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# MERGER MOTIVES, TRENDS AND POST MERGER PERFORMANCE: EVIDENCE FROM ELECTRICITY COMPANIES IN INDIA

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**KEYWORDS**

Electricity, mergers and acquisitions, merger motives, post merger performance.

**ABSTRACT**

Mergers and acquisitions (M&A) in India are the outcome of globalisation and liberalisation. The factors that have triggered the volume of M&A are various economic factors like competitive environment, growth in gross domestic product, higher interest rates and fiscal policies. Mergers and acquisitions have gained significance in corporate world as an important growth strategy for both acquirer and target companies. M&A have mushroomed in almost all sectors like manufacturing, mining, construction sector, financial services, and services other than financial. M&A has also played an active role in electricity sector in India. In this paper we explore the current scenario of M&A in Electricity sector and the factors driving the M&A. In particular, we investigated related and unrelated M&A deals, Public & Private companies gone for deal, year wise deals, and group affiliation deals in electricity sector. We also focused on regulatory aspect of M&A in electricity sector. The period of study is from 1st January 1990 to 31st December 2011. Our finding suggest that M&A in electricity is highly regulated and thus deals are made to survive in this regulated environment even though much deals are not done if compared to other sectors.

## 1. INTRODUCTION

Mergers[1] and acquisitions (M&A) in India are the outcome of globalisation and liberalisation. The factors that have triggered the volume of M&A are various economic factors like competitive environment, growth in gross domestic product, higher interest rates and fiscal policies. Mergers and acquisitions have gained significance in corporate world as an important growth strategy for both acquirer and target companies. M&A have mushroomed in almost all sectors like manufacturing, mining, construction sector, financial services, and services other than financial.

Before the year 1990, companies in the electricity sector enjoyed monopoly where government performed various functions like generation, transmission, distribution and commercial trading. But there was significant change in the scenario after the economic reforms in 1991 because of privatisation and deregulation electricity sector. These changes lead to distribution of various functions like generation, transmission, distribution and trading to separate entities and privatisation in distribution function. Hence, electricity companies were given importance due to the presence of both private and government bodies in the electricity sector. There were many

[1] Merger is a term used to refer when two corporations join together into one, with one corporation surviving and the other corporation disappearing. The assets and liabilities of the disappearing entity are absorbed into the surviving entity (Source: http://www.incorporating-online.org/Definition-merger.html)

problems associated with the electricity sector before 1990 like huge technical and commercial losses due to unprofessionally managed companies; problems of cross subsidisation; and inadequate distribution channels that lead to poor quality of supply of electricity. These problems were hurdles for ensuring financial feasibility, rationalisation of tariffs and facilitation of private investment in attaining policy objectives. Thus, there was always a need for efficiency, economy, and competition in electricity sector in India. M&A has also played an active role to facilitate the mobilisation of resources in electricity sector in India.

## 2. METHODOLOGY AND DATA

The current research is carried out in the following way:

### 2.1. Sample Description

Data have been collected from Centre for Monitoring Indian Economy (CMIE) Prowess database. For the study data have been collected for M&A involved companies only in electricity sector. M&A deals in other sectors like manufacturing, mining, financial services are chosen. There were 451 companies in electricity sector. It was found that 347 electricity companies are there with no M&A or other forms of business combinations from 1st January 1980 to 30th November 2011 as they are totally following organic growth strategy for their company. While around 104 companies in electricity either go for mergers or acquisitions of other business combinations[2].

The data have been collected from 1st January 1990 to 31st December 2011. Around 18 electricity companies made merger deals as acquirer (merging with another company) and around 29 electricity companies merger made deals as target (merged into another company), it means 47 companies went for merger deals Out of 40 acquirer companies, 34 companies are found in prowess, and out of that 34 acquirer companies, 18 companies are from electricity. Out of the 40 target companies, 33 companies found in prowess, and from the 33 targets, 29 are from electricity sector. Out of 67 companies available in prowess actually gone for M&A either as target or as acquirer in merger deals (47 companies are from electricity sector, 18 as acquirer & 29 as target). Some of the deals are made by acquirers which are with no names of companies (unknown companies); these were excluded from the sample. So, the final sample is 32 deals i.e. companies where either acquirer or target with data availability.

The sample acquirers are in main product/service group like thermal electricity, coal based thermal electricity, wind energy, electricity energy, and hydro electricity. The targets are in the main product/service group like electricity energy, power transmission line services, wind energy, oil-based-thermal electricity, thermal electricity, electricity and non-conventional energy, and hydro electricity.

[2] Business Combinations definition: Here we have taken the definitions as in prowess database. The business combinations means, companies acquiring assets, selling assets, merging with another company, being merged into another company, minority acquisition of shares, substantial acquisition of shares

**Table 1: Sample M&A Deals for Performance Evaluation**

| Acquirer | Date | Target Company |
|---|---|---|
| Tata Power Co. Ltd. | 9-Jun-00 | Andhra Valley Power Supply Co. Ltd. [Merged] |
| Reliance Infrastructure Ltd. | 25-Jul-03 | B S E S Andhra Power Ltd. [Merged] |
| C E S C Ltd. | 11-Feb-04 | Balagarh Power Co. Ltd. |
| Torrent Power Ltd. | 23-Mar-06 | Torrent Power A E C Ltd. [Merged] |
| Torrent Power Ltd. | 23-Mar-06 | Torrent Power S E C Ltd. [Merged] |
| Bhilai Electric Supply Co. Pvt. Ltd. | 2-Aug-06 | N T P C-S A I L Power Co. Pvt. Ltd. |
| Jaiprakash Power Ventures Ltd. | 25-Jun-09 | Jaiprakash Power Ventures Ltd. [Merged] |
| J S W Energy Ltd. | 23-Jul-10 | J S W Energy (Ratnagiri) Ltd. [Merged] |
| Source: CMIE Prowess Database | | |

These samples are chosen based on the following criteria:

- Initially merger deals are collected where either acquirer or Target Company is from electricity industry. To make the performance comparable and better results both the acquirer and the target firms are taken from electricity industry.
- The companies have continuous financial data for the pre and post merger first, second and third years
- The deals are completed
- The sample companies are chosen from the merger deals done during 1st January 2000 to 31st March 2010 so that at least data for one year pre and post merger are available.

Initially there were 34 deals found where either the target or acquirer company made merger deal in electricity industry. Then from them 26 companies were found as the target electricity companies and eight as acquirer. The final sample deals were eight selected for performance evaluation.

## 3. REGULATORY OR LEGAL ISSUES

Electricity companies are highly regulated and M&A particularly in this sector are highly regulated. In other words, they were the main players in the channel from production through distribution to final consumers. Besides, as already discussed these monopolies were enjoyed by the state owned companies. The functions like transmission and distribution are involved in high capital intensive segments so that substantial investment can be maintained and network infrastructures and power plants can be build which can meet the electricity needs of consumers. Since the period of investment is long there is need of continuous planning and monitoring. Thus there is state intervention in this sector for security of supply and the complexity of this commodity. Furthermore, some specific features of electricity, such as non-storability and the continuous balance between demand and supply, supported intervention of government. This situation led to the lack of economic incentives for efficiency; direct and indirect state subsidies had been the rule to maintain a stable industry. Since the role of electricity sector is significant for the economic development for all other sectors, it is highly regulated.

To discuss the regulatory aspect it is first necessary to understand the nature of electricity sector that differentiates it from other network industries. The characteristics of the industries is important to know as it will help to know the nature of regulation and competition policy in the sector and the problems involved in achieving the goals of the liberalisation process. It is also important to know the features of electricity as a commodity. Firstly, for consumers electricity is a homogenous product. It does not have any particular feature or quality that differentiates it. Secondly, production costs are heterogeneous depending on the technology and the energy sources used. Thirdly, demand is highly inelastic and there are no substitutes for it. This means that changes in prices have little influence on consumption. Fourthly, unlike gas, electricity is a non-storable commodity. It is not possible to produce more during normal periods in order to cover peak demand periods. It is necessary instead to balance demand and supply at every single point in time. Fifthly, the transmission (high voltage) and distribution (medium, low voltage) of electricity depend on the distance, but also on the resistance in the transmission network. For these reasons, in the case of congested network infrastructures, it is possible that inefficient generators located in a specific place could provide electricity more cheaply than efficient generators in other locations.

