Returns to Acquirers in Indian Aviation Mergers : A Study

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Abstract

Mergers, acquisitions, and other forms of business combinations have become more phenomenal nowadays and have significantly increased in both number and volume. Though the Indian aviation industry has fewer numbers of players, but it has also witnessed major M&As in the past, and many joint ventures are in the process. The present paper exposed the financial performance of the mergers, particularly the gain or loss to the shareholders of the acquiring companies. Event study methodology (to judge the abnormal gains as a result of the mergers) and accounting methodology (to judge operating performance) were used in the present study . The study revealed that mergers were predicted and benefited the shareholders, thereby giving a push to the share prices of the acquiring company in general, but the operating performance in the long run was not impressive.

Keywords: mergers and acquisitions, event study, acquirer shareholder's return

JEL Classification : G020, G140, G340

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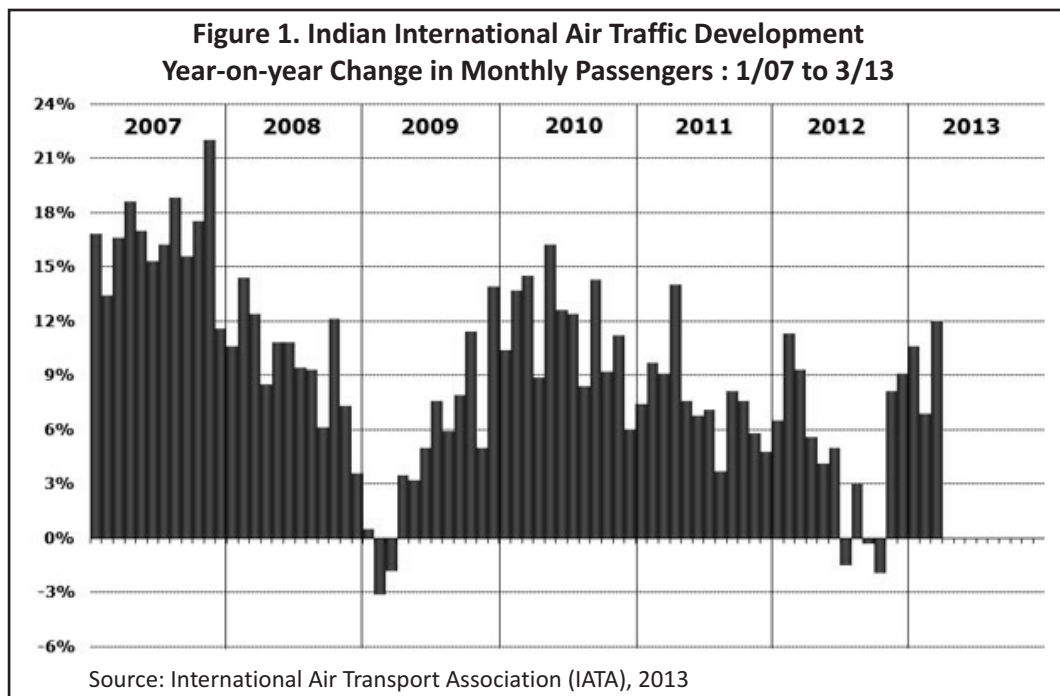
With liberalization in the Indian economy post 1990s, private airlines emerged and competition intensified. In the urge for increasing operational and economic efficiency, consolidation became a trend by 2003. In the year 2007, the major consolidation in Indian civil aviation was witnessed with the merger of six major airlines to form three dominant ones. Mergers and acquisitions in Indian civil aviation is quite an old phenomenon and dates back to the 1950s, when the Government of India through the Air Corporations Act, 1953 nationalized the airline industry to form Air India and Indian Airlines. Tata Airlines became Air India and former freedom domestic airlines, Deccan Airways, Airways India, Bharat Airways, Himalayan Aviation, Kalinga Airlines, Indian National Airways, and Air Services of India were merged to form the new domestic national carrier - Indian Airlines. However, the motives behind the above mentioned mergers were different from the mergers that the aviation industry witnessed in recent times.

