Success Stories & Lessons Learnt by Indian Industries in

Drugs & Pharmaceuticals

Biotechnology and

Process Engineering Sectors

A Project under the NSTMIS Scheme,

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Prepared by

Group for Economic & Social Studies

M-9, Green Park Extension, New Delhi – 110016

Phone: 91-11-26191319, 91-11-26192290 Tele-fax: 91-11-26191319

Email: gess@vsnl.net

Website: www.gessindia.com

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I am thankful to my Project staff and all those associated with this project. I acknowledge their sincere help in completing the project. I would like to express my gratitude to those who may have contributed in the completion of the study, even if, anonymously.

I would like to mention that every effort has been made to give credit where due for the research material used in this Project. I apologise for any inadvertent failure in giving credit to those where it was due.

Dr. S.N. Yadav

Principal Investigator
March 2012

Executive Summary

1. The project entitled 'Success Stories of Drugs & Pharmaceuticals, Biotechnology and Process Engineering Industry was awarded to GESS to document the success and lessons learnt of identified companies from three sectors namely, Drugs and Pharmaceuticals, Biotechnology and Process Engineering to serve as business models for strategies of success and lessons to others. The project was also intended to elucidate the role of critical success factors in the successes and lessons learned of the identified companies and to study the challenges faced by the companies. The report provides a high-level analysis of the case studies at an industry level.

2. As required by NSTMIS Division of DST, GESS studied one success story and one lessons learned case each in the Drugs and Pharmaceuticals and Biotechnology Industries and two successes and two lessons learned cases in Process Engineering sector - total eight case studies.

3. Certain parameters such as year of establishment, annual growth, annual net profit, R&D, innovations, technology policy, R&D expenditure as percentage of net profit, patents, product range, market share, share of import & export, HR practices etc. were given requisite weightage in selecting a company.

4. The data was collected through a specially designed questionnaire, desk research, personnel interviews, email, telephonic call, annual reports and websites of concerned companies and other sources including financial and industry associations.

5. It is important to mention here that the Lessons Learned case studies do not in any way classify the company as a failure. Since this study is based on point-in-time data, a company which did not do well in terms of financial performance during the period 2006-07 to 2010-11 may be covered as a Lessons Learned case but this does not imply that the company's future outlook is negative. A company may not have done financially well for many reasons during this period such as a long gestation period, a falling market due to recession or it may simply have been recovering from past losses.

6. The table below illustrates the companies which were covered under this project:

Sector	Successful Companies	Lessons learnt Companies
Drugs &	1. Sun Pharmaceutical	1. Morepen Laboratories

Pharmaceuticals	Industries Ltd., Mumbai	Ltd., New Delhi
Biotechnology	1. Suven Life Sciences Ltd., Hyderabad	1. Avesthagen Ltd., Bangalore
Process Engineering	1. Crompton Greaves Ltd., Mumbai 2. Bharat Forge Ltd., Pune	1. Best & Crompton, Chennai 2. Amforge Industries, Mumbai

7. Each case study report includes quantitative and qualitative data analysis and contains:-

8. The structure varies only slightly among different case studies depending on information availability. The financial data has been graphically represented to give a pictorial representation of corporate financial results and enable the reader to see a few major financial trends for the company.

9. In the Lessons Learned case studies, the critical success factors are listed as the critical success factors that didn't work for the company thus determining its negative performance.

10. There are many critical success factors which impact a company's ability to success in its area of business. This project studied the key factors which affected the success or failure of the company studied.

11. Overview of Critical Success Factors which contributed to a company's success or failure:

This section highlights some comparative aspects of critical success factors which played a key role in a company's success or failure. The examples are indicative and not comprehensive and are intended only to represent what worked vis-à-vis how or why it did not work for another company.

The following critical success factors are worth mentioning as they have a somewhat global role in corporate success or failure:

- **Sound management and focus on specific areas with well-timed risk taking**
  - Sun Pharma's focus on niche formulations (chronic) segments/ therapeutic areas has helped Sun Pharma tremendously as chronic segments are driving the growth of the pharmaceutical market.
  - On the other side of the spectrum sits Avesthagen which appears to have spread its bets too much, without focusing on execution and delivery in one or two areas – a sign of mismanagement and lack of focus
- **Strategy of inorganic growth through acquisition of the right companies at the right time with a view to global 'De-Risking' of business**
  - Sun Pharma, Crompton Greaves and Bharat Forge have acquired companies across the globe with a view to gaining a strategic advantage in diverse areas such as getting access to latest technology, enhancing manufacturing capability or acquiring marketing strength
  - Here again, Avesthagen appears to have invested in acquisitions but without being able to fully benefit from them due to failure to focus on execution and delivery in one or two areas. Similarly, Amforge Industries seems to have made ill-timed acquisitions resulting in not being able to capitalize on them.
- **Investment in research and development**
  - Sun Pharma invested in its research center in 1991. The decision to invest in the research center SPARC (Sun Pharma Advanced Research center), with 46,000 sq ft of research space, and investments of almost the size of the year's profits was a far-sighted one as Sun Pharma rightly understood that research and innovation is a critical growth driver in the industry it

operates in. Sun Pharma spent as much as 9.4% of its turnover in 2010-11 on Research & Development.

- In stark contrast, Morepen Laboratories reported an R& D expenditure amounting to 0.70% of its turnover in 2010-11.

- **Good HR Practices**

  - Bharat Forge gives utmost importance to HR practices and believes that people are its greatest asset and they must be continuously nurtured to retain leadership position. In tune with this philosophy, Bharat Forge undertakes several training & development initiatives for the overall growth of its workforce. This resulted in a highly motivated team. Similarly, Suven invests heavily in their people. The challenge is to ensure that the investment is effective, attracting and retaining people with great skills, and motivating them to do the right things in the right way. To handle these challenges Suven has put in place a continuous training process to keep employees updated on latest developments in the R&D space.

  - In contrast, Best & Crompton was not transparent with its labor force following its acquisition resulting in prolonged settlement negotiations with its staff which considerably delayed the acquisition and infusion of badly-needed funds.

- **Innovation**

  - Crompton Greaves' focus on R&D and innovation enables it to anticipate and meet customer needs and perform significant technology absorption and adaptation capability to suit local needs.

  - Amforge Industries was working with large suppliers with strong negotiation power in an industry with low margins, it was essential to have innovative products. It would have required targeted R&D efforts or access to cutting edge technologies and an increased speed to market through acquisitions. Cost efficiency could also be obtained by investments in production efficiency and aggressive sourcing of high cost components. Amforge's failure to do this innovation led to its downfall.

- **Export orientation or domestic orientation as a de-risking strategy**

  - Owing to its heavy focus on exports, Suven Life Sciences has continued to achieve 90% export turnover which is to the tune of Rs. 13601.37 lakhs out of the total turnover of Rs. 15104.23 lakhs in the year 2010-11. In contrast, Crompton Greaves' major presence in the

domestic Indian market and a widely installed equipment/ customer base coupled with a superior understanding of Indian conditions has helped the company withstand the vagaries of the global market.

- Morepen could have done well to have a similar strategic focus on either the domestic or global market rather than putting all its eggs in one basket and focusing only on sale of Loratidine in the US market.

Objectives and Methodology Adopted

Introduction

1. Indian Industry has undergone a sea change and performed impressively after the opening of the economy and dismantling of controls and licensing since 1991.
2. Three major segments of industry, namely, drugs and pharmaceuticals, biotechnology and process engineering have witnessed the fastest growth since then by adopting innovative methods, R&D, import of latest technology, know-how and sound management.
3. Indian drugs and pharmaceutical industry is considered an outstanding sector amongst India's science-based industries with wide ranging capabilities in the complex field of drug manufacture and technology. The industry meets around 77% of the country's demand for bulk drugs, drug intermediates, pharmaceutical formulations, tablets, capsules, orals and injectibles.
4. Biotechnology industry is very young, but the sector is poised to grow very fast and is likely to become India's leading industrial sector in the future. Biotechnology is a combination of technology and science pertaining to the field of biology. The sector comprises of several fields such as bio-agriculture, bio-pharmaceuticals, bio-fuel etc. The agricultural sector has immensely benefited from this sector.
5. Process Engineering has greatly helped in industrialization of the country and has added a new dimension in engineering sector and exports.
6. All these three successful segments of Indian industry are promising sectors and provide employment avenues to a large section of Indian population, and contribute in India's economic growth & export earnings significantly.
7. Three key sectors of the Indian Industry have great potential of growth. Their continuous success will help in strengthening Indian economy in its ambition to be a global economic power.
8. A case study is a story about something unique, special, or interesting. Success stories document the success of individuals, organizations, processes, programs or institutions.

9. The case studies will give the story behind the success of different players by capturing what happened to bring it about. They will provide a good opportunity to learn what went into making a venture a success or otherwise and also to focus attention on the challenges & opportunities or difficulties faced in achieving this success.

Objectives

The objectives of the study:-

- To identify successful Indian corporate houses from three sectors namely, (1) Drugs & Pharmaceuticals (ii)Biotechnology and Process Engineering
- To document the success and failure of the identified companies, as per DST guidelines to serve as business models, strategies of success and lessons to others.
- To study one success case and one failure (lessons learned) case each in Drugs and Pharmaceuticals and Biotechnology Industries and two success and two failure (lessons learned) cases in Process Engineering- total eight case studies to be completed.
- To elucidate the role of critical success factors such as innovative methods, application of latest technology and technical know-how through imports, constant improvement of quality through R&D, expertise available, sound financial backup, leadership and management in the successes and failures (lessons learned) of the identified companies..
- To study the challenges faced by companies in the above three categories of industries during the journey to success.

Local Project Advisory Committee

A local Project Advisory Committee (LPAC) was set up to advise and guide GESS from time to time during the execution of the study. The details of the team are given below:-

1. **Dr. S.R. Rao,** Scientist G, Advisor, Department of Biotechnology was the chairman of the LPAC.
2. **Shri V K Tyagi,** Dy. Industrial Advisor, Department of Pharmaceuticals Ministry of Chemicals and Fertilizers

3. **Shri Ashwani Gupta,** Scientist G, Department of Scientific & Industrial Research, Ministry of Science & Technology
4. **Dr. G.J. Samathanam,** Adviser & Head, Technology Development and Transfer (TDT) Division Department of Science & Technology
5. **Shri H.C. Gandhi,** Former Secretary, Ministry of Industry
6. **Shri Rakesh Chetal**, Ex-Adviser NSTMIS Division, Department of Science & Technology
7. **Mrs. Namita Gupta**, Scientist E, NSTMIS Division, Department of Science & Technology
8. **Ms. Jagriti Yadav,** Group for Economic & Social Studies
9. **Dr. S.N. Yadav**, **Principal Investigator,** President, Group for Economic & Social Studies

Methodology

1. As per objectives of the study success stories & lesson learnt from 3 industrial sectors - one success and one lessons learnt each from the Pharmaceuticals and the Biotechnology industry and two success and two lessons learnt from the Process Engineering industry – total 8 case studies in all were covered. Since failure was not considered an acceptable term by the Local Project Advisory Committee, the stories on failure were suggested to be termed as lessons learnt.
2. Consideration was given to DSIR supported companies while selecting a company for the case study.
3. Leading companies one each from drugs & pharmaceutical sector and biotechnology and two from Process Engineering were selected for successful case studies. For unsuccessful (lessons learnt) case studies one company each from drugs and pharmaceuticals and biotechnology and two companies from process engineering sector were selected.
4. Selection of the companies was made keeping in view the suggestions of members of LPAC preferably with turnover in the range of Rs 500-1000 crores. Companies which were approximately 20 years old were selected. Performance data of selected companies for last five years from 2006-07 to 2010-11 was taken into consideration for analysis.
5. Certain parameters such as year of establishment, annual growth, annual net profit, R&D, innovations, technology policy, R&D expenditure as percentage of net profit, patents, product range, market share, share of import & export were given requisite weight age in selecting a company etc.