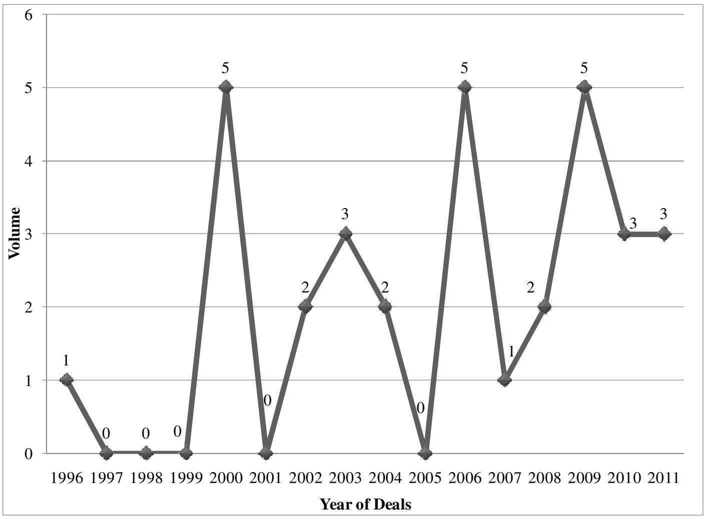
The Electricity Act, 2003 is currently regulating the electricity sector in India with some amendments in 2007 and 2008. This is an Act to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally for taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalisation of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto. A transfer scheme under this section may- (a) provide for the formation of subsidiaries, joint venture companies or other schemes of division, amalgamation, merger, reconstruction or arrangements which shall promote the profitability and viability of the resulting entity, ensure economic efficiency, encourage competition and protect consumer interests; (b) define the property, interest in property, rights and liabilities to be allocated - (i) by specifying or describing the property, rights and liabilities in question; or (ii) by referring to all the property, interest in property, rights and liabilities comprised in a described part of the transferor's undertaking; or (iii) partly in one way and partly in the other; (c) provide that any rights or liabilities stipulated or described in the scheme shall be enforceable by or against the transferor or the transferee; (d) impose on the transferor an obligation to enter into such written agreements with or execute such other instruments in favour of any other subsequent transferee as may be stipulated in the scheme; (e) mention the functions and duties of the transferee; (f) make such supplemental, incidental and consequential provisions as the transferor considers appropriate including provision stipulating the order as taking effect; and (g) provide that the transfer shall be provisional for a stipulated period. (6) All debts and obligations incurred, all contracts entered into and all matters and things engaged to be done by the Board, with the Board or for the Board, or the State Transmission Utility or generating company or transmission licensee or distribution licensee, before a transfer scheme becomes effective shall, to the extent specified in the relevant transfer scheme, be deemed to have been incurred, entered into or done by the Board, with the Board or for the State Government or the transferee and all suits or other legal proceedings instituted by or against the Board or transferor, as the case may be, may be continued or instituted by or against the State Government or concerned transferee, as the case may be. (7) The Board shall cease to be charged with and shall not perform the functions and duties with regard to transfers made on and after the effective date. Explanation.- For the purpose of this Part, -(a) "Government company" means a Government Company formed and registered under the Companies Act, 1956. (b) "Company" means a company to be formed and registered under the Companies Act, 1956 to undertake generation or transmission or distribution in accordance with the scheme under this Part.

As regards M&A transactions in the energy sector, some of the most relevant risks to be identified by the buyer normally relate to regulatory issues (e.g. sale and tariff of electricity), the survival to the transfer of shares of all permits, licences, concessions and authorisations held by the company, agreements with the grid operator, liabilities on environmental matters (e.g. contamination of the site) as well as liabilities on taxes, accounting, labour, health and safety, pending litigation, judicial and/or extrajudicial (Marcenaro, E)

## 4. M&A IN ELECTRICITY: THE CURRENT TREND

M&A in electricity sector is gradually increasing by year to year. There are various factors that are driving these deals. There has been increase in number of mergers and acquisitions as companies go face high electricity prices, regulatory uncertainties. Companies in electricity sectors were enjoying their monopoly over the line of production (generation and distribution). For couple of years especially before 2000, the merger deals in electricity sector was very rare. The scenario has taken new turn after year 2000 when there was less regulatory environment, change in economic environment, better government policies and motivated corporate people going for new investment trends like mergers and acquisitions. Mostly acquirers merged with their subsidiary companies.

**Figure 1: Merger Deals in Electricity Sector in India from 1996-2011**




**Source:** CMIE Prowess Database

Even though an attempt has been to look into M&A from 90's in electricity sector, but the real merger activities started after 2000. Only one merger deal is found during 90s which is done between Nava Bharat Ventures Ltd. with Nav Chrome Ltd. [Merged] on 3rd March 1996. In 2000, 2006, 2009 have highest record of deals in electricity sector which is 16 per cent of total each, in 2003, 2010, 2011 had each 6 per cent of merger deals and 1996, 2007 each had 3 per cent out of total merger deals. In the years 1997, 1998, 1999, 2001, 2005 there no merger deals made. During the 90's the merger deals were not made because of highly regulated environment. During the year

2000 for the first time, the companies in electricity sector went for merger between the firms and they were anti-competitive and made their presence in M&A market.

The companies involved in merger in electricity sector mostly are public limited companies. Among the acquirer there is only one private limited company named Bhilai Electric Supply Co. Pvt. Ltd. that merged with NTPC-SAIL Power Co. Pvt. Ltd. among the target there are two private limited companies named L&T Power Investments. Pvt. Ltd. [Merged] and NTPC-SAIL Power Co. Pvt. Ltd. There were more number of public limited companies than the private companies which signifies that there is less reform in many segments in this electricity sector and lack of private people implies lack of competition which may have lead to lack of good performance record in this sector.

Mostly the companies belong to the industry group electricity generation than the electricity distribution. Some of the target and target companies gone for deals other than the companies in same industry like Ferro alloys, tyres & tubes, coal & lignite, polymers, trading, fund based financial services, pig iron, steel, cement, sugar, trading, business consultancy. These acquirer and target companies involved in electricity generation and distribution have gone of deals in different industries may be to take the benefit of diversified business strategy or benefit of unrelated deals like diversification of loss.

Most of the acquirer and target companies are owned by the business groups apart from Central Government Commercial Enterprises, Private (Indian), State and Private Sector, State Government- Commercial Enterprises. The ownership groups are Elgi Group, IndiaBulls Group, Jaiprakash Group, Kalyani (Bharat Forge) Group, Kirloskar Group, Larsen & Toubro Group, Modi Umesh Kumar, Monnet Group, Nava Bharat Group, NCL Group, Om Prakash Jindal Group, Reliance Group [Anil Ambani], RPG Enterprises Group, S. Kumars Group, T G Venkatesh Group, Tata Group, Torrent Group, VBC Group, Vedanta Group, Weizmann Group. Majority of deals are done by Jaiprakash Group and Tata Group.

The related deals (Deals where acquirer and target were in Electricity Generation) occurred between the following companies:

**Table 2: Deals where Acquirer and Target were in Electricity Generation**

| Merger Date | Acquirer | Target |
|---|---|---|
| 9-Jun-00 | Tata Power Co. Ltd. | Andhra Valley Power Supply Co. Ltd. [Merged] |
| 9-Jun-00 | Tata Power Co. Ltd. | Tata Hydro-Electric Power Supply Co. Ltd. [Merged] |
| 7-Dec-00 | Tata Power Co. Ltd. | Jamshedpur Power Co. Ltd. [Merged] |
| 25-Jul-03 | Reliance Infrastructure Ltd. | B S E S Andhra Power Ltd. [Merged] |
| 23-Mar-06 | Torrent Power Ltd. | Torrent Power A E C Ltd. [Merged] |
| 23-Mar-06 | Torrent Power Ltd. | Torrent Power S E C Ltd. [Merged] |
| 2-Aug-06 | Bhilai Electric Supply Co. Pvt. Ltd. | N T P C-S A I L Power Co. Pvt. Ltd. |
| 3-Dec-08 | Indiabulls Power Ltd. | Indiabulls Power Services Ltd. [Merged] |
| 25-Jun-09 | Jaiprakash Power Ventures Ltd. | Jaiprakash Power Ventures Ltd. [Merged] |
| 23-Jul-10 | J S W Energy Ltd. | J S W Energy (Ratnagiri) Ltd. [Merged] |
| 14-Feb-11 | Jaiprakash Power Ventures Ltd. | Bina Power Supply Co. Ltd. [Merged] |
| 14-Feb-11 | Jaiprakash Power Ventures Ltd. | Jaypee Karcham Hydro Corporation. Ltd. [Merged] |
| *Source: CMIE Prowess Database* | | |

The number of related deals is 12 and unrelated deals are 45 over the sample period. Most of the related deals are done in year 2000 and year 2006. In year 2000, Tata made mergers to bring the group's power companies under one umbrella with a combined turnover of about Rs 3,000 crore. The deal was made to get relaxation in stamp-duty norms by the state government. It was considered year 2000 is good time to go for the deal as the stamp-duty norms are no longer as rigid as it was in past. Again it was believed that existing shortages and demand growth in the western grid will be able to absorb the new capacities planned by the company. In 2006, TEL merged with Torrent Power AEC, Torrent Power SEC and Torrent Power Generation. The merger turned them into first rate power utilities in terms of operational efficiencies and reliability of power supply. Torrent has a generation capacity of 1600 MW and distributes electricity to Ahmadabad, Gandhinagar and Surat. The related deal helped the company for making outstanding performance in power distribution by the Government of India. In 2011, two deals were made by Jaiprakash Power Ventures Ltd. Currently, Jaiprakash Associates owns 63 per cent stake in JHPL. Post merger, its stake is expected to go beyond 80 per cent (depending upon the valuation). JHPL, which generates 300 Mw power in Himachal Pradesh, has a market capitalisation of Rs 4,250 crore.

