Chapter 7

Interpretation and Discussions
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Chapter Objective:
This purpose of this Chapter is to interpret the research findings.

7.1 Electrical Equipment Industry History and Evolution

The Global Electrical Equipment Industry has evolved over the past 150 years. While some companies have survived the test of time, hundreds of companies in this sector have succumbed to mergers & takeovers, competitive pressures, lack of successors at the helm, world wars, inability to cope with technological advancements and unfavourable economic conditions. The electrical equipment industry being a mature industry, the ‘Rule of Three’ has been prevalent at various levels viz. domestic, continental and global. Pioneers like General Electric and Siemens have acquired several companies over the past century and have survived, grown and prospered. Ambitious companies like Schneider Electric and Eaton Electrical have grown rapidly over the past three decades through several strategic acquisitions. Key companies like the Swedish ASEA and Swiss BBC Brown Boveri merged in 1988 to become a formidable global player. Westinghouse Electric Corporation, a pioneer in the field of electrical equipment, divested in bits and pieces and has all but vanished over time. In the developed world, most of the family owned companies and niche technology companies have been taken over by one of the larger generalists.

The history of the industry traces back to the 19th century. Siemens, founded in 1847, pioneered the electrical industry in Europe. It constructed long distance
telegraph lines across Germany, Russia, London and even Calcutta in the mid-19th century and had virtual monopoly in this field.

The legendary Thomas Alva Edison, the founder of GE, revolutionized the world with the invention of the electric bulb in 1879. Generators and AC motors followed, and GE established a virtual monopoly in its field by patenting all its inventions. Major initiatives undertaken by GE in the 1890s included street lighting and railroad electrification. By the turn of the century GE was manufacturing everything involved in the electrification of the US: generators to produce electricity, transmission equipment to carry power, industrial electric motors, electric light bulbs, and electric locomotives.

Meanwhile in Europe, Siemens powered the world's first electric street lighting in UK in 1881. It continued grow and diversified into electric trains and light bulbs in the 1880s. ASEA was established in 1890 in Sweden to manufacture electrical lighting and generators. The dawning of the electrical age provided ASEA with large new markets as the industrial and residential use of electricity became commonplace in Sweden. ASEA quickly established itself as a pioneer in the industrial field. In 1893, ASEA built Sweden's first three-phase electrical transmission, between Hellsjön and Crangesberg.

Brown Boveri was formed in 1891 in Switzerland to manufacture electrical components such as electrical motors for locomotives and power-generating equipment for Europe's railway systems. Schneider Electric became involved in electricity at the end of the 19th century. Schneider specialized in such equipment as transformers, generators and traction motors.

The first world war had its toll on all the players due to a slack in demand from the user industries. The companies started to grow again in the 1920s only to receive a severe setback during the second world war in the 1940s. However Siemens bucked the trend and expanded greatly during the Third
Reich (1933-45), all plants running to full capacity during the war and dispersing throughout the country to avoid air strikes in 1943-44. At the end of the war, Hermann Von Siemens (1885-1986), the head of the group, was briefly interned (1946-48), and Siemens officials were charged with recruiting and employing slave labour from captive nations and associating in the construction and operation of the death camp at Auschwitz and the concentration camp at Buchenwald. As much as 90 percent of the companies' plants and equipment in the Soviet-occupied zone of Germany was expropriated. The Western powers also removed and destroyed some facilities until the Cold War sparked Western interest in West Germany's economic reconstruction and co-operation.

In the 1950s and from its new base in Bavaria, Siemens started to manufacture computers, semiconductor devices, washing machines, and pacemakers. S&H gradually expanded its share of the electrical market in Europe and overseas, and by the 1960s it was again one of the world's largest electrical companies. In 1966 all constituent companies were merged into the newly created Siemens AG.

