

An Empirical Analysis of Working Capital Management of Selected Airline Companies in India

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ABSTRACT

Aviation industry is one of the key industries in India. It contributes more to the economy and it provides more employment opportunities to people both directly and indirectly. Indigo Ltd, Jet Airways Ltd and Spice Jet Ltd are the Domestic and International Airlines, Efficient Management of Working Capital is essential for any Companies. This study has made an attempt to analyse the working capital efficiency of the three companies for the study period of seven years from 2010-11 to 2016-17. The study found that Indigo Ltd, Jet Airways Ltd and Spice Jet also had positive position of working Capital in seven year study period. The ratio analysis of working capital Management of the three companies was satisfactory. The Y-Score model revealed that these three companies good position.

Keywords: Working Capital, Defensive Assets, Current Ratio, Liquid Ratio, Absolute Liquid Ratio.

INTRODUCTION:

Aviation industry is one of the key industries in India. The aviation sector has become the most important segment in the economic development of a nation. It plays a vital role in moving people or products from one place to another, be it domestic or international, especially when the distances involved are far. Stiff competition and favourable initiatives of the Government of India added fuel to enlarge both flights and fleets. Indian aviation industry is among the world's fastest growing industries. It has undergone huge transformation following the liberalization of the aviation industry in India. Once owned by the government, the aviation sector of India is now privately with full service airways and affordable carriers. Almost 75% of the domestic aviation sector consists of the private airlines. Earlier viewed as a costly means of transportation, afforded by few, air travel is now cheap and can be availed by many people. Air Deccan was the premier airline, which is offered low tariff to the domestic as well as international destinations and created a new landmark in aviation sector in India. Now, ordinary citizens were able to easily access the aviation service from their respective air terminals. In a highly competitive environment the provision of high quality services to passengers are the core competitive advantage for an airline's profitability and sustained growth. In the past decade, as the air transportation market has become even more challenging, many airlines have turned to focus on airline service quality to increase service satisfaction. Service quality conditions influences a firm's competitive advantage by retaining customer patronage, which in turn results in increase in market share. Delivering high-quality services to passengers is an essential for airline survival, so, airlines need to understand what passengers expect from them.

Indian aviation sector can be broadly divided into the following main categories;

- Scheduled air transport services include Domestic and International Airlines.
- Non-schedule air transport service consists of charter operators and air taxi operators.

Economic development worldwide is getting a significant boost from air transport. Governments have also gained substantially from the good performance of the airline industry. For the year 2016-17 commercial

airlines are expected to take delivery of almost 1,900 new aircraft, a substantial investment by the industry. The trend improvement in average returns (ROIC) has given the industry the confidence to invest on this scale.

REVIEW OF LITERATURE:

(Amalendu Bhunia, 2007)¹ In her study the paper makes an assessment of management of working capital, examine the adequacy or otherwise of the working capital, observes the liquidity position and areas of weakness and give suggestions for removal of the weaknesses of the public sector iron and steel enterprises in India.

(Amalendu Bhunia, 2010)² in her study working capital is a crucial importance in case capacity utilization and consumption of steels. To ensure rapid economic development it was considered indispensable that a sound steel production program on an alarming centre must be formulated immediately after LPG. Accordingly, the private sector has set up many more integrated steel plants and enhanced the existing plants to increase current production capacity. To so extent the priority given by the country failed to burgeon due to poor capacity, under-utilisation and poor consumption. Working capital is accountable for poor capacity, under-utilisation and poor consumption. The competence of the working capital in terms of short-term liquidity is of foremost connotation in the case where we examine performs and guiding principles presently overcoming in an industry with a view to finding out whether they are reasonable or require enhancement.

(R. Rajavathana, 2013)³ in his study automobile industry is one of the key industries in India. It contributes more to the economy and it provides more employments opportunities to people both directly and indirectly. Tata motors and Mahindra are the leading manufacturers of both domestic and commercial vehicles. Efficiency of working capital is essential for any organization. This study has made an attempt to analyse working capital efficiency of the two companies for the study period nine years. The Tata motors had negative working capital in six years and Mahindra also negative in the two years of the study period. Working capital position these two companies was not satisfactory.