The deals done between cash and stock are discussed below:

**Table 3: Companies Involved in Cash Deals**

| Merger Date | Acquirer Company | Target Company |
|---|---|---|
| 7-Dec-00 | Tata Power Co. Ltd. | Jamshedpur Power Co. Ltd. [Merged] |
| 22-Mar-02 | C E S C Ltd. | Cescon Ltd. |
| 25-Jul-03 | Reliance Infrastructure Ltd. | B S E S Andhra Power Ltd. [Merged] |
| 11-Feb-04 | C E S C Ltd. | Balagarh Power Co. Ltd. |
| 23-Mar-06 | Torrent Power Ltd. | Torrent Power A E C Ltd. [Merged] |
| 2-Aug-06 | Bhilai Electric Supply Co. Pvt. Ltd. | N T P C-S A I L Power Co. Pvt. Ltd. |
| 16-Apr-08 | Treadsdirect Ltd. [Merged] | Geo Renewable Power Ltd. [Merged] |
| 21-Apr-09 | Entegra Ltd. | Shree Maheshwar Hydel Power Corporation Ltd. |
| 25-Aug-09 | B F Utilities Ltd. | Kalyani Utilities Development Ltd. [Merged] |
| 16-Sep-09 | V B C Ferro Alloys Ltd. | Orissa Power Consortium Ltd. |
| 8-Dec-09 | Haldia Petrochemicals Ltd. | H P L Cogeneration Ltd. [Merged] |
| 26-Mar-10 | Weizmann Ltd. | Karma Energy Ltd. [Merged] |
| 23-Jul-10 | J S W Energy Ltd. | J S W Energy (Ratnagiri) Ltd. [Merged] |
| 26-Sep-11 | S B E C Sugar Ltd. | SBEC Bioenergy Ltd. |
| *Source: CMIE Prowess Database* | | |

These deals are done with share swap ratio of 0: 0, which means target shareholders will gain zero share of Acquirer Company for every shares of Target Company. No shares are required to be issued by the holding Company who will take over the assets and liabilities of the subsidiary company. It means they are involved in cash deals. All the acquirer and target in this case are public limited companies. Among them five of the acquirers are unlisted companies and others are listed with BSE listing in category A, B, T, but all these target companies are unlisted. The acquirer companies belong to the size deciles one, two, three while the target companies belong to deciles one, two, four, seven, ten with seven targets with deciles zero. Most of the deals are done in year 2009 and no deals year 2001. This cash deals comprised of 46 per cent of total deals done in this sector.

**Table 4: Electricity Companies Involved in Stock Deals**

| Merger Date | Acquirer Company | Target Company | Share Swap Ratio (N) |
|---|---|---|---|
| 12-Jun-07 | Sarda Energy & Minerals Ltd. | Chhattisgarh Electricity Co. Ltd. [Merged] | 91:10 |
| 23-Mar-06 | Torrent Power Ltd. | Torrent Power SEC Ltd. [Merged] | 47:1 |
| 9-Jun-00 | Tata Power Co. Ltd. | Andhra Valley Power Supply Co. Ltd. [Merged] | 4:5 |
| 31-Mar-96 | Nava Bharat Ventures Ltd. | Nav Chrome Ltd. [Merged] | 4:5 |
| 9-Jun-00 | Tata Power Co. Ltd. | Tata Hydro-Electric Power Supply Co. Ltd. [Merged] | 4:5 |
| 25-Jun-09 | Jaiprakash Power Ventures Ltd. | Jaiprakash Power Ventures Ltd. [Merged] | 3:1 |
| 15-Mar-03 | Gujarat N R E Coke Ltd. | Gujarat NRE Power Ltd. [Merged] | 3:1 |
| 14-Feb-11 | Jaiprakash Power Ventures Ltd. | Bina Power Supply Co. Ltd. [Merged] | 2:13 |
| 3-Dec-08 | Indiabulls Power Ltd. | Indiabulls Power Services Ltd. [Merged] | 1:1 |
| 2-Dec-04 | Neelachal Ispat Nigam Ltd. | Konark Met Coke Ltd. [Merged] | 1:1 |
| 17-Apr-06 | India Infrastructure Developers Ltd. | L&T Power Investments Pvt. Ltd. [Merged] | 1:1 |
| 26-Apr-00 | Sterlite Industries (India) Ltd. | Madras Aluminium Co. Ltd. | 1:2 |
| 5-Jul-10 | Reliance Power Ltd. | Reliance Natural Resources Ltd. [Merged] | 1:4 |
| 14-Feb-11 | Jaiprakash Power Ventures Ltd. | Jaypee Karcham Hydro Corporation Ltd. [Merged] | 1:5 |
| 25-Jul-06 | NCL Industries Ltd. | NCL Energy Ltd. [Merged] | 1:6 |
| 18-Sep-00 | SRHHL Industries Ltd. | Sree Rayalaseema Power Corporation. Ltd. [Merged] | 1:6 |
| 15-Dec-03 | Monnet Ispat & Energy Ltd. | Monnet Power Ltd. [Merged] | 1:10 |
| 30-Oct-02 | Kirloskar Industries Ltd. | Kirloskar Power Supply Co. Ltd. [Merged] | 1:61 |
| *Source: CMIE Prowess Database* | | | |

This comprised 56 per cent of the total merger deals in electricity sector made in stock deals. Highest number of stock deals are done in the year 2000 may be because during this year the target companies are highly optimistic about the success of merger and want to retain their equity stake in the resulting firm. It may also happen that acquirer companies have been paying a higher premium for pure stock deals.

## 5. THE FASCINATION OF M&A IN ELECTRICITY: THE MOTIVES BEHIND THE DEALS

Energy & Utilities has become a prominent topic around the world. Consumers are facing supply constraints and higher prices. Governments are concerned about energy & utilities security and climate change. Global growth and change are putting pressure on scarce energy and water resources like never before. The energy & utilities sector is in the spotlight as companies, governments and consumers grapple with issues such as security of supply, environmental impact, carbon exposure, the impact of efforts to regulate greenhouse gas emissions, and affordability. The sector is on a journey of major change, anticipating a world with a much wider range of technologies than at present and in which the industry is taking on a new shape. Companies are seeking to extend their value chain both upward and downward to secure supply and end-markets. The traditional boundaries that defined the energy & utilities industry are becoming blurred as the interdependence of different energy sectors and between utility and technology companies becomes more critical.