1960s to mid-1970s marked a sustained growth phase in electrical equipment industry. The developed world saw a huge growth in power generating capacity. This led to a tremendous demand for electrical equipment products. ASEA continued to flourish in the 1960s. In the mid-1960s, ASEA's American market expanded considerably and became more important to the company's overall sales strategy. After serving customers such as the Tennessee Valley Authority, the company firmly established itself in the United States when it was chosen to supply HVDC equipment for the Pacific Internie Project on the West Coast. Brown Boveri continued to excel in power generation, including nuclear power generators, and prospered in this field. Electrification efforts in the Third World also provided Brown Boveri with substantial profits.
The big players experienced varying fortunes in the 1970s. General Electric made what was at the time the largest corporate purchase ever. In December 1976 GE paid $2.2 billion for Utah International, a major coal, copper, uranium, and iron miner and a producer of natural gas and oil. The company did 80 percent of its business in foreign countries. Within a year Utah International was contributing 18 percent of GE’s total earnings.

Unable to cope up with the fast pace of changing technology, a large number of utility and electrical equipment manufacturing companies, including ASEA, experienced falling profits and lackluster growth. Siemens continued to consolidate while Schneider continued to struggle.

In 1970 Brown Boveri began an extensive reorganization. The company's subsidiaries were divided into five groups: German, French, Swiss, "medium-sized" (seven manufacturing bases in Europe and Latin America), and Brown Boveri International (the remaining facilities). Throughout the 1970s, Brown Boveri struggled to expand into the U.S. market. While Brown Boveri counted a handful of major U.S. customers as its clients, among them large utilities such as the Tennessee Valley Authority and American Electric, Brown Boveri's American market share was dismal considering the company's international standing, and the company continued to search for a means of effectively entering U.S. markets. In 1974 Brown Boveri acquired the British controls and instrument manufacturer George Kent. The newly acquired company was renamed Brown Boveri Kent and made an excellent addition to the parent company's already diverse product line. In the mid-1970s growing demand in the Middle East for large power-generating facilities distracted the company from its push into North America. Oil-rich African nations, such as Nigeria, attempting to diversify their manufacturing capabilities, also created new markets for Brown Boveri's heavy electrical engineering expertise.
The 1980s to 2000 marked the ‘Twilight zone’ for the global electricity industry as it slipped into a serious slowdown mode. Developed economies saw lack of demand and overcapacities. Power generation saw a huge slump during 1992-99. Developing economies like Russia, China and India were yet not liberalized. Though China started to build capacities in early 90s, sizable capacity started to be built only from 1999 onwards. A lot of consolidation was seen in this phase, as many companies in developed countries got unviable due to lack of demand and high cost of manufacturing. Many joint ventures also came into existence during this period.

Jack Welch took over as the Chairman and CEO of GE, and GE entered a period of radical change. Over the next several years, GE bought 338 businesses and product lines for $11.1 billion and sold 232 for $5.9 billion. Welsh’s goal was to make GE number one or two in every field of operation. Factory automation became a major activity at GE during the early 1980s. General Electric’s operations were divided into three business groups in the early 1990s: technology, service, and manufacturing. Its manufacturing operations, traditionally the core of the company, accounted for roughly one-third of the company’s earnings. Still, GE continued to pour more than $1 billion annually into research and development of manufactured goods. Much of that investment was directed at energy conservation; more efficient light bulbs, jet engines, and electrical power transmission methods.

Schneider Electric reached a crossroads in 1984. After withdrawing from its historical businesses of steel and shipbuilding, the Company had to choose a new direction. One option was to liquidate the group and reorganize the viable businesses in a new enterprise. Another was to continue pruning, and to rebuild an international group out of Jeumont-Schneider, Merlin Gerin and Spie-Batignolles. Management chose the second solution. Merlin Gerin was
brought firmly into the group in 1986, and then Schneider launched an ambitious acquisitions strategy, capped by the integration of Telemecanique (1988) and Square D (1991). The strategic refocusing on electricity was completed in 1996, with the divestment of Spie Batignolles. In 1997 Schneider acquired Modicon, an industrial control and automation giant. The merger of Merlin Gerin, Telemecanique, Square D and Modicon created a tight network of subsidiaries in 130 countries. In just ten years, a company that looked headed for bankruptcy transformed itself into a world-class manufacturer of equipment for Electrical Distribution, Automation and Control. The development of new products was being quickened by strategic alliances, such as Schneider Toshiba Inverter in speed drives, MGE UPS in UPS systems, VA Tech in the high voltage business and Thomson multimedia in power line carrier technology. To strengthen its final low voltage distribution operations, Schneider Electric acquired Scandinavia's Lexel. In 1998 and 1999, the Company acquired Schyller in Italy (industrial plugs), Mafelec in France and Veris Industries, Electrical Switchgear and Power Distribution Services in the United States. In 2000, Schneider Electric acquired fourteen companies across the world in the areas of low and medium voltage switchgear, and industrial control and automation.

