GAP GYAN
A GLOBAL JOURNAL OF SOCIAL SCIENCES
(ISSN – 2581-5830)
Impact Factor – 4.998

GROWTH OF AVIATION INDUSTRY AFTER MERGER AND ACQUISITION: A CASE STUDY OF CATHAY PACIFIC AND UNITED AIRLINES

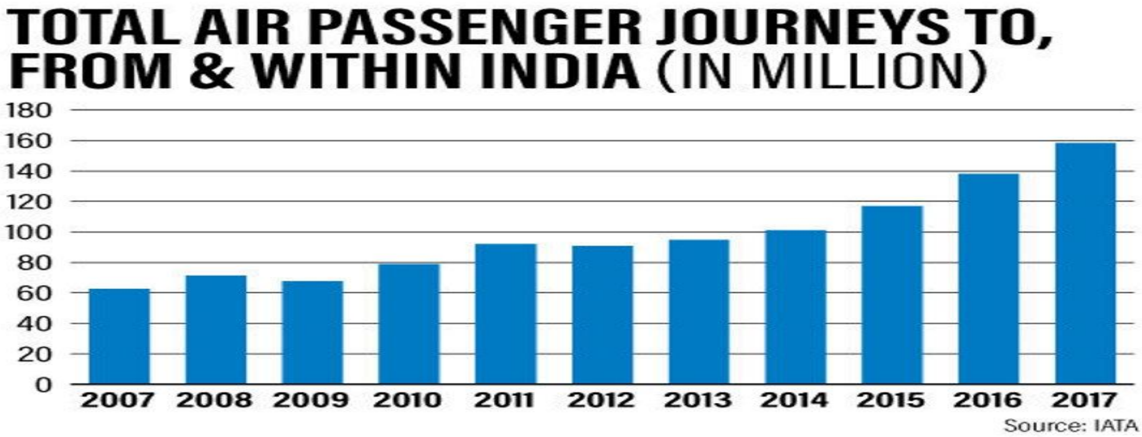
Shivani Patel
Visiting Faculty
Sheth Damodardas School Of Commerce
Bhavan's College Of Commerce
R. A. College Of Arts And Commerce
Sbpatel5683@gmail.com

Dhaval Nakum
Junior Research Fellow
S.D. School of Commerce, Gujarat University

Abstract
In today's globalised economy, mergers and acquisitions are being increasingly used the world over, for improving competitiveness of companies through gaining greater market share, broadening the portfolio to reduce business risk, for entering new market and geographic, and capitalizing on economies of scale. This research study is aimed to study the impact of Merger and Acquisitions (M&A) on shareholders' profitability and wealth and also overall wealth of the organization. The results suggests that there is negligible impact of M&A in case of UNITED AIRLINES and CONTINENTAL AIRLINES on shareholders' profitability and wealth whereas in case of CATHAY PACIFIC and DRAGON AIR there is significant impact on shareholders' profitability and overall wealth of the organization.

INTRODUCTION

OVERVIEW OF INDIAN AVIATION INDUSTRY
Aviation in India is broadly divided into two segments Military and Civil aviation. The civil aviation industry in India has also accelerated during the last 10 years. The civil aviation industry in India has emerged as one of the fastest growing industries in the country during the last three years. India is currently considered the third largest domestic civil aviation market in the world. India has become the third largest domestic aviation market in the world and is expected to overtake UK to become the third largest air passenger market (indianmirror.com, 2016). There are many airlines which are operating in India listed companies like Spice Jet, Indigo airlines, Air Indian Express and Jet Airways etc. and private companies like GoAir, Air Asia, Vistara and Indigo.



