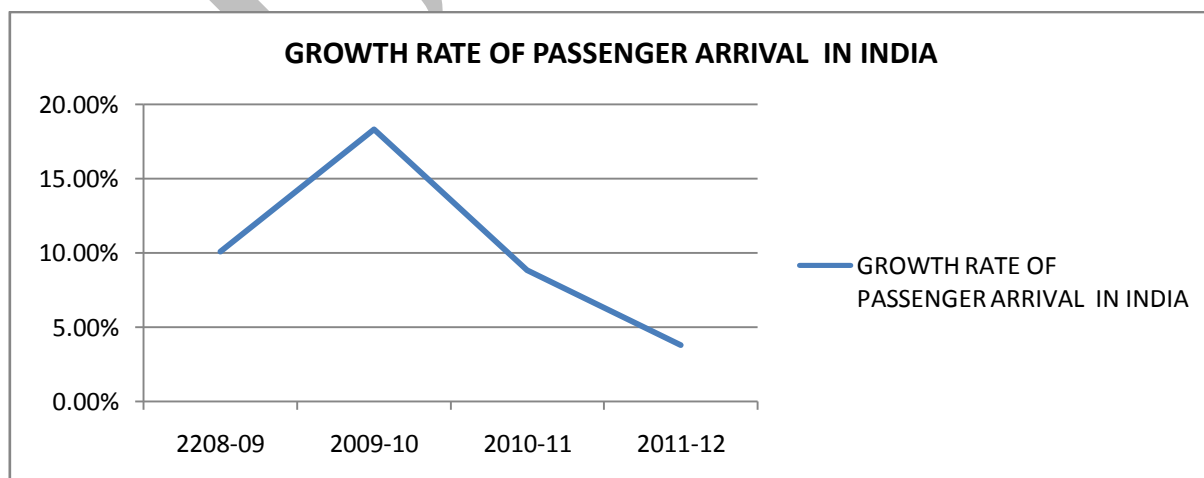
Source: Government Budget (2012)

To analyse the relationship among net losses, passenger arrival, crude oil and rupee value in Aviation Industry, we take net losses (Y) as dependent variable, passenger arrival($X1$), crude oil($X2$) and rupee value ($X3$) as independent variables. e is the error term. To analyse the relationship data for six years is taken (2007-08 to 2012-13).

Net Losses = α + X1 passenger arrival + X2 crude oil + X3 rupee value + e

On running the regression on Excel, we got the following results:

$$Y= -19874.1 + -49.29X1 + 79.35X2 + +395.97X3 + e$$ regression equation which shows the impact of crude oil, rupee value and passenger arrival in India on net losses of the three leading airlines in the industry.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.98431398
R Square	0.96887402
Adjusted R Square	0.92218504
Standard Error	681.959484
Observations	6

ANOVA

	df	SS	MS	F	Significance F
Regression	3	28952853	9650951	20.75166574	0.046323758
Residual	2	930137.4762	465068.74		
Total	5	29882990.47			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%
Intercept	-19874.067	3423.637773	-5.8049561	0.028416914	-34604.79152
X Variable 1	-49.291729	216.5287691	-0.2276452	0.841076334	980.9398288
X Variable 2	79.3590121	61.61355023	1.2880123	0.326650946	-185.742698
X Variable 3	395.975801	188.1090655	2.1050331	0.169931139	-413.3921837

Here, R Square is coming out to be 96.88% which means that 96.88% of variability in net losses can be explained by the multiple regression equation. The Y coefficient is 19874.1 which mean that when all the three variables are zero, the net profits earned are -19874.1 crores. Similarly, X1 coefficient is -49.21 which shows negative relationship between net losses and passenger arrival by air. If passenger arrival increases by 1 unit then net profits decreases by 49, 21 units. The X2 coefficient is 79.35 which show that there is a positive relationship between crude oil prices and net losses. It implies that if crude oil prices increases by 1$ then net losses increases by 79.35. Lastly, X3 coefficient is 395.97 which show positive relationship between net losses and exchange value of rupee. It further implies that if rupee value depreciates by 1 rupee, net losses will further increase by 395.97 rupees.

We have also used correlation to further define the relationship between above mentioned factors. Correlation is the measure of linear relationship between two variables. Positive value indicates a positive relationship whereas negative value indicate a negative relationship.

The first correlation has been taken between net looses and crude oil prices from 2008-13. Excel has been used to compute the value. The value has come out to be 0.663457. This shows a good positive relationship between net looses and crude oil prices. As the value is near 1, we can say that a good positive relationship exist between the two variables. Thus, as crude oil prices increases the net losses suffered by the companies also increases.

The second correlation has been taken out between net looses and rupee-dollar exchange value. The value has come out to be 0.643881. This shows a good positive relationship between net looses and rupee value. As the value is near 1, we can say that a good positive relationship exist between the two variables. Thus, as rupee depreciates the net losses suffered by the companies also increases.

CONCLUSION

The annual reports of the leading airline companies shows that Jet Airways is the most consistent company followed by Spice Jet. Kingfisher is the company which is going through a deep financial crisis followed by Air India. The financial ratios reveal that all the leading players are facing looses. The net profit ratio and the gross profit ratio have come out to be negative for most of them. When it comes to liquidity, none of the companies have achieved the ideal ratio of 2:1. The company with highest liquidity is Air India followed by Spice Jet, Jet Airways and then Kingfisher. The company with highest debt equity ratio is Jet Airways followed by Air India, Spice Jet and then Kingfisher. Kingfisher has a negative debt equity ratio implying inefficient use of funds. Jet Airways has the highest return on investment followed by Air India, Kingfisher and Spice Jet.

The regression analysis shows that the sector has been deeply affected by rise in crude oil prices and depreciating rupee value. The net profits have also turned negative because of falling rate of passenger arrival in India.

International as well as domestic passenger traffic is growing at a fast rate. Likewise, the quantum of aircraft movement has also shown an upward trend. This trend has been led by certain airports that have recorded significant increase in aircraft movement and air traffic. This rapid increase in traffic can be related to increased capacity at airports and greater connectivity. This will lead to to air traffic figures exceeding the projected CAGR of 25.4% as regional airports are increasing their capacity. Government is aggressively taking interest in modernizing the non-metro airports such that their capacity will increase. The government is keen in shifting the inbound and outbound traffic to other non-metro airports. This will ease congestion at metro airports and improve airport operational efficiency. According to a report released by the Airport Authority of India, this trend can be seen with Coimbatore, Ahmadabad and Tiruchiapalli International Airport registering very high international traffic when compared globally.

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Website Links
Delhi International Airport website.
Government of India Portal
MoCA(Ministry of Civil Aviation)

News Papers:
Indian Express
http://www.indianexpress.com/
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http://economictimes.indiatimes.com/
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USEFUL LINKS
www.google.com
www.centreforaviation.com
www.pib.nic.in
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