Project Dissertation on
Analyzing the impact of Merger and Acquisition on Big Giant in the Telecom Sector : Vodafone and Idea

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CERTIFICATE

This is to certify that the dissertation report titled "Analyzing the impact of Merger and Acquisition on Big Giant in the Telecom Sector : Vodafone and Idea" is a bonafide work carried out by Mr. Hamender Jain of EMBA 2020-22 and submitted to Delhi School of Management, Delhi Technological University, Bawana Road, Delhi-42 in partial fulfilment of the requirement for the award of the Degree of Masters of Business Administration.

Signature of Guide   Signature of Head (DSM)

Seal of Head

Place:

Date:

DECLARATION

I, Hamender Jain, student of EMBA 2020-22 of Delhi School of Management, Delhi Technological University, Bawana Road, Delhi – 42, hereby declare that the dissertation report "Analyzing the impact of Merger and Acquisition on Big Giant in the Telecom Sector : Vodafone and Idea" submitted in partial fulfilment of Degree of Executive Masters of Business Administration is the original work conducted by me.

The information and data given in the report is authentic to the best of my knowledge.

This report is not being submitted to any other University, for award of any other Degree, Diploma or Fellowship.

Place: Delhi Hamender Jain

Date: 07 May 2022

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I would like to thank everyone including my friends and relatives who have helped me directly or indirectly in completion of my research work.

My sincere gratitude goes out to my colleagues whose participation in the project gave many valuable inputs for its completion.

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Executive Summary

A business might grow in two ways. Either the growth could be with the passage of time, or it could be inorganic i.e., a sudden expansion in the workforce, customers, infrastructure etc. which might lead to an overall increase in the revenues and profits of the business. M&A are basically the execution of some form of transactions amongst the two companies combining in some form. The two terms are often used interchangeable but refer to different legal meanings. M&A are instruments which help in growth of an organization and are gaining wide acceptance by businesses in India.

M&A are becoming the need of hour to deal with competition and macroeconomic factors, for other the objective may be to get global recognition and become market leaders. Whatever be the objective of business, it is observed that M&A has grown drastically in recent years and become popular method for restructuring.

This project talks about corporate restructuring through ownership restructuring by M&A. Such decision are strategic which lead to the maximising the growth of a firm. This can be achieved by enhancing the operations of business , helping them in creating a larger value along with achieving business objective and financial strategies. This external growth strategy has recently acquired a lot of attention due to privatization, globalisation along with increased deregulation, enhanced competition, breaking of trade barriers. M&A decisions are capital budgeting and strategic decisions and impact the entire organisation. Such decision requires review at every level within the organisation.

The success of M&A depends on the correct valuation of company which acquiring company targeted. Determining the correct value is one of the most challenging tasks. Analysts face many complications and choices while assessing the target company's value. The proper planning along with the correct methodology help in correct valuation of target company.

The project aims is to find the financial performance of the two giants in the Telecom Sector Vodafone and Idea prior to the merger and after the merger. For carrying out

the comparison the financial ratios like Profitability, Liquidity and Leverage will be used.

For achieving the objective stated above and gaining a deep insight firstly a comprehensive review of the past papers has been done. The literature review helps in giving the research direction and understanding the problem in a better way.

The study conducted helped in understanding the reason behind the merger of these two telecom giants and impact that it has on performance of the two companies. For carrying out this study secondary data was taken from moneycontrol.com, capitaline.com and screener.com. Hypothesis was proposed and after conducting paired t test conclusions were drawn.

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1. INTRODUCTION

The current business environment is experiencing huge competition, globalization and tremendous change in technology. In order to cope up businesses are being forced to focus on enhancing the business values, business portfolios, ownership and many more things so as to reduce their cost of capital along with increasing the value of shareholder. Corporate restructuring can be one way for achieving this. It includes Ownership, Asset and Business Restructuring. The first one leveraged buyouts, joint ventures and strategic alliances. In the second one asset and their ownership is acquired. The third one involves the reorganizing business units or divisions.

M&A helps in –

- Limiting competition
- Economies of scale
- Overcome profitability
- Utilize resources and managerial skills
- Increase income with less investment
- Reach foreign market
- Create strategic opportunism image
- Accumulate major economic powers of company

In merger with consolidation, two or more companies combine with each other under the legal entity of one of the current companies, this is called as merger through absorption.

Another type of merger is Acquisition. In this type one company purchases another company without having a major share.

Mergers are broadly classified as horizontal, vertical, and conglomerate. Horizontal merger occurs when similar type companies having similar type of business combine. However, in case of vertical merger two different types of businesses combine. When combination of firms occur when unrelated lines are there the merger is termed as Conglomerate.

Motive behind M&A are following -

1) Accelerating Growth – The companies achieve growth in current position by two ways, one is by expanding existing market another is by entering in new market. The expanding its existing market require that the company to develop its operating facilities which requires time as well as additional resources. In case of lack of resources and time needed for internal development company have option to acquire resources from outside through mergers and acquisitions. This is specifically when companies intended to enter in new products/markets and lack necessary resources. In this particular cases, the company acquire existing company with desired infrastructure and skills to grow quickly and increase in shareholder's value. Thus, Mergers and acquisitions help companies to accelerate the pace of the company's growth in a convenient and inexpensive manner.

2) Enhancing profitability – The companies can enhanced their profits through "synergy", "operating efficiency" and "economies of scale".

3) Diversifying the risk– When companies looking for growth through the combination of firms in different business they are basically diversify the risk. This type of merger is called conglomerate merger.

4) Reducing tax liability - Firm who is current in losses cannot take the advantage of carry-forward provision as may not be able to generate enough profits however if such firm combine with the other firm who is in profit, the merged firm can utilize the carry-forward loss and thereby take taxes benefits.

5) Market power - The combined firm improve its market power by reducing competition.

6) Financial Benefits – M&A can provide financial synergy and following benefit to company.
    a. In case company found difficult to grow internally, they can merge or acquire other company for their growth.

b. Deploying Surplus cash – In case company have surplus cash available to them and it is not possible to grow internally or there are not enough internal opportunities to grow, in such case company grow externally by merger and acquisition.
c. Depth Capacity - Firms get cash flows stability which enable to serve more debt and reduce risk of insolvency.
d. Lowering the finance cost- Firms get the financial stability hence provide more protection to lenders as a result of which money can be borrow at lower rate of interest.

Merger and Acquisition Planning

As it is seen that correct valuation is important for the success of M&A. Apart for this, other important thing is planning, search& screening of target firm, financial evaluation of target firm and finally, integration –

1) Planning - The first step i.e. planning talks about the detailed analysis of firm-specific and industry-specific information. During planning phase, acquiring company collect the data and information of target firm which include market share, capital structure, profitability, operations, culture, etc. The information about the industry growth, competition, laws and regulations, etc. collected as well. The two planning process steps are –
   a. Strategy - The acquiring firm's strategy inform about the objective and other growth options which they are looking. Its own strength and weaknesses need to be assessed before formulating acquisition strategy.
   b. Approaches and criteria - The acquiring firm's should spell out its approach to acquisitions and the criteria to be applied to acquisitions.

2) Screening and Search - The objectives of acquiring firm might include gain market power and leadership; improving profitability; achieving cost reduction; attaining faster growth; and improving managerial effectiveness etc. Based on this search for target firm starts. After search, the next step is screening which involve shortlisting of target firms.

3) Financial assessment - The third step in this process is financial assessment. It is the most important stage of decision process in which the valuation of target company performed based on the data and information collected. Apart from financial position, market position of target firm, due diligence must include the evaluation of organisational culture, skills of employees, core competencies of target firm etc.

4) Integration – Five rules given by Peter Drucker for the integration process are;
   - Ascertain that the acquired company shares a core of unity with the parent. To take advantage of synergies, the acquiree and acquired firm should have overlapping qualities such as common technology or markets.
   - Potential skill assessment required by the acquired company which can be made available for the acquired company.
   - The acquirer must respect the acquired firm's goods, markets, and consumers..
   - Within a year, skilled top management should be provided by the acquirer for acquired company.
   - Within a year, cross-company promotions should be made by the acquirer.

1.1 Background

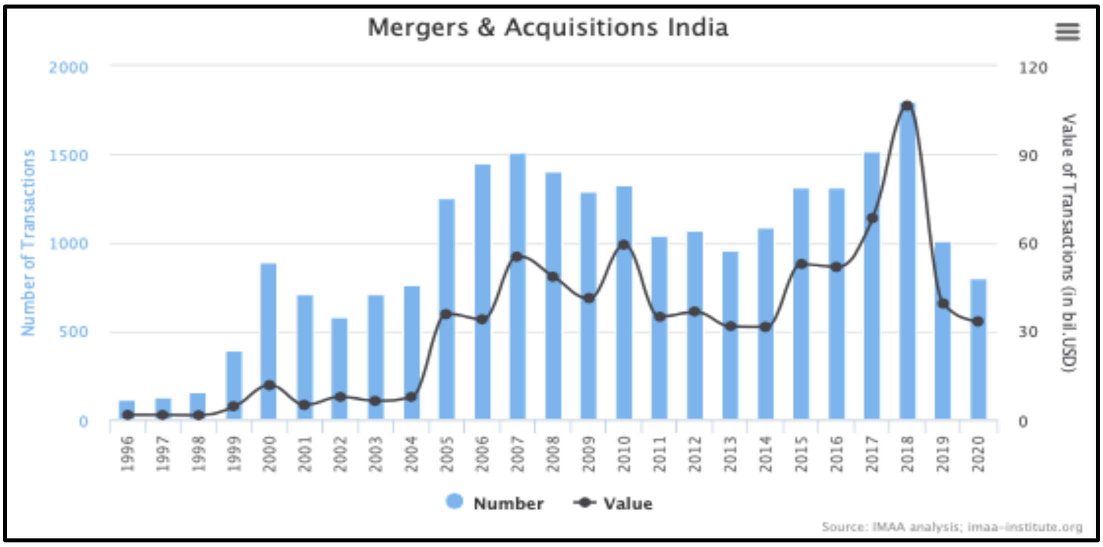
Table 1 show the data of merger and acquisition in India from 1996 till 2020. During this period, it is observed that the international firms enter into the Indian market due to economic reform and deregulation of Indian economy which increase the competition and pressure on Indian companies which leads to structural changes. The amount involved in deals has shown variation. In 2019, the value of M&A deals was $39.36 billion, compared to $33.30 billion in 2020. In 2019, there were 1008 mergers and acquisitions, compared to 798 in 2020. The numbers of 2019 & 2020 are considerably less as compared to 2018 in which deals worth US $106.48 billion and 1798 in number took place.