EVOLUTION OF INDIAN AVIATION INDUSTRY
The historical evolution of Indian aviation industry has started since the beginning of 1932. Evidence of which is seem in Mr. J.R.D.TATA flies a De Havilland Puss Moth from Karachi to Bombay as part of the first Tata Sons Ltd. Flight to deliver mail carried by British Imperial Airways in1948 Govt. of India acquires 49% stake in Tata Airlines, designates it a flag carrier and renames it Air India International (AII) In 1953 Jawaharlal Nehru, in friendly transaction, convinces the Tata Group to let the Govt. of India acquire a majority stake in AII and

https://www.gapgyan.org/

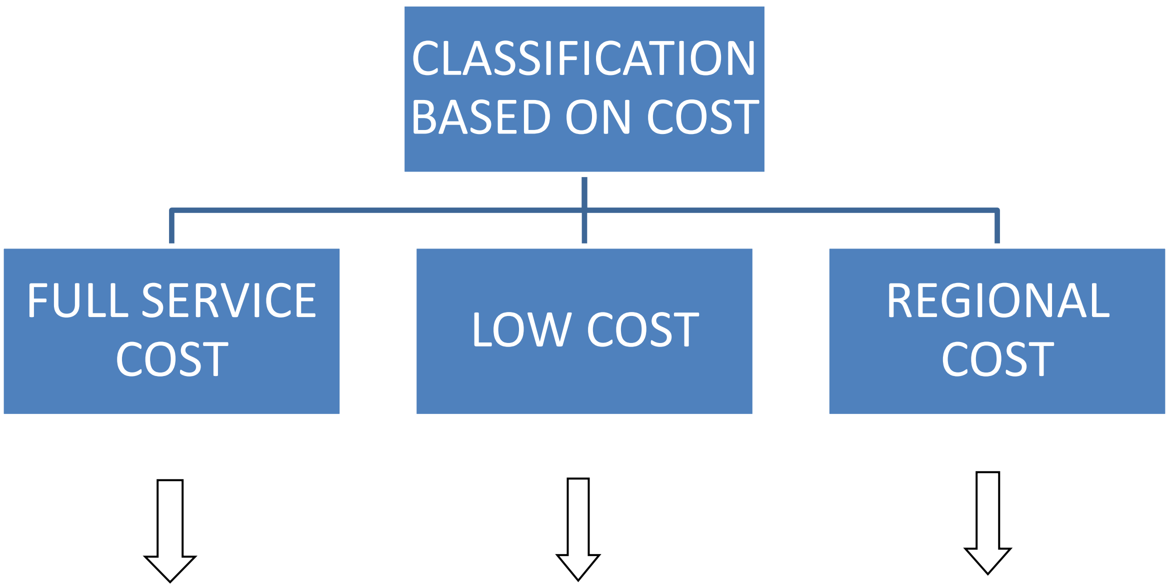
GRAND ACADEMIC PORTAL
RESEARCH JOURNALS
GAP GYAN
A GLOBAL JOURNAL OF SOCIAL SCIENCES
(ISSN – 2581-5830)
Impact Factor – 4.998
GRAND ACADEMIC PORTAL (GAP) 2017
ज्ञान: अध्ययन: परम्परा

nationalizes air transport 1953. Indian Airlines formed by merging eight former independent domestic airlines in 1960. India enters the jet age with an Air India B707; USA and India are connected for the first time with an Indian airline in 1989. Indian airline was the first airline to induct the A320 into its fleet 1990. East West Airlines becomes the 1st private airline in 1953.

India's passenger traffic grew at 16.52% year on year to reach 308.75 million in 2018. It grew at a CAGR of 12.72% during 2006-2018.Domestic passenger traffic grew 18.28% to reach 243 million in 2018 and is expected to become 293.28 million in 2020. International passenger grew 10.43% to reach 65.48 million in 2018 and traffic is expected to become 76 million in 2020.

Domestic freight traffic stood at 1,213.06 million tones, while international freight traffic was at 2,143.97 million tones in 2018. India's domestic and international aircraft movements grew 14.40% and 9.40%.As per May 2018, India has 102 operational airports and there are nearly 588 commercial aircrafts in India.