In August 1987, ASEA and Brown Boveri, who had been fierce competitors in the heavy-electrical and power-generation fields, announced their intent to merge their assets for shares in a new company, ABB Asea Brown Boveri Ltd. The joint venture between the two former competitors allowed them to combine expensive research and development efforts in superconductors, high-voltage chips, and control systems used in power plants. In addition, ASEA's strength in Scandinavia and northern Europe balanced Brown Boveri's strong presence in Austria, Italy, Switzerland, and West Germany. The merger, which created Europe's largest heavy-electrical combine, was also
designed to take advantage of ASEA's management strengths and Brown Boveri's technological and marketing expertise.

In 1988 and 1989, ABB also went on an acquisition spree in Western Europe and the United States, purchasing a total of 55 companies. Perhaps most importantly, ABB was able to gain a foothold in North America, something both halves of ABB had struggled to achieve for the previous two decades. In early 1989 ABB formed a joint venture with the American electrical firm Westinghouse Electric Corporation. ABB owned 45 percent of the new subsidiary, a manufacturer of power transmission and power distribution systems for international markets. Then, in December 1989, ABB exercised its option to buy Westinghouse out of the venture, leaving ABB the sole owner of the company. That same month, the company agreed to buy Stamford, Connecticut-based Combustion Engineering Group, an unprofitable manufacturer of power generators and related equipment, for $1.56 billion.

With recession plaguing the markets of Western Europe and North America in the early 1990s and with the continuing maturation of those markets, ABB decided that its future lay in the emerging markets of Eastern Europe and Asia, where opportunities for growth were plentiful and where it could set up lower-cost manufacturing operations. Although the company had virtually no operations in Eastern Europe at the beginning of the decade, through a series of acquisitions and joint ventures in Eastern Germany, Poland, and Czechoslovakia, ABB had established a considerable presence in the region by 1992, employing 20,000 people in 30 companies.

From its first year of operation in 1988 through its ninth year in 1996, ABB Asea Brown Boveri Ltd. nearly doubled in size, increasing revenues from $17.83 billion to $34.57 billion. ASEA AB and BBC Brown Boveri Ltd., achieved a peak operating margin of 9.7 percent in 1995 before falling back to
8.8 percent in 1996. ABB was already much stronger, better managed, and more global in nature than its parent companies had been when operating independently.

In October 1998 ABB completed the largest acquisition in company history, buying Elsag Bailey Process Automation N.V., a Netherlands-based maker of industrial control systems, for $2.1 billion, including $600 million in debt. This deal made ABB's automation segment the world's leading maker of robotics and automated control systems, with annual revenues of $8.5 billion. In March 1999 ABB and France-based ALSTOM merged their power generation businesses into a 50-50 joint venture called ABB Alstom Power. Then in May 2000 ABB sold its 50 percent interest in the venture to ALSTOM for $1.2 billion. That same month, ABB completed the sale of its nuclear power business to the U.K. firm BNFL Inc. in a $485 million deal.

US based Cooper Industries was another aggressive acquirer in the late 1990s. Cooper acquired Menvier-Swain Group, UK for entry into Europe, Australia and East East in 1997; Regent Lighting, US to expand its offerings in the home automation & security segment in 1999; B-Line, US to broaden the portfolio of electrical products and gain exposure into communications/data markets in 2000; and Eagle Electric Manufacturing Co, US for residential wiring devices in 2000.