(Dr. (Mrs.) Asha Sharma, 2013)⁴ in her study Working Capital Management has its impact on liquidity as well profitability. The impact on effectiveness and profitability of working capital is tried to find out by measuring the fluctuation in fixed assets, current assets and sales. For this last five years data from 2008 to 2012 of two major companies in public and private sector of steel industry i. e., Steel Authority of India and Tata Steel Ltd., is taken. It is also tried to find out correlation among working capital to find along with their liquidity, efficiency and profitability. We find that there is a significant negative relationship between liquidity and profitability. In this paper efforts are made to know is these ratios remained unchanged for any industry or varies from one industry to another.

(Varun Kesavan, 2015)⁵ in his study a well designed and implemented working capital management provides significant contribution to a firm's profitability and helps to maintain liquidity powers. The purpose of this study is to assess working capital adequacy and its impact on profitability; and to investigate the relationship between profitability and liquidity of firms. Working capital refers to the firm's investment in short term assets. The management of working capital is important to the financial health of business of all sizes. The amounts invested in working capital are often high in proportion to the total assets employed and so it is vital that these amounts are used in an efficient way. The management of working capital affects the liquidity and the profitability of the corporate firm and consequently it's net worth (Smith, 1980). Working capital management therefore aims at maintaining a balance between liquidity and profitability for conducting day to day operations of the business concern. Inefficient working capital management not only reduces the profitability of business but also ultimately lead to financial crises, Chowdhury and Amin (2007). The study aims to provide empirical evidence about the effects in current assets and current liabilities of Spice jet Airlines, Limited

IMPORTANCE OF THE STUDY:

The working capital is the life-blood and nerve centre of a business firm. The importance of working capital is any industry needs no special emphasis. No business can run effectively without a sufficient quantity of working capital. It is crucial to retain right level of working capital. Working capital management is the one the

¹ Amalendu Bhunia (2007), Vidyasagar University Journal of Commerce, Vol.12, March 2007

² Amalendu Bhunia, 2010, Asian Journal of Management Research, ISSN: 2229-3795, 'A study on Liquidity trends on private steel companies in India.

³ R.Rajavathana (2013), An Emprical Analysis of Working Cpital Management of Selected Automobile Companies in India, ISSN: 2277-100X, Volume 2, Issue 2, Journal of Radix International Educational and Research Consortium

⁴ Dr. (Mrs.) Asha Sharma, (2013), A Comparative Analysis of Working Capital Management between Public & Private Sector Steel Companies In India, International Journal of Management and Social Sciences Research (IJMSSR) ISSN: 2319-4421 Volume 2, No. 4, April 2013

⁵ Varun Kesavan (2015) A Study on Working Capital Management of Aviation Industry with Specific Reference to Spicejet Airlines. Volume-4, Issue-3, March 2015, IJLTEMAS

most important functions of corporate management. Working capital can be utilized for the payment of lease, employee's payroll, and pretty much any other operating cost that are involved in the everyday life of business. Even very successful business owners may need working capital funds when the unexpected circumstances arise. The overall success of the company depends upon its working capital position. So, it should be handled properly because it shows the efficiency and financial strength of company. Efficient management of working capital means management of various components of working capital in such a way that an adequate amount of working capital is maintained for smooth running of a firm and for fulfilment of objectives of liquidity and profitability. The researcher has attempted to analyze the efficiency of working capital management of airline companies in India.

METHODOLOGY OF THE STUDY:

The study is analytical in nature and it primarily depended on secondary data. For these purpose annual reports of the selected airline companies were collected and calculations were made from it. It used various standard ratios and other statistical tool for analysing and interpreting the data. It also used y-score model to assess working capital. The study selected three airline companies in India such as Indigo, Spice jet and Jet Airways.