6. A detailed questionnaire was prepared and finalized in consultation with LPAC to collect the data for the study from the companies selected for case studies.
7. The questionnaire was mailed to the selected companies. This was followed by reminders, emails, fax messages and personal visits and interviews.
8. Information was collected from the identified companies on the parameters listed in the objectives from multiple sources including their websites, concerned industry associations, Department of Pharmaceuticals, Ministry of Chemicals & Fertilizers, Ministry of Corporate Affairs, Ministry of Commerce and Industry and DSIR. Website of several financial institutes, RBI, IDBI and industry surveys appearing in financial papers and periodicals were consulted in preparing the case studies.
9. Several telephonic contacts were made followed by visits by GESS representatives to collect the relevant information and balance sheets of the eight corporate houses selected for case studies. Local offices of companies based in Delhi were also approached for data and information.
10. The data collected were scrutinized for their completeness and follow up action was taken to get the information in respect of incomplete questionnaires.
11. The progress report was periodically presented before the LPAC and suggestions of the committee were incorporated in the report.
12. Case studies were prepared on the basis of data and information collected compiled, tabulated and analyzed and cross checked. The final draft report of the case studies was presented to LPAC.

Limitations of the Study

1. Some of the companies approached did not respond to the questionnaire.
2. Companies in general were not willing to share data as also the reasons particularly of their declining performance.
3. Some companies responded but did not fill the complete questionnaire. A number of queries raised in the questionnaire remained blank. Some companies chose to interpret the questions differently from the way they were framed.
4. Some companies provided group financial data whereas others provided standalone company financial performance data. To the extent possible, GESS has tried to use standalone financial performance data as the barometer of the company's financial performance (sales turnover, PAT etc.)

5. Companies selected for lessons learnt did not disclose the specific reasons of their unimpressive performance nor were any indications given in their websites or other documents.
6. Websites used as secondary data sources in some cases provided data for a shorter duration than required for the study.
7. GESS cannot vouch for the accuracy and authenticity of the data as the data has been gathered from various websites, companies' responses to the questionnaire, newspapers and periodicals.

Part I

Case Studies – Drugs & Pharmaceuticals Industry

1. **Sun Pharmaceutical Industries Ltd.**
2. **Morepen Laboratories Ltd.**

Drugs & Pharmaceuticals Industry: Brief Background

The Pharmaceutical Industry is characterized by a highly risky and lengthy R&D process, intense competition for intellectual property, stringent government regulations regarding the patenting, testing & marketing of drugs and powerful purchaser pressures.

Drug discovery and development is very expensive; of all compounds investigated for use in humans only a small fraction are eventually approved in most nations by government appointed medical institutions or boards, who have to approve new drugs before they can be marketed in those countries.

The Indian Pharmaceutical industry is a vibrant segment of Indian Economy and it is at the forefront of the country's science-based industries with wide ranging capabilities in the complex field of drug manufacture and technology. The Indian pharmaceuticals market is expected to grow from the current US$19 billion to US$32 billion by 2015.

In the years to come Indian Drugs & Pharmaceuticals industry has the potential to grow manifold and contribute more significantly to the global drug requirements, particularly in the generics segment. While the pharma exports are growing at over 20% over the last few years the domestic market is showing a growth of about 15% per annum.

India is poised to emerge as a significant player in the area of generics. The biopharmaceuticals market is also evolving very fast. India is likely to emerge as one of the largest producers of vaccines in the in the coming years.

Globalization of international market, product patent expiry and increased use of IT offer excellent opportunities for Pharma companies in India. In particular India has the potential to become the world leader in generics.

In Drugs & Pharmaceuticals sector following two companies have been covered for the case study:-

i. Sun Pharmaceutical Industries Ltd – Mumbai (Success Story)

ii. Morepen Laboratories Limited, New Delhi (Lessons learnt)

Case Study - Sun Pharmaceutical Industries

Corporate Profile

Company Name	Sun Pharmaceutical Industries Ltd.
Year Of Incorporation	1982
Regd. Office:	
Address	Sun Pharma Advanced Research Centre (SP, Tandalja,
District	Vadodra
State	Gujarat
Pin Code	390020
Tel. No.	0265-337539
Fax No.	0265-332664
Email : secretarial@sunpharma.com	**Internet** : http://www.sunpharma.com
Auditors	Deloitte Haskins & Sells
Company Logo	

Background

Sun Pharmaceutical Industries popularly referred to as Sun Pharma, is an international specialty pharmaceutical company, with a large presence in the US and India and a footprint across 40 other markets.

Sun Pharma began in 1982 with just 5 products to treat psychiatry ailments. Sales were initially limited to two states in Eastern India. Sales were rolled out nationwide in 1985. Products for cardiology were introduced in 1987, and Monotrate, one of the first products launched then, continues to be sold even today. Several of these cardiology drugs were introduced for

the first time in India, and these brought patients the latest treatments at a sensible cost, which Sun Pharma calls the value proposition it offers consumers.

Sun Pharma was listed on the main stock exchanges in India in 1994. The Rs. 55 crore public issue of a Rs. 10 face value equity share offered at a premium of Rs. 140/-, was oversubscribed 55 times. The minimum 25% that was required under the regulations then for listing was offered to the public, the founder's family even now continues to hold a majority stake in Sun Pharma. Sun Pharma used this money to build a greenfield site for API manufacture, as well as for acquisitions.

Sun Pharma's first API manufacturing plant was built in Panoli in 1995, for access to high quality actives ahead of competition, and in order to tap the vast international opportunity for specialty APIs.

Considering research to be a critical growth driver, Sun Pharma established its first research center, SPARC, in 1993 and this created the base for strong product and process development that enabled growth in the subsequent years.

The company's API plant in Ahmednagar was acquired from the multinational, Knoll Pharmaceuticals in 1996, and expanded and substantially upgraded for regulated markets, with capacity addition over the years across differentiated API lines such as anti-cancers and peptides. In 1997, Sun Pharma's headquarters shifted to Mumbai, India's commercial capital.

In the US, which is Sun Pharma's largest market, the company has built a strong pipeline of generics, directly and through their subsidiaries Caraco and Sun Pharmaceutical Inc. Taro adds strong dermatology range to this portfolio.

In India and rest of the world markets, Sun Pharma's drug brands are prescribed in chronic therapy areas like cardiology, psychiatry, neurology, gastroenterology, diabetology etc. Sun Pharma is a market leader in specialty therapy areas in India. It is the 6th largest pharmaceutical company in India by prescription sales for over a decade (IMS ORG Stockist Audit, Sept. 2010).

Since the mid-nineties, Sun Pharma has used a combination of growth and acquisition to drive growth. Important acquisitions have included those of the Detroit, US-based Caraco Parma Labs and a plant at Halol which now holds UKMHRA and USFDA approvals. The 2010 acquisition of Taro Pharmaceuticals doubled its US business adding strengths in dermatology and pediatrics. Sun Pharma's strategy for acquisitions has typically been to identify companies or assets that allowed the company entry into a new market or therapy area and assets that could be turned around and brought on track.

The company's first international acquisition was in the form of an initial $7.5 million investment in Caraco, Detroit in the year 1997. By 2000, Sun Pharma had completed 8 acquisitions, each such move adding new therapy areas or offering an entry to important international markets. A new research center was set up in Mumbai for generic product development for the US market. In India, as new therapy areas were entered into post acquisition; customer attention, product selection and focused marketing helped Sun Pharma gain a foothold in areas like orthopedics, gynecology, oncology, etc.

From a ranking of 38th in 1994, by 2000, Sun Pharma had climbed to the 5th rank with a leadership in 8 of the 11 therapy areas the company is present in. The year 2000 was the year of turnaround at the US subsidiary, Caraco, as it began to receive approvals after successful inspection by the USFDA.

In December 2004, a research center spread over 16 acres was inaugurated by the President of India, with special lab space for drug discovery and innovation. The post 2005 years have witnessed important acquisitions to

strengthen the company's US business - the purchase of manufacturing assets for controlled substances in Cranbury, NJ; that of a site to make creams and lotions in Bryan, that of Alkaloida, a Hungary based API and dosage form manufacturer , and Chattem Ltd., a Tennessee-based controlled substance API manufacturer.

In September 2010, acquisition of Taro Pharmaceuticals doubled the size of Sun Pharma's US business and brought in a range of generics including a strong line of dermatologicals. Taro's manufacturing facilities in Israel and Canada substantially add to the company's production capacity.

The tally at the end of 2010:

- 23 manufacturing plants in 3 continents
- 9000 employees
- 4 World class research centers
- Brand in markets worldwide
- A strong presence in the US generic market
- Increasing research investments
- Over 58% of sales from international markets.

Sources:

1. http://www.sunpharma.com
2. http://www.moneycontrol.com/company-facts/sunpharmaceuticalindustries/history/SPI

Chronological history

1982

The Company was incorporated as a partnership firm by Dilip Sanghvi and his family to manufacture pharmaceutical formulations. It was converted into a public limited company effective 1st March, 1982.

Sun Pharma began operations in Kolkata with five psychiatry - based products, first with two people and then with a ten employee team. Year 1 turnover - Rs. 1 million. Within a year, marketing effort expanded to cover all the eastern states of India. A compact manufacturing facility for tablets/capsules was set up at Vapi, Gujarat.

1986

Administrative office set up in Mumbai. Customer coverage extended to select cities in Western India.

1987

Marketing operations rolled out nation-wide.

1988

With the introduction of Monotrate and Angizem, the first few cardiology products were launched.

Sun Pharma featured for the first time in a market audit by the prescription tracking company, ORG (later IMS ORG) at rank 107th with 0.1% market share.

1989

Corporate office moved to Baroda, Gujarat. Gastroenterology products introduced. Exports to neighboring countries began.