The Indian Aviation Industry : An Overview

Indian aviation's growing role in the GDP from the past few years has been notable. The aviation industry contributed Rs. 33,000 crore or 0.5% to India's GDP and generated more than 1.7 million jobs in the country in 2012 ("Aviation sector contributing 0.5% of GDP: Study," 2012). With liberalization and the increase in income levels, particularly of middle class India, the aviation industry in our country is growing at a steady rate. The domestic air traffic is growing steadily, and India experienced double-digit growth in domestic passenger traffic,

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Figure 1. Indian International Air Traffic Development
Year-on-year Change in Monthly Passengers : 1/07 to 3/13

Source: International Air Transport Association (IATA), 2013

adding a total of 49.3 million new passengers ("India's domestic air traffic growth to be world's second highest," 2012). The monthly growth rate of international air traffic is depicted in the Figure 1.

India is an emerging economy, and the aviation industry has got a lot of potential. Looking into this situation, the Aviation Ministry has phase wise deregulated, and now, FDI is allowed to the extent of 49%. As a result, foreign airlines are looking to enter India in the form of acquisitions and joint ventures. Etihad Airways of Abu Dhabi acquired 24% of Jet Airways for $379 million (Sikarwar & Pandey, 2014). In July 2014, India's Foreign Investment Promotion Board approved Etihad's purchase of the Jet stake. AirAsia is set to launch its Indian operations in a joint venture with Indian steel conglomerate Tata and Telestra Tradeplace. Tigerair is also looking for a local partner in India.

Review of Literature

Mergers and acquisitions are the best form of in-organic growth. There are several motives why companies look for acquisitions. The field has brought forward a total of seven different theories (Trautwein, 1990) of merger motives, which fall broadly into two theories of firm, shareholders value maximization motive or managerial benefits.

Several studies have tried to explore the financial gain to the shareholders of the acquirers in mergers and acquisitions. The number of studies exploring M & A benefits and the methodological rigor of such studies is higher in developed countries like the U.S. and UK as compared to India as M&A is a comparatively recent phenomenon in India, and it has, so far, not attracted academic concern. Predominantly, event studies (Ball & Brown, 1968; Fama, Fisher, Jensen, & Roll, 1969) and accounting studies are used to judge the benefits to the shareholders of the acquiring firms. Most of the studies reported negative return to shareholders of bidder firms (Firth, 1976; Ismail, Davidson, & Frank, 2009 ; Kelly, 1967 ; Meeks, 1977; Reid, 1968 ; Utton, 1974) in general; whereas, there are also studies, which reported a positive (Olson & Pagano, 2005 ; Shick & Jen, 1974) or negligible gain (Hogarty, 1970 ; Lev & Mandelker, 1972; Yang, Lin, Chou, & Cheng, 2010). At the same time, there has been evidence of acquirer shareholders gaining significantly positive abnormal returns both in the short term and long term. The same study also concluded no change in the operating performance (Bhabra & Huang, 2013).

Mostly, aviation mergers are concentric in nature as they are predominantly done for route expansion or load sharing. Concentric mergers normally generate more returns for the bidder shareholders because the economies of scale and synergy are comparatively better than what they are in conglomerate mergers. However, the case seems to be different in Indian aviation industry mergers.

Mahesh and Prasad (2012) examined the profitability, leverage, liquidity, and capital market standards and reported insignificant improvements in return on equity, expenses to income, earnings per share, and dividend per share in the post-merger period. However, Joshi and Desai's (2012) study on impact of mergers and acquisitions on the operating performance of the firm showed mixed results. Jet Airways was able to post positive operating margins post merger. However, Kingfisher Airlines failed to do so. Rani, Yadav, and Jain (2013) investigated the share price performance of domestic mergers and acquisitions in India during the period from 2003-2008. Their findings indicated that acquisitions generated a CAAR of significant 1.60 % in a short event window period of 5 days (- 2, +2). At the same time, the CAAR was found to be different in different conditions - like if the target remained as a domestic subsidiary, the acquirer had positive CAAR to an extent of 2.82% in a 19-day window period, but the acquirer lost if the target firm was consolidated with the acquirer. Different CAARs have been witnessed for cash financed and stock financed deals.