STRUCTURE OF INDIAN AVIATION SECTOR



AIR INDIA
VISTARA
AIR INDIA EXPRESS
GO AIR

INDIGO
SPICE JET
AIR ODISHA

ALLIANCE AIR
AIR DECCAN

Full service cost typically offers passengers in flight entertainment, checked baggage, meals, beverages and comforts such as blankets and pillows in the ticket price. Full service cost offer passengers the choice of economy or business class travel and on some flights premium economy and first class.

Low cost services means which services are emphasis more on minimize operating costs and without some of the traditional services and amenities provided in the fare resulting in lower fares and fewer comforts.

Regional cost means services restricted to particular region only. There are three of regional costs are there. Large regional cost (more than 60 passengers) Medium regional cost and small regional cost (less than 61 seats).

LITERATURE REVIEW

R & Prasad(2012) reveals the paper on **Post merger and acquisition financial performance analysis: a case study of selected Indian airlines companies** in 2008 there was no significant improvement in return on equity, expenses to income earning per share and dividend per share by using convenience sampling.

Craig(2006) gives his opinion in **evaluating the performance of merger simulation: evidence from US airline industry** in January 2003 there is desirable predict changes in marginal cost and other variables AND efforts to accommodate alternative conduct assumptions.

Adrangi et el.(1991) gives opinion in **the market share, cost and profit relationship in airline industry** by using Instrumental variable technique and two stages least square estimation technique (2SLS) noted that

https://www.gapgyan.org/

market share increases so overall profit also increases and consist time series and cross sectional set of financial and operating statistics.

Gudmundsson(2004) analyzed in **Management emphasis and performance in the airline industry: An exploratory multilevel analysis** by using multilevel method and questionnaire and give two opinions under distress create market power to achieve fast growth and superior market share and non-distressed given importance on productivity and brand image.

bilotkach(2011) gives his opinion in **Multi market contact and intensity of competition: evidence from an airline merger** by using cluster robust standard errors and instrumental variable technique (2SLS) and notice effect on multimarket contact on market players.

Kathryn et el gives their opinion in **shareholder value creation during Research and Development innovation and commercialization stages** with the help of event study (conventional approach) and found that directly document wealth effect, long term stock holder wealth effect on research and development projects and knowledge of wealth.

Rast and tourani(2012) studied in **Evaluation of employees' job satisfaction and role of gender difference: An empirical study of airline industry in Iran** with the help of cluster sampling method and analyzed that majority of employees moderately satisfied with their job employees' most satisfactory factors: supervision, relationship with co-worker, nature of work, opportunities for promotion and present pay.

Krishnan and Krishnan(2009) present a paper on **Market perception of synergies in related acquisitions** with the help of event study and analyzed that strong positive association between abnormal security returns for the bidding firm surroundings an acquisition announcement and post acquisition operating performance measured for by return on sales for combined firm.

Cortes et el (2015) present a paper on **effects of merger and acquisition on shareholder wealth: Event Study for Latin America Airlines** in January 2015 by using event study and evaluate that there is not focus on much research. Negative impact on company's result is not conclusive when analyzing the effect on the value of buying companies.

Friesen(2015) research on **capital market's assessment of European airline merger and acquisition** by using event study and find that there is empirical evidence on the value effects for the bidding and target shareholders of airfrance and KLM and notice there is significant growth after merger and acquisition

RESEARCH GAP

From my analysis of various literatures and theories on merger and acquisition, have observed that most mergers and acquisition in the Airline industry result can into three different result that is merger can generate either Positive result, Neutral result or Negative result. The literatures and their various results can be classified as follows:

- Studies on impact of merger and acquisition on overall performance that market price increases so overall profit also increases and give importance to achieve fast growth, superior market share, productivity and brand image and significant growth after merger and acquisition.
- This studies also notice that after merger and acquisition prohibition of new entrants so competition is very less and debt increases and company faces loss so that overall performance of company not good.
- The last classification of literatures is studies on impact of merger and acquisition also give neutral impact on overall performance of the company due to some factors.