Period of the Study:

The present study covers a period of seven years taking from 2010-11 to 2016-17

Sample Design of the Study:

The samples of Airline companies are selected on the basis of convenient sampling method. A sample of three airlines has been selected on the basis of availability of data and also these three airlines are the main airlines in India.

The following have been selected for the study

- Indigo Ltd
- Jet Airways Ltd
- Spice Jet Ltd

Y-Score Model:

This model was developed by Dr.S.S.Srivastava and Dr.R.A.Yadav. The model was developed based on 78 companies. They considered various accounting ratios, but only four accounting ratios were found to be use full for the prediction of working capital.

There are

1. Current ratio
2. Cash flow to total tangible assets
3. Net sales to total tangible assets
4. Defensive assets to total operating expenses. Based on the model the analysis is made in the present study.

Assessment of working capital position as per the model is:

$$Y=V2+V25+V31+V35$$

Where

V2= Cash flow to total tangible assets

V25 =Current Assets to Current Liabilities

V31= Net sales to total tangible assets

V35= Defensive assets to total operating expenses

It fixed cut off rate to assess working capital performance which is 1.7068. if the Y= score of company is more than this cut off, the working capital efficiency is good otherwise it is not good.

DATA ANALYSIS AND INTERPRETATION:

This section of the study provides the result and it interpretations.

The following tables highlights of analyse the working capital efficiency of selected airline companies in India

The following table 1 the highlight of working capital position of the Indigo during the period from 2010-11 to 2016-17

Table 1: Working Capital position of the Indigo Ltd

(Rs.In Crore)

Year	Indigo			
	CA	CL	NWC	+/- of WC
2010-11	1948.72	1427.08	521.64	--
2011-12	2308.70	1328.13	980.57	458.93
2012-13	3070.68	878.00	1192.68	212.11
2013-14	2914.69	2850.05	64.64	1128.04
2014-15	3168.01	2949.03	218.98	154.34
2015-16	5600.79	3985.87	1614.92	1395.94
2016-17	9446.41	4784.61	4661.8	3046.88

Source: Computed from annual reports

The above table give the amount of Current Assets (CA), Current Liability (CL), Net Working Capital (NWC), and its change over the previous year for the companies. The results showed that the Current Asset of Indigo was increased over the year from 2010-11 Rs. 1948.72 crores to 2016-17 Rs. 9446.41 crores. The Current Liability also was in increasing trend over the period of the study. Net working capital was 2010-11 is 521.64. In the year of 2016-17 were 4661.8 positive performances. Current assets and Current Liabilities was continuously positive and negative performance all the years.

The following table 2 the highlight of Working Capital position of the Jet Airways during the period from 2010-11 to 2016-17

Table 2: Working capital position of the Jet Airways Ltd

(Rs.In Crore)

Year	Jet Airways			
	CA	CL	NWC	+/- of WC
2010-11	3163.14	8874.99	5711.84	--
2011-12	3340.18	10403.62	7063.44	13516
2012-13	4050.13	11738.30	7688.17	624.73
2013-14	3994.56	13471.56	9477.00	1788.83
2014-15	5452.92	14935.87	9482.95	5.95
2015-16	6197.54	14725.18	8527.64	955.31
2016-17	5404.58	11713.59	6309.01	2218.63

Source: Computed from annual reports

The above table give the amount of Current Assets (CA), Current Liability (CL), Net Working Capital (NWC), and its change over the previous year for the companies. The results showed that the Current Assets of Jet Airways was increased over the previous year from 2010-11 Rs. 3163.14 crores to 2016-17 Rs. 5404.58 crores. The current liability also was in increasing trend over the period of the study. Net working capital was 2010-11 is 521.64. In the year of 2013-14 and 2015-16 was increased. The next year of 2015-16 and 2016-17 continuously decreased net working capital. The working capital position was positive performance.