A few studies have been conducted that have judged the change in market power of bidding companies as a result of aviation mergers. Gong and Firth (2006) explored the competitive effect of airline mergers and acquisitions, and the evidence strongly found the effect of stock price changes in the rival firms. Kim and Singal (1993) found evidence of price changes associated with airline mergers during 1985-1988. Prices increased on routes served by the merging firms relative to a control group of routes unaffected by the merger. This suggests that M&As in the aviation industry leads to monopoly power of the acquirers and should increase their profitability.

Objectives of the Study

This study analyzes the profitability of merged companies in the post-liberalization period in the Indian aviation industry. The specific objectives of the study are :

✤ To find out the merger benefits by comparing the pre-merger operating performance with the post-merger performance of the acquiring companies;

✤ To identify the benefits to the shareholders of the acquiring companies at the time of merger announcements.

Methodology

✤ **Data:** The Prowess database of the Centre for Monitoring Indian Economy (CMIE) was used to find the post liberalization acquisitions in aviation industry in India. Though more than eight mergers have happened in the aviation sector, but there are only three mergers which are bigger in deal volume and have strategic importance. Hence, the said three mergers have been analyzed in the present paper (Table 1). The daily stock market returns were extracted from BSE archives. Both accounting study and event study have been used for the present study.

✤ **Accounting Measures of Performance :** In the present study, we employed three categories of financial ratios - profitability, leverage, and liquidity ratios. Profitability determines the operating success over a period of time, quick ratio determines the paying ability, and leverage indicates the outsiders' funds in proportion to owners' capital.

✤ **Profitability Ratios** :

RONW = (PAT ÷ net worth) × 100

Table 1. Three Major M&As in Indian Civil Aviation

Announcement Date	Acquirer	Target	Volume	Percentage Acquisition
2nd June 2007	Kingfisher Airlines	Air Deccan	2115 Cr	26
18th Jan 2006	Jet Airways	Sahara Airlines	3020 Cr	100
15th May 2007	Air India	Indian Airlines	NA	NA

Table 2. Accounting Performance Indicators - 3 Years Pre & 3 Years Post Merger

	Jet Airways		Air India		Kingfisher	
	Pre-Merger	Post- Merger	Pre-Merger	Post- Merger	Pre-Merger	Post- Merger
RONW	0.251794	-0.16135	-1.42968	-6.70812	-0.02722	-0.24056
Debt-Equity	1.897028	3.220467	23.66726	45.25244	3.525472	7.448576
CR	2.255424	0.714673	1.470433	1.410262	1.995684	0.790194

where,

RONW is the return on net-worth,
PAT is the net profit after tax.

✤ **Leverage Ratios :**

Debt equity ratio = total debt ÷ net worth

✤ **Liquidity Ratio :**

Current ratio (CR) = current assets ÷ current liability

We calculated the ratios for 3 years pre merger and 3 years post merger period. The mean values were computed and the comparison was done with the help of *t*- test for significance and is represented in the Table 2.

✤ **Event Study Measure of Performance :** Event study is the most popular methodology used for capturing the abnormal return and measuring the merger and acquisition performance (Krishnakumar & Sethi, 2012). Ball and Brown (1968) and Fama et al. (1969) introduced the event study methodology that is essentially used today, and it has become the preferred method when measuring performance induced by an event.

➔ **Event Date:** The first media announcement date for the merger or acquisition was taken as the event date. The deal completion date was not taken as the market reacts to the announcement even though the deal has not happened.

➔ **Estimation Period :** Normally, the estimation period is the unbiased and clean period which can be used to predict the normal return during the window period. We took -90 days to -30 days as the estimation period.

➔ **Calculation of Normal Returns :** To calculate the normal returns, we used the single index market model. The sensex return was set to be the benchmark and was regressed to calculate the normal expected return.

$$R_{it} = \alpha + \beta(R_{mt}) + e$$

where,

Table 3. Regression Statistics & Coefficients of the Estimation Period

	Jet airways	Kingfisher Airlines
R Square	0.2855	0.153591
Adjusted *R Square*	0.267185	0.131888
Standard Error	0.017998	0.037064
F	15.58	7.07
Intercept (α)	-0.00165 (-0.55467)	-0.00183 (0.31374)
X Variable 1 (β)	0.960452 (3.947664)	0.88 (2.66)

Table 4. CAR for Aviation Merger

	Jet	Kingfisher	Combined
CAR (-10 to 30)	-12.26	4.97	-3.41
t - stat	-4.68	2.19	-4.04
CAR (-10 to 1)	4.1	4.9	
t - stat	4.7	-0.31	

R_{it} = Expected normal return for the company in the absence of announcement of merger,
R_{mt} = sensex return for day t,
α and β are regression coefficients representing the constant and slope of regression line,
e = error term.