The new millennium, especially 2003 onwards, has been a boom time for the electrical equipment industry. Companies from developed geographies have been acquiring companies for footprint expansion, Middle East has booming due to increasing price of oil, resulting in excessive money availability. BRIC economies and Eastern Europe are opening up and feeling the need to develop. Huge power generation capacities have been put up in China from 2006, of the order of 50-100K MW per year. Chinese and Brazilian power
equipment manufacturing companies rapidly expanded capacities. The big players are getting bigger and bigger, and are increasing their market share either organically or through JVs and acquisitions.

Since 2002, Schneider Electric has pursued an assertive strategy of organic growth and acquisitions to enhance its geographic coverage, strengthen performance in its core business and broaden its lineup to offer ever-more innovative and integrated solutions. In 2004, Schneider Electric became the European leader in critical power with the acquisition of MGE UPS Systems in France. In October 2006, it made a friendly offer to purchase all outstanding shares of American Power Conversion (APC), the global market leader. The transaction, which was approved by competition authorities and by APC’s shareholders, was finalized in February 2007.

Schneider Electric gained world leadership positions in human-machine interface (HMI) with the 2002 acquisition of Digital Electronics Corporation in Japan, and in automation solutions for packaging machines with the 2005 acquisition of Elau AG in Germany. In 2006, it expanded its lineup of high power speed drives with the acquisition of Austria’s VA TECH ELIN EBG Elektronik. The Group also broadened its industrial automation portfolio with the acquisition of Citect, an Australian manufacturer of Supervision Control and Data Acquisition (SCADA) solutions and Manufacturing Execution Systems (MES). Schneider Electric offers the most comprehensive lineup of customized sensors in the market after bringing in Hyde Park Electronics, the North American leader in ultrasonic sensors, in 2003; Kavlico and Dinel, manufacturers of sensing and optoelectronics devices, in 2004; and US-based BEI Technologies, in 2005.

Schneider Electric now ranks second worldwide in installation and control due to the acquisitions of Clipsal, the Asia-Pacific market leader, in 2003; Juno
Lighting, America’s leading manufacturer of trac and recessed lighting, in 2005; and Clipsal Asia, Merten (Germany), OVA Bargellini (Italy), AEM S.A. (Spain) and GET (UK), in 2006. In 2007, the Group enhanced its presence in Germany and expanded its lineup in by acquiring Ritto GmbH & Co KG.

In 2003, it acquired Sweden’s TAC, which was joined in 2004 by Tour Andover Control and Abacus Engineered Systems in the US. ABS (Advanced Buildings Systems) EMEA, which operates in Europe and the Middle East, came on board in 2005, followed by IBS (US and Asia) in 2006. In 2007, Schneider Electric enhanced the security side of the business by acquiring Pelco Inc., the world leader in video security systems.

ABB has had a topsy-turvy ride in this millennium. In 2001 ABB got saddled with the asbestos liability claim. The building products and oil, gas, and petrochemicals units were placed into a discontinued operations category, slated for divestment. In December 2002 ABB sold its water and electricity metering business to Ruhr gas Industries GmbH for $223 million. For 2002, ABB posted a record net loss of $783 million on revenues of $18.3 billion.

On the divestment front, ABB in August 2003 sold its building systems business in Sweden, Norway, Denmark, Finland, Russia, and the Baltic states to Helsinki-based YIT Corporation for about $233 million. In December the company agreed to sell its Sirius reinsurance business to the Bermuda-based White Mountains for about $425 million. In January 2004 ABB reached an agreement to sell the upstream portion of its oil, gas, and petrochemicals unit to a private equity consortium led by Candover Partners, a European buyout firm, in a deal estimated to be worth at least $925 million.

ABB returned to profits by 2005 through a sustained restructuring drive of focusing on its core businesses on power and automation products & systems,
and divesting its non-core activities. ABB has since then formulated its strategy for 2009, which talks of focusing on its core automation & power businesses through a mix of organic growth and focused acquisitions. Till date, ABB has not made any acquisition since 2002, however it has put together a sizable war chest for acquisitions.