1991

Construction began at the first research center SPARC (Sun Pharma Advanced Research center), with 46,000 sq ft of research space, and investments of almost the size of the year's profits. The company's turnover - Rs. 9.74 cr, and its market rank - 70th.

1993

SPARC, the first research center, was inaugurated by His Excellency, Shri K. R. Narayanan, the Vice President of India. An office began operations in Moscow. Products were registered across 10 markets in all.

1994

In October 1994, the company issued 37,00,300 no. of equity shares of Rs 10 each at a premium of Rs 140 per share to the public. The offering was oversubscribed 55 times. After the IPO, Sun Pharma was listed on the major stock exchanges in India.

A dosage form plant at Silvassa started production. Major expansion at the Vapi plant was completed.

For the first time, a brand from the company, Monotrate, featured among the top 250 pharma brands in the Indian market. A separate division, Synergy, was carved out to market Psychiatry/ Neurology products, the first of focused marketing divisions.

In October, the company undertook enhancement of the production capacity of bulk drugs at Panoli from 62,000 Kgs. p.a. to 92000 Kgs. p.a. Formulation unit enhanced to 1800 million tablets p.a. from 570 million tablets p.a.

The Company publicized its proposal to modernise the formulation unit at Vapi and increase its capacity from 480 million tablets to 1440 million tablets p.a. and also to set up additional facilities at the R&D centre SPARC.

71,85,000 equity shares issued to promoters and others

1995

Bulk drug plant at Panoli started production.

A new division, Azura, begun for cardiology products. Inca, a new division to market critical care medication to intensive care units began operations. International marketing strengthened with offices in Ukraine and Belarus.

Two more products viz. Clofranil SR and Syndopa CR introduced in the Synergy division.

The Company entered into an MOU with Knoll Pharmaceuticals Ltd. for acquisition of their Ahmednagar unit manufacturing bulk drugs.

1996

API-manufacturing unit at Ahmednagar bought from Knoll Pharma.

Equity stake picked up in Gujarat Lyka Organics Ltd., a manufacturer of Cephalexin Active with a USFDA approval for the intermediate, 7ADCA. At the close of the year, Sun Pharma ranked 27th with 2 products among the country's top selling 300 pharmaceutical brands. Product registrations in place across 24 countries.

18 new products launched across the company's six focused marketing divisions and 4 more line extensions including drug delivery systems launched.

The Company acquired controlling stake in MJ Pharmaceuticals Ltd. Sun Pharma and its group company Virtuous Finance Ltd., the major shareholders of MJPL with more than 50 per cent of shareholding, had signed a MoU with erstwhile promoters, the Shah family, on November 1, 1996.

1997

Sun Pharma began its first international acquisition. As part of a technology-for-equity agreement, a stake was acquired in a generic dosage form manufacturer; the Detroit-based Caraco Pharm Labs.

An equity stake was taken in MJ Pharma, a manufacturer of several dosage form lines with UK MHRA approval for Cephalexin capsules.

Marketing reorganized into 6 specialty-focused divisions. A research and development facility of over 6,000 sq ft set up in Mumbai to make dosage forms and create supporting technical documentation for the generic markets in North America and Europe.

Sun Pharma decided to set up a new tablet manufacturing facility at Silvassa in Dadra and Nagar Haveli as part of its strategy to maximize benefits on the tax shelter front.

Chennai based Tamil Nadu Dadha Pharmaceuticals Co. Ltd. merged with the company in the ratio of 4:1 effective 1st April, . TDPL, a company with an extensive product offering (oncology, fertility, anesthesiology, and pain management) brought to Sun Pharma extensive product strengths across the areas of gynecology, fertility, oncology, pain managers and duaesthelics. TDPL's products offered ready entry with known brands and customer equity in new high growth therapy areas

1998

A basket of products, including several respiratory/asthma brands acquired from Natco Pharma.

New formulation plant at Silvassa commenced operations.

During the year, the company launched Duracard that not only affects blood pressure but also has beneficial effect on the cholesterol profile and glucose metabolism.

Another product, Cardivas, launched that has an ability to pump blood through the body there by reducing the strain on the heart during heart failure.

The company also launched Muvera, an anti inflammatory drug and Octapeptide Octride, an

emergency medication in treating esophageal varices, severe bleeding in the upper part of the gastrointestinal tract and also in the treatment of acromegaly, an endocrine disorder caused by the excess growth of hormone secretion.

1999

Rank moved within the top 10 in the domestic market.

An ophthalmology products company, Milmet Labs, acquired. 2,08,000 shares of Rs. 10 each allotted to shareholders of erstwhile Milment Labs. Pvt. Ltd. pursuant to a scheme of amalgamation.

Cephalexin API manufacturer Gujarat Lyka Organics merged with Sun Pharma.

6 brands featured among the leading 300 prescription pharmaceutical brands in India.

The hiving-off of Sun Pharmaceutical Exports into a 100 per cent subsidiary and increase in interest burden affected the bottomline.

2000

Ranked 5th among all companies in the domestic market.

Acquisition of Pradeep Drug company, a Chennai based API manufacturer initiated.

Sun Pharma's wholly owned export subsidiary (99.28%) Sun Pharma Exports merged with itself. As per the scheme of amalgamation, SPIL issued four equity shares of Rs 10 each of SPIL to the members of SPEL for every five equity shares held in SPEL.

The company, on 1st April, allotted 3,08,44,466 Bonus Equity Shares of Rs. 10/- each, to its shareholders in the ratio of 2 Bonus Equity shares for every 1 Equity share held by the Shareholders.

The company launched Edegra (Sidenefil) in 25, 50 and 100mg.

During June 2000, the company introduced several products including Celact (Celecoxib), Oleanz (Olanzapine), Rofact (Rofecoxib), Nodict (Naltrexone), Fexotrol (Fexofenadine), Zelast (Azolastine) and Ketorid (Ketotifen).

2001

New formulation plant built in Dadra. This new plant, spread over a 5-acre site with built up area of 120,000-sq. ft. was designed and built to comply with international regulatory requirements, such as the UKMHRA and USFDA.

Erstwhile TDPL division renamed Spectra.

A new division, Arian, targeting cardiologists/ physicians and diabetologists, launched.

Sun Pharmaceutical Industries Ltd approved the merger of the ailing Pradeep Drug Company Ltd.

Sun Pharmaceutical Industries Ltd. decided to merge its research arm, Sun Pharmaceutical Advanced Research Centre Ltd. (SPARC)

The company, ranked 5th by domestic prescription product sales consistently added to market share from 2.47% in November 2000 to 2.78% in November 2001 (ORG Retail Chemist Audit, November 2000 and 2001).

2002

Forbes Global ranked Sun Pharma in the list of best small 200 companies for 2002 (turnover less than $500 million).

Sun Pharma selected as the best company by Express Pharma Pulse, for overall performance for 2002 (in the category A - market share over 2.5%).

4 manufacturing sites won the prestigious IDMA awards.

Work commenced on a new, state-of-the-art drug discovery campus in Baroda; this 16-acre site, with space for 600+ scientists, would be commissioned over the next two years.

Work began on a new R&D center in Mumbai, with 50,000 sq. ft. floor area for product development for the North American and European markets.

2003

Sun Pharmaceutical Industries Ltd (Sun Pharma) announced the buyback of fully paid-up equity shares of the Company of face value of Rs 10 each and / or Rs 5 each (being face value and paid up value subsequent to the splitting of the equity shares of Rs 10 into 2 equity shares) not exceeding 2,000,000 equity shares of Rs 10 each and/or 4,000,000 equity shares of Rs 5 each i.e. not exceeding equity shares of face value of Rs 20,000,000 being less than 25% of the paid-up equity share capital of the company for an aggregate amount not exceeding Rs 1200,000,000 upto a maximum price of Rs 750 per equity share of Rs 10 each or upto a maximum price of Rs 375 per equity share of Rs 5 each from the existing shareholders of the company from open market through stock exchanges.

Sun Pharmaceuticals' US-based associate, Caraco Pharmaceutical Laboratories, received approval from the US Food and Drug Administration (US FDA) to manufacture and market yet another generic drug, this time for the treatment of mild to moderate cardiac failure, in the US. The drug, Digoxin, is the generic form of Glaxo Wellcome's Lanoxin, the company said.

Sun Pharmaceutical Industries Ltd informed BSE that it has redeemed 1,42,99,833, 6% Cumulative Redeemable Preference Shares of Re 1 each amounting to Rs 1,42,99,833 in the fifth lot out of the total paid - up Preference Share Capital of the company.

Sun Pharmaceuticals Industries Ltd informed BSE that the company pursuant to the earlier intimation about redemption of Preference Shares, has extinguished /cancelled 3,01,20,608 shares - 6% Cumulative Redeemable Preference Shares of Re.1/- each consisting of 2,98,37,008 Preference Shares in demat mode and 2,93,376 Preference Shares in physical mode.

The company's equity shares to be delisted from Vadodara Stock Exchange Ltd.

Forbes Global ranked Sun Pharma in the list of the best small 200 companies for 2003 (turnover less than $500 million).

Sun Pharma rated amongst the best-managed companies for 2003 across all sectors (Business Today-AT Kearney study of best-managed companies)

2004

Sun Pharma acquired common stock and options from 2 large shareholders of Caraco, increasing stake to over 60% from 44% at a total outlay of about $42 million.

The upgraded and expanded formulation site in Halol, India (the erstwhile MJ Pharma site) receives approval from USFDA, UK MHRA, South African MCC, Brazilian ANVISA and Columbian INVIMA.

The BT Stern Stewart survey placed Sun Pharma among the top 20 wealth creators in India and among the top 3 wealth creators in the pharmaceutical sector.

Construction at a formulation manufacturing site at Jammu completed.

The first joint venture manufacturing unit, in Dhaka, Bangladesh commissioned.

Two of Sun Pharma's API factories received USFDA approval, taking the total number of US FDA approved sites to three.

A Cephalosporin Active manufacturer, Phlox Pharma, with European approval for cefuroxime axetil amorphous acquired.

Niche brands Ortho-Estin (estropipate) and antimigraine preparation Midrin bought from the San Diego, US based Women-s First Healthcare. (WFHC, not listed).

Forbes Global ranked Sun Pharma in the list of most valuable companies for 2004 (turnover

less than $2bill).

2005

Sun Pharma bought a plant in Bryan, Ohio, US and the business of ICN, Hungary from Valeant Pharma.

Intellectual property and assets of Able Labs acquired from the US District Bankruptcy court in New Jersey in December 2005.

Dilip Shanghvi, the Sun Pharma CMD, received the E&Y Entrepreneur of the Year award in healthcare and life sciences for 2005.

Sun Pharma selected by Forbes amongst the best 200 companies (sales less than USD 1 billion) in Asia.

2006

Sun Pharma announced the demerger of innovative research and business with pipelines, people, equipment and funding, into a new company.