Abnormal return (AR) for any day was calculated by subtracting the actual return of that day for a particular stock on a particular day from the expected return of that day.

AR = Actual return - Expected return

Aggregating the return over the window period, we get a cumulative abnormal return (CAR) for the event over the window period.

CAR = ? AR

The window period was taken as -10 to +20 days as it takes a little time for the market to react to the information and discount all future expected benefits or losses. The t - stat of the CAR was computed, and the significance was tested.

Analysis and Results

The regression coefficients were calculated by regressing the daily sensex price with the stock price of the companies. The details of the statistical parameters are depicted in the Table 3. The normal return (R_{it}) for the window period was calculated by using the coefficients of regression by using the following formula :

$R_{it} = α + β (R_{mt})$

where,

R_{mt} = the return from the sensex for that particular day.

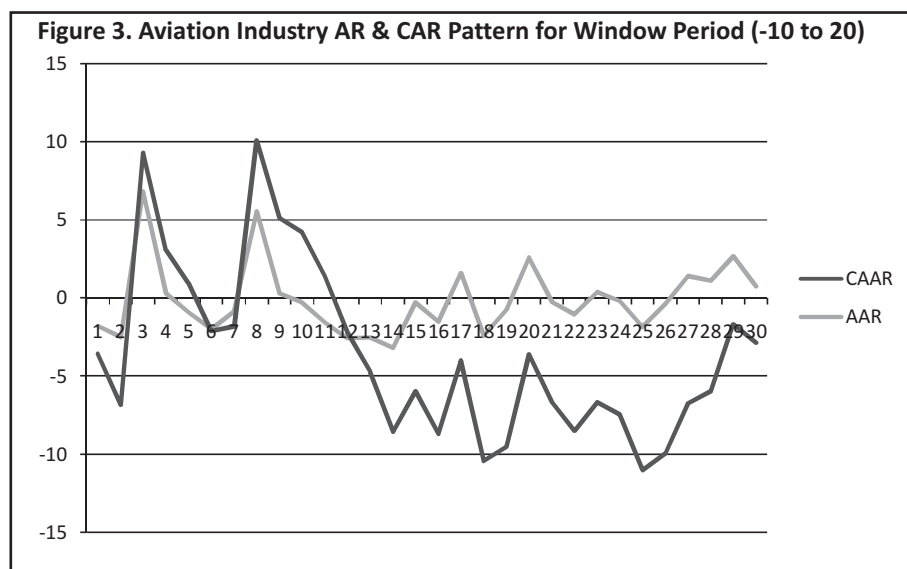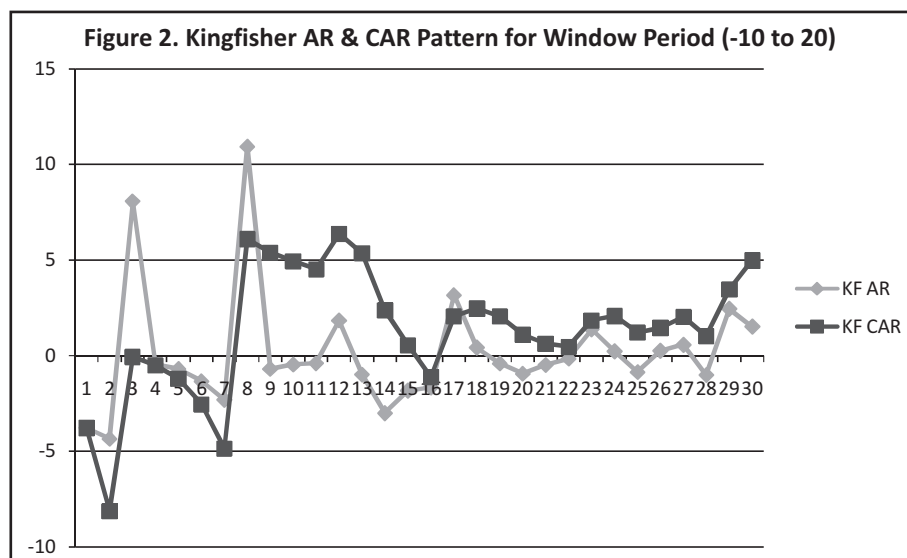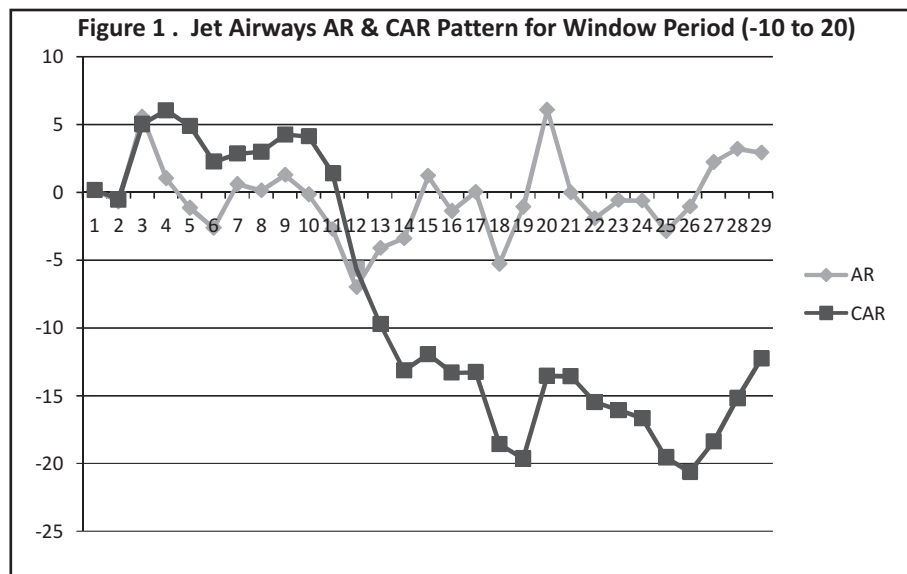## Table 5 . Daily AR & CAR for Aviation Mergers