The following table 3 the highlight of working capital position of the Spice Jet during the period from 2010-11 to 2016-17

Table 3: Working capital position of the Spice Jet Ltd

(Rs.In Crore)

Year	Spice Jet			
	CA	CL	NWC	+/- of WC
2010-11	281.84	763.29	481.45	--
2011-12	434.30	1373.28	938.98	457.53
2012-13	785.67	1831.29	1045.62	106.64
2013-14	462.02	2562.17	2100.15	1054.53
2014-15	626.88	2542.32	1915.44	4015.59
2015-16	674.13	210750	1433.37	482.07
2016-17	826.42	2467.22	1640.8	207.43

Source: Computed from annual reports

The above table give the amount of Current Assets (CA), Current Liability (CL), Net Working Capital (NWC), and its change over the previous year for the three companies. The results showed that the Current Assets of continuously increased over the previous year from 2010-11 Rs. 281.84 crores to 2016-17 Rs. 826.42 crores. The Current Liability also was in increasing trend over the period of the study. Net working capital was 2010-11 is 481.45. In the year of 2012-13 was increased 1045.62 and 2013-14 was continuously increased. In the year of 2016-17 was decreased 1640.8. Working Capital position is positive performance.

The following table 4 the highlight of Working Capital Ratios like Current Ratio Liquid Ratio and Absolute Liquid Ratio of the Indigo, Jet Airways and Spice Jet during the period from 2010-11 to 2016-17

Table 4: Results of Working Capital Ratios

Year	Current Ratio			Liquid Ratio			Absolute Liquid Ratio		
	Indigo	Jet Airways	Spice Jet	Indigo	Jet Airways	Spice Jet	Indigo	Jet Airways	Spice Jet
2010-11	1.365	0.356	0.369	7.777	1.083	0.191	7.27	0.281	0.056
2011-12	1.738	0.321	0.316	8.737	0.678	0.612	8.25	0.132	0.501
2012-13	1.635	0.345	0.429	5.519	0.580	0.466	5.062	0.176	0.275
2013-14	1.022	0.296	0.180	3.286	0.652	0.197	2.877	0.236	0.048
2014-15	1.074	0.365	0.246	4.699	0.805	0.188	0.419	0.381	0.238
2015-16	1.405	0.420	0.319	5.399	0.707	0.281	5.016	0.251	0.139
2016-17	1.974	0.461	0.334	6.402	0.730	0.589	5.980	0.340	0.344

Source: Computed

The above table reveals that in the year current ratio of Indigo Airlines was as per standard norms (2:1) and in most of the years near the standard norms, more than 1. In the year 2010-11 the current ratio was higher with 1.365 which is near the standard norms. During 2013-14 it had low current ratio 1.02 as per the standard norms. The current assets of Jet Airways were not as per the standard norms (2:1) in any year of the study period. But the Indigo airline during the all the years it was more than 1 time. In the year 2016-17 if had current ratio at 0.46 and the lowest current ratio was recorded in the year 2013-14 at 0.296 times. The current ratio Spice jet was not as per the standard norms (2:1) in the year of the period. In the year higher current ratio 2012-13 was 0.429. The lowest current ratio was recorded in the year 2013-14 at 0.296 times.

Liquid ratio of Indigo Airline was as per standard norm (1:1) in the year 2010-11 to 2016-17 more than the standard norms. The highest Liquid Ratio in the year 2011-12 was 8.737times respectively. All the year of indigo airlines Liquid Ratio was above the standard norms. The Liquid Ratio of Jet Airways was not standard norm (1:1) in the year of 2010-11 the highest Liquid Ratio 1.08. In the year of 2012-13 lowest Liquid Ratio was 0.580. Liquid Ratio of Spice Jet was not standard norms (1:1) in the year 2012-13 was highest liquid ratio 0.678. And the lowest liquid ratio in the year of 2014-15 was 0.188.