2007

Demerger of the innovative business completed, with requisite legal and regulatory approvals. SPARC Ltd, the new company, was listed on the stock exchanges in India, the first pure research company to be so listed.

In May 2007, Sun Pharma signed definitive agreements to acquire Taro Pharmaceutical Industries Ltd., (TAROF, Pink Sheets), a multinational generic manufacturer with established subsidiaries, manufacturing and products across the U.S., Israel, Canada for $454 mill. This all-cash deal is subject to Taro shareholder approval and requisite regulatory clearances.

2008

In November 2008, Sun Pharma acquired 100% ownership of Chattem Chemicals, Inc., a narcotic raw material importer and manufacturer of controlled substances with an approved API facility in Tennessee. This was a means to acquire vertical integration for their controlled substance dosage form business in the US.

2010

In the first week of September, the Supreme Court of Israel unanimously dismissed the appeal by Taro of the previous ruling by the Tel-Aviv District Court holding that the Israeli special tender offer (STO) rules do not apply to the Tender Offer by Sun's subsidiary, Alkaloida, to purchase all outstanding Ordinary Shares of Taro.

In the last week of September: Sun Pharma completed the acquisition of a controlling stake in Taro and increased economic interest and their voting rights. This doubled the size of the company's US business.

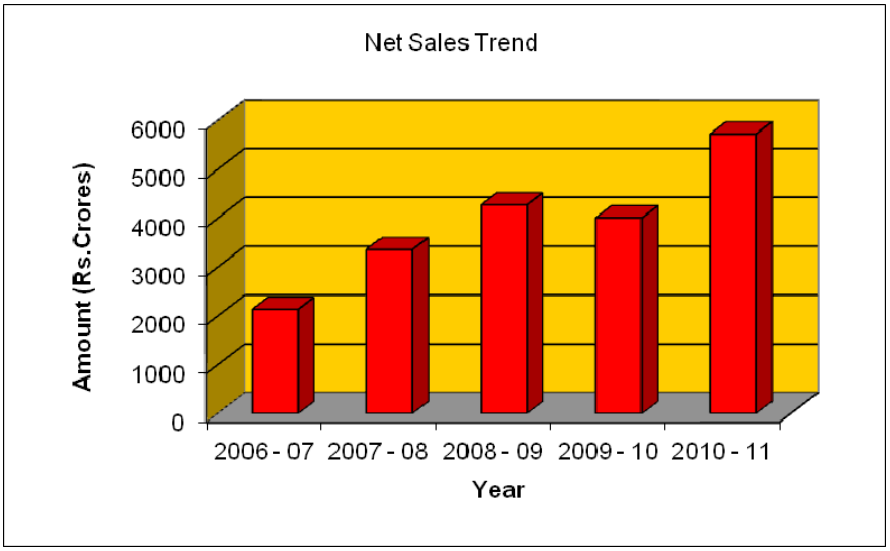
2011

Dilip Shanghvi, CMD, Sun Pharma received the E&Y Entrepreneur of the Year Award for 2010. (ORG - Operations Research Group Audit of Retail Chemist Sales, later renamed the IMS - ORG Retail Store Audit).

Key Performance Indicators

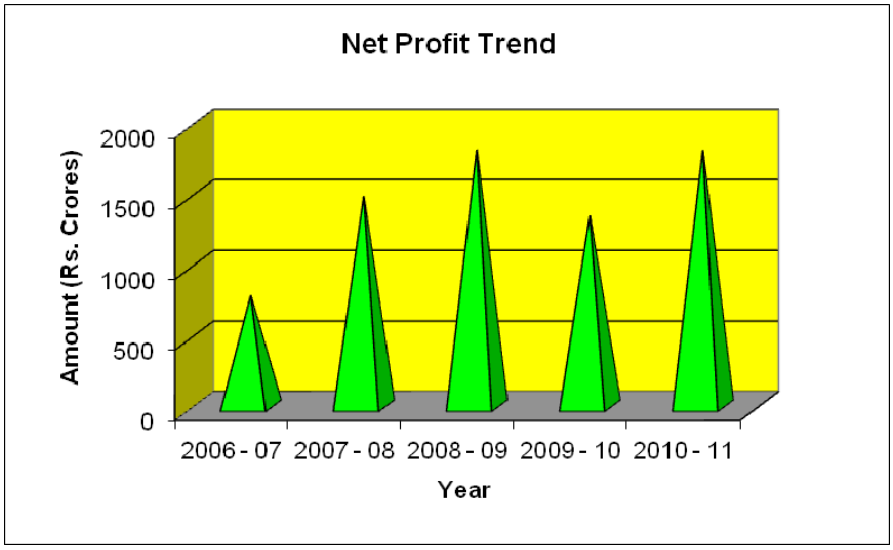
Consistent growth in turnover over the past five years

	Rs. in Crores
Year	Net Sales
2006 - 07	2135.9
2007 - 08	3356.5
2008 - 09	4272.3
2009 - 10	4007.5
2010 - 11	5721.4



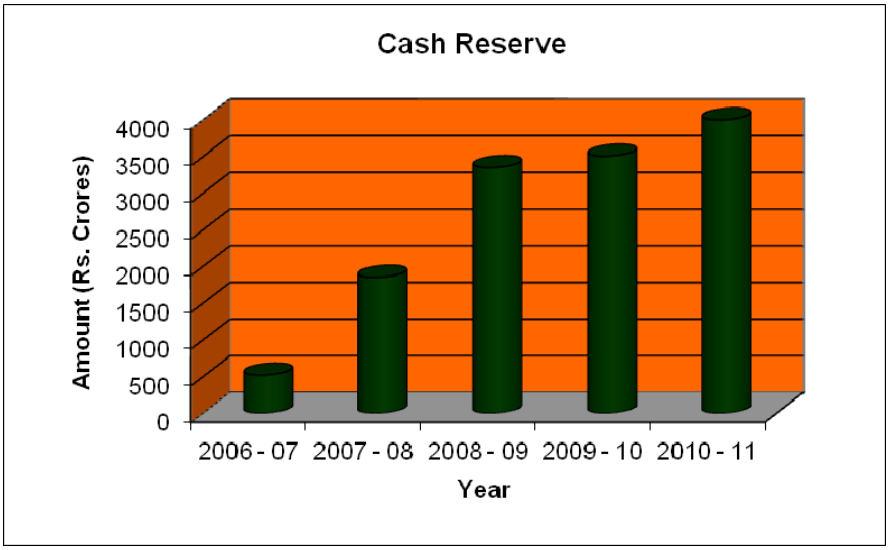
Consistent growth in net profit over the past five years

	Rs. in Crores
Year	Net Profit
2006 - 07	784.3
2007 - 08	1486.9
2008 - 09	1817.7
2009 - 10	1351.1
2010 - 11	1816



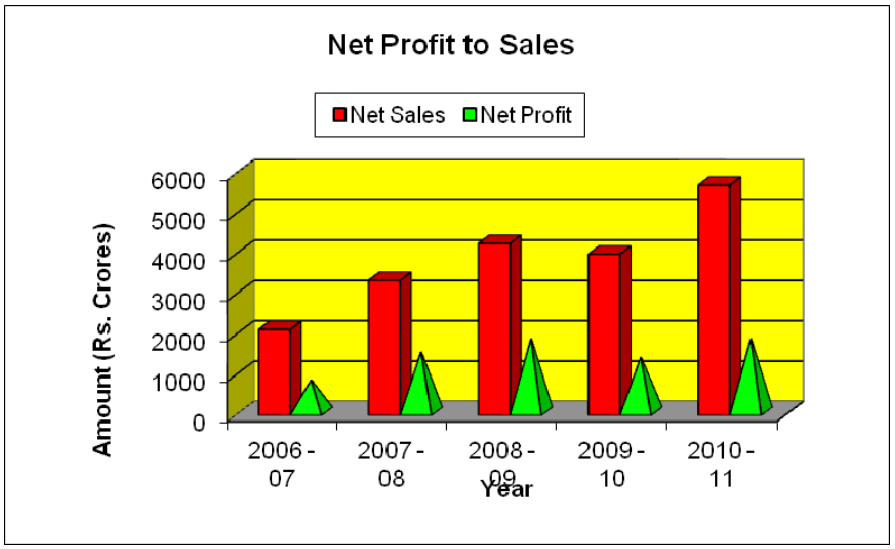
Consistent growth in cash reserves

	Rs. in Crores
Year	Cash Reserve
2006 - 07	520.1
2007 - 08	1851.3
2008 - 09	3349.6
2009 - 10	3504.1
2010 - 11	3999



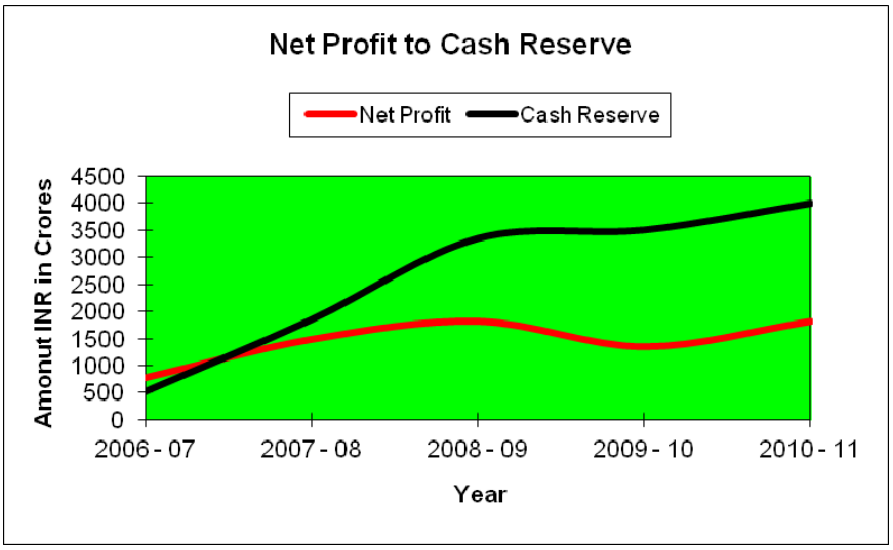
Healthy proportion of net profit to sales

	Rs. in Crores	
Year	Net Sales	Net Profit
2006 - 07	2135.9	784.3
2007 - 08	3356.5	1486.9
2008 - 09	4272.3	1817.7
2009 - 10	4007.5	1351.1
2010 - 11	5721.4	1816



Healthy proportion of net profit and cash reserve

Year	Rs. in Crores	
	Net Profit	Cash Reserve
2006 - 07	784.3	520.1
2007 - 08	1486.9	1851.3
2008 - 09	1817.7	3349.6
2009 - 10	1351.1	3504.1
2010 - 11	1816	3999



Financial Results

Sun Pharma FY2010-11 Financials

Highlights of FY11 standalone financials

- Income from operations at Rs.3297 crores, growing 25% over FY10
- Net profit at Rs. 1816 crores, resulting into a net margin of 32%