Window	JET Airways		Kingfisher Airlines		Combined	
	AR	CAR	AR	CAR	AAR	CAAR
-9	0.17516	0.18	-3.78034	-3.78034	-1.80259	-1.80017
-8	-0.70286	-0.53	-4.34749	-8.12782	-2.52518	-4.32777
-7	5.552455	5.02	8.067881	-0.05994	6.810168	2.482403
-6	1.024875	6.05	-0.45306	-0.513	0.285908	2.768311
-5	-1.15139	4.90	-0.69303	-1.20603	-0.92221	1.846101
-4	-2.63474	2.26	-1.33544	-2.54147	-1.98509	-0.13899
-3	0.593543	2.86	-2.29881	-4.84028	-0.85263	-0.99162
-2	0.130578	2.99	10.92998	6.089705	5.530279	4.538656
-1	1.279661	4.27	-0.69454	5.395166	0.292561	4.831217
0	-0.16383	4.10	-0.46619	4.928971	-0.31501	4.516207
1	-2.70985	1.39	-0.40388	4.525094	-1.55687	2.959342
2	-7.00588	-5.61	1.83908	6.364174	-2.5834	0.375942
3	-4.11229	-9.72	-0.99458	5.369591	-2.55344	-2.17749
4	-3.40478	-13.13	-3.00193	2.367664	-3.20336	-5.38085
5	1.211401	-11.92	-1.82668	0.540984	-0.30764	-5.68849
6	-1.38739	-13.31	-1.66046	-1.11948	-1.52393	-7.21241
7	0.029335	-13.28	3.16327	2.043794	1.596303	-5.61611
8	-5.27372	-18.55	0.419771	2.463565	-2.42697	-8.04309
9	-1.07295	-19.62	-0.41216	2.051402	-0.74256	-8.78564
10	6.086211	-13.54	-0.94236	1.109043	2.571926	-6.21371
11	-0.02249	-13.56	-0.48277	0.626268	-0.25263	-6.46634
12	-1.91601	-15.47	-0.15854	0.467727	-1.03728	-7.50362
13	-0.58097	-16.06	1.372879	1.840606	0.395955	-7.10767
14	-0.61692	-16.67	0.229197	2.069803	-0.19386	-7.30153
15	-2.87777	-19.55	-0.86326	1.206543	-1.87052	-9.17204
16	-1.05812	-20.61	0.250561	1.457104	-0.40378	-9.57582
17	2.223645	-18.39	0.570989	2.028093	1.397317	-8.1785
18	3.2021	-15.18	-1.00957	1.018522	1.096265	-7.08224
19	2.923951	-12.26	2.443887	3.462408	2.683919	-4.39832
20	.001	-12.26	1.516835	4.979243	0.758918	-3.6394