RESEARCH METHODOLOGY

OBJECTIVE OF THE STUDY

- To know the overall impact of merger and acquisition on companies' performance.
- To gain the knowledge of merger and acquisition and its impact on Airline industry.
- This research aims to establish if the financial performance improve after Mergers and Acquisitions in Aviation sector.

DATA COLLECTION

- The present study is mainly based on secondary data. The data was obtained from the annual reports relating to the various financial performances of Airline industry, The data has been augmented from websites, various books and journals
- The data of just preceding years of the year in which merger/acquisition took place has been considered as Pre-Merger Study and the data after the year of merger/acquisition is considered as Post-Merger Study.
- The research methodology employed is the descriptive research design in order to explain the variation between pre-merger accounting ratios and post-merger accounting ratios. The population and sample size

https://www.gapgyan.org/

of the study, data collection, hypothesis testing, analysis techniques, and the analytical model to be utilized in the study are identified below.

PERIOD OF STUDY

- The present study covers a period of 6 years, 2 years before the date of M&A and 2 years after the date of M&A subsequently.

RESEARCH DESIGN AND SAMPLE SIZE

The research methodology employed is the descriptive research design in order to explain the variation between pre-merger accounting ratios and post-merger accounting ratios and their impact on the financial performance of the merged airlines companies. This type of design will enable the study to depict whether mergers and acquisitions do have an impact on the financial performance of companies. Most of the companies have engaged in mergers and acquisitions in efforts to improve financial performance and maximize shareholder value. However the samplesize of this study will comprise of airlines companies merger deals that happened between the years of 2006 to 2012. They include the followings:

NAME OF THE COMPANY ACQUIRED	NAME OF THE COMPANY GOT MERGED	YEAR OF THE MERGER
INDIAN AIRLINES	AIR INDIA	2007
AIR BERLIN	DBU	2006
AIR BERLIN	LTU	2007
AIR BERLIN	LGW	2009
AIR BERLIN	BELAIR	2009
AIR BERLIN	FLYNIKI	2011
ALASKA AIRLINES	VIRGIN AMERICA	2016
REPUBLIC AIRWAYS HOLDINGS	MIDWEST AIRLINES	2009
REPUBLIC AIRWAYS HOLDING	FRONTIER AIRLINES	2009

LIST OF THE COMPANIES USED IN STUDY

SR NO.	ACQUIRER COMPANY	TARGET COMPANY	YEAR
1	CATHAY PACIFIC	DRAGONAIR	2006
2	UNITED	CONTINENTAL	2011-12

TOOLS AND TECHNIQUES

To analyze the available financial information of the companies various techniques of applied research and accounting tools like comparative ratios have been employed. The following are financial ratios and their means were calculated for analyzing the financial performance of the companies:

1) **Earnings per Share Ratio** = $\frac{\text{TOTAL EARNINGS−PREFERENCE DIVIDEND}}{\text{NO OF OUTSTANDING SARES}}$

EPS is the portion of company's profit allocated to each share of common stock. EPS measure company's profitability. It is so important ratio for investors and stock market traders. While calculating EPS it is advisable to weighted ratio because the number of outstanding shares can change over time.

2) **Operating profit ratio** = $\frac{\text{OPERATING PROFIT}}{\text{TOTAL REVENUE}}$

It is a profitability/performance ratio used to calculate how much profit generate by company from its operations, before interest and tax. It indicates how well a target company performs in comparison to its peers and how efficiently a company manages its expenses so as to maximize profitability.

3) **Return on capital employed** = $\frac{\text{EARNING BEFORE INTEREST AND TAX}}{\text{CAPITAL EMPLOYED}}$

https://www.gapgyan.org/

Where, Capital employed = Equity capital + Preference capital + Reserve and surplus + Long term debt – Fictitious assets

ROCE is a useful metric for comparing profitability across companies based on the amount of capital they use.

4) **Debt equity ratio** = $\frac{\text{TOTAL LIABILITIES}}{\text{TOTAL SHAREHOLDER'S EQUITY}}$

This ratio is used to evaluate a company's financial leverage. It reflects the ability of shareholder equity to cover all outstanding debts in the event of a business downturn.