**Table 5: Motives of Electricity Companies behind M&A Deals**

| Date | Deals between (Acquirer vs. Target) | Motive behind Mergers |
|---|---|---|
| 31-Mar-96 | Nava Bharat Ventures Ltd. & Nav Chrome Ltd. [Merged] | To reduce the energy cost in production of ferro alloys and to achieve economies of scale in post merger period. |
| 18-Jan-00 | STI India Ltd. & STI India Vidyut Ltd. [Merged] | To get the concessions from STI India Ltd which is considered more advantageous to set up a 9 MW capture power plant in STI India Ltd. instead in STI India Vidyut Ltd. The merger is done because STI India ltd, being 100 per cent Export Oriented Unit (EOU) is allowed various benefits like duty free import of capital goods, raw materials, spares, consumables and also fuel oil for diesel generating sets. |
| 26-Apr-00 | Sterlite Industries (India) Ltd. & Madras Aluminium Co. Ltd. | To get various benefits from the Madras Aluminium Company Ltd. (MALCO) because is considered as a primary Aluminium producer in South India with operations involving mining, refining, smelting and power generation. |
| 9-Jun-00 | Tata Power Co. Ltd. & Tata Hydro-Electric Power Supply Co. Ltd. [Merged] 59.90 | To enhance the financial strength of Tata Power that will enable it to bid for larger projects. It will help those managing projects outside India and engage them basically, in the infrastructure sector of the economy for supplying bandwidth, optical fibre network. |

**Table 5: Motives of Electricity Companies behind M&A Deals**

| | | |
|---|---|---|
| 9-Jun-00 | Tata Power Co. Ltd. & Andhra Valley Power Supply Co. Ltd. [Merged] | To enable Tata Power to have a much stronger balance sheet, focus on larger projects in future and to bring about greater liquidity of the company's stocks. The companies faced several operational hurdles due to emerging scenario of economic liberalisation and globalisation. Tata Electric becoming a single entity was an appropriate step towards overcoming such and other limitations. Tata Power was the largest private power sector company in India. The merger will again accelerate its growth. With plans going into related infrastructure of broadband communication and energy the company can also position itself as a national player in the energy and communication sector. |
| 18-Sep-00 | Sree Rayalaseema Hi-Strength Hypo Ltd (SRHHL) Industries Ltd. & Sree Rayalaseema Power Corporation. Ltd. (SRPCL) [Merged] | To get benefit from the equity participation in a profit making and large manufacturing company like SRHHL. It will also help SRPCL in getting ready customer in SRHHL and its manufacturing units for the wind power generation. SRHHL would also benefit from the deal by getting ready access to the power generation by SRPCL. Again the cash flows of SRHHL are expected to benefit SRPCL in repaying its lease finance to the Industrial Development Bank of India (IDBI). Moreover, SRHHL would enjoy financial benefits as it would no longer be required to repay the loans of Rs 10.24 crore and the interest payment of Rs 1.22 crore for 2000-01 to SRPCL. |
| 7-Dec-00 | Tata Power Co. Ltd. & Jamshedpur Power Co. Ltd. [Merged] | To increase the generating capacity by a large extent and to achieve high levels of operational efficiency. |
| 22-Mar-02 | CESC Ltd. & Cescon Ltd. | To leverage on the CESC Ltd brand name for landing more power engineering consultancy projects. Cescon Ltd was facing difficulty in branding itself despite of its domain knowledge in the field. CESC will directly enter for power sector consultancy contracts across India. The merger between Cescon Ltd and CESC Ltd will improve return compared to pre liberalisation period. The merger will consolidate the operations of CESC Ltd and secure term loans and debentures. |
| 30-Oct-02 | Kirloskar Industries Ltd. & Kirloskar Power Supply Co. Ltd. [Merged] | To meet the orders received during the year 2001-02 for re-power of defence vehicles, and also for supply of engines for Indian Navy ships. It will help to fulfil contract received the company to study the feasibility of re-powering certain Naval Ships and meet the requirements of the customers and end users. |

**Table 5: Motives of Electricity Companies behind M&A Deals**

| | | |
|---|---|---|
| 15-Mar-03 | Gujarat NRE Coke Ltd. & Gujarat NRE Power Ltd. [Merged] | To get instant liquidity and to get financial and logistic support, the shareholders of Gujarat NRE Power made the deal as the company was facing the problem of insufficient resources for further development. Gujarat NRE Coke will also benefit from the deal in terms of rationalisation and synergies. The performance of Gujarat NRE Coke extremely good in merger year and in post merger, it is expected to do even better when revenues from the generation of power from waste heat is taken into account. Again addition of two more chimneys with 56 ovens will benefit the company. |
| 25-Jul-03 | Reliance Infrastructure Ltd. & BSES Andhra Power Ltd. [Merged] | To reform the entire power distribution sector. |
| 15-Dec-03 | Monnet Ispat & Energy Ltd. & Monnet Power Ltd. [Merged] | To expand its sponge iron capacity to 750,000 tonne from the existing 300,000 tons and lead to a combined entity with estimated revenues of over Rs 600 crore. The merger will create an integrated company and will help for growth. The new merged entity will have access to coal and iron ore, prime raw materials of sponge iron. It will also have access to captive power. |
| 11-Feb-04 | CESC Ltd. & Balagarh Power Co. Ltd. | To meet the growing power requirement in the state by setting up of a 500 MW thermal power station. |
| 10-Sep-04 | Websol Energy System Ltd. & Delta PV Pvt. Ltd. | To make it a 100 per cent owned subsidiary. |
| 2-Dec-04 | Neelachal Ispat Nigam Ltd. & Konark Met Coke Ltd. [Merged] | To get integrated plant with concomitant benefits. Integration of all units will lead to improved techno-economics, higher capacity utilisation, improved productivity, cost savings and higher profitability. |
| 23-Mar-06 | Torrent Power Ltd. & Torrent Power SEC Ltd. [Merged] | To have better balance sheet for upcoming investments opportunities in the sector in the country. Most companies and the states which offer opportunities in power sector normally look for big balance sheet and so the merger would give us that necessary background to compete at the national level. |
| 23-Mar-06 | Torrent Power Ltd. & Torrent Power AEC Ltd. [Merged] | To enable the group to leverage its existing material and human resources for enhancing the value of all its stakeholders. With the merger of three companies, the total turnover of the new company would touch Rs 2,400 crore. |

**Table 5: Motives of Electricity Companies behind M&A Deals**

| | | |
|---|---|---|
| 17-Apr-06 | India Infrastructure Developers Ltd. & L&T Power Investments Pvt. Ltd. [Merged] | To focus on core an area, as (on October 2005) company has totally exited from the packaging business by sale of its Glass Containers Business to ACE Glass. . To exploit the opportunities that will come from hydrocarbon, infrastructure, power, minerals & metals and other industrial sectors. |
| 25-Jul-06 | NCL Industries Ltd. & NCL Energy Ltd. [Merged] | To increase the market price of equity shares, to expand and modernise, to have low capital cost. |
| 2-Aug-06 | Bhilai Electric Supply Co. Pvt. Ltd. & NTPC-SAIL Power Co. Pvt. Ltd. | To reduce the operational, administrative and managerial expenses, the merger of these two entities is done as they are in the same business of power generation and under the same management. |
| 10-May-07 | GVK Power & Infrastructure Ltd. & Bowstring Projects & Investment Pvt. Ltd. [Merged] | To align all GVK infrastructure companies under one roof thereby enabling GVK to position itself as an integrated infrastructure company to leverage emerging opportunities in this sector. It will also provide better realisation of value for our investors |
| 12-Jun-07 | Sarda Energy & Minerals Ltd. & Chhattisgarh Electricity Co. Ltd. [Merged] | To become a leading energy and minerals company. |
| 21-Apr-09 | Entegra Ltd. & Shree Maheshwar Hydel Power Corporation Ltd./SKG Power Ventures Pvt. Ltd | To reduce the peak power deficit in Madhya Pradesh and also provide much needed water supply to the region. |
| 25-Jun-09 | Jaiprakash Power Ventures Ltd. & Jaiprakash Power Ventures Ltd. [Merged] | To enable creation of an integrated corporate structure for development of power business of the group, to achieve economies of scale, operational and managerial efficiency and to enhance resource mobilisation capacity required for growth. It would also result in uniform management philosophy, utilisation of common pool of talent, flexibility in funding expansion plans and achieving better cash flows substantially enhancing shareholders' value. It would also result in better utilisation of resources and capital and would not only create a stronger base for future growth of the power business but would also result in creating a better and healthier balance sheet facilitating participation in upcoming large power projects. The amalgamation also enhances the competitive strength of the company to participate vigorously in high growth opportunities available in the power sector. |

**Table 5: Motives of Electricity Companies behind M&A Deals**

| | | |
|---|---|---|
| 8-Dec-09 | Haldia Petrochemicals Ltd. & H P L Cogeneration Ltd. [Merged] | To invest in plant and technology that would reduce the generation cost, which is currently "reasonably higher" than the cost of grid power. The acquisition will help HPL meet its energy requirements that are slated to increase as HPL has embarked on a 30 per cent capacity expansion. It will also offer flexibility in fuel usage. |
| 5-Jul-10 | Reliance Power Ltd. & Reliance Natural Resources Ltd. [Merged] | To get resource benefit like gas from the RNRL's Coal Bed Methane (CBM) blocks. It comprises of 45 per cent interest in four blocks with acreage of 3,251 sq. km. and an estimated resources of 193 billion cubic metres; and a 10 per cent share in oil and gas block in Mizoram, with acreage of 3,619 sq. km. and a reserve potential of up to 28 billion cubic metres. It would also benefit because of reliability and cost efficiency for fuel supplies through the RNRL's coal supply logistics and shipping business; contribution from the RNRL's net worth of Rs.1,900 crore, leading to an increase in Reliance Power's net worth to more than Rs.16,000 crore. It would further speed up Reliance Power's overall growth prospects. The RNRL's shareholders will also benefit from the amalgamation by taking part in future growth prospects of Reliance Power's diversified generation portfolio of 37,000 MW, and its substantial coal reserves in India and abroad. |
| 14-Feb-11 | Jaiprakash Power Ventures Ltd. & Bina Power Supply Co. Ltd. [Merged] | To restructure the power business of the group for achieving economies of scale, operational and managerial efficiency and enhance resource mobilisation capacity for growth. |
| 14-Feb-11 | Jaiprakash Power Ventures Ltd. & Jaypee Karcham Hydro Corporation Ltd. [Merged] | To restructure the power business of the group for achieving economies of scale, operational and managerial efficiency and enhance resource mobilisation capacity for growth. |
| Sources: Collected from different online sources | | |

These various benefits discussed above have motivated electricity companies to go for M&A deals in India.