Table 1.1: M&A Deals in India Since 1996

Mergers & Acquisitions India		
Category	Number	Value (Billion USD)
1996	115.00	1.60
1997	127.00	1.59
1998	156.00	1.49
1999	395.00	4.48
2000	892.00	11.66
2001	709.00	5.04
2002	582.00	7.74
2003	706.00	6.32
2004	763.00	7.81
2005	1254.00	35.94
2006	1449.00	34.03
2007	1510.00	55.45
2008	1402.00	48.44
2009	1294.00	41.08
2010	1329.00	59.20
2011	1045.00	34.88
2012	1070.00	36.53
2013	958.00	31.61
2014	1086.00	31.44
2015	1310.00	52.77
2016	1310.00	51.77
2017	1520.00	68.35
2018	1798.00	106.48
2019	1008.00	39.36
2020	798.00	33.30

Source: https://imaa-institute.org (Data available up to 2020)

Figure 1.1: Merger and Acquisition in India Since 1996



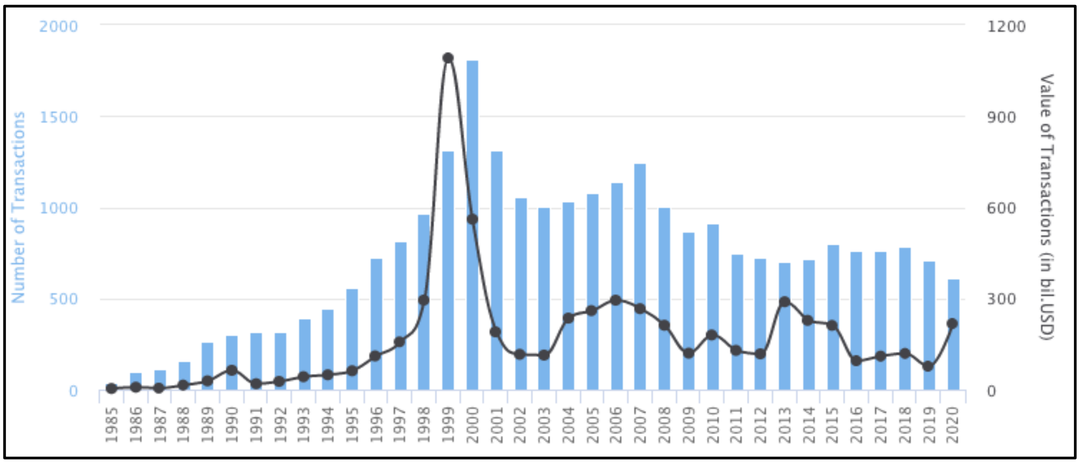
Source: https://imaa-institute.org (Data available up to 2020)

Merger and Acquisition in Telecommunication Industry

The Indian telecom business is one of the world's fastest expanding and most competitive. India's communications network is the world's second largest, with 1180 million subscribers as of January 31, 2022. In terms of internet user also, India is second largest in the world with the total subscriber of 750 million. Telecommunication industry has played a significant role and supported the economic development of India. It is the back bone of digital India which narrow the rural-urban digital drive . The Indian telecom Sector is broadly divided into three segments namely Wireless Service, regular telephones, and Internet. The telecom market is expected to grow by around 10.3 % on annual basis. Airtel, Vodafone, Reliance, Idea, Aircel and BSNL are amongst the top players in the wireless sector. The telecom sector is plagued with lot of competition. It has been tough for majority of telecom workers to deal with costly problems. The entry of JIO was a severe setback for the majority of Indian telecom businesses.

Figure 2 and Table 2 shown the world-wide telecommunication deals since 1985. From the table, it is observed that maximum number of deals 1813 occurred in 2000 of US $561 billion. In term of value the maximum was US $1091 billion in 1999 with 1315 deals. In 2019, 712 deals took place worth US $77 billion as compared to 611 deals worth US $218 billion in 2020. The lower numbers in 2020 justified by decline in world economic due to covid restrictions.

Figure 1.2: Worldwide M&A deals in Telecommunication Industry



Source: https://imaa-institute.org/m-and-a-by-industries (Data available up to 2020)

Table 1.2: Worldwide M&A Deals in Telecommunication

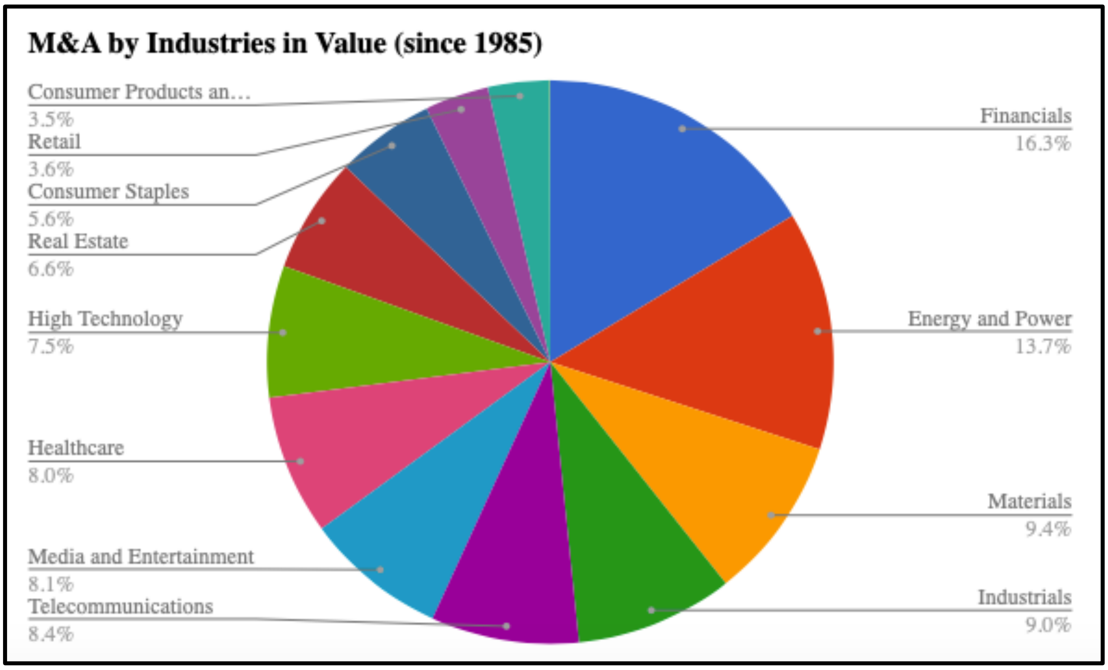
Mergers & Acquisitions in Telecommunication		
Category	Number	Value (Billion USD)
1985	41.00	3.51
1986	98.00	7.80
1987	113.00	4.93
1988	161.00	14.82
1989	263.00	28.64
1990	304.00	63.43
1991	319.00	19.22
1992	315.00	26.94
1993	395.00	42.30
1994	448.00	48.76
1995	556.00	61.92
1996	728.00	110.60
1997	814.00	156.94
1998	968.00	294.32
1999	1315.00	1091.29

Mergers & Acquisitions in Telecommunication		
2000	1813.00	560.75
2001	1316.00	189.99
2002	1058.00	115.97
2003	1002.00	113.40
2004	1036.00	235.13
2005	1077.00	259.75
2006	1138.00	294.10
2007	1249.00	266.25
2008	1001.00	211.64
2009	868.00	119.80
2010	910.00	179.76
2011	745.00	128.92
2012	724.00	117.56
2013	705.00	289.00
2014	716.00	227.71
2015	802.00	211.18
2016	760.00	94.92
2017	760.00	109.97
2018	786.00	118.90
2019	712.00	76.90
2020	611.00	217.30

Source: https://imaa-institute.org/m-and-a-by-industries (Data available up to 2020)

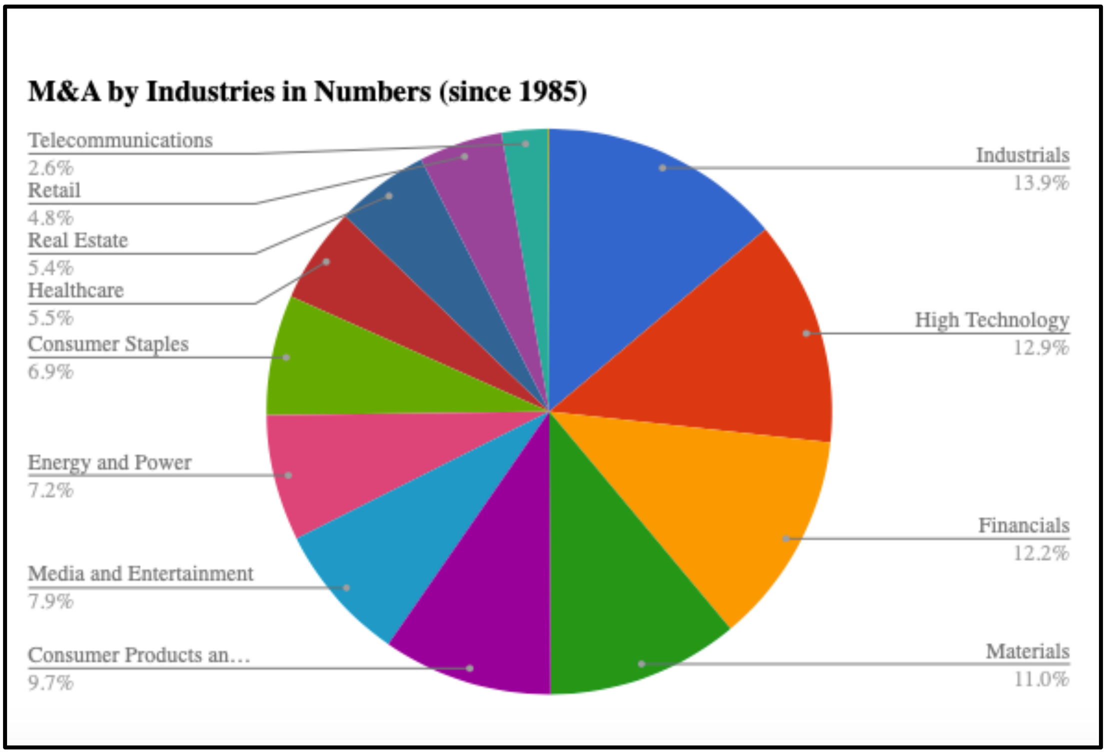
Figure 3 & 4 shown the world-wide M&A deals by Industry type since 1985. From figure 3, it is observed that telecommunication industry contributed 8.4% in term of deal value and from figure 4 it is observed that the contribution of telecommunication industry in terms of number of worldwide deals is 2.6% only.

Figure 1.3: Worldwide M&A Deals by Industry in Value



Source: https://imaa-institute.org/m-and-a-by-industries (Data available up to 2020)

Figure1.4: Worldwide M&A Deals by Industry in number



Source: https://imaa-institute.org/m-and-a-by-industries (Data available up to 2020)

1.2 Problem Statement

Whenever a new player enters the market, it becomes a threat to the existing players. Sometimes it becomes difficult for many companies to survive. To stay in this competitive market, a way out is to have mergers or acquisitions. Mergers and acquisition are done to limit competition, gain economies of scale, overcome profitability, utilize resources and managerial skills, increase income with less investment, reach foreign market, create strategic opportunism image, and accumulate major economic powers of company. This project studies the same concept of corporate restructuring through ownership restructuring with the help of M&A. This external growth strategy has recently acquired a lot of attention due to privatization, globalisation along with increased deregulation, enhanced competition, breaking of trade barriers. M&A decisions are capital budgeting and strategic decisions that affect the entire organisation and its interaction with its business environment; therefore, such decisions must be reviewed at every level within the organisation. This project will investigate the financial performance of the two telecom behemoths Vodafone and Idea following their merger.

1.3 Objective of the study

Around the world, M&A contributed a lot in external growth of the firms. Since 1985, M&A deals in telecommunication industry contribute 8.4% in value and 2.6% in terms of number. Since, M&A is one of the most popular mean of corporate restructuring, there are several aspect that are worth of study. Objective of this project is to:

1. Examine Vodafone's financial performance before to the merger.
2. Examine Idea’s financial performance before to the merger
3. Examine the financial success of the Vodafone idea formed by the merger.

1.4 Scope of the Study

In the current study the Vodafone and Idea merger are studied to evaluate the deal design. Furthermore, the financial results of Vodafone and Idea prior to and after the merger is evaluated and compared. For this purpose, five year post and five year pre-merger data collected and compared.

