

## **“PROFITABILITY ANALYSIS” OF SELECT INDIAN AVIATION FIRMS AN EMPIRICAL ANALYSIS**

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### **AREA OF STUDY: COMMERCE**

#### **ABSTRACT**

Airline service decisions are increasingly influenced by the new drivers of profitability. The fluctuating profitability must be better understood by the firm to make a better strategy. The Primary objective of a business undertaking is to earn profits. Profit earning is considered essential for the survival of the business. Profitability analysis measures how will a firm is performing in terms of its ability to generate profits. Profitability of the firm is highly influenced by internal and external variables, i.e., size of organizations, liquidity management, growth of organizations, component of costs and inflation rate. In this paper an attempt has

made to measure the profitability performance and to analyze the impact of selected profitability ratios on ROCE of the company, for fulfilment of the objectives the data collected from the annual report from 2010 to 2014. The collected data is analyzed and computed to fit for drawing inferences. In this investigation correlation and two ways ANOVA were used to find out the impact of selected profitability ratios (Gross Profit, Operating Profit, Net Profit,) on ROCE and to determine its significance over the years.

**Key words:** Profitability, profit earning capacity, survival of the firm, Return on equity

## **INTRODUCTION**

Profitability (P) is the profit earning capacity which is a crucial factor contributing to the survival of the firms. The perpetual existence of the firms depends on the profit earning capacity of the firm, which is also considered to be the main factor in influencing the reputation of the firm. The borrowing capacity of the firm is also determined by Profit. Thus, it is considered as the main factor in determining the returns which is generated by the firm from the basic capital employed. Profit consists of two words, profit and ability. Therefore, it is necessary to differentiate between profit and profitability at this juncture. Profit, from the accounting point of view, is arrived at by deducting from the total revenue of an enterprise all amount expended in earning that income whereas profitability can be measured in terms of profit shown as a percentage of sales known as profit margin.

## **ACCOUNTING TOOLS AND TECHNIQUES USED**

### **SELECT PROFITABILITY RATIO'S FOR ANALYSIS**

- ❖ Gross Profit Margin
- ❖ Cash Profit Margin
- ❖ Adjusted Cash Margin
- ❖ Net Profit Margin
- ❖ Adjusted Net Profit Margin
- ❖ Return On Capital Employed
- ❖ Return On Net Worth

## **STATEMENT OF THE PROBLEM**

The primary objective of a business undertaking is to earn profits. Profit earning is considered essential for the survival of the business. A business needs profits not only for its existence, but also for expansion and diversification the investors want an adequate return on their investment as well as workers, creditors. And a business enterprise can discharge its obligation to various segments of the society only through earning of profit.

## **OBJECTIVES OT THE STUDY**

- ❖ To ascertain the overall financial position of selected aviation companies in India
- ❖ To evaluate the relationship between selected profitability ratios and ROCE

### **LIMITATIONS OF THE STUDY**

- ❖ The study is limited for a period of five years alone.
- ❖ The study is based on the information presented in the annual reports, which is typically secondary data which is analyzed by the person previously and it may be biased.

### **REVIEW OF LITERATURE**

**Dr. S.K. khartik titto Varghese, (2011)** they found the profitability more or less depends upon the better utilization of resources and to manpower. It is worthwhile to increase production capacity and use advance technology to cut down cost of production and wage cost in order to increase profitability, not only against the investment, but also for investor’s return points of view..

**Asha Sharma and R.B. Sharma(2011)** These attempts identify and study the movement of keyfinancial parameters and their relationship with profitability of textile industry. It is an attempt to and the study whether the key identified parameters move in a synchronous way going up and coming down with basic profitability parameters. All three comparably profit-making companies have been taken as the sample for the study for the period of 2006to2010.

**Aubry lyimo, Dr.Reubenj.L mwamakimbullah kiko F.S.Hamza, (2010)** they found costs resulting from poles being rejected, reworked or down-graded were the highest at the study mill. The cost of quality were so high and as a result they negatively affect the financial performance of the mill.-cost of quality and its effect on company’s profitability, the amount accrued from costs of quality was too high to reject the null hypothesis which claimed that costs of quality impacts negatively the profitability of the company. (P.value-0.4582)

**Asha (1987)** of reserve bank of India had worked out the required norms and techniques for evaluating the performance of public sectors banks. She has reinvaded the different techniques adopted by different agencies and criteria for evaluating the banking performance.