Absolute liquid ratio of Indigo airlines was as per the standard norm (0.5) in the year of 2010-11 absolute liquid ratio was 7.27. And the next year of 2011-12 absolute liquid ratio was 8.25 is highest absolute liquid ratio respectively. The lowest absolute liquid ratio was 0.419 in the year of 2014-15. The Absolute Liquid Ratio of Jet Airways was as per not standard norms. (0.5) in the year of 2010-11 was 0.281 and the next year of 2011-12 absolute liquid ratio was 0.132. There no highest absolute liquid ratio in all the study years. The absolute liquid ratio of Spice Jet was as per the standard norm (0.5) in the year of 2010-11 absolute liquid ratio was 0.056. In the next year of 2012-13 absolute liquid ratio was 0.501. It is standard norms (0.5) is one year only. The lowest absolute liquid ratio was 0.048 in the year of 2016-17.

The following table 5 the highlight of overall performance Y-Score Model of Indigo, Jet Airways and Spice Jet during the period from 2010-11 to 2016-17

Table 5: Result of Y-Score Model

Year	V2			V25			V31			V35			Overall Y-Score		
	Indigo	Jet Airways	Spice Jet	Indigo	Jet Airways	Spice Jet	Indigo	Jet Airways	Spice Jet	Indigo	Jet Airways	Spice Jet	Indigo	Jet Airways	Spice Jet
2010-11	2.634	0.098	1.501	1.365	0.356	0.369	4.746	0.961	34.73	0.509	0.134	0.530	9.254	1.549	37.12
2011-12	1.016	1.653	0.712	1.738	0.321	0.316	6.471	1.116	4.730	0.455	0.075	6.44	9.676	3.165	12.19
2012-13	0.992	0.171	0.00	1.635	0.345	0.429	5.379	1.619	3.214	0.310	0.119	0.077	8.316	2.254	3.721
2013-14	0.404	0.095	0.00	1.022	0.296	0.180	2.901	1.843	3.416	0.199	0.159	0.001	4.526	2.393	3.597
2014-15	0.489	0.057	0.081	1.074	0.365	0.246	2.940	2.200	3.144	0.347	0.309	0.009	4.85	2.904	3.48
2015-16	0.662	0.288	0.396	1.405	0.420	0.319	3.550	2.496	3.258	0.778	0.294	0.077	36.39	3.498	3.942
2016-17	1.00	0.146	0.306	1.974	0.461	0.334	5.168	3.452	3.893	0.730	0.280	0.108	9.872	4.339	4.281

Source: Computed

Over the study period of seven years, all seven years the Y-Score of Indigo Ltd was more than the criteria (1.7068). in the year of 2015-16 Y-Score was highest score 36.39 followed by the year of 2016-17 also highest Y-Score was 9.872, and also 2010-11 and 2011-12 Y-Score was highest Score 9.67. So the Indigo Ltd working capital management was good during the seven years of the study period. The Y-Scores of Jet Airways Ltd was more than the standard norms (1.7068) in all the years of study period. The Y-Score was highest Score 4.339 in the year 2016-17 followed by 2015-16 also high score was 3.489 and the previous year of 2014-15 and 2013-14 also good 2.904, 2.254. But one year only was not standard norm of Y-Score 1.549. So the Jet Airways Ltd working Capital Management was good. The Y-Score model of Spice jet Ltd was more than the standard norm (1.7068) in the all years of study period. It was highest during the year of 2010-11 the Score is 37.12 the followed by 2011-12 was more than the standard norm 12.19. The Remaining five year also good position of Y-Score model. So Spice Jet Ltd working capital management was good during the seven years of the study period.

CONCLUSION:

The study analyzed the working capital performance of selected airline companies in India using the ratio analysis and Y-Score model. The study found that Indigo ltd, Jet Airways and Spice Jet ltd. Suffered by the positive working capital during the seven years respectively. Those companies did have current, liquid and absolute liquid ratio as per the standard norms in the study period. The result showed that these companies perform well in terms of working capital management. The study also found that on the basis of the companies was good during the seven years of the study period.

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