STANDALONE FINANCIAL PERFORMANCE OF THE LAST 5 YEARS – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	3,297.35	2,641.98	4,074.65	3,300.72	2,454.23
Net Sales	1,933.39	1,845.09	2,774.65	2,368.51	1,662.56
PBDIT	1,518.84	1,017.50	1,357.04	1,113.37	695.61
PBT	1,454.02	949.16	1,307.11	1,052.20	640.49
PAT*	1,383.80	898.65	1,265.29	1,014.04	628.93

Source: http://www.moneycontrol.com/financials/sunpharmaceuticalindustries/profit-loss/SPI#SPI

Highlights of FY11 consolidated financials

- Net sales / income from operations at Rs. 5721 crores, growing 43% over FY10
- India branded generic sale at Rs 2380 crores, registering a growth of 37% over same period last year

FINANCIAL PERFORMANCE (CONSOLIDATED) – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2006
Total Income	6,012.52	4,337.24	4,587.09	3,442.72	2,501.62
Net Sales	5,721.72	3,903.23	4,279.52	3,360.32	2,132.05
PBDIT	2,297.53	1,572.73	2,078.31	1,703.82	927.43
PBT after Exceptional Item	2,035.81	1,414.84	1,960.87	1,599.39	833.42
PAT	1,907.37	1,346.98	1,878.01	1,550.91	840.15

*** These figures are exclusive of Minority Interest. After reducing minority interest, the PAT/Net Profit changes as follows:**

Net P/L After Minority Interest & Share Of Associates	1,815.99	1,349.51	1,817.73	1,485.71	784.27

Source: http://www.moneycontrol.com/financials/sunpharmaceuticalindustries/profit-loss/SPI#SPI

Capital Structure:

Capital Structure (Sun Pharmaceutical Industries)

Period		Instrument	Authorized Capital	Issued Capital	- P A I D U P -		
From	To		(Rs. cr)	(Rs. cr)	Shares (nos)	Face Value	Capital (Rs.cr.)
2010	2011	Equity Share	150	103.56	1035581955	1	103.56
2009	2010	Equity Share	150	103.56	207116391	5	103.56
2008	2009	Equity Share	150	103.56	207116391	5	103.56
2007	2008	Equity Share	147.5	103.56	207116391	5	103.56
2006	2007	Equity Share	127.35	96.7	193402120	5	96.7
2005	2006	Equity Share	153.95	92.87	185731637	5	92.87
2004	2005	Equity Share	153.95	92.76	14030430	1	1.4
2003	2004	Equity Share	126	46.38	92755678	5	46.38
2002	2003	Equity Share	100	46.52	93048478	5	46.52
2001	2002	Equity Share	100	46.77	46774537	10	46.77
2000	2001	Equity Share	50	46.76	46750000	10	46.75
1999	2000	Equity Share	50	15.42	15422833	10	15.42
1998	1999	Equity Share	25	15.42	15422833	10	15.42
1997	1998	Equity Share	25	15.21	15214833	10	15.21
1996	1997	Equity Share	15	14.8	14801200	10	14.8
1995	1996	Equity Share	15	14.8	14801200	10	14.8
1994	1995	Equity Share	15	14.8	14801200	10	14.8
1993	1994	Equity Share	15	7.19	7185000	10	7.19
1992	1993	Equity Share	1	0.9	900000	10	0.9

Source: http://www.moneycontrol.com/financials/sunpharmaceuticalindustries/capital-structure/SPI#SPI

Shareholding Pattern:

Category of Shareholder	No. of Share-holders	Total NO. of Shares	Total No. of Shares held in Dematerialized Form	Total Shareholding as a % of total No. of Shares		Shares pledged or otherwise encumbered	
				As a % of (A+B)	As a % of (A+B+C)	No. of shares	As a % of Total No. of shares
(A) Shareholding of Promoter and Promoter Group							
(1) Indian							
Individuals / Hindu Undivided Family	10	152,676,100	152,676,100	14.74	14.74	3,062,000	2.01
Bodies Corporate	17	506,512,000	506,512,000	48.91	48.91	-	-
Any Others (Specify)	1	640,100	640,100	0.06	0.06	-	-
Trusts	1	640,100	640,100	0.06	0.06	-	-
Sub Total	**28**	**659,828,200**	**659,828,200**	**63.72**	**63.72**	**3,062,000**	**0.46**
(2) Foreign							
Total shareholding of Promoter and Promoter Group (A)	**28**	**659,828,200**	**659,828,200**	**63.72**	**63.72**	**3,062,000**	**0.46**
(B) Public Shareholding							
(1) Institutions							
Mutual Funds / UTI	148	24,890,367	23,642,267	2.40	2.40	-	-

Financial Institutions / Banks	33	42,811,238	42,809,818	4.13	4.13	-	-
Central Government / State Government(s)	1	27,420	27,420	-	-	-	-
Foreign Institutional Investors	436	196,121,067	196,115,067	18.94	18.94	-	-
Sub Total	**618**	**263,850,092**	**262,594,572**	**25.48**	**25.48**	-	-
(2) Non-Institutions							
Bodies Corporate	1,426	52,987,392	52,884,447	5.12	5.12	-	-
Individuals		-	-	-	-	-	-
Individual shareholders holding nominal share capital up to Rs. 1 lakh	68,719	39,088,900	32,348,976	3.77	3.77	-	-
Individual shareholders holding nominal share capital in excess of Rs. 1 lakh	36	17,039,666	16,895,666	1.65	1.65	-	-
Any Others (Specify)	2,063	2,787,705	2,709,135	0.27	0.27	-	-
Non Resident Indians	1,715	716,762	638,192	0.07	0.07	-	-
Clearing Members	333	983,744	983,744	0.09	0.09	-	-

Trusts	13	440,749	440,749	0.04	0.04	-	-
Foreign Corporate Bodies	2	646,450	646,450	0.06	0.06	-	-
Sub Total	**72,244**	**111,903,663**	**104,838,224**	**10.81**	**10.81**	-	-
Total Public shareholding (B)	**72,862**	**375,753,755**	**367,432,796**	**36.28**	**36.28**	-	-
Total (A)+(B)	**72,890**	**1035,581955**	**1,027,260,996**	**100.00**	**100.00**	**3,062,000**	**0.30**
(C) Shares held by Custodians and against which Depository Receipts have been issued-m	**-**	**-**	**-**	**-**	**-**	**-**	**-**
(1)		-	-	-	-	-	-
(2)		-	-	-	-	-	-
Sub Total		-	-	-	-	-	-
Total (A)+(B)+(C)	**72,890**	**1,035581955**	**1,027,260,996**	**-**	**100.00**	**3,062,000**	**0.30**

Source: http://www.moneycontrol.com/company-facts/sunpharmaceuticalindustries/shareholding-pattern/SPI#SPI

Sun Pharma Share Price Data vs. competitor companies as on 8-Nov-11

Company Name	Last Price	% Chg	52 wk High	52 wk Low	Market Cap (Rs. cr)
Sun Pharma	511.55	1.54	538.45	392.05	52,975.19
Dr Reddys Labs	1,617.15	-1.32	1,855.00	1,387.00	27,414.98
Cipla	292.50	0.53	380.80	273.60	23,485.45
Lupin	483.15	1.78	519.80	363.00	21,574.58
Ranbaxy Labs	503.60	-1.95	624.90	414.00	21,251.91
GlaxoSmithKline	2,109.55	0.98	2,475.00	1,905.00	17,868.52
Cadila Health	763.00	0.60	983.50	703.10	15,622.31
Divis Labs	771.00	0.38	842.50	582.05	10,231.41
Glenmark	310.45	1.01	389.75	241.60	8,393.91
Biocon	348.40	0.04	437.75	301.65	6,968.00

Source: http://www.moneycontrol.com/stocks/top-companies-in-india/market-capitalisation-bse/pharmaceuticals.html

Corporate Governance

Sun Pharmaceuticals' is a professionally managed company with a sound corporate governance structure in place. Sun Pharma's overall management and supervision is undertaken by the Board. The day-to-day management of the company is the responsibility of the Managing Director who is assisted by two Whole time Directors under the supervision, direction and control of the Board. A team of professionals forms the next level of management with responsibility for the divisions or functional areas that they lead.

The Board is composed of the following members:

Dilip S. Shanghvi

Chairman and Managing Director

Dilip S. Shanghvi is a graduate in commerce from Kolkata University. He founded the company in 1982 and has extensive industrial experience in the pharmaceutical industry. Mr. Shanghvi is actively involved

in international pharmaceutical markets and research and development functions in the company and is also the Chairman of our primary subsidiary, Caraco, in Detroit, U.S.A.

Sudhir V. Valia

Executive Director

Sudhir V. Valia is a fellow Member of Institute of Chartered Accountants of India and carries more than two decades of taxation and finance experience. He joined the company in 1994, prior to which he was in private taxation practice. In addition to being on the Board of Directors of a number of companies in our group, he is also on the Board of Directors of Caraco.

Sailesh T. Desai

Executive Director

Sailesh T. Desai is a science graduate from Kolkata University, with more than 28 years of industrial experience, 18 of which have been in the pharmaceutical industry. Mr. Desai has had comprehensive corporate affairs experience, being involved in the turnaround at Milmet prior to Sun Pharma's acquisition of it, as well as in the early stages of the company's growth.

S. Kalyanasundaram

Chief Executive Officer

S. Kalyanasundaram is a BSc, ACA and carries almost three decades of regional/ global experience much of which has been in pharmaceuticals, largely with Glaxosmithkline, where he has held both Country, Regional and global responsibilities. As the Managing Director, GSK India, he led the GSK India turnaround; and in the regional role, he spearheaded the company's differentiated and region-specific emerging markets strategy. He also led the commencement of operations in certain emerging markets such as Vietnam, IndoChina, as well as the Wellcome New Zealand reorganization.

Hasmukh S. Shah

Non-Executive Independent Director

Hasmukh S. Shah has four decades of experience in senior management, and was formerly the Chairman and Managing Director of Indian Petrochemical Corporation Ltd, as well as the Vice Chairman of GE Capital and advisor to GE in India. He has had wide experience in various government departments, including as Joint Secretary to the Prime Minister, as Secretary, Post & Telegraph and as Chairman, National Institute of Design, as well as the Institute of Rural Management, Anand and the Gujarat Council of Science & Technology.

Keki M. Mistry

Non-Executive Independent Director

Keki M. Mistry is a Fellow Member of the Institute of Chartered Accountants of India and a Member of the Michigan Association of Certified Public Accountants, USA. He is the Managing Director of the

Housing Development Finance Corporation Limited, widely considered to be India's leading housing finance company. He has worked as a consultant to the Commonwealth Development Corporation in various emerging markets as well as to the Asian Development Bank. He holds a number of directorships and is a member of the management committee of the Bombay Chamber of Commerce & Industry.