## 6. LITERATURE REVIEW

There is vast number of research literatures on effects of mergers, acquisitions, and takeovers on company performance. Study of both Indian and International research papers are made on the works relating to post merger corporate financial performance. As surveyed through literature most of the work is done in USA & UK apart from Malaysia, Japan, Australia, Greece, Canada, and India. But limited works are done with respect to India. Research on M&As till date has not been able to provide conclusive evidence whether they enhance efficiency or destroy wealth. The literature review is organised as 'Studies using Accounting Measures', 'Studies using Event studies', 'Studies using multiple performance measures', 'Studies on post merger performance in electricity companies'.

### 6.1. Studies Focusing on Accounting Approach

Accounting approach use accounting and financial measures from financial statements to evaluate the M&A success. There is evidence from various research studies that shareholders get negative returns after M&A. There is no positive return from merger (Meeks, 1977; Mueller, 1980; Chatterjee and Meeks, 1996; Parrino and Harris, 2001; Ghosh, 2001; Sharma and Ho, 2002; Salter and Weinhold, 1979 cited from Bruner, 2004). Acquiring firms' performs poorly in post merger years (Meeks, 1977 cited from Bruner, 2004). The firms with tender offer activity were 3.1 per cent less profitable than firm without the activity (Ravenscraft and Scherer, 1987; Dickerson, Gibson and Euclid, 1997; Mueller, 1980 cited from Bruner 2004; Singh, 1975 cited from Daga, 2007). Acquirers get return on assets same as non acquirers, thus making M&A a zero Net Present Value (NPV) activity (Healy, Palepu and Ruback, 1992). So above studies give evidence that M&A are value destroying activities. There is post merger improvement of companies involved in merger (Herman and Lowenstein, 1988; Ravenscraft and Scherer, 1989). The performance of merged firms improves significantly after they are combined. Buyers, targets, combined firms underperform their peers in five years before merger, and outperform their peers in five years after (Carline et al, 2004). There is improvements in long run operating cash flow performance after acquisition because of both increases in return on sales (operating cash flow per dollar of sales) and in asset turnover (sales per dollar of assets) (Rahman and Limmack, 2004). There are cases where companies involved in M&A may give both positive and negative returns. Operating synergies in the form of additional cash flows is positive (12.9 per cent) and financial synergies in the form of changes in required rate of return is negative (-3.6 per cent) after M&A (Seth, 1990). Pautler (2001) made literature survey and found that pre merger and post merger studies provide no clear answers to questions about the efficiency and market power effects of M&As. In case of large scale studies (those used large sample, as viewed by Pautler, 2001) M&A are unsuccessful. There is significant gain to target firms and little or no gains to acquiring firms. Again there is price enhancement and cost reduction in multiple merger cases. Thus, from the above literature it is concluded that accounting based studies shows mixed results. These mixed results may be because of studies made in different countries or using different performance variables or other deal specific factors.

### 6.2. Studies Focusing on Event Study Approach

The approach for the examination of abnormal stock returns to the shareholders of both acquirer and target around the announcement of an offer is called event studies, event being the M&A announcement. Acquisitions are not value-enhancing for shareholders (Morck et al. 1990). Stockholders of the acquiring firm experience a statistically significant wealth loss of about 10 per cent over five years after merger completion date (Agrawal et al., 1992). There is a small and insignificant abnormal return for acquirer at the date of takeover announcement (Halpern, 1973; Mandelkar, 1974; Ellert, 1976 from Brailsford and Knights, 1998).There is a negative relationship between management shareholdings and post acquisition performance of high tech acquisitions. High managerial ownership seems to reduce managers' risk aversion and encourage over investment in value diminishing high tech acquisitions (Gao and Sudarsanam, 2003).The acquiring firm experiences considerably deteriorating operating performance after acquisition, but the poor performance is generally not different from industry counter parts (Ken, 2004). The returns to the acquiring companies are either zero or negative (Maletesta 1983 cited from Bruner, 2004). It is also found that the post merger stock price and operating performance of the merged companies are negative and even worse than the stock price and operating performance of a control portfolio of companies that did not merge (Becker et al., 2008). Various studies show evidence that both acquiring and target firm get positive returns from M&A. Stockholders of target firms earn large positive abnormal returns from tender offers (Dodd and Ruback, 1977; Moeller et al. 2004; Dennis and McConnell 1986; Asquith et al. 1983; Leeth, 2000). The cumulative abnormal return is statistically significant giving positive returns acquiring firm shareholders (Loderer and Martin, 1992; Frederikslust et al., 2005; Dutta and Jog, 2009). Combined returns to shareholders of acquiring firm and target firm showed positive cumulative abnormal returns to both firms (Berkovitch, 1993; Bradley et al., 1982; Mulherin, 2000; Fan and Goyal, 2002). Target return, acquirer return and total returns are larger when targets have low q ratios and acquirers have high q ratios (Servaes, 1991). Literature suggests that M&A returns are based on who gets the returns, the timing of getting return. Acquiring firm shareholders make small gains before and large losses after consolidation (Leeth and Borg, 1994). The shareholder value is found to be positive, even though it is small (Pautler, 2001). Mergers and acquisitions result in benefits to the acquired firms' shareholders and to the acquiring companies' managers while in case of losses, it is suffered by the acquiring companies' shareholders (Firth, 1980). Shareholders of target firm gain while shareholders of acquirer either gain or lose (Kaplan and Weisbach, 1992). Mergers that focus both geography and activity are value-increasing, whereas diversifying mergers do not create value (DeLong, 2001). In stock market studies, it is found that there is significant gain to target firm shareholders and little or no gain to acquiring firm shareholders around the time when the mergers and acquisitions took place. Over the long-term, in the post announcement period, acquiring firms earn lower returns relative to those earned in the pre acquisition performance but their relative performance remains exceptionally good (Rosa et al., 2003). Since the return varies in different situations, it is therefore important to know for whom performance is to be evaluated-target, acquirer or combined firm; for which time period performance is to be evaluated-short term or long term. There is mixed results in event study methodology also. It is therefore needed to know the results of studies that have used both accounting return and event study methods to evaluate the M&A performance.

### 6.3. Studies Focusing on Mixed Approach

Several studies are based on multiple performance measures which may not be classified purely related to accounting measures or event studies. For short run announcement period, the average cumulative abnormal return is positive and similar for the first merger for single as well as multiple acquirers (Paul et al., 2001). The post merger impact appears stronger when measured against the acquirer's results alone. In the banking industry, acquirers tend to be over-achievers and they add to profitability in post merger period. The positive post merger results are consistent with the industry results (Knapp, et al. 2006). The financial performance of manufacturing companies using the rate of return on equity and rate of return on total assets improved after merger (Katsuhiko and Noriyuki, 1983). The profitability ratios show that the majority of merged banks show a decline in financial performance (Kithinji and Waweru, 2007). Long term performance is significantly greater for diversifying mergers. The acquirer company's pre merger performance partially outperforms the post merger performance of merged company. Since the post merger operating performance of combined company is poor than pre merger performance of the acquirer, the acquirer company may have done better without such transaction (Kukalis, 2007). Apart from the traditional parameters like ROA and ROE, economic value added (EVA) is also taken for performance evaluation. One such study is made for Chinese firms. The profitability and growth of such firms involved in M&A first falls and then rises (Wang and Qian 2006). Companies improved efficiency through M&A in the year of M&A having better performance than average of the industry (Xiao and Tan, 2007). The analysis of pre and post merger profitability and efficiency ratios for the acquiring firms shows that there is a differential impact of mergers for different ratios (Agarwal, Nataraj and Singh, 2010). In nutshell, it is observed that returns to acquirer are situational and the returns vary accordingly influenced by different factors relating to M&A.