The empirical findings of her study shows a positive trend in terms of opening new branches deposits mobilization and advances over a period

## RESEARCH METHODOLOGY

Research is a common parlance which refers to a search for knowledge. Research methodology is a way of systematically solving the research problem. It may be understood as a science of studying how research is done scientifically. In this study, past and existing data are used to analyze the present state of affairs and therefore, the research design is descriptive and analytical in nature. For this Evaluation of Empirical analysis, Data has been collected from the official website of NSE and selected Aviation company’s financial reports and analysis has been made using various tools

## STATISTICAL TOOLS USED

### MEAN, STANDARD DEVIATION, RANKING OF MEAN, COMPOSITE MEAN RANKING AND TWO WAY ANOVA.

Used to find out the average position of accounting ratios related to Profitability analysis.

**CORRELATION ANALYSIS:** used for to identify the relationship between selected profitability and ROCE ratio

### PROFITABILITY RATIO CALCULATION FOR TOP 3 INDIAN AVIATION FIRMS

**TABLE NO 1.1**

Profitability Ratios	2014	2013	2012	2011	2010
Operating Profit Margin (%)	-560.10	-39.29	15.14	6.32	-10.49
Profit Before Interest And Tax Margin (%)	-445.82	-42.93	11.53	3.06	-11.70
Gross Profit Margin(%)	-607.72	-45.51	11.88	3.10	-13.02
Cash Profit Margin(%)	-594.37	-34.10	-11.70	-22.43	-24.58
Adjusted Cash Margin (%)	-594.37	-34.10	-11.70	-22.43	-24.58
Net Profit Margin (%)	-629.31	-39.97	-15.99	-32.04	-27.43
Adjusted Net Profit Margin(%)	-629.31	-39.97	-15.99	-32.04	-27.43
Return On Capital Employed (%)	67.21	-73.61	21.72	4.35	-3.68
Return On Net Worth (%)	31.92	41.30	28.27	39.70	71.98

**Source: Money control.com/ King Fisher airlines**

**TABLE NO 1.2**

Operating Profit Margin (%)	-15.17	17.55	19.70	-3.07	0.24
Profit Before Interest And Tax Margin (%)	-15.65	16.85	19.03	-3.37	-0.33

Gross Profit Margin (%)	-15.96	17.24	19.35	-3.50	-0.35
Cash Profit Margin (%)	-14.30	3.67	2.25	-21.00	-13.27
Adjusted Cash Margin (%)	-14.30	3.67	2.25	-21.00	-13.27
Net Profit Margin (%)	-15.07	3.43	3.02	-19.43	-9.60
Adjusted Net Profit Margin (%)	-15.07	3.43	3.02	-19.43	-9.60
Return On Capital Employed (%)	-78.15	128.56	177.00	5.21	12.28
<b>Profitability Ratios</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
Operating Profit Margin (%)	-8.58	5.35	12.16	19.58	20.18
Profit Before Interest And Tax Margin (%)	-13.32	-0.13	5.85	12.29	10.81
Gross Profit Margin (%)	-13.64	-0.14	5.99	12.45	10.97
Cash Profit Margin (%)	-11.68	1.92	-1.53	4.42	3.35
Adjusted Cash Margin (%)	-11.68	1.92	-1.53	4.42	3.35
Net Profit Margin (%)	-20.70	-2.78	-7.93	0.07	-4.41
Adjusted Net Profit Margin (%)	-20.70	-2.78	-7.93	0.07	-4.41
Return On Capital Employed (%)	-30.65	6.21	12.28	12.33	8.81
Return On Net Worth (%)	164.64	141.73	229.14	1.15	-56.54

Source: Money control.com / Spice jet

**TABLE NO 1.3**

Source: Money control.com/Jet Airways

**MEAN AND STANDARD DEVIATION CALCULATION FOR KING FISHER**

**TABLE NO 1.4**

YEAR/RATIOS	OP	GP	PBIT	CP	NP
<b>2010</b>	-10.49	-13.02	11.70	-24.58	27.43
<b>2011</b>	6.32	3.10	3.06	22.43	<b>-32.04</b>
<b>2012</b>	15.14	11.88	11.53	-11.70	-15.99
<b>2013</b>	-39.29	45.51	42.93	34.10	-39.97
<b>2014</b>	-560.10	-607.72	-445.82	594.37	629.31
<b>MEAN</b>	<b>-117.684</b>	<b>-112.05</b>	<b>-75.32</b>	<b>122.924Q</b>	<b>113.748</b>
<b>SD</b>	<b>248.18708</b>	<b>277.91141</b>	<b>207.6729</b>	<b>264.63708</b>	<b>289.38309</b>