Siemens has focused its efforts on becoming No.1. and No.2 in all the geographies that it operates. It has followed a combination of organic and inorganic means to do so. In fiscal 2005, the Company acquired, in several steps, the Austrian engineering group VA Technologie AG (VA Tech) which is now a wholly owned subsidiary of Siemens for preliminary acquisition costs of approximately €1,049 million (including €535 million cash acquired). In July 2005, the Company completed the acquisition of all shares of Flender Holding GmbH, Germany (Flender), a supplier of mechanical and electrical drive equipment, focusing on gear technology. The primary reason for the acquisition was to enable the Company to offer a full drive train (motor, inverter, gear) to customers. Preliminary acquisition costs amounted to €702 million. Siemens also acquired substantially all of the assets of Robicon Corporation, USA, a manufacturer of medium voltage drives and power controls. In fiscal 2006, Siemens acquired Electrium Limited, UK, a vendor of electrical installation systems at A&D and Bewator, Sweden, a supplier of products and systems for access control solutions at Siemens Building Technologies (SBT). On May 4, 2007, Siemens completed the acquisition of U.S.-based UGS Corp. (UGS), one of the leading providers of product lifecycle management (PLM) software and services for manufacturers. The acquisition enabled Siemens to provide an end-to-end software and hardware portfolio for manufacturers encompassing the complete lifecycle of products and production facilities. The estimated purchase price, including the assumption of debt, amounted to €2.7 billion (including €75 million cash acquired).
General Electric has been less active on the acquisition front as far as electrical equipment business is concerned in the last decade. GE has acquired a few companies for expanding its product range in power generation space.

Eaton Electrical has acquired some major companies to establish itself as a serious threat to the global biggies. In 2003 Eaton Electrical acquired the European Delta PLC’s electrical division for $350 million which held the following brands: HOLEC, MEM, TABULA, BILL, ELEK and Westinghouse to get a hold of the IEC standards (European, Middle East and Asia Pacific markets), one of the steps to get Global and grow more into a worldwide standard. Eaton Electrical also entered into a JV with Caterpillar Inc. and purchased more than half of I & S operations (now known as Intelligent switchgear organization, LLC.), which followed several years later with the acquisition of Powerware.

In late 2007 Eaton acquired the MGE Office Protection Systems division from Schneider Electric. A Taiwanese manufacturer, [Phoenix Tec], was also acquired giving the company the highest share in the Chinese single phase UPS market. In September 2008, Eaton Electrical completed the acquisition of Germany based Moeller Group, supplier of controls for industrial equipment applications. Moeller has 15 global production facilities and sales offices in more than 90 countries. This acquisition, coupled with the acquisition of Phoenixtec Power Company Ltd., Taiwan solidified Eaton’s position as a global supplier of electrical power distribution and control products and power quality equipment and systems.

It can thus be concluded that the global players are continuing on the move as far as expanding their product range and geographical coverage is concerned.
The coming years are likely to see more consolidation with the major players spreading their wings in fast developing geographies like China and India.

7.2 Merger / Acquisition Motives during the 5th and 6th Merger Waves

Acquisitions can happen for a variety of reasons. Access to new geographies, consolidation in same markets, killing a competitor, better bargaining power through merging, expansion of product range, complementary products, access to technology, R&D capabilities, skilled management/manpower, acquiring customers, vertical integration, low-cost manufacturing base, economies of scale/scope, diversification, tax benefits, possibility of turn-around are some of the reasons why companies acquire other companies or merge.