2. LITERATURE REVIEW

The Literature review present in this section helps in understanding the concept of mergers and acquisitions. Merger occurs when two or more companies may lose their legal entity to form a new company. Mergers could be as horizontal, vertical, and conglomerate. This section highlights the work done by various researchers in mergers and acquisitions specifically in respect of the telecom sector. Around 10 research papers were studied which were related to the scope of this project. They not helped in understanding the research problem but also helped significantly in giving the problem a research direction. This section will also help in understanding the various concepts and valuation techniques used in M&A.

Atashi Bedi in his paper titled "Post Acquisition Performance of Indian Telecom Companies: An Empirical Study "conducted a study for finding out the difference between pre and post- acquisition performance of five telecom companies where Mergers took place from the period 2000-10. For carrying out this analysis the author made use of profitability, liquidity and solvency ratios. For analysing the performance of the companies, accounting ratios and paired sample t-Test were used. The author cited that the most popular means of corporate restructuring are Mergers and Acquisitions (M&A). To improve the financial performance and growth it is the best strategy. It has been seen that the performance of companies improves significantly post M&A thereby benefitting the overall wealth of shareholders. After carrying out the study it was seen that not much improvement was observed in the liquidity position of the companies. This was concluded based on decreasing Current ratio in most of the cases. Not much improvement was seen in profit margin post-merger this is a very crucial tool since it helps in showing the effect of merger on the profits of the company. It has been shown that the merger activities negatively affected the solvency position of firms. The t-test concluded that in pre- and post-merger period no difference was seen between the mean score of different ratios. Thus, it has been concluded by the author that not much improvement was seen in the financial performance of the telecom companies.

Shivani Soni in her paper titled “Idea-Vodafone Merger-Post Merger integration” talks about the merger between Idea Cellular and Vodafone India. The author cited the reason behind the merger and the impact this merger had on the Indian Telecom Industry. The rationale behind the merger has also been discussed. In case if any other company wants to go for mergers some recommendations have also been provided. The author has cited the different benefits like making Vodafone and Idea top player, better network coverage for people, cost savings etc.

Dr. Ashok Kumar Panigrahi and Dr. Vijay Joshi described the specifics, consequences, and expectations of a merger in their article titled "A Post-Merger Analysis of Vodafone-Idea Ltd." The author has researched the merger of Vodafone India and Idea, as well as the intricacies of their agreement. In addition, an analysis of the merger's impact on the Indian telecom sector has been conducted and given.

Wilcox et al. [1] investigated forty-four M&A transactions involving 89 partners in the telecommunications industry. They examined hypotheses on the impact of near and far diversification, market price response to M&A announcements, and firm size on market valuation. The author discovered that M&A involving partners in linked businesses outperforms M&A including partners in unrelated businesses. Furthermore, market value increases for larger organisations are comparable to those experienced by smaller firms in M&A transactions. The writers also emphasised on the fact that when a larger and a smaller firm form an alliance, the smaller firm benefits considerably more than the larger firm..

The manner in which the corporate business entities value the mergers and acquisitions was carried out in [2]. Here the authors explained the relevance of goodwill, marriage value, and fair value concept in corporate business asset valuation along with the existing models of valuation i.e. Balance sheet model, Accounting/ Financial ratios as well as Discounted cash flow. It has been shown that value of holding property to the business should be measured against the return that the equity could achieve both within the business and elsewhere. Further it emphasized on the fact that a valuer is responsible for interpretation of financial and physical information. He must have thorough understanding of nature of the business under consideration in M&A.

A study on the use and effectiveness of synergy valuation model in context of merger and acquisition was carried out in [3]. For data collection, A survey was conducted by the author wherein industry experts were asked to find the answer of research questions like which synergy valuation models are generally used , which one is more appropriate ,why and how are they used. In this research, author found that the most popular choices are "net present valuation" as the primary model and "relative valuation" as the control model. It has been mentioned that these two models are complementary and are more relevant when combined . Net present valuation was found as the most appropriate synergy valuation model. In comparison of Synthetic or analytic methodology the findings suggest that the valuation path and the forecasting process determine the effectiveness of the synergy value used.

In [4,] Jay et al. discuss the merger and acquisition of the Indian oil and gas sector. The feasibility and impact of mergers and acquisitions on the firm's operating performance were investigated. The null hypothesis that mergers do not improve the acquiring firm's operating performance or shareholder wealth was tested. For this analysis, two oil and gas industry mergers from 2007 were used (the merger of Reliance Industries Limited and Indian Petroleum Corporation Limited (IPCL) and the merger of Indian Oil Corporation and IBP). Financial data from two years (before and after the merger) were examined. Operating Profit Margin, Gross Operating Margin, Net Profit Margin, Return on Capital Employed, Return on Net Worth, Debt-Equity Ratio, and so on.

AYDIN in [5] talked about the business valuation methods. An analysis of three methods balance sheet, Income statement and market along with discounted cash flow was carried out. This was done in order to ascertain which one is the best in the area of mergers and acquisitions. Valuation was found to be the most important factor in the success and maintenance of M&A. An emphasis on DCF method (determining value of establishment on the basis of future performance)was also done. This method was shown to provide more accurate and realistic results. It was also stated that for valuation of companies discounted cash flow method can be used. It was further suggested that for deciding a company's value multiple methods should be used.

[6] investigated the impact of mergers and acquisitions on acquirers' operating efficiency. The macroeconomic elements influencing the acquirer's performance were also investigated. Data from one year before and after the merger was used for the analysis. The data was subjected to a paired t test in order to examine the influence of M&A on the acquirer's operating efficiency.. Financial ratios were taken and null hypothesis was tested. After this study it has been revealed that merger and acquisition added less value than expected for acquired company. The macroeconomic factors identified were timing of deal, global financial crisis.

Authors Ashu et al. evaluated the pre-post-merger financial performance of Indian enterprises that engaged in cross-border merger and acquisition from 1998 to 2009. In this study, authors studies the profitability, liquidity and leverage ratio. The financial ratio of three year prior and three year after had been considered. Author found that the firm size increased significantly however profitability, liquidity and leverage ratio fall significantly. The reasons for this were identified as industry specific considerations, purchase timing, the status of the target's economy's development, and corporations' inexperience in foreign markets due to less understanding of conducting cross border mergers and acquisitions as compared to western counterparts. The firms profitability, liquidity and solvency worsen due of increase in the operating costs and decline in demand. One proposal was that the company diversify its international exposure before engaging in cross-border mergers and acquisitions.

Dr. T.N Anuradha , Sarum Manisha in [4] performed merger and acquisition of telecon sector and service sector. In this study, they compared the performance of telecon companies as well as performance of post-merger of telecon and service sector. The research conducted by using two way ANOVA technique and analysed the profitability, solvency and liquidity ratio data of selected telecon and service industry. They collected the secondary data from internet.

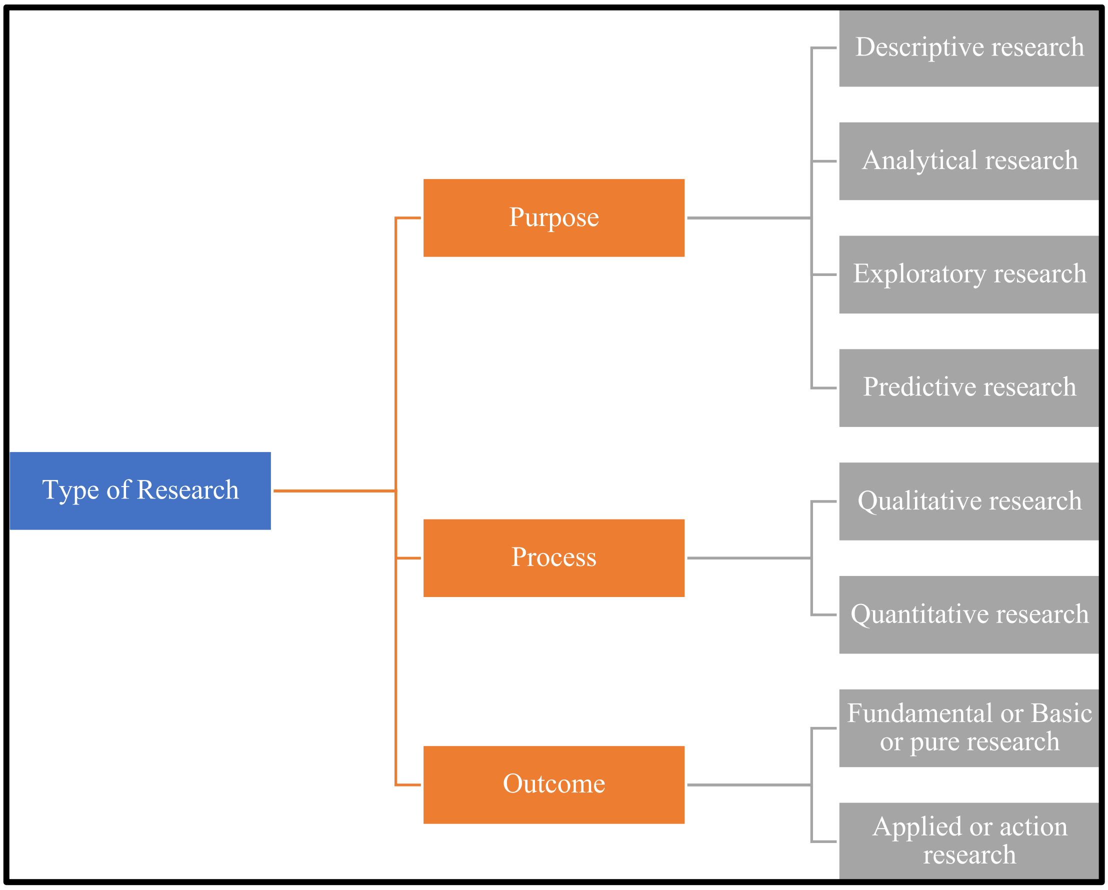
3. RESEARCH METHODOLOGY

Research methodology refers to the techniques that are applied for identifying, selecting, processing and analysing information related to any topic. It is basically a way of systematically solving a research problem. The various steps done by the researcher for carrying out the research work are studied along with the logic adopted. Methodology is as important as are the research methods and techniques. Research methodology varies from problem to problem and is very crucial for carrying out successful research. Research must be Systematic, Scientific in nature, must Addresses directly or indirectly some real problem, should be conducted in controlled environment to the maximum extent possible, must be valid and verifiable and a potential to suggest directions for future research must exist; these are all characteristics of a good research. While carrying out the research one should define clearly and precisely the decision that has been selected and the reason for selecting it as it must be evaluated by others as well.

The purpose of carrying out the research study, how the research problem has been defined, in what way and why the hypothesis has been formulated, the type of data have collected and the method that has been adopted, the reason behind selecting a particular technique of data analysis has been used and other such questions are usually answered after performing research methodology concerning a research problem or study.

As stated in the diagram below, the research can be classified on the basis of purpose, process and outcome. On the basis of purpose can be further classified into descriptive, analytical, exploratory and predictive. Descriptive research focus on description of characteristics. This type of research have no control on variables and make use of frequencies, average and statistical method. Analytical research carries out analysis by making use of secondary data. In this type of research, carries out the analysis by using the fact and information readily available. Exploratory research focuses on gaining insight and familiarity for later investigation. Predictive research is based on data mining, artificial intelligence, deep learning and machine learning.