### 6.4. Studies Based on Post Merger Performance of Electricity Companies

Studies on post merger performance of electricity companies were few as far as literature is reviewed. Limited studies are made based on accounting and event studies. Mostly were conceptual and review oriented papers. Kwoka (2006) found that mergers produce efficiencies that provide benefit to consumers and shareholders in same manner. The results were applicable to the economy as a whole as well as for mergers amongst electricity companies. Mergers helped in terms of increased size, and realised economies of scale. Generators and distribution companies go for mergers to have benefit of economies of scale. Acquirer companies are not efficient in pre merger and acquisition years and therefore whatever their objectives of merger may be, they are not in a position to transfer efficiencies to target companies. Target electricity companies are better performer than the acquirer. The performance levels of target companies after merger did not increased and declined significantly. The acquirers in electricity companies rather than acquiring underperforming firms they have acquired better performers. There were no efficiency transfers and the efficiency of the target companies have declined. It was expected to have net efficiency gains from merger but there were no gains at all.

Kwoka (2007) analysed the impact on operating and total cost in electricity distribution using data envelopment analysis to measure the efficiency of each operating unit. It was found that electricity mergers are inconsistent with improved cost performance. In terms of timing, the merger effects are seen fairly consistent except for the years immediately before and immediately after the merger.

Leite and Castro (Unknown) observed that unlike the United States , in the European Union, it is considered illegal for a firm if it uses its dominant market position (even one gained by innovation, efficiency etc.) to abuse its market power. Firms cannot fix prices which are considered high, i.e. where margins above costs are greater than the average range for prices set by competitive firms. These types of mergers are considered as harmful for social welfare (Leveque, 2006; Gilbert and Newberry, 2006) because, by reducing inefficiency in vertical transactions, it will lead to reduced costs and thus lower prices.

Blease, Goldberg and Kaen (2004) found that mergers and acquisitions do not create value for a fully diversified investor. Acquiring firms do not perform well after deal completion. Buy and hold returns and operating performance measures show negative returns after deal completion. Acquirers acquiring more than one target experience poor stock price and operating performance during and after acquisitions. The merger and acquisition done by electricity companies in regard to deregulation did not create value for their shareholders and thus reap no synergistic benefits out of the mergers.

Gilbert, R & Newbery, D (2006) found that vertical mergers between electricity companies and gas companies with market power in the gas market (often secured through their control over the pipeline network and storage and balancing services) are problematic, as the incentive to raise gas prices may be enhanced through ownership of electricity generation. The author suggested that regulatory bodies and competition authorities must be particularly vigilant in scrutinising mergers in the electricity and gas sectors to ensure competitive environment.

## 7. RESULTS AND DISCUSSIONS

The performance is evaluated taking into various parameters like Return on Net worth (RONW) and Return on Capital Employed (ROCE), Current Ratio (CR), Quick Ratio (QR), Net Working Capital by Sales Ratio, Interest Coverage Ratio (ICR), Total Debt Ratio (TDR) and Asset Turnover Ratio (ATR). The following results are found:

**Table 6: Pre and Post Merger One Year Return on Capital Employed**

| Year | Rs. Crore | T-1 (ROCE) | T0 (ROCE) | T+1(ROCE) |
|---|---|---|---|---|
| 2000 | Tata Power Co. Ltd. | 0.12 | 0.14 | 0.12 |
| 2003 | Reliance Infrastructure Ltd. | 0.12 | 0.07 | 0.05 |
| 2004 | C E S C Ltd. | 0.12 | 0.15 | 0.13 |
| 2006 | Torrent Power Ltd. | 0 | 0.13 | 0.03 |
| 2009 | Jaiprakash Power Ventures Ltd. | 0.18 | 0.13 | 0.06 |
| 2010 | J S W Energy Ltd. | 0.18 | 0.16 | 0.12 |
| | | **0.12** | **0.13** | **0.09** |

During the post merger first year the return on capital employed for electric companies have not improved and decreased even if it has risen compared to pre merger and merger year.

**Table 7: Pre and Post Merger One Year Return on Net Worth**

| Year | Rs. Crore | T-1 (RONW) | T0 (RONW) | T+1(RONW) |
|---|---|---|---|---|
| 2000 | Tata Power Co. Ltd. | 0.1 | 0.13 | 0.1 |
| 2003 | Reliance Infrastructure Ltd. | 0.11 | 0.05 | 0.05 |
| 2004 | C E S C Ltd. | 0.02 | 0.18 | 0.12 |
| 2006 | Torrent Power Ltd. | 0 | 0.07 | 0.03 |
| 2009 | Jaiprakash Power Ventures Ltd. | 0.21 | 0.13 | 0.07 |
| 2010 | J S W Energy Ltd. | 0.29 | 0.16 | 0.15 |
| | | **0.12** | **0.12** | **0.09** |

During the post merger first year the return on net worth for electric companies have not improved and decreased If compared pre merger with merger year the RONW has remain unchanged.

**Table 8: Pre and Post Merger Two Year Return on Capital Employed**

| Year | Acquirer | T-2 (ROCE) | T-1 (ROCE) | T0 (ROCE) | T+1(ROCE) | T+2(ROCE) | pre 2 year | post 2 year |
|---|---|---|---|---|---|---|---|---|
| 2000 | Tata Power Co. Ltd. | 0.13 | 0.12 | 0.14 | 0.12 | 0.14 | 0.13 | 0.13 |
| 2003 | Reliance Infrastructure Ltd. | 0.12 | 0.12 | 0.07 | 0.05 | 0.07 | 0.12 | 0.06 |
| 2004 | C E S C Ltd. | 0.11 | 0.12 | 0.15 | 0.13 | 0.12 | 0.12 | 0.13 |
| | | | | | | | **0.12** | **0.11** |

It is not only during the first year but during the second year the performance of electricity companies decline in terms of return on capital employed.

**Table 9: Pre and Post Merger Two Year Return on Net worth**

| Year | Acquirer | T-2 (RONW) | T-1 (RONW) | T0 (RONW) | T+1(RONW) | T+2(RONW) | Pre 2 Year | Post 2 Year |
|---|---|---|---|---|---|---|---|---|
| 2000 | Tata Power Co. Ltd. | 0.11 | 0.1 | 0.13 | 0.1 | 0.12 | 0.11 | 0.11 |
| 2003 | Reliance Infrastructure Ltd. | 0.12 | 0.11 | 0.05 | 0.05 | 0.09 | 0.12 | 0.07 |
| 2004 | C E S C Ltd. | -0.2 | 0.02 | 0.18 | 0.12 | 0.11 | -0.09 | 0.12 |
| | | | | | | | **0.04** | **0.10** |

In terms of return net worth, the companies have improved after post merger and they were able to generate money for the investments made by the shareholders.

**Table 10: Pre and Post Merger Three Years Return on Capital Employed**

| Year | Acquirer | T-3 (ROCE) | T-2 (ROCE) | T-1 (ROCE) | T0 (ROCE) | T+1(ROCE) | T+2(ROCE) | T+3(ROCE) | pre 3 year | post 3 year |
|---|---|---|---|---|---|---|---|---|---|---|
| 2000 | Tata Power Co. Ltd. | 0.13 | 0.13 | 0.12 | 0.14 | 0.12 | 0.14 | 0.15 | 0.3 | 0.14 |
| 2003 | Reliance Infrastructure Ltd. | 0.15 | 0.12 | 0.12 | 0.07 | 0.05 | 0.07 | 0.08 | 0.31 | 0.07 |
| 2004 | C E S C Ltd. | 0.08 | 0.11 | 0.12 | 0.15 | 0.13 | 0.12 | 0.14 | 0.23 | 0.13 |
| | | | | | | | | | **0.28** | **0.11** |

Return on capital employed again decreased in post merger three years compared to pre merger three years.