**MEAN AND STANDARD DEVIATION CALCULATION FOR KING FISHER**

**TABLE NO 1.5**

YEAR/RATIOS	OP	GP	PBIT	CP	NP
2010	0.24	-0.35	-0.33	-13.27	-9.60
2011	-3.07	-3.50	-3.37	-21.00	-19.43
2012	19.70	19.35	19.03	2.25	3.02
2013	17.55	17.24	16.85	3.67	3.43
2014	-15.17	-15.96	15.65	-14.30	-15.07
MEAN	3.85	3.356	9.566	-8.53	-7.53
SD	14.67644	14.85278	10.54644	10.91226	10.41838

**MEAN AND STANDARD DEVIATION CALCULATION FOR KING FISHER**

**TABLE NO 1.6**

YEAR/RATIOS	OP	GP	PBIT	CP	NP
2010	20.18	10.97	10.81	3.35	-20.70
2011	19.58	12.45	12.29	4.42	-2.78
2012	12.16	5.99	5.85	-1.53	-7.93
2013	5.35	-0.14	-0.13	1.92	0.07
2014	-8.58	-13.64	-13.32	-11.68	-4.41
MEAN	9.738	3.126	3.1	-0.704	-7.15
SD	11.90137	10.58812	10.38643	6.53319	8.10777

**ANALYSIS OF PROFITABILITY OF THE SELECTED COMPANY IN INDIAN AVIATION INDUSTRY  
BASED ON SELECTED PROFITABILITY RATIOS (COMPOSITE RATIOS)**

**TABLE NO 1.7**

RATIOS/ FIRM	MEAN OP	RANK (R1)	MEAN GP	RANK (R2)	MEAN PBIT	RANK (R3)	MEAN CP	RANK (R4)	MEAN NP	RANK (R5)
KF	117.68 4	1	-112.05	3	-75.32	3	122.9 24	1	113.7 48	1
SJ	3.85	3	3.356	1	9.566	1	-8.53	3	-7.53	3
JA	9.738	2	3.126	2	3.1	2	-0.704	2	7.15	2

**ANALYSIS OF PROFITABILITY OF THE SELECTED COMPANY IN INDIAN AVIATION INDUSTRY  
BASED ON SELECTED PROFITABILITY RATIOS (COMPOSITE RANK)**

**TABLE NO 1.8**

RATIOS/FIRM	RANK (R1)	RANK (R2)	RANK (R3)	RANK (R4)	RANK (R5)	SUM TOTAL R1+R2+R3+R4+R5
KF	1	3	3	1	1	9
SJ	3	1	1	3	3	11 **
JA	2	2	2	2	2	10

**MEAN CORRELATION BETWEEN SELECT PROFITABILITY RATIOS AND ROCE (RETURN ON CAPITAL EMPLOYED)**

**TABLE NO 1.9**

RATIO S/FIRM	CORRELATION OP & ROCE	CORRELATION GP & ROCE	CORRELATION PBIT & ROCE	CORRELATION CP & ROCE	CORRELATION NP & ROCE
KF	-0.6419. HC	-0.6428. MNC	-0.6243.	0.6815	-0.6821.
SJ	0.8461. SPC	0.8451 SPC	0.8463 SPC	0.7497 MPC	0.7738 SPC
JA	0.8913. SPC	0.9188	0.9222.	0.9222.	0.9191.

**INTEPRETATION FOR THE ABOVE TABLE:**

From the above table 1.1 it is clear that the gross profit margin has shown a negative phase with (-445.82%) were return on capital employed has shown a positive sign and implies that the firm has made the best use of its capital and is urging towards reaching a better profitability position .Return on net worth is stable thus indicates that the firm generates a stable profit and this can be a good indicator for the investors to invest in King fisher airlines. From the above table 1.2 it is clear that the return on net worth has a drastic increase which reveals that the company generates good amount of profit with the money that the equity shareholders have invested. The operating profit in a decrease phase has to be set right by improving the core business activity. The operating profit of Jet airways shown in table 1.3 is positive which means the firm has a strong profitability position From the above table 1.7 ranks have been formulated for the select profitability ratios for each firm based on the mean value were spice jet holds the first rank indicating that the overall profitability position is good .Table 1.8 shows the correlation between the ROCE and select profitability ratios and indicates a high correlation for profitability ratios of spice jet which means the firm's

profitability position has a good impact on the return from the initial capital and this is a good sign to attract more share holders towards investment.