Figure 3.1: Different Type of Research

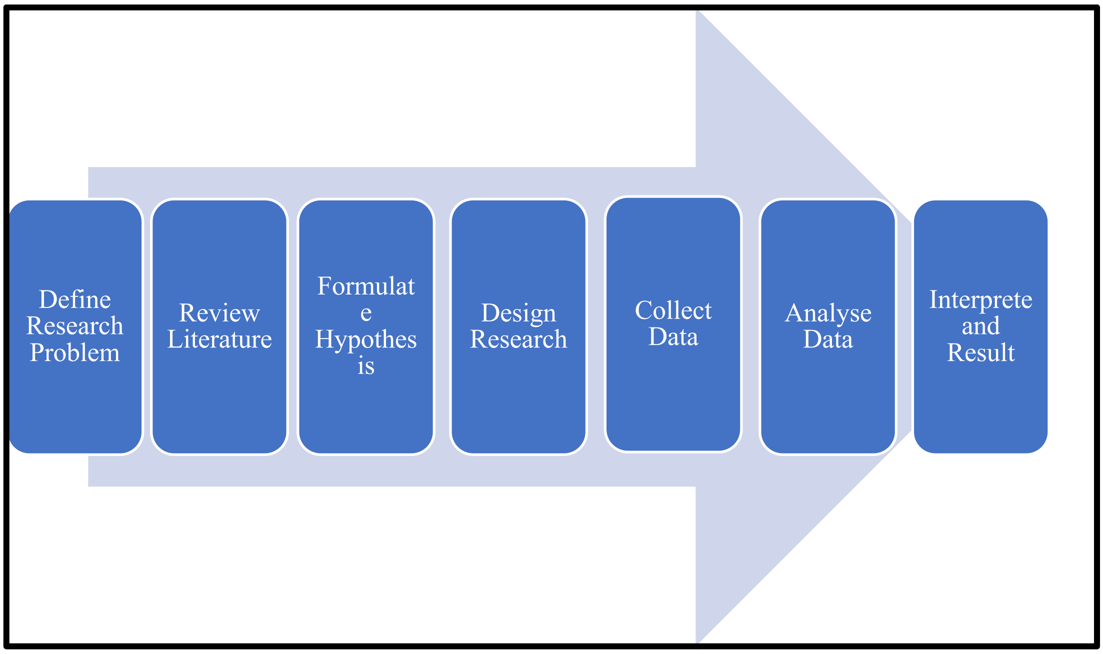


(Source: Marketing Research an Applied Orientation by N.K. Malhotra)

Further, on the basis of process, the research can be classified into quantitative and qualitative. Qualitative research is majorly applicable in behavioral science and aim to determine the motives behind human behaviour. Quantitative research focuses on quantity. Tools used for carrying out the research can be questionaries or using data collection tools. The major purpose of carrying out this type of research is to test hypothesis.

On the basis of outcome, the research can be classified into Fundamental or Basic or pure research and Applied or action research. Applied research is conducted for finding the reasons behind occurrence of any event. Basic research is conducted to find out the new theory or confirming the existing one. It is usually not action oriented and is normally conducted at universities.

Figure 3.2: Research Design Flow



(Source: Marketing Research an Applied Orientation by N.K. Malhotra)

Figure 3.2 depicts the research design flow, the entire process has been explained below:

1. Formulating the research problem: The preliminary step in any research problem is identifying the research problem. This is the most important and basic step in the entire research process. Mainly identifying the research problem helps the researcher in placing the problem in a specific context. It helps in understanding the importance of any research topic and provides a framework which help in presenting the results. Thus, a research problem is a statement which expresses the area of concern, or it can be a condition that needs improvement, any question which exists in literature review and is unresolved or anything which requires some meaningful investigation. For carrying out an ideal research logical answers needs to be answered. Research problems are classified into three types: Descriptive (Issues that requires study), relational (focus on relating two or more factors) and casual research (problems looking at cause and effect).

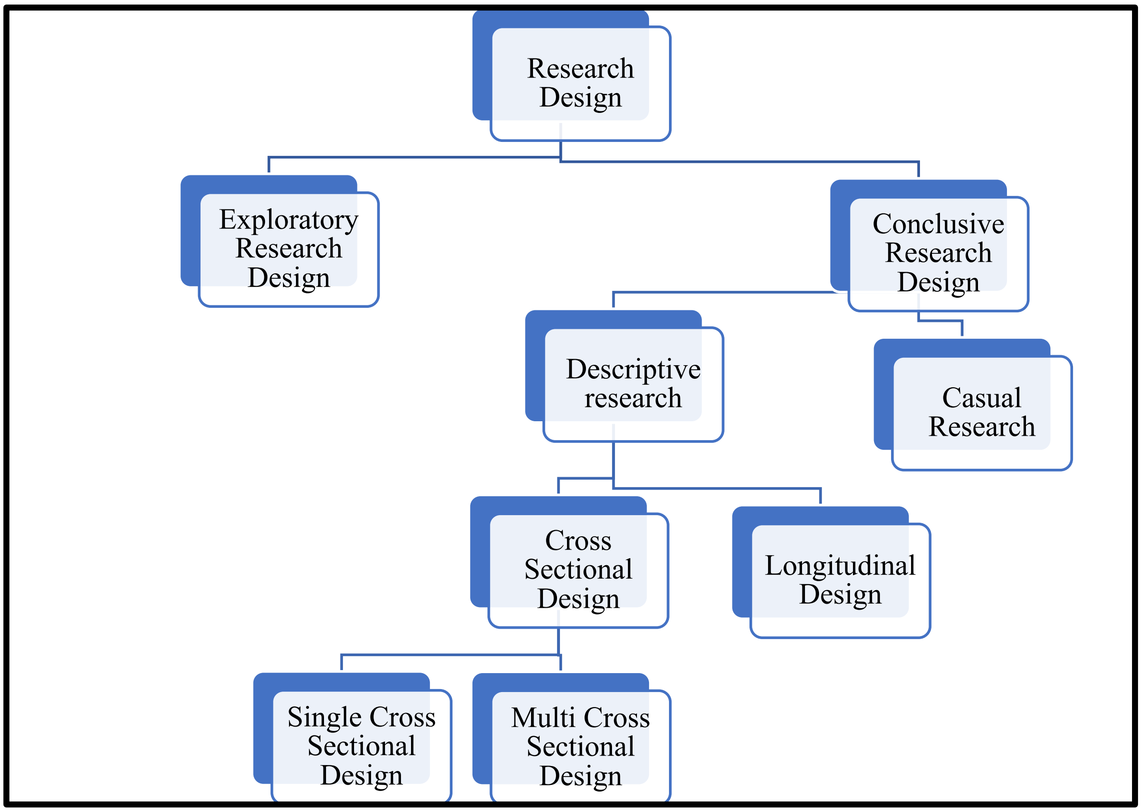
2. Extensive Literature survey: After problem formulation, summarization of the problem statement in brief is required. The literature review helps in

understanding the problem statement in detail and the work done by other researchers in the same field. Not only understanding but it also helps in knowing how and in what ways a problem can be solved. It also gives a research direction to the researchers.

3. Development of working Hypothesis: Once the literature review is done formulation of working hypothesis is required. Working hypothesis is basically a tentative assumption that one makes to test the logical or empirical consequences.

4. Preparing the research design: After formulating the research problem, the research design must be prepared. The conceptual structure within which the research must be carried out must be described in research design. The research design could be exploratory or conclusive. The details of type of research design are mentioned in the table below.

Figure 3.3: Research Design Types



(Source: Marketing Research an Applied Orientation by N.K. Malhotra)

5. Determining sample design: The next step is determination of sample design. During sample designing a population is taken. Population refers to all the items which will be considered for enquiry. Sample designs can be of several types: Deliberate sampling also referred to as purposive sampling or non-probability sampling. Simple random sampling or chance or probability sampling. In this type of sampling every item present in the population possess equal chance of being included in the sample space. And further every possible sample has the chance or probability of being selected. Systematic sampling is the sampling in which every nth item in the sample space can be selected. E.g., every 10th or 15th item. Stratified sampling is another type in which if a sample that must be drawn from the population is not a part of the homogeneous group. If such a scenario exists, then stratified sampling helps in obtaining a representative sample. Quota sampling comes under the category of non-probability sampling method. In this type, the elements from the population are selected on a non-random basis. Here all members of the population or the sample space do not have an equal chance of being a part of the sample group. Multistage sampling also referred to as multistage cluster sampling wherein a sample is drawn from a population by making smaller groups at each stage. This type of sampling is frequently used where the data needs to be collected from large area (geographically spread). A typical application of this type is in national surveys. Sequential sampling performs the evaluation of every sample present in sample space to check if it fits a desired conclusion or not.

6. Collecting the data: Once the sample design has been determined we need to start with data collection. Data collection can be done by several methods like by observation, by conducting personal interviews, by conducting interviews telephonically, by mailing the questionnaires or through schedules. The data could be primary data or secondary data. By primary data we refer to the data which the researcher has gathered on his own. e.g., Surveys, Questionnaires, experiments, interviews etc. Secondary data refers to the data which someone else has collected. E.g., journals, articles, books, census data etc.

7. Execution of the project: This phase includes data analysis and testing of hypothesis. For carrying out the data analysis different statistical formulas need to be applied on the data which was collected during the last phase. In this all the calculations and analysis are carried out which helps in testing of hypothesis. Hypothesis formulated earlier is tested after application of statistical techniques like Chi square test, t-test, F-test. Now either hypothesis is accepted or rejected based on the test run.

8. Generalisations and interpretation: During this phase various interpretations are made based on hypothesis testing. This is the last phase which summarizes the work done and enlists the conclusion made after carrying out the analysis. This is very important as it helps the other researchers also in understanding the existing work and thereby carrying out their research. So here we need to mention all the conclusions which we have arrived at after carrying out this research plan. The report preparation is also a part of this process.

In this project also we started with formulating the research problem. The research problem states that performance analysis of two telecom giants i.e., Vodafone and Idea will be compared prior to the merger of the two companies and after their merger. The literature review is presented in the section 2. It has been seen that Literature review has helped a lot in understanding the problem definition and research direction. After this hypothesis formulation was done. For the current project two hypothesis have been designed: Null hypothesis and alternate hypothesis. The problem statement is making use of conclusive research design. Research design uses quota sampling. For data collection secondary data is being used. The data has been extracted from capital line tool. Paired t test has been used for carrying out the analysis and testing the hypothesis. The results obtained and conclusion have been presented in the last section.