Ashwin Dani

Non-Executive Independent Director

Ashwin Dani is a science graduate from the Institute of Science, University of Mumbai and U.D.C.T., University of Mumbai. He is Vice Chairman and Managing Director of Asian Paints (India) Limited, one of India's leading paint companies. He also holds a number of directorships and has been nominated by the government as a Trustee on the Central Board of Trustees of the Employees Provident Fund. He is also a member of the executive committee of the Federation of Indian Chambers of Commerce and industry.

S. Mohandchand Dadha

Non-Executive Independent Director

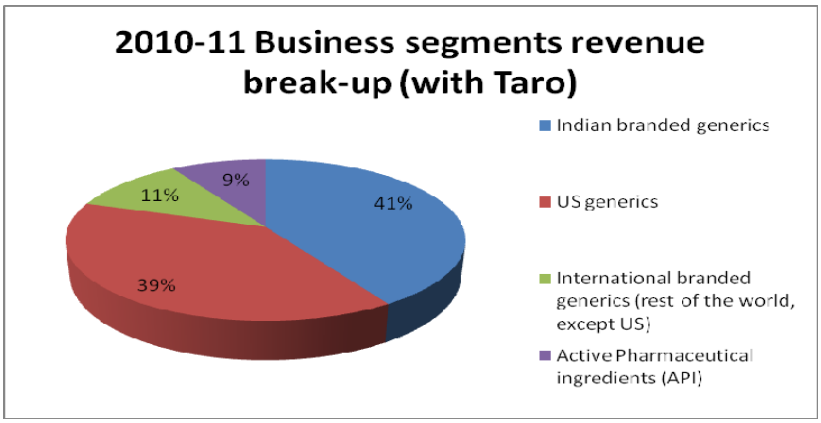
S. Mohandchand Dadha has approximately four decades of experience in the pharmaceutical industry. Mr. Dadha was Managing Director and Promoter of Tamilnadu Dadha Pharmaceuticals Ltd, which merged with Sun Pharma in April 1997.

Market share

Sun Pharma's business can be divided into 4 segments:

- Indian branded generics
- US generics
- International branded generics (rest of the world, except US)
- Active Pharmaceutical ingredients (API)

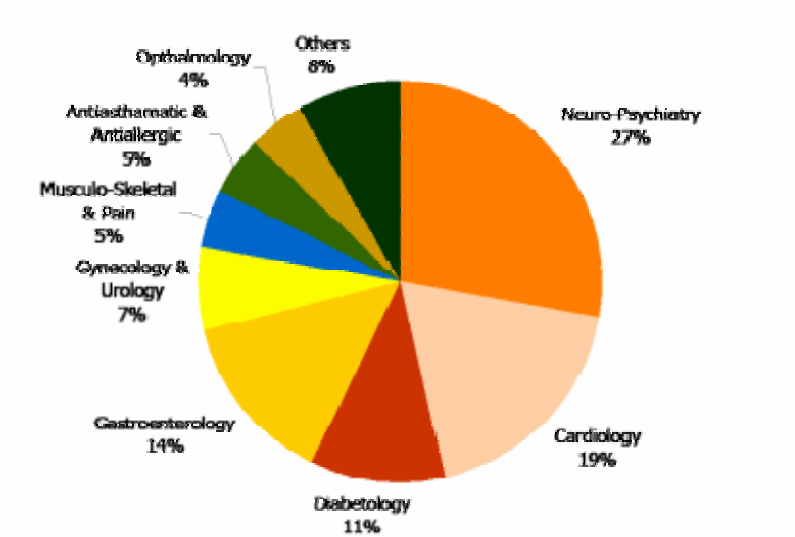
Sun Pharma had a market share of 4.3% in the Indian branded generics space in 2010-11 as per AWACS



Sun Pharma pioneered specialty marketing in the Indian pharma industry when the company began in 1982. The company retains this edge, owing to its structure of customer-dedicated marketing teams and comprehensive product portfolios. It has reached a leadership position in each of the therapy areas that it operates in, and has built a reputation of trust and quality with consumers. In the Indian prescription market, Sun Pharma is ranked 6th by prescription share, with market share at 3.7% and a growth rate of 20% faster than industry. Adding to market share and keeping this customer focus remains a high priority area for the company. Sun Pharma's market share grew from 0.93% in December 1992 to 3.7% in December 2010. Twelve large brands feature among India's largest selling prescription brands. The top 10 brands account for 21% of prescription sales in India, hence reducing dependence on any single brand.

No. 1 in India in specialty therapy areas like Neuropsychiatry, Cardiology, Gastroenterology, Orthopedics and Ophthalmology
Among the top 3 companies in a total of 7 therapy areas including Diabetology, Respiratory, Pain, Cancer and Gynecology
Brands in 41 markets worldwide

Contribution of various Specialty Areas to sales revenue



Psychiatry and neurology account for 27% of the brands Sun Pharma sells in India and this is the therapy area with the oldest product range, including some products that the company started with. Cardiology, oral hypoglycaemic agents and gastroenterology account for 46% of domestic sales.

Sun Pharma's top 3 competitors in the Indian pharmaceutical industry are Lupin Laboratories, Dr Reddy's Laboratories and Cadila. Sun Pharma's top 3 competitors in the international pharmaceutical industry are Teva, Sandoz and Mylan.

Marketing Strategy

Sun Pharma is an international specialty pharma company with a significant presence in the US through their subsidiary Caraco. In the rest of the world markets, Sun Pharma has a strong ground network of 600 committed field force in 41 countries, with a pipeline of over 2600 products of which 1600 are registered and marketed. Typically, every year the company introduces 25-30 new products.

The company has a 3300-person strong sales team in India distributing through 2400 stockists. Sun Pharma is now at a stage of rapid growth across geographies spanning Russia and CIS countries, China and South east Asia, Africa and Latin America.

In India, Sun Pharma markets over 500 products through 18 specialty marketing divisions that are built around chronic therapy areas. These marketing divisions offer a range of prescription brands that cover all or most of the conditions seen in that chronic therapy areas such as cardiovascular, psychiatry, neurology, gastroenterology, respiratory, ophthalmology, orthopedics etc. These divisions have independent sales and product management teams that work to create a prescription pull. For marketing of therapeutic products, companies require highly skilled field force to develop good rapport with their direct customer (doctor). Moreover field force should have good product knowledge and USP of their products over other so as to convince doctors and PULL the demand for their products i.e. from Doctor to Retailer to Stockist to CFA to company.

Focus on niche formulations (chronic) segments/ therapeutic areas has helped Sun Pharma tremendously as chronic segments are driving the growth of the pharmaceutical market as leading prescribers in these segments are specialists as opposed to general practitioners.

Sun Pharma is looking at adding to its specialty product portfolio for prescription leadership in India and also to strengthen its presence, with a complete basket of specialty products, in Russia and CIS countries, China and South East Asia, Africa, Brazil and Mexico. The company intends to achieve this by partnering and collaborating with other companies as an important strategic approach that will complement its growth in India and international markets. The company can achieve this in one of two ways:

- **In-Licensing**

Sun Pharma is currently interested in in-licensing products that are already marketed or are in late stage clinical development in its key therapy areas. The company is looking for products that leverage its core strengths and complement its existing product portfolio in the following therapy areas:

- CNS disorders
- Cardiology
- Diabetes and Metabolic disorders

- Gastroenterology
- Ophthalmology
- Oncology
- Pain
- Allergy, Asthma and Inflammation
- Gynecologicals

Sun Pharma also has a strategic interest in licensing biosimilar products and new products based on recombinant/humanized monoclonal antibody technology that find use in these therapy areas. The company is desirous of establishing long term, mutually rewarding relationships based on exclusive marketing rights business model for the above listed geographies, as well as co-marketing or strategic alliances for co-development including clinical trials of products for necessary regulatory approvals.

- **Out-licensing**

Sun Pharma's formulation development expertise enables it to develop complex generic products which are bioequivalent, sustained release oral dosage forms and long acting injectable depot formulations. The company offers a range of dosage forms for oral, injectable, topical and transdermal routes developed through non-infringing routes and/or patented routes. Its organic synthesis team develops highly complex bulk actives like Peptides, Hormones, Steroids, Anticancer drugs and Cephalosporins through non-infringing routes and/or patented routes. It offers over 150 bulk actives manufactured at USFDA/UK MHRA approved sites.

Sun Pharma is seeking out-licensing opportunities for its specialty generics, super generics, and bulk drugs for global markets.

- CVS
- CNS
- Pain
- Cancer
- Gynecologicals
- Allergy, Asthma other respiratory diseases

Research & Development

Sun Pharma is committed to ongoing investment in research and development as a way to differentiate the company's existing products, while bringing innovative, high-value products to market. The company's research and development activities are closely focused on market needs and driven by technological progress. Sun Pharma allocates a significant amount of its operating budget to research and development and has historically increased its annual R&D spend from year to year. Sun Pharma has

the skill set to create a wide range of pharmaceuticals across the value chain from complex APIs to formulations. These projects typically work with a lead time of a few years.

As per Sun Pharma's Annual Report 2010-11, Sun Pharma has close to 983 scientists working across development centers in Baroda and Mumbai in India and Taro's R&D centres in Israel and Canada. The company continues to file ANDAs to create a strong pipeline in the US.

Even several years after separating out its innovative research programs, Sun Pharma continues to be an aggressive investor and developer of generic-related pharmaceutical research and technology in the country, with research programs to support its generic business being pursued at its R&D centres. SPIL's expert scientist team is engaged in complex developmental research projects in process chemistry and dosage forms, including complex generics based on drug delivery systems at these research centres. This research activity supports the short, medium and long term business needs of the company, in India and all the other markets that the company invests in.

Projects in formulation development and process chemistry help SPIL introduce a large number of new and novel products to the Indian market including products with complexity or a technology edge. Process chemistry enables the company to be integrated right up to the API stage for important products. This helps the company maintain its leadership position in the Indian market with specialty formulations and derive market and cost advantage from API's developed and scaled up In-house. Further, it helps Sun Pharma to compete in the international regulated markets across US / Europe.

The team also works on projects involving complex drug delivery systems for India. Complex API like steroids, sex hormones, peptides, carbohydrates and taxanes which require special skills and technology, are developed and scaled up for both API and dosage forms. This complete integration for some products works to the company's advantage. These projects may offer higher value addition and sustained revenue streams.

In 2010-11, 38 formulations were introduced across marketing divisions, (not including line extensions, but including complex products). All of these were based on technology developed in house. Technology for 28 API was commercialised. For some of the important API that SPIL already manufactures, processes were streamlined so as to have more energy efficient or cost effective or environment friendly processes. Some of the new processes were non-infringing, so as to support the company's plans for ANDA filings for the US. A large part of API sales is to the regulated market of US / Europe, and this earns valuable foreign exchange and also a reputation for quality and dependability. The company's formulation brands are exported to 40 international markets where a local field force promotes the same.