The excess returns were calculated by subtracting the predicted returns from the actual returns. The daily excess returns were aggregated mathematically to find the cumulative abnormal returns. To test the significance of the returns and to test our hypothesis, the student's *t* test was used. The Table 4 shows the CAR for both the companies (Jet Airways and Kingfisher Airlines) over the window period.

The Table 5 shows the daily abnormal return and the cumulative abnormal return for the entire window period and the combined window period for both Jet Airways and Kingfisher Airlines. The abnormal return was averaged to find the average abnormal return (AAR) and was cumulated to find the cumulative average abnormal return (CAAR) over several window periods.

The Figure 1, Figure 2, and Figure 3 show the abnormal return, cumulative abnormal return, and the combined returns for Jet Airways and Kingfisher Airlines for the window period.

Figure 1 . Jet Airways AR & CAR Pattern for Window Period (-10 to 20)

Figure 2. Kingfisher AR & CAR Pattern for Window Period (-10 to 20)

Figure 3. Aviation Industry AR & CAR Pattern for Window Period (-10 to 20)

Discussion and Conclusion

The analysis revealed that the mergers and acquisitions were anticipated in all cases - even before the merger or acquisition was announced. The market reaction was found to be more active before the announcement period than in the post announcement period, that is, the market seemed to be more optimistic about the gains from the merger before the announcement. Overall, the market reported a positive CAR before the merger announcement. However, gradually, the returns faded out. In case of Jet Airways, the post announcement CAR started falling sharply with occasional positive abnormal returns. This might be due to the fact that the market felt that the merger was not going to generate the expected benefits. There might be several reasons for the same - like overpayment of unrealistic synergy gains. However, in case of Kingfisher Airlines, the cumulative return was positive, which might be because the market valued the merger to be synergistic and assumed that it would add value as it might have helped Kingfisher Airlines to develop its international operations. However, the combined effect was not value enhancing, though it cannot be generalized. The operating performance for all airlines across the industry was significantly destroyed in the post merger period. The study has revealed that the mergers failed to realize the synergy benefits and could not develop on operational parameters to increase sales or profits. Hence, managers should keep realistic ambitions about synergy and should make proper plans to realize their goals. Managerial overconfidence about synergy gains and benefits should be limited and need to be tested keeping in mind the market constraints.

Research Implications

The Indian aviation industry has opened up FDI to an extent of 49% now, and it is going to see further opening up to 74% soon. As a result, several mergers and acquisitions agreements have taken place and some are underway. Furthermore, the mergers and acquisitions in the Indian aviation industry are going to increase in the coming years. Managers need to understand the performance of mergers and acquisitions and how these can be improved. The present research paper has given insights into aviation merger performance. Market reactions to mergers have always been negative, or in rare cases, lukewarm. Managers need to understand the market sentiments and make achievable commitments.

Limitations of the Study and Scope for Further Research

M&A outcomes are industry specific and are dependent on the external economic factors. The number of M&As in the Indian aviation industry are quite less, which implies that the sample size of the study is small. We took a time frame of medium term for the accounting performance study and considered a short term event window for the event study. However, mostly, it is believed that M&As are a long term strategy, so the performance of the companies should be studied by considering a long term time frame. In addition, the present study mainly focused on the performance of two airlines - Jet Airways and Kingfisher Airlines.

Future studies can investigate the reasons behind losses suffered by shareholders in M&As. Functional parameters can also be used to measure the level of changes in the combined entity as a result of the merger.

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