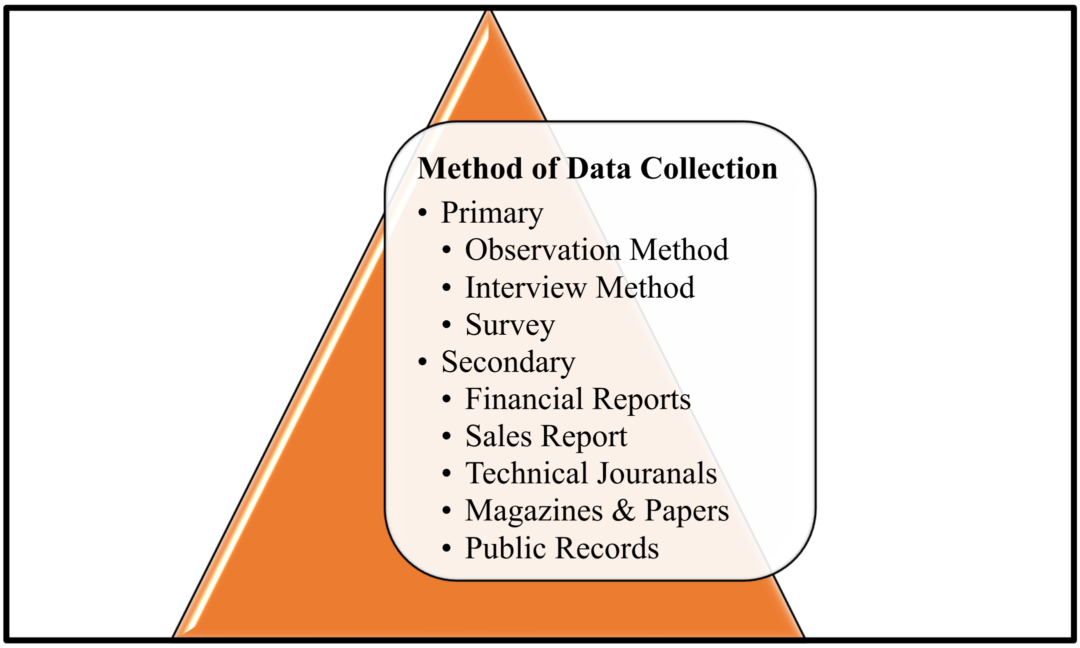
4. ANALYSIS, DISCUSSION AND RECOMMENDATION

4.1 Data collection

Data collection begins after the research problem has been defined. Based on the research problem and research design, researcher decided the method used to collect the data required for study and analysis. There are mainly two type of data that is primary data and secondary data. The primary data are that data which have been collected first time and original in nature. On the other hand, secondary data are that data which have already been collected by others and used by researcher for further analysis and drawn conclusions. There are various methods of data collection, the selection of the appropriate method depends on the following factors -

1) Nature of problem
2) Time
3) Resource
4) Accuracy required

Figure 4.1: Data Collection Methods



(Source: Research Methodology by C.R Kothari)

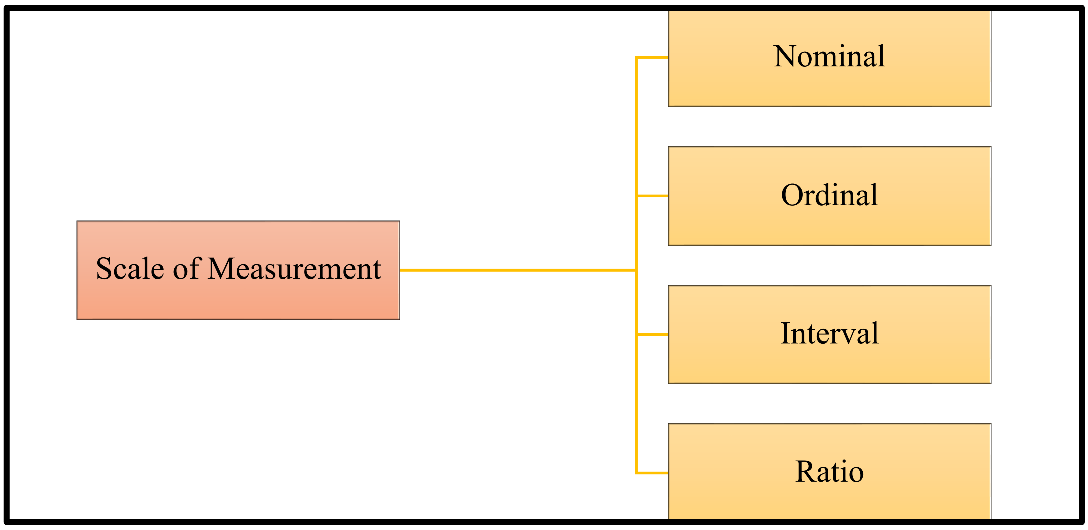
The various method used to collect the primary data has been specified below -

a) Observation Method - In this type of method researcher collected the data through observation rather than asking directly from the respondent. The observation method can further be described as controlled observation and uncontrolled observation. In the controlled observation method, researcher has observed according to pre-arranged plan and in uncontrolled observation method researcher observed in natural conditions.
b) Interview Method - This method involves collecting the data via personal interview or via telephonic interview. In this method data collected through structured way.
c) Questionnaires - This is the most common method of primary data collection in which the researcher send the questions to respondent via email.

The secondary data has been readily available. It could be collected either from the published source or unpublished source. The published data are available in new papers, magazine, reports, publications, technical journals, public records, and historical documents. The source of unpublished data is from all other means which is not covered in published data. In the case of the secondary data, the reliability, suitability and accuracy of data has been verified before using for research purpose.

After collecting the data, the data need to be measured using scale to classify and quantify the data collected. For measurement there are four type of scale named as Nominal, Ordinal, Interval and Ratio. The nominal scale classify the data without indicating the order, distance or unique origin. The ordinal scale indicate the magnitude of relationship only. The interval scale indicate both order and distance however no unique origin. The ratio scale classify the data indicating order distance and unique origin.

Figure 4.2: Scales of Measurements



(Source: Research Methodology by C.R Kothari)

In this project, the data that has been used for analysis is the secondary data. It has been extracted from capitalgain.com to ensure the reliability, suitability and accuracy of data. The extracted data measured on Ratio scale.

Ratio Analysis is very helpful tool in identifying financial strength and weakness of any firm. It helps the management to find out the reason for not performing well and investigate the issues in detail. This can be accomplished either by trend analysis of company's ratio over a period of time or by comparing the company's ratio with competitor or industry averages. The three most important ratios which companies analyse for evaluating the performance are -

1) Profitability Ratio
2) Liquidity Ratio
3) Leverage Ratio

Profitability ratios is the ratio between profits figure on one hand and sale & assets on another hand. It measure the measure overall performance of a company by determining the effectiveness in generating profit. Liquidity ratio is the ratio between current assets by current liabilities. It measure the company's ability to meet its obligations. Leverage ratio is the ratio between borrowed capital and equity capital. It measure the proportion of money borrowed from other to financing the company's assets.

Profitability Ratio

The difference between the expense and revenue over a period of time is profit. Each and every company focuses on increasing the profit and manager generally evaluate the efficiency of the company in terms of profit. The profitability ratio is measure of operating efficiency of company and calculated as - Profitability in terms of sales (Gross, Operating and Net Profit) and in terms of investment (ROA, ROE, and ROCE). Gross Profit is the difference between Sales and cost of manufacturing, it reflect the efficiency at which company produce each unit of product. A high gross profit ratio is good for the company.

When the operating expenses, interests and tax subtract from gross profit, net profit is obtained. Net profit ratio is establish relationship between profit after tax and sales. It reflects the company's efficiency in manufacturing, administration and selling the product.

The analyst examined both the ratios while evaluating the company's performance as if gross margin increased over the years and profit margins decrease or remain constant over the same time, than it indicate operating expenses are more than the sales. However, if gross margin decrease over the years it happen either due to increase in cost of manufacturing or due to decline in sales. This results in decrease in net profit margin as well unless or until operation expenses reduces drastically.

Return on equity indicate the effectiveness of use of company resources. This is important ratio as it reveals the company's performance and strength which help in attracting future investments.

The table below indicate the formulas used to calculate the profitability ratio pre and post-merger.

Table 4.1: Profitability Ratios

Ratios	Formulas
Profitability Ratios	
Gross Profit Margin	Gross Profit / Sales
Operating Margin	Profit before tax/ Sales
Net Profit Margin	Profit after tax/ Sales
Return on Net worth / Equity	Profit after tax/ Net Worth

(Source: Financial Management by I.M Pandey)

Liquidity Ratio

Company should ensure that they do not suffer from lack of liquidity and also do not have excess liquidity. In case of lack of sufficient liquidity company cannot meet its current obligations, that will effect company credibility results in poor credit worthiness, loss of creditors etc. however, in case of high liquidity, it is also not good as idle assets earn nothing.

The current ratio and quick ratio indicate the extent of liquidity or lack of it. Current ratio represents the margin of safety for creditors. The higher value of current ratio represents higher safety margin as it ensure that company have enough funds that they can meet it current liability easily. Quick ratio is also called as acid test ratio. In quick ratio, current asset considered those assets that can be converted into cash immediately without the loss of its value. Quick ratio of 1 or more represents a satisfactory current financial condition. However, in case if debtors are slow paying, doubtful or long duration outstanding, in that cases, even companies with higher quick ratio may suffer from shortage of funds. On the other hand, less quick ratio also does not represent that company cannot meet its current obligations, if in case company turn over its inventory well.

The table below indicate the formulas used to calculate the liquidity ratio pre and post-merger.

Table 4.2: Liquidity Ratios

Ratios	Formulas
Liquidity Ratios	
Current Ratio	Current Asset/ Current Liability
Quick Ratio	Current Asset - Inventories/ Current Liability

(Source: Financial Management by I.M Pandey)

Leverage Ratio

In order to determine the firms long term financial position, leverage ratio are calculated. These ratio indicate the extent up to which companies rely on debts in financing assets. Coverage ratios are calculated to determine the company ability to meet its interest obligations. High coverage ratio is desirable however too high indicate that company is not using its debt properly. Too low coverage ratio indicates that company is using debt in excess or having inefficient operations.

The table below indicate the formulas used to calculate the leverage ratio pre and post-merger.

Table 4.3: Leverage Ratios

Ratios	Formulas
Leverage Ratios	
Debt to Equity (x)	Net Worth/ Total Debt
Interest Coverage Ratios (%)	EBIDTA/ Interest

(Source: Financial Management by I.M Pandey)

For this analysis, financial performance data of Vodafone and Idea collected five year prior to merger and five years after the merger. In the data collection, focus is to extract the data required for calculating the profitability ratios, liquidity ratios and leverage ratios as specified above.

Vodafone Five Year performance data

Table 4.4: Vodafone Profit and Loss Statement

Vodafone - Profit and Loss Statement					
	Mar'17	Mar'16	Mar'15	Mar'14	Mar'13
Sales	35575.74	35949.41	31570.89	26518.91	22407.45
Expenses	25348.28	24281.23	20771.20	18236.98	16438.84
Operating Profit	10227.46	11668.18	10799.69	8281.93	5968.61
Other Income	746.38	641.20	496.67	247.33	131.01
Depreciation	7827.20	6256.07	5303.62	4519.40	3477.77
Interest	4009.87	1803.18	1060.21	965.59	1044.53
Profit before tax	-863.23	4250.13	4932.53	3044.27	1577.32
Tax	-463.54	1522.00	1739.63	1076.44	566.40
Net profit	-399.70	2728.13	3192.91	1967.82	1010.93

(Source: capitalline.com)

Table 4.5: Vodafone Balance Sheet

Vodafone - Balance Sheet					
Narration	Mar'17	Mar'16	Mar'15	Mar'14	Mar'13
Equity Share Capital	3605.33	3600.51	3597.84	3319.63	3314.32
Reserves	21126.92	19949.98	19429.47	13205.42	10989.04
Borrowings	55054.55	40541.31	26859.09	20634.92	14043.78
Other Liabilities	16881.00	16033.71	10580.42	9397.49	8030.92
Total	96667.80	80125.51	60466.82	46557.46	36378.06
Net Block	76763.24	65190.16	35539.73	29601.97	29160.03

Vodafone - Balance Sheet					
Capital Work in Progress	7535.10	6039.73	5140.53	11419.41	881.08
Investments	6378.23	3470.91	11526.73	215.53	1028.02
Other Assets	5991.23	5424.71	8259.83	5320.55	5308.93
Total	96667.80	80125.51	60466.82	46557.46	36378.06
Working Capital	-10889.77	-10609.00	-2320.59	-4076.94	-2721.99
Debtors	1313.92	1142.35	978.91	800.62	960.08
Inventory	58.80	106.54	71.03	68.31	72.64
Debtor Days	13.48	11.60	11.32	11.02	15.64
Inventory Turnover	605.03	337.43	444.47	388.21	308.47