5) **P/L ratio**= $\frac{\text{NET INCOME}}{\text{NET REVENUE}}$

It is one of the commonly used profitability ratio to know profitability of the business activity. It indicates that how much profit/loss generated from business activities.

6) **Dividend coverage ratio**= $\frac{\text{NET INCOME}}{\text{DIVIDEND DECLARED}}$

It is a financial metric that measures the number of times that a company pays dividends to its shareholders.

7) **Interest coverage ratio**= $\frac{\text{EBIT}}{\text{INTEREST EXPENSE}}$

It measure of company's ability to meet its interest payments on its debt with EBIT. It determines how easily a company can pay interest expenses on outstanding debt.

8) **Return on Equity**= $\frac{\text{NET INCOME}}{\text{AVERAGE SHAREHOLDERS'EQUITY}}$

It measure how effectively management is using company's assets to create profits. It is used to measure the overall profitability of the company from preference and common shareholders' point of view.

9) **Diluted EPS ratio**= $\frac{\text{TOTAL INCOME} - \text{PREFERENCE DIVIDEND}}{\text{OUTSTANDING SHARES} + \text{DILUTED SHARES}}$

It is important for shareholders simply because it lays down the earnings that a shareholder would get in the worst of the scenario.

SR NO.	RATIOS	PRE MERGER			POST MERGER		
		2004	2005	MEAN	2007	2008	MEAN
1	DEBT EQUITY (Times)	0.34	0.26	0.3	0.29	0.66	0.475
2	EPS (Cents)	131.4	97.7	114.55	178.3	217.5	197.9
3	DILUTED EPS	-	-	-	-	-	-
4	P/L (%)	11.3	7.4	9.35	11.2	9.9	10.55
5	RETURN ON CE (%)	13.8	9.7	11.75	12.6	11.3	11.95
6	DIVIDEND COVERAGE(Times)	2	2	2	2.1	72.5	37.3
7	INTEREST COVERAGE(Times)	9	9.3	9.15	9.8	7.8	8.8
8	RETURN ON EQUITY ($)	10.34	9.75	10.04	12.83	9.74	11.28

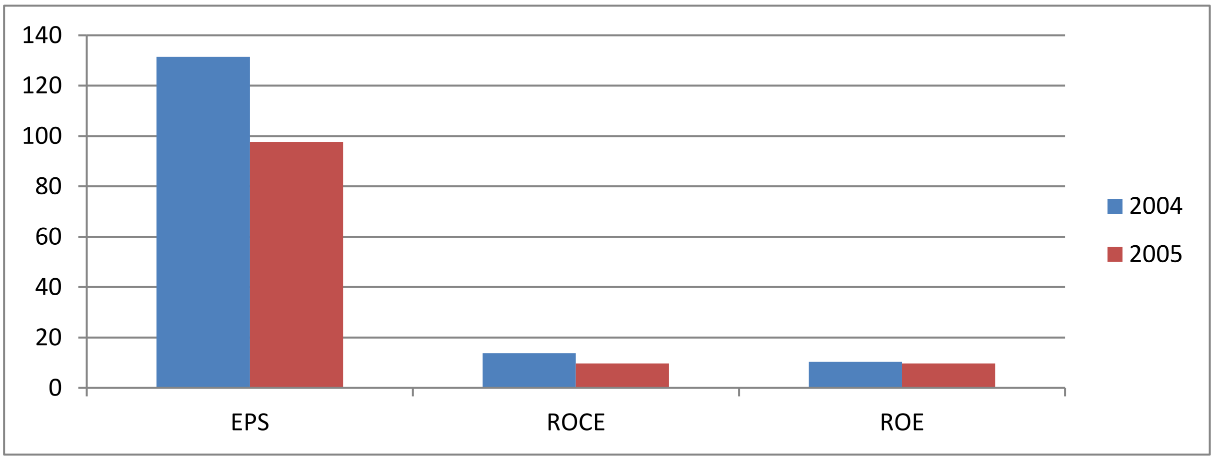


FIGURE 1.0 GRAPHICAL REPRESENTATION OF CATHAY PACIFIC AIRLINES RATIOS (PRE-MERGER)