## TWO WAY ANOVA FOR RETURN ON CAPITAL EMPLOYED OF SELECTED AVIATION

### FIRMS IN INDIA

Set of hypothesis H<sub>0</sub>: there is a significant difference on the **ROCE** of selected Aviation firms in India. H<sub>1</sub>: there is no a significant difference on the **ROCE** of selected Aviation firms in India

TABLE NO: 1.10: RETURN ON CAPITAL EMPLOYED OF SELECTED AVIATION FIRMS IN INDIA

SOURCE OF VARIATION	SS	d.f	Mean square	Variance ratio "F"
YEAR/FIRM	KING FISHER	SPICE JET	JET AIRWAYS	TOTAL
2010	67.21	-78.15	-30.65	-41.59
2011	-73.61	138.56	6.21	71.16
2012	21.72	477.00	12.28	511
2013	4.35	5.21	12.33	21.89
2014	-3.68	13.28	8.81	18.41
TOTAL	15.99	555.9	8.98	580.87

SOURCE: Secondary data

### ANOVA CALCULATION

BETWEEN FIRMS	39378.23	2	19689.115	19689.115/610.875= 32.23
BETWEEN YEARS	31252.5	4	7813.125	7813.125/610.875= 12.79
RESIDUAL	4887	8	610.875	



<b>TOTAL</b>	75517.73	14		
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$$\text{CORRELATION FACTOR} = T^2 / N = (580.87)^2 / 15 = 22,493.99$$

### SUM OF SQUARES BETWEEN FIRMS

$$(15.99)^2 / 5 + (555.9)^2 / 5 + (8.98)^2 / 5 - \text{C.F}$$

$$= 51.13 + 61,804.962 + 16.128 - 22,493.99 = 39378.23$$

$$V = (C - 1) = (3 - 1) = 2$$

### SUM OF SQUARES BETWEEN YEARS

#### ANOVA TABLE 1.11

$$(-41.59)^2 / 5 + (71.16)^2 / 5 + (511)^2 / 5 + (21.89)^2 / 5 + (18.41)^2 / 5 - \text{C.F}$$

$$345.94 + 1012.74 + 52224.2 + 95.83 + 67.78 - 22,493.99 = 31252.5$$

$$V = (r - 1) = (5 - 1) = 4$$

$$\text{Sum total of all squares} = 67.21 + (-73.61) + 21.72 + 4.35 + (-3.68) + 78.15 + 138.56 + 477.00 + 5.21 + 13.28 + (-30.65) + 6.21 + 12.28 + 12.33 + 8.81 - 22,493.99$$

$$= 21756.82$$

$$\text{Residual} = \text{total SS} - \text{SS between firms} - \text{SS between years}$$

$$= 21756.82 - 39378.23 - 31252.5 = 4887$$

### INTERPRETATION FOR THE ABOVE TABLE 1.11

$$\text{For } v(2, 8) \text{ F } 0.05 = 4.45$$

$$\text{For } v(4, 8) \text{ F } 0.05 = 3.84$$

The calculated value of F is more than the table value. Our null hypothesis is not true; hence there is a significance difference among the ROCE ratio among the select aviation industry, which means the ROCE ratio is not constant over the years but on the increasing phase.

### SUGGESTIONS

The firm has to give importance to long-range planning, day-to-day administration and appraisal of results to check the profitability position on regular intervals. The firms have to make the best use of the capital and increase the ROCP so that it attracts investors.

## CONCLUSION

After the analysis of various data, related to selected aviation firms in India, it is found that the profitability more or less depends upon the better utilization of resources, cut-off expenses and quality of management function in the products, customer services and to manpower and goodwill and market share. It is worthwhile to increase production capacity and use advance technology to cut down cost of production and wage cost in order to increase profitability, not only against the investment, but also for investor's return point of view. Aviation industry being the largest GDP growth contributor to the economy now faces stiff competition. It is prime enough to make the best use of the capital and to attract more investors to sustain in the market. Thus these firms have to frame effective strategy to make the best use of the capital.

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