(Source: capitalline.com)

Idea five year performance data shown in below figure

Table 4.6: Idea Cellular Balance Sheet

Idea Cellular - Balance Sheet					
Particulars Notes	March 31, 2017	March 31, 2016	March 31, 2015	March 31, 2014	March 31, 2013
Total non-current assets (A)	8,90,721.69	7,56,285.93	4,27,070.01	440632.84	330890.18
Total current assets (B)	76,325.25	44,969.09	1,56,077.71	465574.57	363780.70

Idea Cellular - Balance Sheet					
Total Assets (A+B)	9,67,046.94	8,01,255.02	5,83,147.72	906207.41	694671.01
Total equity (A)	2,47,322.44	2,35,504.87	2,10,742.57	165250.49	143033.64
Total non-current liabilities (B)	5,49,109.94	4,09,862.85	1,80,117.20	213631.95	140315.68
Total current liabilities (C)	1,70,614.56	1,55,887.30	1,92,287.95	465574.57	363780.70
Total Equity and Liabilities (A+B+C)	9,67,046.94	8,01,255.02	5,83,147.72	844457.01	647130.02

(Source: Idea Cellular Financial Statements)

Table 4.7: Idea Cellular Profit and Loss Statement

Idea Cellular - Profit and Loss Statement					
Particulars	March 31, 2017	March 31, 2016	March 31, 2015	March 31, 2014	March 31, 2013
Revenue from operations	355757.37	359494.06	315708.86	264319.68	224074.45
Other income	3069.35	2,131.39	4696.72	869.37	502.09
TOTAL INCOME	358826.72	3,61,625.45	320405.58	265189.05	224576.54

Idea Cellular - Profit and Loss Statement					
Total Expenditure	252994.51	239818.74	207592.19	181852.27	164531.16
PROFIT/(LOSS) BEFORE TAX	-8632.35	42,501.28	49325.32	30442.65	15773.23
PROFIT/(LOSS) AFTER TAX	-3996.96	27281.33	31929.06	19678.2	10109.27

(Source: Idea Cellular Financial Statements)

Vodafone-Idea five year performance data

Table 4.8: Vodafone-Idea Profit and Loss Statement

Vodafone- Idea Profit and Loss Statement					
Annual	Mar-21	Mar-20	Mar-19	Mar-18	Mar-17
Sales	41,952	44,957	37,092	28,278	35,575
Other Income	174	1,039	731	352	306
Total Income	42,126	45,996	37,823	28,631	35,882
Total Expenditure	68,613	92,757	46,733	30,640	33,188
EBIT	-26,486	-46,760	-8,909	-2,008	2,694
Interest	17,998	15,392	9,462	4,812	3,979
Tax	-20	12,081	-3,571	-2,331	-463
Net Profit	-44,464	-74,233	-14,800	-4,490	-821

(Source: capitalline.com)

Table 4.9: Vodafone-Idea Balance Sheet

Vodafone- Idea Balance Sheet					
Equities & Liabilities	Mar-21	Mar-20	Mar-19	Mar-18	Mar-17
Share Capital	28,735	28,735	8,735	4,359	3,605
Reserves & Surplus	-66,999	-22,821	50,832	22,822	20,992
Current Liabilities	66,402	95,779	54,238	10,830	17,061
Other Liabilities	1,75,342	1,25,226	1,15,893	60,563	55,045
Total Liabilities	2,03,480	2,26,919	2,29,699	98,577	96,704
Assets					
Fixed Assets	1,68,096	1,86,974	1,82,899	83,271	84,292
Current Assets	14,099	16,686	18,381	10,234	7,632
Other Assets	21,284	23,258	28,418	5,071	4,779
Total Assets	2,03,480	2,26,919	2,29,699	98,577	96,704
Other Info					
Contingent Liabilities	25,349	18,482	41,202	31,231	0

(Source: capitalline.com)

4.2 Data analysis

After the collection of data, the nest step is to analyse it. Analysis of data is very important as it helps in reaching to a conclusion. Here, the data analysis is being carried out using the ratio analysis and paired t-test. Ratio analysis has been directly applied to the data where as for the hypotheses paired t-test is being used.

The research hypotheses formulated for carrying out the paired t-test is given below.

Null Hypotheses - There is no significant difference between pre-merger and post-merger performance of acquirer company.

Alternative Hypotheses - There is significant difference between pre-merger and post-merger performance of acquirer company.

1) Study of financial performance of Vodafone before merger using ratios: The table below shown the profitability ratio, liquidity ratio and leverage ratio of Vodafone

Table 4.10: Vodafone Ratios

Vodafone Ratios					
	Mar-17	Mar-16	Mar-15	Mar-14	Mar-13
Profitability Ratios					
Gross Profit Margin (%)	27.40	25.71	26.86	27.13	31.36
Operating Margin (%)	7.82	4.45	4.65	7.00	27.96
Net Profit Margin (%)	-13.22	-9.82	13.64	154.52	0.96
Return on Net worth / Equity (%)	-2.67	-5.67	8.65	15.75	0.92
Liquidity Ratios					
Current Ratio (%)	1.00	0.84	0.69	0.99	0.74
Quick Ratio (%)	1.00	0.84	0.53	0.70	1.65
Leverage Ratios					
Debt to Equity (%)	0.63	0.67	0.52	0.41	0.57
Interest Coverage Ratios (%)	0.00	0.00	1.52	1.26	0.00

(Source: capitalline.com)

2) Study of financial performance of Idea before merger using ratios: The table below shown the profitability ratio, liquidity ratio and leverage ratio of Idea cellular.

Table 4.11: Idea Cellular Ratios

Idea Cellular Ratio					
	Mar-17	Mar-16	Mar-15	Mar-14	Mar-13
Profitability Ratios					
Gross Profit Margin (%)	5.83	11.13	13.67	9.95	5.80
Operating Margin (%)					

Idea Cellular Ratio					
Net Profit Margin (%)	-2.34	7.27	8.85	6.45	3.70
Return on Net worth / Equity (%)	-1.61	11.58	13.86	11.90	7.06
Liquidity Ratios					
Current Ratio (%)	0.45	0.29	0.89	1.00	1.00
Quick Ratio (%)	0.45	0.28	0.88	1.00	1.00
Leverage Ratios					
Debt to Equity (%)	2.09	2.15	1.57	0.58	0.86
Interest Coverage Ratios (%)	0.68	3.33	5.72	4.95	2.66

(Source: capitalline.com)

3) Study the financial performance of Vodafone and Idea merger after merger using ratios: The table below shown the profitability ratio, liquidity ratio and leverage ratio of Vodafone and Idea merger

Table 4.12 Vodafone-Idea Ratios

Vodafone & Idea Merger Ratio					
	Mar-21	Mar-20	Mar-19	Mar-18	Mar-17
Profitability Ratios					
Gross Profit Margin (%)	40.80	35.48	12.87	22.63	29.65
Operating Margin (%)	-15.53	-18.69	-26.31	-7.10	7.65
Net Profit Margin (%)	-105.98	-165.11	-39.90	-15.87	-2.30
Return on Net worth / Equity (%)	0.00	-1235.44	-24.48	-15.28	-1.61
Liquidity Ratios					
Current Ratio (%)	0.21	0.17	0.34	0.94	0.45
Quick Ratio (%)	0.21	0.17	0.34	0.94	0.44
Leverage Ratios					
Debt to Equity (%)	-4.12	16.11	1.82	2.09	2.09
Interest Coverage Ratios (%)	-0.36	-0.55	-1.03	-0.42	0.68

(Source: capitalline.com)

4) Analysis obtained after the application of paired t-test. As stated above the paired t-test being used for testing the hypotheses formulated.

Table 4.13: Paired T-test Result

t-Test: Paired Two Sample for Means		
	Post-Merger	*Pre-Merger*
Mean	-16.8944444	3.90346667
Variance	1177.011078	21.4664038
Observations	10	10
Pearson Correlation	-0.81039475	
Hypothesized Mean Difference	0	
df	8	
t Stat	-1.63509973	
P(T<=t) one-tail	0.070333749	
t Critical one-tail	1.859548038	
P(T<=t) two-tail	0.140667498	
t Critical two-tail	2.306004135	

(Source: Own analysis)

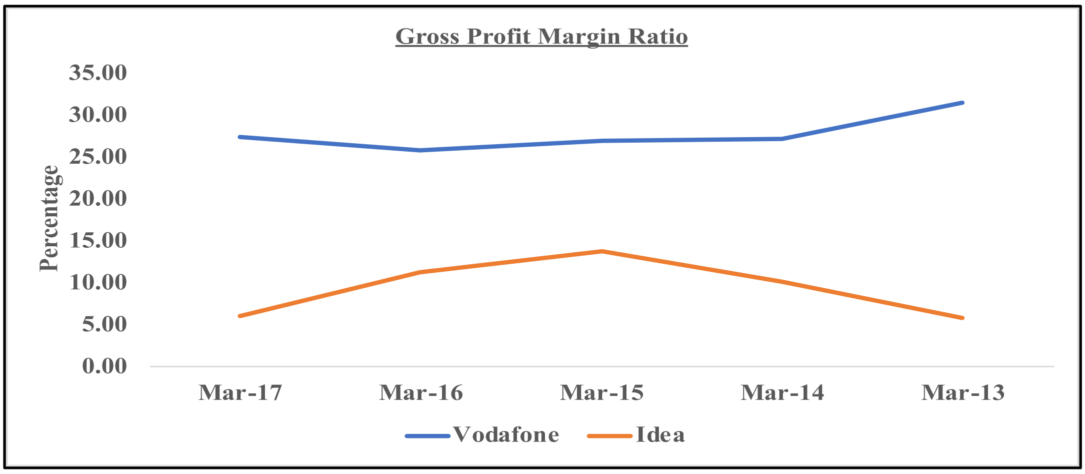
4.3 Finding and Recommendations

This section depicts the pre and post- merger performance of Vodafone and Idea on the basis of various profitability ratios (gross margin ratio, operating ratio, net profit ratio, return on equity ratio), leverage ratios (debt to equity ratio and Interest coverage ratio) and liquidity ratio (current ratio and quick ratio). The 2D line chart for each ratio is given below which will help in analysing how the merger affect the performance of the two companies.

<u>Gross Profit Margin</u>

As stated above, gross profit is the difference between sales and cost of manufacturing, it reflect the efficiency at which company produce each unit of product. A high gross profit ratio is good for the company. On the basis of the data extracted from company annual report and using web, the profitability ratios were calculated.