Snapshot of Sun Pharma's R&D expenditure

	Year Ended 31st March, 2011	Year Ended 31st March, 2010
Expenditure on R&D	in Lakhs	in Lakhs
a) Capital	2361	1590
b) Revenue	15728	14408
c) Total	18089	15998
d) Total R&D expenditure as % of Total Turnover	9.4%	8.8

Sun Pharma continues to invest on R&D revenue as well as capex. A large part of the spend is for complex products, ANDA filings for the US and API technologies that are complex and may require dedicated manufacturing sites.

The company has made investments to create research sites, employ scientifically skilled and experienced manpower, add equipment and upgrade continuously the exposure and research understanding of the scientific team in the therapy areas of interest. Laboratories and instrument facilities have been set up to initiate R&D activities in biotechnology for the development of biosimilars.

A state of the art bioequivalence facility with a functional capacity of 220 beds with a well equipped, Phase I Clinical unit and ECG Core Laboratory for clinical studies and safety studies has been expanded to more than 300 beds. Eighteen high capacity LCMS, fully computerised blood chemistry labs capable of comprehensive analysis are being used extensively for biostudies. This facility has been inspected and approved for India and for the US.

Benefits derived as a result of the above efforts e.g. product improvement, cost reduction, product development, import substitution

(a) Market leader for several complex products. Offers complete baskets of products under speciality therapeutic classes. Strong pipeline of products for future introduction in India, emerging markets, as well as US and European generic market.

(b) Not dependent on imported technology, can make high cost products available at competitive prices by using indigenously developed manufacturing processes and formulation technologies.

(c) Offer products which are convenient and safe for administration to patients, products with a technology advantage.

(d) Sun Pharma is among the few selected companies that have set up completely integrated manufacturing capability for the production of anticancer, hormones, peptide, cephalosporins and steroidal drugs.

(e) The Company has benefited from reduction in cost due to import substitution and increased revenue through higher exports.

(f) Sun Pharma has not imported technology during the last 5 years reckoned from the beginning of the financial year.

The Department of Scientific and Industrial Research, Ministry of Science and Technology of Government of India has granted approval to the in house research and development facility of the Company under the provision of the Income Tax Act, 1961.

377 cumulative ANDAs filed	***248 total patents granted***
225 cumulative ANDAs approved	***25 ANDAs filed in 2010-11***
207 DMF/CEP cumulative applications filed	***18 ANDAs approved in 2010-11***
127 DMF/CEP cumulative applications approved	***15 DMFs filed in 2010-11***
549 total patent applications submitted	***15 DMFs approved in 2010-11***

Critical Success factors and key enablers

The following factors have played a key role in Sun Pharma's success in the pharmaceutical industry in India and abroad:

- Focus on niche formulations (chronic) segments/ therapeutic areas has helped Sun Pharma tremendously as chronic segments are driving the growth of the pharmaceutical market as leading prescribers in these segments are specialists as opposed to general practitioners. Sun Pharma early on decided to be a specialty company; a strategy which considerably insulates Sun Pharma from the industry's growth
- Sun Pharma's strategy of inorganic growth through acquisition of companies in specialty therapeutic areas helped it to grow quickly especially in areas where it had no presence e.g.

TDPL, a company with an extensive product offering (oncology, fertility, anesthesiology, pain management) acquired in 1997 brought to Sun Pharma extensive product strengths across the areas of gynecology, fertility, oncology, pain managers and duaesthelics. TDPL's products offered ready entry into high growth therapy areas with known brands and customer equity. Similarly, a basket of products, including several respiratory/asthma brands was acquired from Natco Pharma. The same holds for most of Sun Pharma's acquisitions.

- Increasing scale helped Sun Pharma grow significantly as only by growing larger are companies able to afford the considerable costs of drug development and distribution
- Sun Pharma invested in its research center in 1991. The decision to invest in the research center SPARC (Sun Pharma Advanced Research center), with 46,000 sq ft of research space, and investments of almost the size of the year's profits was a far-sighted one as Sun Pharma rightly understood that research and innovation is a critical growth driver in the industry it operates in.
- High promoter's shareholding enables the company's management to make decisions fast and smoothly
- Sun Pharma's strategy of acquiring distressed assets on the cheap with a view to turn them around has helped the company to maintain costs and the bottom line at a time when its peers made ill-timed and expensive acquisitions in western markets in the past decade. Sun Pharma has been clear that all acquisitions should meet one primary expectation: a return on investment of 20% to 25%. It has also been clear about going after acquiring 'high potential yet under-performing businesses' and this has enabled it to make money on all its deals. A cautious approach has always ensured the company has not regretted its moves.
- The company's strategy of focusing on home market India and the US instead of spreading itself across continents arbitrarily has borne fruit enabling it to become the leader in specialty therapeutic areas in India and the number two generics company in the US
- A low debt-equity ratio is a key strength for Sun Pharma which can enable it to raise debt funds for future acquisitions.
- Human Resource development is a key focus area at Sun Pharma. Sun Pharma has a team of over 11200 employees at various locations across its corporate office, various R&D Centers & 19 plant locations (including associate companies) spread across three continents. The Company continues to take new initiatives to further align its HR policies to meet the growing needs of its business. A transparent work culture, quality of work and supportive environment induces discretionary behavior among employees which gives them the opportunity to personally succeed in a way that leads to collective organizational success

Challenges

- Sun's propensity to engage with troubled companies as acquisition targets has on some occasions put it in direct confrontation with a section of the target company's shareholders. This is an ongoing issue with the Taro acquisition.
- Generics opportunity is gravitating towards more specialized products such as biologics. Sun – which has gone after difficult-to-produce chemical generics – has no capability to make biosimilars or versions of biologics. Others such as Dr Reddys are ahead.
- Sun Pharmaceutical Industries Ltd. expects generic medicine makers to find themselves in the same rough seas as innovator companies from 2015, as fewer new treatments hit the market.

Generic drug companies such as Sun Pharma make copied versions of branded original products from companies such as Pfizer Inc. or Roche Holding AG and sell them for a lower price, generally after the patents protecting the original drugs expire. But while the fortunes of generic drug makers have risen rapidly in recent years, the imitation drug industry could still face a struggle as products that could potentially be replicated become scarcer. Owing to the risks involved in making generic drugs, a company would only strive to imitate original medicines with large annual sales and try to have enough such products in the pipeline, as "an adequate number" of branded products need to go off-patent every year for the generic industry to be healthy.

- There are a set of countries which believe that long term strategy of affordable medicines for its citizens necessitates a stronger local industry. This preference is often evident through explicit and implied protectionist measures favouring local manufacturers. This poses a challenge for companies like Sun Pharma which are looking at enhancing global sales as part of their overall growth strategy and where global sales are a significant contributor to their overall turnover.
- Above all, regulatory agencies like the FDA remain on a constant vigil about the quality of medicines reaching their citizens. In the face of several highly publicized recent events, significant tightening of regulatory requirements across markets is visible, further adding to the business overhead for companies like Sun Pharma who have the US market as a significant contributor to their overall turnover.
- A 10-15% price erosion has been witnessed across several existing products, even as new generic products witness a price fall of over 90% compared to the brand price, soon after launch. Crowding within the US generic market is also obvious from the number of companies that file complicated patent challenges.
- Competition and pricing pressures in the generic segment continue to be a challenge.
- Sun Pharma's presence being limited to US and India markets renders it vulnerable to any major regulatory or competitive changes in either.

Future plans

While Sun Pharma has been becoming more international and formulations-driven over the past decade, the acquisition of Taro in 2010 places it firmly on a new growth orbital, with over half of its sales now coming from North America. Sun Pharma is looks set for a great future, with brands registered in major branded generic markets of the world, and in most of these markets, promoted by a high quality field force.

In the high value US generics market Sun Pharma is working to become a trusted, high quality generic company, with a balanced portfolio comprising both of complex and simple-to-file generics including injectibles, controlled substances and dermatologicals. While continuing to look at technology and the cost advantage Sun Pharma is open to acquisitions in the US generic space.

In India, where Sun Pharma has built a leadership position in chronic therapy areas over the last 25 years, the company will be working hard to retain leadership and add to prescription share.

In key international markets across Asia, South East Asia, Russia, China, the Middle East, Latam and Africa where Sun Pharma has a footprint firmly in place, it will continue to build prescription driven sales

and customer share of mind. Backed with a strong network and established company equity, Sun Pharma would be an excellent partner for a company seeking to license out products across markets.

Sun Pharma has spun off its innovative research group into a separate company. If the businesses had stayed together, R&D investment would have been 15 to 18 per cent of turnover, as the company has been one of the largest R&D spenders among the domestic players. Its R&D expenditure in the third quarter of 2005-06, had gone up by more than 65 per cent, to Rs 64.5 crore (Rs 645 million) from Rs 38.6 crore (Rs 386 million) in the corresponding period the previous year. It offers investors an option to separately hold investments in businesses with different investment and return characteristics, depending on what matches their risk and return expectations. Certainly, de-risking the company's R&D efforts was another important motive behind the demerger.

Over the past few years, the company has been making substantial investments in R&D activities, including new drug delivery systems. These investments in innovative R&D carry higher risk and often generate higher returns, but over a longer term when compared to investments in the generic pharma business. Sun Pharma believes that its R&D business has tremendous potential for growth and long-term profitability. After having nurtured it for these initial years, it has reached a stage where it requires a focused organisation. Hence, Sun Pharma wanted to reorganise both the businesses and undertakings. Additionally, the demerger will also provide scope for independent collaboration and expansion, without committing the existing organisation in its entirety.

Another area of focus for the company in terms of geographical growth is emerging markets.

Case Study - Morepen Laboratories

Corporate Profile of Morepen Laboratories

Industry Name	Pharmaceuticals
Year Of Incorporation	1984
Regd. Office:	
Address	Morepen Village, Nalagarh Road, Near Baddi
District	Solan
State	Himachal Pradesh
Pin Code	411 036
Tel. No.	01792-33283 / 01792-33284
Fax No.	01792-32606-32596
Email: corporate@morepen.com	**Internet:** http://www.morepen.com
Auditors	M Kamal Mahajan And Co..
Company Logo	MOREPEN The Joy of Growing Together

Background

Morepen Laboratories Limited has grown from a single-product Company to a multi-activity pharma major group over a period of 26 years. The company was established in the year 1984. It has filed 14 patents including 6 international PCT applications. The company has filed an international patent on a new amorphous form of the cholesterol-reducing drug Lipitor (Atorvastatin) that is the largest selling drug in the world.