During the period under question, i.e. 5th and 6th merger waves in the electrical equipment industry; expansion of product range, access to new markets and consolidation in same market were the main merger motives. The above three were the primary motives for around 80% of the acquisitions that took place in both waves 5 and 6. Expansion of product range was the most dominant motive accounting for 42% of the acquisitions. This is a logical motive for acquisitions, considering that the final customer would prefer to award a turnkey electrical contract to one supplier to ensure uniformity rather than giving piece-meal contracts to many suppliers. The suppliers i.e. manufacturers of electrical equipment, are thus dictated by the customers to provide majority equipment of their own. Hence, it makes sense to have a broad product range rather than specializing in only 1-2 products. It can be seen that most of the global players in the electrical equipment industry are generalists, and provide the entire spectrum of products required by the customers. They are constantly on the lookout for acquiring players who would help them in plugging any gaps that may exist in their offerings.
Access to new markets / geographies was the second most common motive accounting for 23% of the acquisitions. With competition intensifying and limited scope for expansion in home markets, companies look out for new geographies to expand. Liberalization of developing economies having high growth rates has also been a major factor for companies from developed nations to expand into these geographies. Acquiring a company in a new geography enables the acquiring company to set up its foot-print in that geography immediately, thereby saving precious time that would be required to set up its operations organically. Brand name, low-cost manufacturing set-up, distribution network, ready access to customers and suppliers are also some of the reasons why companies enter into new geographies apart from getting a ready-made market.

Consolidation in same market was the third most common motive accounting for 16% of the acquisitions. Consolidation takes place to eliminate competition, and also for gaining better bargaining power over customers as well as suppliers. Consolidation also results in economies of scale by rationalizing the operations. Sometimes, smaller companies merge and consolidate in order to survive, and challenge the bigger players.

7.3 Distinguishing characteristics of the 5th and 6th merger waves
A lot of research literature is available on merger waves. The literature mentions how the different waves have been characterized by different economic conditions, and thereby different merger motives. The 5th merger wave took place in the late 1990s which was characterized by recession, whereas the 6th merger wave took place in the new century, when the economies were again starting to boom.
The findings of this research study have shown that merger motives have not changed over the two merger waves. The top three motives have remained constant, and the order has also remained the same. This means that irrespective of the economic situation, the key motives for acquisition remain the same. However, the number of acquisitions have doubled from 64 to 137 during the 6th merger wave w.r.t. the 5th wave. This means that companies get more aggressive for growing inorganically, when times are good. The reason for the same can be easier availability of funds when the economies are booming.

Sales and Profit Growth for the top acquirers have been analyzed during the 5th and 6th merger waves. The sales growth during the 5th merger wave was 6.5%, while it was 9.2% during the 6th merger wave. The profit growth during the 5th merger wave was 10.0%, while it was 13.3% during the 6th merger wave. An increase can be seen in the sales and profit growths during the 6th merger wave as compared to 5th, but it is statistically insignificant.

It can be concluded that better economic conditions during the 6th merger wave have resulted in better sales growth and profitability (though statistically insignificant) for the acquiring companies. The merger motives have remained the same in both the waves.

7.4 Effectiveness of Different Merger Motives

It is interesting to know whether different merger motives have different financial implications. This research study has attempted to find an answer to this question. The analysis has been performed for the two most dominant motives of acquisition i.e. Expansion of Product Range’ and ‘Entry into New Markets’. The findings show that acquisitions for which ‘Entry into New Markets’ is the primary motive have produced better sales and profit
growth than acquisitions having ‘Expansion of Product Range’ as the primary motive. Better sales growth in the case of entry into new markets can be attributed to ‘getting a share in the bigger pie’ as compared to expansion of product range.

7.5 Effect of consolidation on Industry development
Consolidation is the name of the game, and the global electrical equipment industry is no exception. The industry is getting increasingly consolidated, and ‘The Rule of Three’ is in prevalence at all levels – national, continental and even global. Europe is dominated today by Schneider Electric, ABB and Siemens; whereas North America is dominated by Schneider Electric, GE, ABB and Eaton Electric. All the global majors are also present in Latin America, Africa and Australasia. The big players are also continuously acquiring the smaller players, and the concentration ratio (a ratio which measures the level of industry concentration) indicates that the top 6 players constitute 64% of the industry revenues today as compared to 50% in 1997.

The questions to be answered here are:- Has consolidation helped the dominant players? Have they reaped the benefits of consolidation? Has their financial performance improved? Are the global players spending enough on R&D for the overall benefit of the industry? Or is there a laxity in their approach, given the fact that their position is getting stronger and stronger?