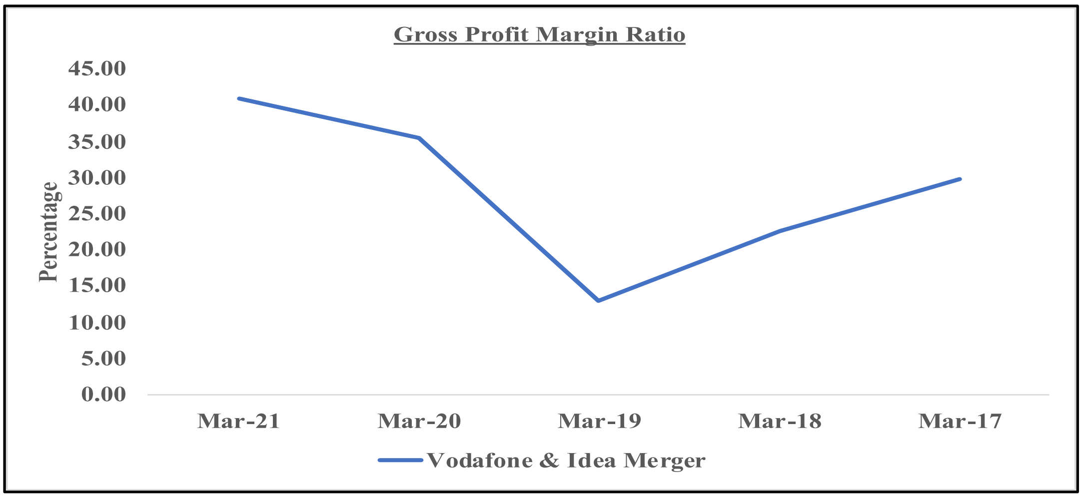
Figure 4.3: Gross Profit Margin Ratio (Pre-merger)



(Source: Own analysis)

The Gross profit margin ratio for both the companies prior to the merger has been shown in the figure above. As can be seen, the efficiency of producing one unit of product is more for Vodafone than Idea cellular.

Figure 4.4: Gross Profit Margin Ratio (Post-merger)



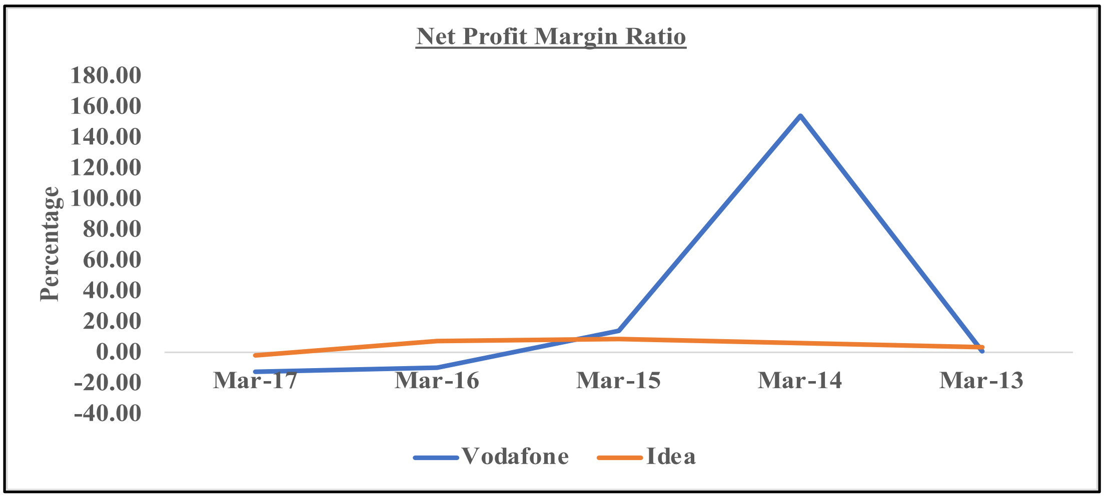
(Source: Own analysis)

The Gross profit margin ratio for Vodafone-Idea after the merger has been shown in the figure above. As can be seen, the efficiency of producing one unit of product decreases immediately after the merger however a rise can be seen after 2 years of operation.

Net Profit Margin

As stated above, Net profit ratio is establish relationship between profit after tax and sales. It reflects the company's efficiency in manufacturing, administration and selling the product.

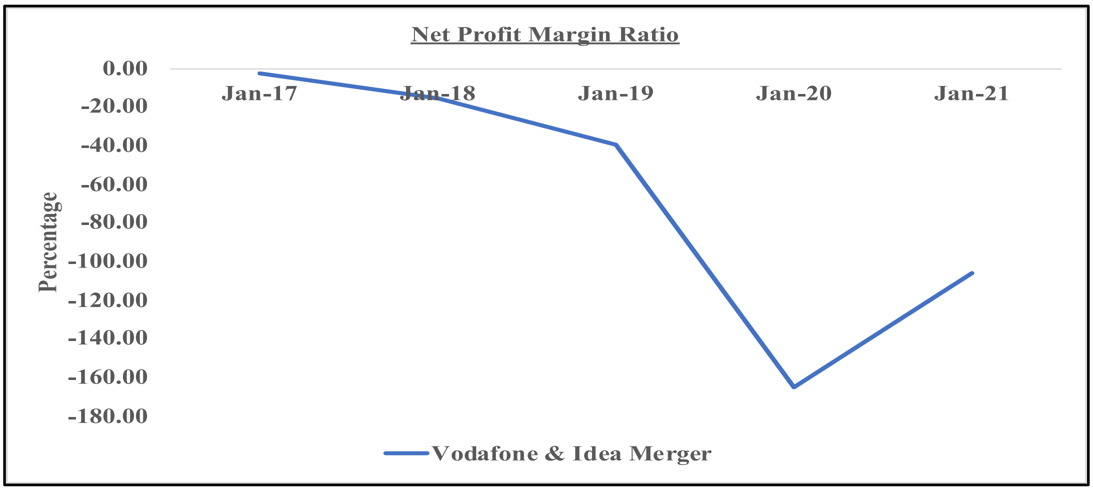
Figure 4.5: Net Profit Margin Ratio (Pre-merger)



(Source: Own analysis)

The net profit margin ratio for both the companies prior to the merger has been shown in the figure above. It is clearly evident, that Vodafone's efficiency continuously declining from 2013 to 2017 however idea cellular is maintaining the consistence in terms of net profit.

Figure 4.6: Net Profit Margin Ratio (Post-merger)



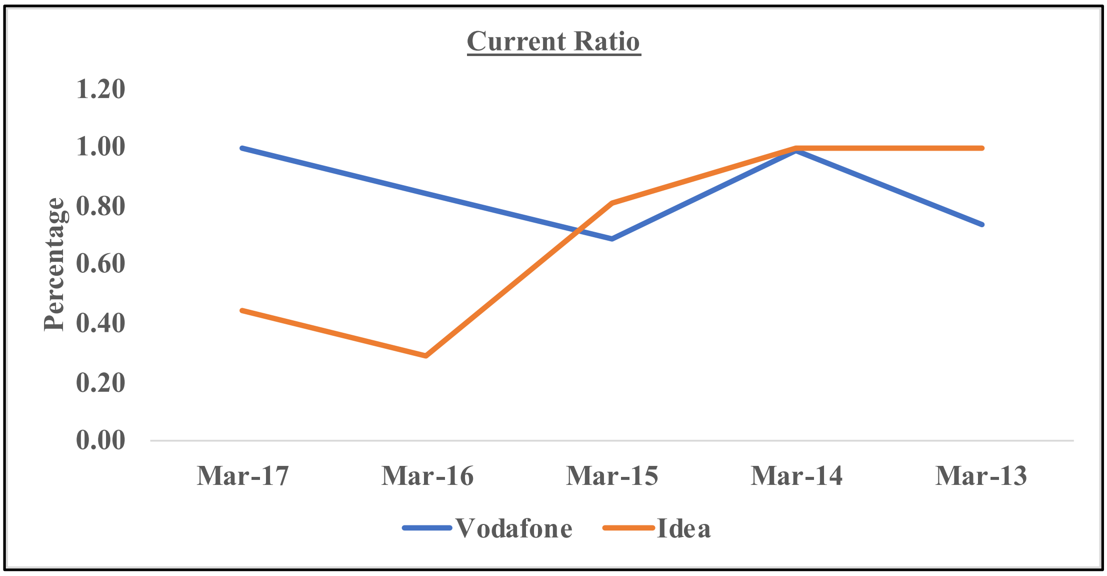
(Source: Own analysis)

The net profit margin ratio for Vodafone-Idea after the merger has been shown in the figure above. The figure shows, the efficiency of merger decreases immediately after the merger however a rise can be seen after 4 years of operation.

Current and Quick Ratio

As mentioned above, the current ratio and quick ratio indicate the extent of liquidity or lack of it. Current ratio represents the margin of safety for creditors. The higher value of current ratio represents higher safety margin as it ensure that company have enough funds that they can meet it current liability easily. Quick ratio is also called as acid test ratio. In quick ratio, current asset considered those assets that can be converted into cash immediately without the loss of its value. Quick ratio of 1 or more represents a satisfactory current financial condition.

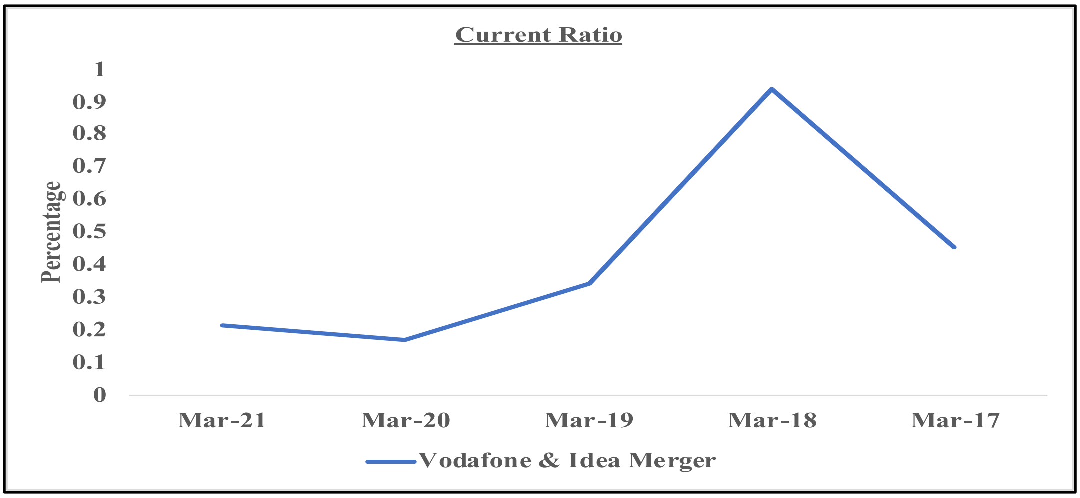
Figure 4.7: Current Ratio (Pre-merger)



(Source: Own analysis)

The current ratio for both the companies prior to the merger has been shown in the figure above. The graph shows idea cellular liquidity declining from 2013 to 2017 which represent that Idea cellular don’t have enough funds to meet their current liabilities however Vodafone have funds to meet their current liabilities.

Figure 4.8: Current Ratio (Post-merger)



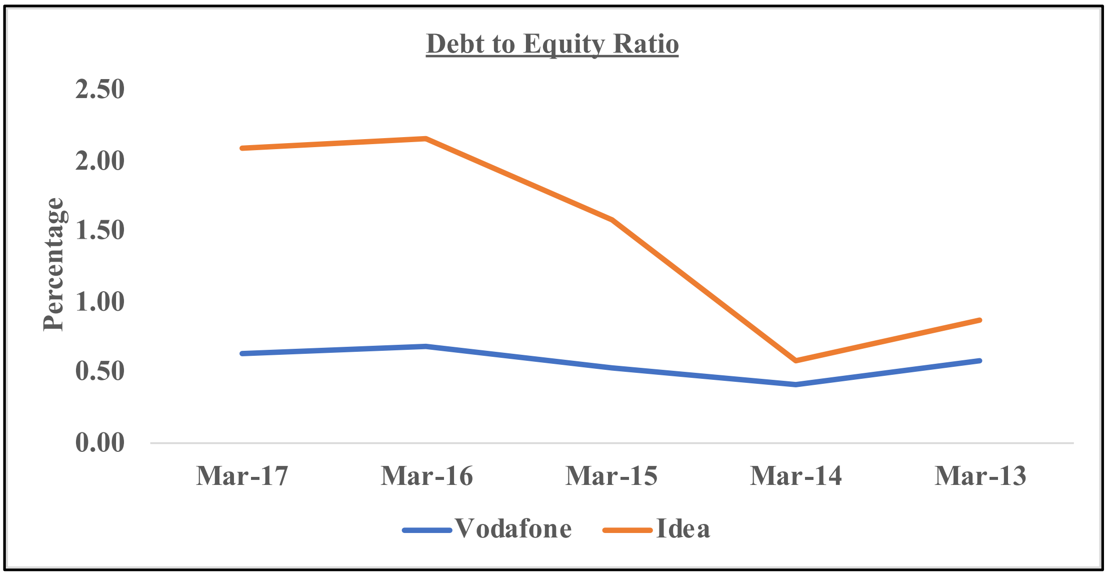
(Source: Own analysis)

The current ratio for Vodafone-Idea after the merger has been shown in the figure above. The figure shows that after the merger Vodafone and Idea current ratio declining and they don’t have enough funds to meet their current liabilities.