GRAND ACADEMIC PORTAL
RESEARCH JOURNALS
GAP GYAN
A GLOBAL JOURNAL OF SOCIAL SCIENCES
(ISSN – 2581-5830)
Impact Factor – 4.998

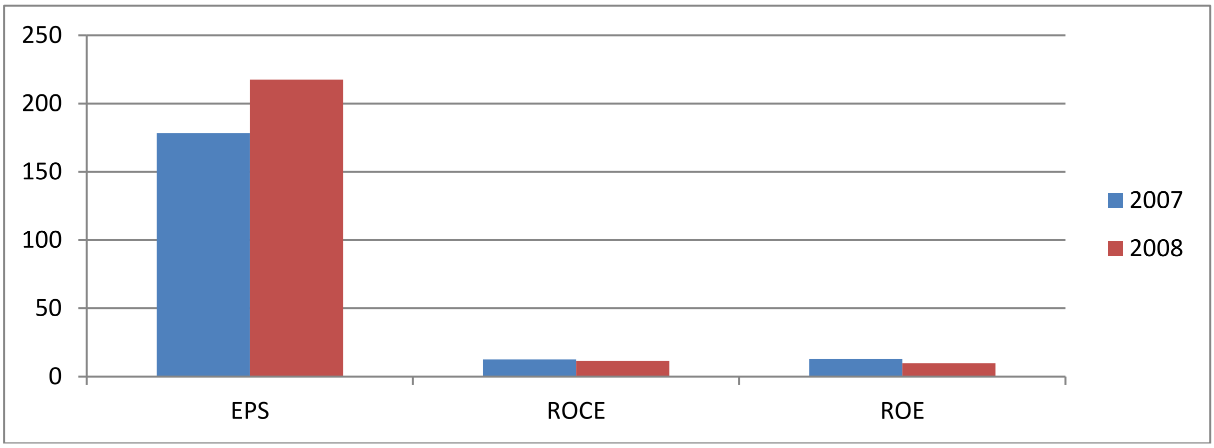


FIGURE 1.1 GRAPHICAL REPRESENTATIONS OF CATHAY PACIFIC AND DRAGONAIR AIRLINES RATIOS (POST MERGER)

SR NO.	RATIOS	PRE MERGER			POST MERGER		
		2009	2010	MEAN	2013	2014	MEAN
1	OPERATING PROFIT($)	101.45	23.80	62.62	30.64	16.39	23.51
2	EPS($)	4.32	1.22	2.77	1.64	3.05	2.34
3	DILUTED($)	4.32	1.08	2.7	2.93	1.53	2.23
4	EBT-EQUITY(Times)	0.39	0.32	0.35	0.04	0.05	0.04

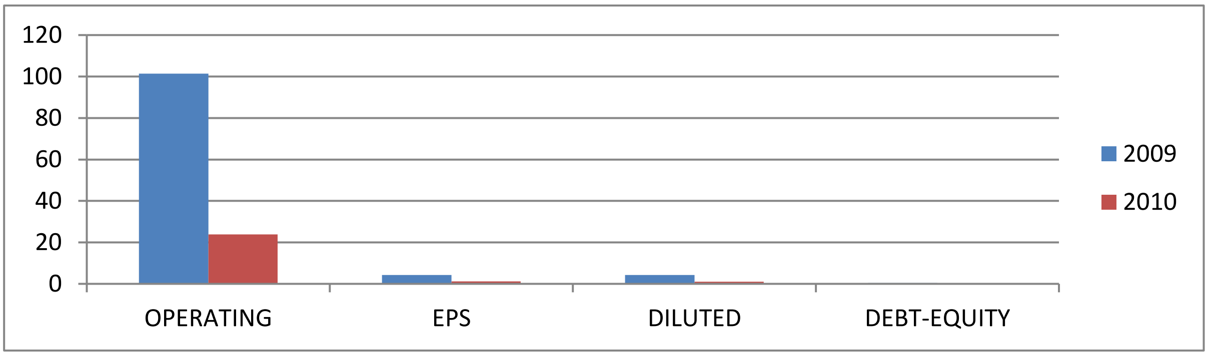


FIGURE 1.2 GRAPHICAL REPRESENTATIONS OF UNITED AIRLINES RATIOS (PRE MERGER)