The research shows that consolidation has indeed improved the financial health of the global majors. The operating profitability of the top 6 players has improved from 9.9% in 1997 to 12.7% in 2007, corresponding to the increase in concentration ratio from 50% to 64%. The statistically significant positive correlation between the industry consolidation and profitability indicates that the bargaining power of the major players is improving...
continuously. Due to consolidation, they are well placed to get favourable monetary terms from the suppliers and customers.

The relationship between consolidation and R&D intensity is statistically insignificant at 10% significance level. But the interesting point to note is that the correlation is negative (minus 0.464), and is statistically significant at 20% significance level. The R&D intensity (R&D expenses /Sales) of the top 6 players has reduced from 5.2% in 1997 to 4.0% in 2007, corresponding to the increase in concentration ratio from 50% to 64%. This indicates that the major players are spending less on R&D, as they are increasing their market share. This is not an encouraging sign, as technological developments may not happen at the same pace as earlier given the reduced R&D spending. However, this data needs to be viewed with caution. The electrical equipment industry is mature, and breakthrough innovations are not expected to take place often. This could be one of the reasons why R&D intensity is not keeping pace with the sales growth of the industry.

7.6 Summary
The global electrical equipment industry has evolved over the last 150 years. It has gone through many phases, and is currently in the growth phase, though the technology is mature. Mergers and acquisitions have been an important tool that the companies in the industry have used to survive, expand and prosper. Consolidation is continuously taking place, and a few global players are ruling the roost.

The global players have been extremely active during the 5th and 6th merger waves. Schneider Electric has emerged from near bankruptcy to become a leading player in the global industry through extremely well-thought acquisitions. Eaton Electric and Cooper Industries, both US based, are making
rapid inroads through acquisitions. Eaton, in particular, has made a couple of big-ticket acquisitions in Europe to expand its geographical footprint. Siemens has been growing through a combination of organic means and selective acquisitions. General Electric, once a very aggressive acquirer, is probably facing the heat and has slowed down its inorganic growth. Areva T&D has become a global player on account of its big-ticket acquisition of Alstom’s T&D business. ABB, an aggressive acquirer in the late-1980s, has just recovered from near bankruptcy, due to its asbestos liability which stemmed from one of its acquisitions. ABB is known to be gathering a sizable war-chest that can be used for acquisitions in the near future.

To summarize, the electrical equipment industry has 5-6 global players who are present across continents. The ‘Rule of 3’ is in prevalence in the developed markets of Western Europe and North America. In developing geographies of Asia, South America, Africa and East Europe, local players still exist. But they are facing the heat due to the growing aggressiveness of the global players. The global players are entering into these developing markets primarily due to better growth prospects as compared to their existing developed markets. Their entry strategies are multifold depending upon the barriers of entry, competition and local regulations present in these markets. Consolidation is being witnessed at all levels i.e. local, national, continental and global.

Entry into new markets, expansion of product range and consolidation in same market have been the most dominant motives of acquisitions that have taken place during the 5th and 6th merger waves. Both the waves have been characterized by the same motives, in spite of different economic conditions. The 6th merger motive has resulted in better financials for the merger entities as compared to the 5th merger wave. This could be a result of favourable economic conditions. Acquisitions for which ‘Entry into New Markets’ is the
primary motive have produced better sales and profit growth than acquisitions having ‘Expansion of Product Range’ as the primary motive.

Consolidation has indeed improved the financial health of the global majors. The operating profitability of the top acquirers has gone up corresponding to an increase in consolidation. This could be due to an increase in bargaining power of the major players. The R&D intensity of the top 6 players has reduced corresponding to the increase in consolidation. This indicates that the major players are spending less on R&D, as they are increasing their market share. This may stifle the technological developments in the industry.

**Going forward**

The next chapter will identify the possible applications of the research to other industries and its overall implications. It will explore avenues for further research in related areas. The limitations of this study will be explained. It will also identify specific contributions of this study to the field of Management.