Debt to Equity Ratio

The debt to equity ratio indicate the extent up to which companies rely on debts in financing assets.

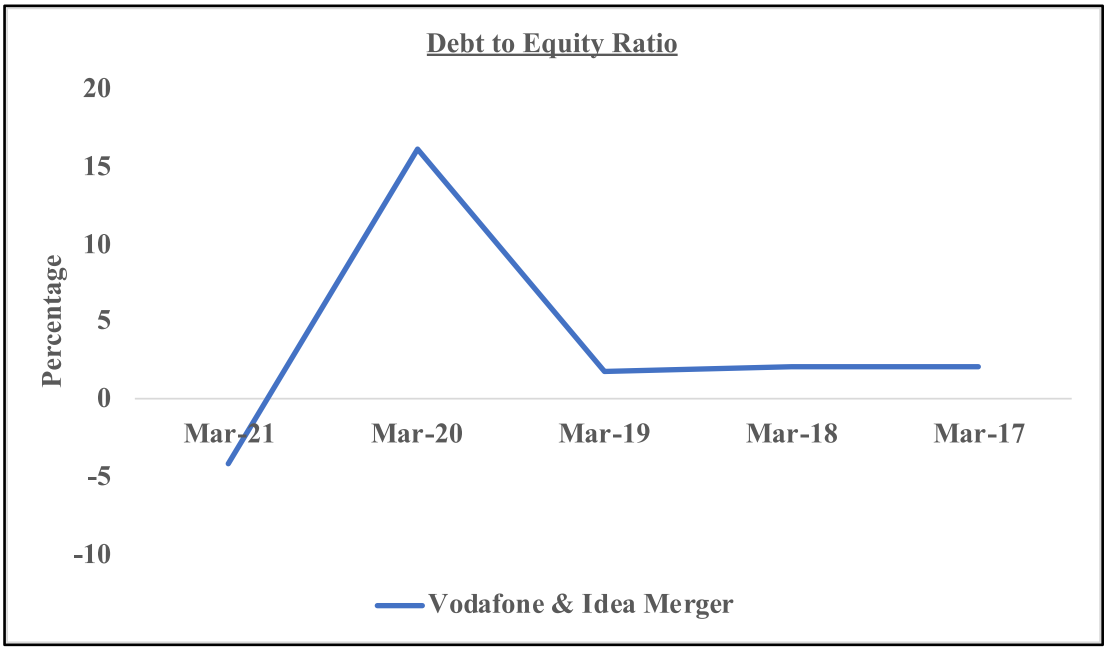
Figure 4.9: Debt to Equity Ratio (Pre-merger)



(Source: Own analysis)

The debt to equity ratio for both the companies prior to the merger has been shown in the figure above. As seen from the graph, idea cellular debt to equity ratio increases continuously year after year however Vodafone has maintained the consistency.

Figure 4.10: Debt to Equity Ratio (Post-merger)



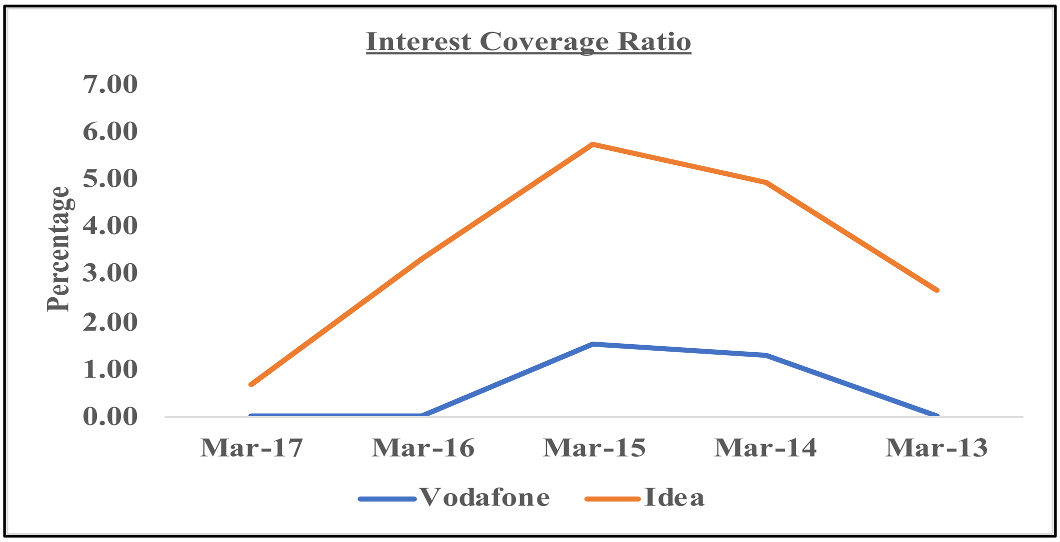
(Source: Own analysis)

The debt to equity ratio for Vodafone-Idea after the merger has been shown in the figure above. The figure shows that after the merger Vodafone and Idea debt to equity ratio maintained consistent for 3 years after that it increased in 2020 and then declined in year 2021 to negative which means they have more liabilities than assets.

Interest Coverage Ratio

As mentioned above, Coverage ratios determine the company ability to meet its interest obligations. High coverage ratio is desirable however too high indicate that company is not using its debt properly. Too low coverage ratio indicates that company is using debt in excess or having inefficient operations.

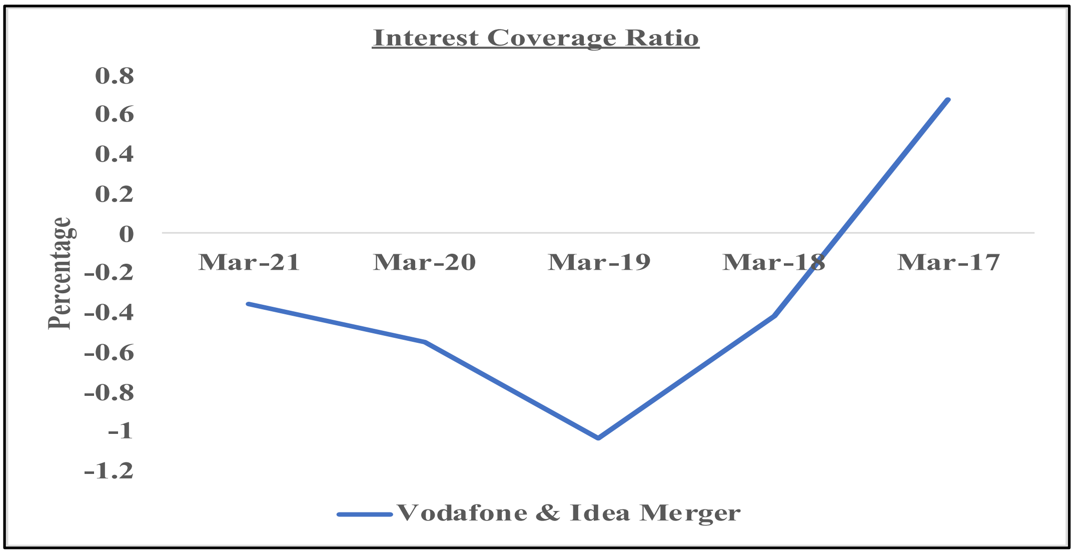
Figure 4.11: Interest Coverage Ratio (Pre-merger)



(Source: Own analysis)

The interest coverage ratio for both the companies prior to the merger has been shown in the figure above. As seen from the graph, idea cellular interest coverage ratio is high as compared to Vodafone.

Figure 4.12: Interest Coverage Ratio (Post-merger)



(Source: Own analysis)

The coverage ratio for Vodafone-Idea after the merger has been shown in the figure above. The figure shows that after the merger Vodafone and Idea coverage ratio declined for 3 years after that it increased from 2020 onwards.

Hypotheses testing using paired t-test

In order to determine the Vodafone-Idea post-merger financial performance paired t-test conducted on current financial year of acquirer company and last financial year of merged company. Table 4.13 indicate the paired t-test results . Since the p-value exceeds significance level (0.05), the null hypotheses rejected. Hence, it can be inferred that the proposed null hypothesis is false, and alternative hypothesis is true. Thus we can say that significant difference exists between the performance of Vodafone -Idea pre-merger and post-merger.

4.4 Limitation

1. This analysis has been carried out considering there is reasonable amount of continuity between the past and future data. No impact due to Covid 19 has been considered.
2. This analysis has been done carried out using the data for 5 years. However, during the literature review it is observed that merger perform better in long terms.

5. CONCLUSION

The Indian telecom Industry is huge. Hence all the operators present in the market seem to battle amongst each other for their share in the marketplace. The Indian telecom sector suffered a major blow when new entrants came into the market. To cope up with this tough competition Vodafone and Idea entered a merger. The major motive behind any type of merger is to gain the economic advantage from the merger which they won't be able to get from their own entity. Merger provides the benefit of economic of scale, increase in operation efficiency, tax shields, increase in market value etc. The firms undertaken the mergers and acquisition when the gains from the target company exceeds the cost.

The study conducted analysed the financial performance of these two telecom giants prior to and after the merger took place. The analysis was carried out by making use of Ratio analysis and t-test. It was seen that Vodafone-idea gross profit increases post-merger however operating margin and net profit margin decreases which indicate operating expenses are more than the sales. The return on equity is decreasing continuous post-merger which reveals the company's performance and strength is not good and will not attract future investments. The positive value of liquidity ratios indicate that Vodafone-Ideas merger have enough funds that they can meet it current liability easily. The low leverage ratios indicate the operation inefficiency and Vodafone-idea merger use the debt in excess. The gross profit margin increases after the merger which indicates that efficiency of production increased. Net profit ratio is established relationship between profit after tax and sales. The analysis revealed that initially net profit is not much however it was seen that in due course of time it increased. The current and quick ratio were also analysed for the two companies. After the analysis it can be concluded that prior to the merger Idea cellular don't have enough funds to meet their current liabilities however Vodafone have funds to meet their current liabilities. However, after the merger Vodafone and Idea current ratio was seen to be declining hence it can be said that they don't have enough funds to meet their current liabilities.

The t-test was conducted on current financial year of acquirer company and last financial year of merged company. The results of the t-test indicate that not much significant difference was seen in the financial performance of the company prior to the merger and after the merger.

It can be said that the benefits of the merger between Vodafone and Idea would be achieved slowly and gradually in the coming years. As of now not much significant affect can be seen as has been concluded after conducting this study. The synergy between the two companies might result in higher profit and leverage which will benefit all the people who are a part of this group. But yes, this merger can make them a strong competitor in the long run.

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