**Table 11: Pre and Post Merger Three Year Return on Net Worth**

| Year | Acquirer | T- (RONW) | T-2 (RONW) | T-1 (RONW) | T0 (RONW) | T+1(RONW) | T+2(RONW) | T+3(RONW) | pre 3 year | post 3 year |
|---|---|---|---|---|---|---|---|---|---|---|
| 2000 | Tata Power Co. Ltd. | 0.08 | 0.11 | 0.1 | 0.13 | 0.1 | 0.12 | 0.11 | 0.22 | 0.11 |
| 2003 | Reliance Infrastructure Ltd. | 0.13 | 0.12 | 0.11 | 0.05 | 0.05 | 0.09 | 0.09 | 0.29 | 0.08 |
| 2004 | C E S C Ltd. | -0.98 | -0.2 | 0.02 | 0.18 | 0.12 | 0.11 | 0.15 | -1.17 | 0.13 |
| | | | | | | | | | **-0.22** | **0.10** |

Even though the return on net worth has improved in second year, it has again declined in post merger three years. It means in initial years due to merger pressure the profitability has declined, and then it improved when company became stable and then it declined being affected by other factors.

**Table 12: Pre and Post Merger One Year Asset Turnover Ratio**

| | Company Name | T-1 (ATR) | T0 (ATR) | T+1(ATR) |
|---|---|---|---|---|
| 2000 | Tata Power Co. Ltd. | 0.35 | 0.38 | 0.44 |
| 2003 | Reliance Infrastructure Ltd. | 0.6 | 0.78 | 0.4 |
| 2004 | C E S C Ltd. | 0.38 | 0.46 | 0.49 |
| 2006 | Torrent Power Ltd. | 0 | 0.85 | 0.24 |
| 2009 | Jaiprakash Power Ventures Ltd. | 0.15 | 0.15 | 0.07 |
| 2010 | J S W Energy Ltd. | 0.32 | 0.27 | 0.29 |
| | | **0.30** | | **0.32** |

The ratio of sales to assets, or asset turnover ratio shows improvement in initial first year of merger and the companies have increased the capital-intensity capacity of a business, and it has used assets to produce revenue. The companies like Tata Power Co. Ltd., Reliance Infrastructure Ltd., CESC Ltd have improved performance individually in post merger years. The performance of Jaiprakash Power Ventures Ltd. has remained unchanged and J S W Energy Ltd. has negative performance in terms of asset turnover ratio.

**Table 13: Pre and Post Merger Two Year Asset Turnover Ratio**

| **Asset Turnover Ratio** | **Acquirer** | **T-2 (ATR)** | **T-1 (ATR)** | **T0 (ATR)** | **T+1(ATR)** | **T+2 (ATR)** | **pre 2** | **post 2** |
|---|---|---|---|---|---|---|---|---|
| 2000 | Tata Power Co. Ltd. | 0.4 | 0.35 | 0.38 | 0.44 | 0.45 | 0.38 | 0.45 |
| 2003 | Reliance Infrastructure Ltd. | 0.51 | 0.6 | 0.78 | 0.4 | 0.34 | 0.56 | 0.37 |
| 2004 | C E S C Ltd. | 0.35 | 0.38 | 0.46 | 0.49 | 0.37 | 0.37 | 0.43 |
| 2009 | Jaiprakash Power Ventures Ltd. | 0.16 | 0.15 | 0.15 | 0.07 | 0.04 | 0.16 | 0.06 |
| | | | | | | | 0.36 | 0.33 |

The two year average asset turnover ratio has declined when compared between pre and post merger years by three per cent.

**Table 14: Pre and Post Merger Three Year Asset Turnover Ratio**

| | Acquirer | T-3 (ATR) | T-2 (ATR) | T-1 (ATR) | T0 (ATR) | T+1(ATR) | T+2(ATR) | T+3(ATR) | pre 3 | post 3 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2000 | Tata Power Co. Ltd. | 0.49 | 0.4 | 0.35 | 0.38 | 0.44 | 0.45 | 0.49 | 0.41 | 0.46 |
| 2003 | Reliance Infrastructure Ltd. | 0.53 | 0.51 | 0.6 | 0.78 | 0.4 | 0.34 | 0.27 | 0.55 | 0.34 |
| 2004 | C E S C Ltd. | 0.31 | 0.35 | 0.38 | 0.46 | 0.49 | 0.37 | 0.34 | 0.35 | 0.40 |
| | | | | | | | | | **0.44** | **0.40** |

If assets turnover ratio is looked then there is no difference in the pre and post merger performance in three years average.

**Table 15: Performance of Tata Power Co. Ltd for deal with Andhra Valley Power Supply Co. Ltd.**

| Year | RONW | ROCE | ATR | CR | QR | NWCS | ICR | TDR |
|---|---|---|---|---|---|---|---|---|
| Mar-95 | 0.11 | 0.11 | 0.49 | 1.1 | 0.52 | 780.04 | 2.57 | 0.52 |
| Mar-96 | 0.18 | 0.19 | 0.5 | 0.4 | 0.4 | -31.5 | 4.94 | 0.47 |
| Mar-97 | 0.08 | 0.13 | 0.49 | 1.24 | 0.58 | 134.29 | 3.65 | 0.42 |
| Mar-98 | 0.11 | 0.13 | 0.4 | 1.61 | 1.03 | 9 | 3.79 | 0.49 |
| Mar-99 | 0.1 | 0.12 | 0.35 | 1.28 | 0.7 | 36.31 | 3.48 | 0.5 |
| Average of 5 year pre merger | 0.12 | 0.14 | 0.45 | 1.13 | 0.65 | 185.63 | 3.69 | 0.48 |
| **Mar-00** | **0.13** | **0.14** | **0.38** | **0.96** | **0.56** | **-15.8** | **4.16** | **0.5** |
| Mar-01 | 0.1 | 0.12 | 0.44 | 1.76 | 1.33 | 4.35 | 3.28 | 0.5 |
| Mar-02 | 0.12 | 0.14 | 0.45 | 1.2 | 0.82 | 31.48 | 3.26 | 0.49 |
| Mar-03 | 0.11 | 0.15 | 0.49 | 1.12 | 0.69 | -35.78 | 3.39 | 0.45 |
| Mar-04 | 0.1 | 0.15 | 0.53 | 1.1 | 0.67 | -80.14 | 3.83 | 0.36 |
| Mar-05 | 0.11 | 0.11 | 0.43 | 1.73 | 1.31 | 5.53 | 5.32 | 0.44 |
| Average of 5 year post merger | 0.11 | 0.13 | 0.47 | 1.38 | 0.96 | -14.91 | 3.82 | 0.45 |
| Source: Evaluated from Financial data from CMIE Prowess Database | | | | | | | | |

While evaluating performance of particular merger deal of Tata Power Co. Ltd with Andhra Valley Power Supply Co. Ltd. [Merged], following findings are made:

- Return on Net Worth of Tata Power Co. Ltd improved in merger year if compared with five year average of pre merger. But if five year average of pre and post merger is compared then it has reduced.

- Return on Capital Employed of Tata Power Co. Ltd has remained unchanged if compared with five year average of pre merger and if five year average of pre and post merger is compared then it has reduced.
- Asset Turnover Ratio which is considered as best measure for companies that require a large infrastructure in order to produce, or deliver their product, such as electric companies that require a large asset base to generate sales, has improved if five year average of pre and post merger is compared.
- Current Ratio and Quick Ratio has increased in five year average of post merger when compared with five year average pre merger years.
- Net Working Capital/ Sales have declined significantly and has given negative returns in post merger years.
- Tata Power Co. Ltd were able to generate sufficient money to pay back its debt as the Interest Coverage Ratio has improved from 3.69 to 3.82 in five year average pre and post merger year. The good thing is Total Debt Ratio has reduced which show the debt burn of the companies have reduced after getting synergetic befits from the deal.

## 8. CONCLUSION

Electricity companies are going on merger spree for improving their market share by solving many financial issues like cost. Post merger performance of companies have been better in second year, while in the first year and average of three years the electricity companies have declined in different ratios. The return on capital employed has never improved. But the return on net worth and asset turnover ratio has increased in two year average pre and post merger years. Mergers and acquisitions (M&A) in the electricity sector are expected to grow in coming years because to keep the sector highly profitable in both the short and long term, there is need of M&A. The electricity companies with strong financial backup acquiring leading to expansion of industry and company. At that time, the electric power industry will enjoy a long-term development in a physically sound way. No doubt M&A in electricity industries have resulted in economies of scale and synergetic benefits to companies but still, it is suggested that acquirer companies should acquire those target companies whose benefit is above its costs as there are also many problems associated with it like job cuts which may hamper the ethical and cultural values. Following economic expansion and large demand for power, the electric power industry has stepped in an accelerated phase of M&A. The current market is that the major role was played by government owned companies while private players small part. The local electricity companies have stayed focused on acquisition to improve their core competitiveness with expanding market share.