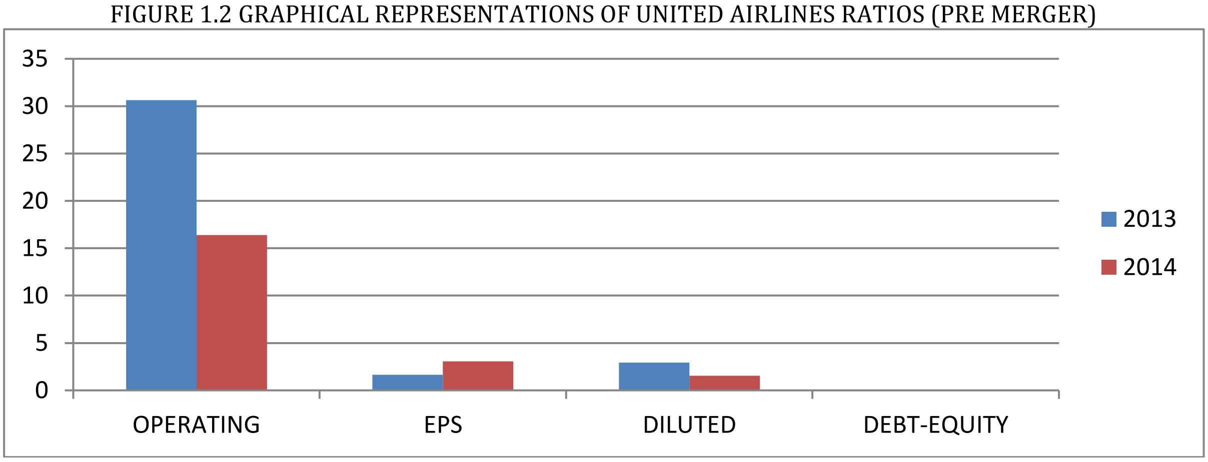


FIGURE 1.3 GRAPHICAL REPRESENTATIONS OF UNITED AND CONTINENTAL AIRLINES RATIOS (POST MERGER)

https://www.gapgyan.org/

LIMITATIONS OF STUDY

- As the complete source list of all Airlines companies is not readily available so the study is restricted to two airlines companies' merger and acquisition.
- The study is limited for the 2-3 years pre and post merger and acquisition period
- The profitability ratios are used to depict the financial performance of the selected companies and statistical methods are not used.

DATA ANALYSIS

The mean of debt-equity ratio of Cathay pacific is 0.3times (Pre-merger) and Post merger is 0.475times which shows that the company is being financed by creditors rather than from its own financial sources which may impact negatively on company's financial performances. The mean of EPS is 114.55cents Pre-merger and 197.9cents Post-merger which shows that company is capable of generating a significant dividend for investors and it also indicates that potential worthwhile investment, depending on the market price of the stock. The mean of P/L margin ratio is 9.55% Pre-merger and 10.55% Post-merger which indicates that profit generated from business activities increases so that its impact on business is positive. There is no major difference between mean of ROCE Pre and Post merger but it slight increases which shows that more efficient use of capital and which minimize the cost of business. The mean of Dividend coverage ratio is 2times Pre-merger and 37.3times Post-merger that indicates that the earnings generated by the company are enough to serve shareholders with their dividends, if dividend coverage ratio is more than 1 is considered good. The mean of Interest coverage ratio is 9.15times Pre-merger and 8.8times Post-merger which indicates that after merger it decreases so lower the interest coverage ratio higher the company's debt burden. The mean of ROE 10.04% Pre-merger and 11.28% Post-merger which shows that higher the ROE, more efficient the company's operations are at making use of funds.
The mean of Operating profit ratio of United airline is 62.62$ Pre-merger and 23.51$ Post-merger that indicates company was not perform well after mergers. Company fails to generate enough profit from operating activities. There is no significant difference in EPS pre and post merger but it decreases which directly affect negatively on profitability of the business. The mean of Debt-equity ratio is 0.35times Pre-merger and 0.04times Post-merger which indicates that lower the debt equity ratio is good for company financed by own funds rather than creditors and impact positively on company's financial performance.

CONCLUSION

The results and analysis of the key financial ratios of the acquiring firms shows that there is significant impact on the overall wealth of the firm and on the profitability of shareholders' in case of CATHAY PACIFIC AND DRAGON AIR AIRLINES merger. On the other hand, in case of UNITED AND CONTINENTAL AIRLINES there is negligible impact on the overall wealth and shareholders' profitability. This study considers only the fundamental aspects of analysis but this research can further be extended to statically aspects also.

REFERENCES

Mahesh, R., & Prasad, D. (2012). Post merger and acquisition financial performance analysis: A case study of select Indian airline companies. International Journal of Engineering, Management & Sciences, 3(3), 362-369.
Peters, C. (2006). Evaluating the performance of merger simulation: Evidence from the US airline industry. The Journal of law and economics, 49(2), 627-649.
Adrangi, B., Chow, G., &Gritta, R. (1991). Market structure, market share, and profits in the airline industry. Atlantic Economic Journal, 19(1), 98-98.
Gudmundsson, S. V. (2004). Management emphasis and performance in the airline industry: an exploratory multilevel analysis. Transportation Research Part E: Logistics and Transportation Review, 40(6), 443-463.
Bilotkach, V. (2011). Multimarket contact and intensity of competition: evidence from an airline merger. Review of Industrial Organization, 38(1), 95-115.
Kathryn.M.Kelm and V.K. Narayanan George E Pinches
Rast, S., &Tourani, A. (2012). Evaluation of employees' job satisfaction and role of gender difference: An empirical study at airline industry in Iran. International Journal of Business and Social Science, 3(7).
Krishnan, H. A., Krishnan, R., &Lefanowicz, C. E. (2009). Market perception of synergies in related acquisitions. Academy of Strategic Management Journal, 8, 99.
Cortés, L. M., García, J. J., &Agudelo, D. (2015). Effects of Mergers and Acquisitions on shareholder wealth: Event study for Latin American Airlines. Latin American Business Review, 16(3), 205-226.
Cortés, L. M., García, J. J., &Agudelo, D. (2015). Effects of Mergers and Acquisitions on shareholder wealth: Event study for Latin American Airlines. Latin American Business Review, 16(3), 205-226.

https://www.gapgyan.org/

https://www.investopedia.com/terms/m/merger.asp
https://www.investopedia.com/terms/m/merger.asp
https://www.mcgill.ca/iasl/files/iasl/C01-Gautam_Acharya-Roundtable_Discussion.pdf
https://www.ibef.org/industry/indian-aviation.aspx
https://www.slideshare.net/yashkotak21/indian-aviation-industry-or-market-structure-of-indian-airlines
http://www.indianmirror.com/indian-industries/aviation.html
https://www.cathaypacific.com/content/dam/cx/about-us/investor-relations/interim-annual-reports/en/2004_annual-report_en.pdf
https://www.aai.aero/en/corporate/aai-today
https://www.thenational.ae/business/aviation/india-s-aviation-industry-is-struggling-but-its-future-outlook-is-bright-1.79534
https://www.investopedia.com/articles/active-trading/082615/key-financial-ratios-analyze-airline-companies.asp
http://www.annualreports.com/Company/united-continental-holdings
https://www.airlineratings.com/full-service-carrier-product-rating-criteria/