## REFERENCES

Agrawal, A., Jaffe, J.F., Mandelker, G.N. (1992). The Post Merger Performance of Acquiring Firms: An Re-examination of Analomy, *Journal of Finance*, 47(4), 1605-1621.

Asquith, P., Bruner, R.F., Mullins, D.W. (1983). The Gains to Bidding Firms from Merger, *Journal of Financial Economics,* 11(1-4), 121-139.

Becker, J. R., Goldberg, L.G., & Kaen, F.R. (2008). Mergers and Acquisitions as a Response to the Deregulation of the Electric Power Industry: Value Creation or Value Destruction?, *Journal of Regulatory Economics*, 33(1), 21-53

Berkovitch, E. & Narayanan, M.P. (1993). Motives for Takeovers: An Empirical Investigation, *Journal and Financial Quantitative Analysis,* 28 (3), 347-362.

Brailsford, T.J. & Knights, S. (1998). The Financial and Non-Financial Effects of Corporate Takeovers, Working Paper No. 23/98, Melbourne Institute of Applied Economic and Social Research retrieved on 6th June, 2010 from http://www.melbourneinstitute.com/wp/wp1998n23.pdf

Bruner, R.F. (2004). Applied Mergers and Acquisitions, John Wiley & Sons.

Carline, N.F., Linn, S. C., & Yadav, P. K. (2004). Can the Stock Market systematically make use of Firm and Deal Specific Factors when initially Capitalising the Real Gains from Mergers and Acquisitions?, retrieved on 12th May 2009 from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=567110

Daga, V. (2007). Post Merger Profitability Analysis of Shareholders: Evidence from Europe, Unpublished Master's Dissertation, retrieved on 29th November 2011 from http://edissertations.nottingham.ac.uk/1094/1/07MAlixvd1.pdf

DeLong, G. L. (2001). Stockholder Gains from Focusing versus Diversifying Bank Mergers, *Journal of Financial Economics*, 59 (2), 221-252.

Dennis, D.K. & Mcconnell, J.J. (1986). Corporate Mergers and Security Returns, *Journal of Financial Economics,* 16 (2), 143-187.

Dickerson, A.P., Gibson, H.D., & Euclid (1997). The Impact of Acquisitions on Company Performance: Evidence from a Large Panel of UK Firms, *Oxford Economic Papers, New Series,* 49(3), 344-361.

Dodd, P., & Ruback, R. (1977). Tender Offers and Shareholder Returns: An Empirical Analysis, *Journal of Financial Economics,* 5 (3), 371-374.

Dutta, S., & Jog, V. (2009). The Long-Term Performance of Acquiring Firms: A Re-Examination of an Anomaly, *Journal of Banking & Finance,* 33(8), 140-141.

Fan, J. P. H., & Goyal, V.K. (2002). On the Patterns and Wealth Effects of Vertical Mergers, Hong Kong , *University of Science and Technology Working Paper*, retrieved on 2nd May 2010 from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=296435

Firth, M. (1980). Takeovers, Shareholder's Returns and Theory of Firm, *Quarterly Journal of Economics,* 94 (2), 235-260.

Frederikslust, R.A.I.V., & Wal, V.V.D, Westdijk, H. (2005). Shareholder Wealth Effects of Mergers and Acquisitions, retrieved on May 18, 2009 from http://www.efmaefm.org/efma2005/papers/262-van-frederikslust_paper.pdf

Gao, L., Sudarsanam, P. S. (2003): Value Creation in UK High Technology Acquisitions, retrieved on 4th June 2009 from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=493762, accessed on

Ghosh, A. (2001). Does Operating Performance really improve following Corporate Acquisitions? *Journal of Corporate Finance,* 7(2), 151-178.

Gilbert, R & Newbery, D (2006). Electricity Merger Policy in the Shadow of Regulation accessed on 15th February 2012 available from http://www.iern.net/portal/page/portal/IERN_HOME/IERN_ARCHIV/Publications/Competition_Issues/57AA9CE3ED0240C1E040A8C03C2F75CB

Katsuhiko, I. & Noriyuki, D. (1983). The Performances of Merging Firms in Japanese Manufacturing Industry: 1964-75, *The Journal of Industrial Economics*, 31(3), 257-266.

Ken, C. Y. (2004). The Measurement of Post Acquisition Performance using EVA, retrieved on 12th March 2010 from http://www.allbusiness.com/public-administration/administration-economic-programs/990660-1.html

Kithinji, A.M., & Waweru, N.M. (2007). Merger Restructuring and Financial Performance of Commercial Banks in Kenya *Journal of Economics*, *Management and Financial Markets*, 2(4), 10-32.

Kukalis, S. (2007). Corporate Strategy and Company Performance: The Case of Post Merger Performance, *The International Journal of Finance*, 19(3), 4475-4489.

Kumar, B. R., Rajib, P. (2007a). Mergers and Corporate performance in India: An Empirical Study, *IIMC Decision*, 34(1), 121-147.

Kumar, B. R., Rajib, P. (2007b). Characteristics of Merging Firms in India: An Empirical Examination, *IIMA Vikalpa*, 32(1), 27-45.

Kumar, R. (2009). Post Merger Corporate Performance: An Indian Perspective, *Management Research News* 32(2), 145-157.

Kwoka, J. (2006). Promises, Promises: Competition and Efficiency in the Restructured Electricity Sector, accessed on 15th February 2012 available from http://www.antitrustinstitute.org/files/486d.pdf

Kwoka, J. (2007). Do Mergers improve Efficiency? Evidence from Restructuring the U.S. Electric power sector accessed on 15th February 2012 available from http://www.dspace.cam.ac.uk/bitstream/1810/194705/1/0725%26EPRG0708.pdf

Leeth J. D., Borg, J. R. (2000). The Impact of Takeovers on Shareholder's Wealth during the 1920s Merger Wave, *Journal of Financial and Quantitative Analysis*, 35, (2), 217-238.

Leeth, J.D., & Borg, J. R. (1994). The Impact of Mergers on Acquiring Firm Shareholder Wealth: The 1905-1930 Experience, *Ernpirica* 21,221-244.

Leite, A.L.D.S; Castro, N.J.D, Soares, M.I.R.T (Unknown). Electric Sector Mergers And Acquisitions: Lessons from the European Union, accessed on 15th February 2012 available from www.brazilink.org/tiki-download_file.php?fileId=117

Loderer, C., & Martin, K. (1992). Post Acquisition Performance of Acquiring Firms, *Financial Management*, 21, 69-79.

Marcenaro, E (Unknown). Whose risk is it anyway? The Allocation of Risks related to a M&A Transaction in the Energy Sector

Masulis, R W; Wang, C and Xie, F (2005). Corporate Governance and Acquirer Returns, *ECGI-Finance Working Paper No. 116/*2006 Journal of Finance, retrieved on 13th November 2011http://www.afajof.org/afa/forthcoming/2893.pdf

Moellera, S.B., Schlingemannb, F.P., Stulz, R.M. (2004). Firm Size and the Gains from Acquisitions, *Journal of Financial Economics,* 73(2), 201–228.

Morck, R., Shleifer, A., & Vishny, R.W (1990) Do Managerial Objectives Drive Bad Acquisitions?, *Journal of Finance,* 45 (1), 31-48.

Pautler, P.A. (2001). Evidence on Mergers and Acquisitions, retrieved on18th May 2010 from http://www.ftc.gov/be/workpapers/wp243.pdf

Rahman, R. A., & Limmack, R.J. (2004). Corporate Acquisitions and the Operating Performance of Malaysian Companies, *Journal of Business Finance & Accounting*, 31(3-4), 359-400.

Rosa, R.D. S., Engel, R., Moore, M., & Woodliff, D. (2003). Post Acquisition Performance and Analyst following US Evidence, retrieved on 29th November 2011 from http://wwwdocs.fce.unsw.edu.au/banking/seminar/2003/MarkMoore.pdf

S, Shikha (2009). State Electricity Board in Troubled Waters, JK *Journal of Management & Technology*, 1(1), 101–112.

Servaes, H. (1991). Tobin's Q and the Gains from Takeovers, *Journal of Finance,* 4 (1) 409-419.

The Electricity Act, 2003, accessed on 21st December 2011 available from http://www.cercind.gov.in/08022007/Act-with-amendment.pdf

Wang, L. & Qian. (2006). An Empirical Study of the Performance of China's Cross-Border Mergers & Acquisitions Activity, retrieved from http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4105196

Xiao, X., & Tan, L. (2007). Research of M&A Performance of Listed Companies in China based on EVA, retrieved on May 14, 2010 from http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=5190469&tag=1