The company markets formulation products in various therapeutic categories, such as antibiotics, gastrointestinal, respiratory, analgesic, anti-allergic and neuropsychiatry with brands, such as Saltum, Saltumax, Cefpopen, Cefpen-S, Dom-DT, Acifix, Rabipen-DSR and Montelast. It has new products added to the therapeutic categories, including Kilbac, Ducal D, Aclomore and Montelast-L. The company has three state-of-the-art manufacturing plants in

the state of Himachal Pradesh (HP) in India.

The Company which commenced its business as a pure Active Pharma Ingredients player, claims to be currently the world's largest manufacturer of Loratadine, an anti-allergy drug internationally known as Claritin, from its USFDA approved plant in Parwanoo.

The state-of-the-art integrated manufacturing complex in Baddi produces Formulations that meet the most stringent quality standards, and cater to discerning markets across the world. The Company has recently diversified into the sphere of Contract Manufacturing as well.

Morepen began its journey in the sphere of wellness with the development and commercialization of bulk drugs for the regulated markets of USA, Canada and Europe. The company manufactures the anti-allergy drug Loratadine – internationally known as Claritin – from its USFDA approved plant at Masulkhana. Today Morepen has over 90% share for the supply of Loratadine in the US market, and has launched many other products such as Atorvastatin, Montelukast, and Pioglitazone etc for various markets globally.

Morepen is listed in all major stock exchanges in India including Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) since 1993 with an Investor base of 62,400 shareholders.

Its facility at Baddi is an integrated complex of ten independent plants, each with a specific product profile. The company has a very strong quality system and follows the most advanced GMP standards across all its manufacturing units.

During the year 1991-1992, the company set up the new facilities for bulk manufacture of Cephalexin, 7 ADCA and CIMC Chloride at its existing location. During the year 1992-1993, the company started implementing its expansion plans for manufacture Cephalexin, 7ADCA, CIMC Chloride, Research and Development Block and Formulation unit. The company introduced two latest molecules, Ketrolac Tromethamine and Omeprazole. The company also launched Loratadine and Cisapride. In 1993-1994, the company increased the installed capacity of Bulk Drugs from 162 MT to 245 MT. The company started the commercial production of Ketorolac Tromethamine, which is a potent analgesic.

In 1994-1995, the company increased the installed capacity of Drugs & Drug Intermediates from 305 MT to 469 MT. Also, the company launched herbal product namely Paclitaxel, an anti cancer drug. In the year 1996-1997, the company commissioned its own formulation unit, which gave a competitive edge to the company in terms of quality and cost efficiency. During the year 2000-2001, the company increased the installed capacity of Drugs & Drug Intermediates from 916 MT to 1170 MT. The company signed a joint venture with DiaMed AG of Switzerland, a proven international leader in blood group serology diagnostic products. Also, the company developed and launched wide range of contemporary, lifestyle oriented FMHG (Fast Moving Health Goods) Self Medication products.

During the year 2001-2002, the company increased the installed capacity of Drugs & Drug Intermediates from 1170 MT to 1251 MT. Also, the company further increased installed capacity of Tablets / Capsules from 25080 Nos to 35000 Nos. During the year 2004-2005, the company developed the new polymorphic from V1 and field patent in 33 countries and in the same year, the company started finalizing marketing partner for filing ANDA's for the molecule. During the year 2005-2006, the company made 52 DMF filing across ten European countries for six products. Also, the company broadened its offering by introduced new product like Ducal, Rythmix, Montelast, Alcoflam, Levopen, Moezole, and Cefpen-S.

In 2006-2007, the company improved its presence in the key market of South East Asia, Africa & Australia. During the year, the company acquired more than fifty new prospective customers in Korea, Japan, and

Taiwan. Morepen entered the Branded Business segment with the launch of Dr. Morepen – a sophisticated range of OTC products for upwardly mobile consumers with hectic schedules.

In the year 2007-2008, the company made the tie ups with several new business segments. Marketing alliance with World leaders like Immucor, USA (for immuunohematology system & consumables), Teco Medical Instruments, Germany (for coagulation system & consumables), InTec INC. (for ELISA Kits), Access Bio, USA (for Rapid Malaria Kits), helped the diagnostics division to make deeper inroads into both the consumer market and the blood bank and laboratory segment.

Morepen created a new category for marketing of global brands of medical devices and clinical diagnostic products with the launch of Medipath. This division has introduced many innovative products in the country under two mother brands – the rapid test kits called 'QuickChek' and the self-health diagnostic products called 'HomeHealth'. The range of self-monitoring healthcare products is meant to manage the excessive stress of today's fast-paced lifestyle. Morepen has entered into JV agreements with world leaders and caters to an all-India network of hospitals, clinical labs and retail distributors.

The Company has also tied up with international majors to market Diagnostic Devices in India. This initiative has empowered people to monitor their own health and lead improved lifestyles.

Today, Morepen's strong customer base includes top generic companies worldwide and its market spans over 50 countries across Asia, Africa, Europe and America.

The company started defaulting in repayment to its depositors in 2002-03. The Company Law Board (CLB) subsequently approved the fixed deposits repayment schedule plan of the company.

The company continues to service its outstanding debt obligations, as per CDR (Corporate Debt Restructuring) scheme and also as per terms of individual settlement with banks and financial institutions. Absence of institutional working capital support continues to hamper the company apart from squeezing the operating margins of the company.

During the year 2010-11, the company allotted, 9,24,90,413 Equity Shares to the fixed deposit holders towards settlement of their dues, under the Scheme of arrangement or compromise u/s 391 of the Companies Act, 1956, approved by Hon'ble High Court at Shimla vide order dated 04th August, 2009. The central government preferred an appeal against the said order and the Hon'ble Divisional Bench remanded the matter back to the Single Judge while setting aside the previous order. The matter is under adjudication.

The government has been conducting a probe into the affairs of the company for alleged mismanagement and financial irregularities. The company is accused of diverting funds to associate companies at a time it could not even repay its public deposits.

In 2006, the Serious Fraud Investigation Office (SFIO) started an investigation into all allegations of mismanagement and Company Law violations.

The company affairs ministry had received investor complaints about the company not repaying Rs 156 crore to public depositors, following which it nominated two directors to the drug maker's board to safeguard public interest. The nominees were allegedly not allowed to join the board.

The company maintains that there is only financial mismatch and no financial mismanagement and that it defaulted on payments due to reasons beyond its control.

Morepen's financial problems are linked to its miscalculation of the patent term renewal of the anti-allergy medicine Loratadine. Due to the financial setback, it failed to repay matured deposits from '02.

According to the government, the company failed to redeem cumulative redeemable preference shares and non-convertible debentures. It allegedly diverted Rs 67 crore to associate companies as investment, which the company says was a business risk it had to take.

The company affairs ministry also said the drug maker incurred huge liabilities in the '03 fiscal.

The cases filed against the company by Ministry of Corporate Affairs, on the basis of investigation carried out by SFIO u/s 235 of the Companies Act, 1956 are being defended by the company and its directors.

Sources:

1. http://www.morepen.com
2. http://www.indiainfoline.com/Markets/Company/Background/Company-Profile/Morepen-Laboratories-Ltd/500288
3. http://www.moneycontrol.com/company-facts/morepenlaboratories/history/ML06#ML06

Chronological history

1984

Morepen Laboratories Limited formed as a company on December 1st, 1984 and subsequently converted into a Public Limited Company on March 16, 1992.

The Company manufactures CIMC chloride, 7-ADCA acid cephalexin Monohydrate, formulations etc. The bulk drug manufacturing unit manufactures life saving drugs such as Ampicillia trihydrate & cloxacillin sodium.

The company undertook to set up a project for manufacture of cephalexin monohydrate (CPH), CIMC chloride and 7-ADCA with capacities, 72 tpa, 54 tpa and 54 tpa respectively and cephalexin monohydrate.

1993

The company adapted technology from the M/s. Techquin Elabeissment, Switzerland for launching Loratadine and cisapride. Formulations division was set up.

The Company undertook to establish facilities for herbal research and development at Gurgaon with financial assistance from ICICI under its technology support services programme.

18,00,000 shares issued, subscribed & paid up. 34,00,000 No. of equity shares of Rs 10 each were issued at a prem. of Rs 15 per share in November 1992 some of which were reserved for allotment on a preferential basis to employees, UTI, LIC and TDICI

1995

The Company launched high value high technology products namely, Cisapride and Loratadine.

26,00,000 shares allotted on conversion of `O' interest debentures.

1997

Morepen Laboratories was close to entering into a tie-up with the US-based Stryker Corporation for marketing the US company's medical equipment in the country.

The company planned to launch its OTC healthcare product range in January to introduce garlic-based tablets, ginger-based tablets, antacids, sweeteners and memory tonics, etc.

1998

Many of the major European generic companies signed agreements with Morepen to import bulk drugs. During the year, the company further expanded its marketing network for exports which would help the company to further expand its sales by tapping new markets.

The company also earned the distinction of introducing for the first time in India two new molecules - Loratadine and Cisapride - in bulk and formulation forms owing to its in house R&D facilities.

During the year the company made its entry into the US market following the filing of drug master file of Loratidine with USFDA which was acknowledged and assigned a DMF number.

1999

Morepen Laboratories Ltd signed an agreement with PARI GmbH of Germany for marketing its inhalation systems for respiratory diseases in the country. The company thus became the youngest Indian company to obtain this approval from USFDA authorities.

The company had an installed capacity of 6 tonnes per annum, and in the years to come, around 50 per cent of the company's turnover was expected to be contributed by this product.

The company's manufacturing facilities for Loratadine at Parwanoo in Himachal Pradesh

was awarded the United States Food and Drug Authority (USFDA) approval, which would enable it to explore new markets.

Loratadine became the fifth largest selling drug in the world with over 50 per cent market share among all anti-histamines.

The consumer care division of the company launched DAB, an antacid with fruit flavours. The other products in the pipeline - Sugar Care (a low calorie sweetener), Garlitone, (Garlic tablets), Mintina-Peppermint tablets and Slimwell (weight reducing agent).

It set up a most modern state-of-the-art plant at Baddi in Himachal Pradesh as per the US FDA guidelines and international standards.

Dab, an ayurvedic antacid granule in sachet packaging was introduced in the market. Morepen also planned to introduce the same in bottles.

In the consumer-care product category, the company was all set to introduce vitamin products for pregnant women. Zimvit-P to be launched in the next four months would be for providing the necessary vitamin support to the `would-be mothers' and Zimvit-L for supporting the post-pregnancy vitamin requirements of the young mothers.

The company is entering into the segment of generic manufacturing and identified at least 20 non-patent high-volume generic products and the process could begin within the next few months.

Amongst new bulk drugs to be launched by the company in the near future - `Atorvastatin' and `Fluvastatin' (both cholesterol reducers), `Paroxetin' (anti-depressant), `Losartan' (anti-hypertensive), `Zafirlukast' and `Montelukast' (both anti-asthmatic).

The new products lined up in the OTC segment included hospital foods, health water, Cold-N-Fever tablets, Vitamin-C tablets and three variants of DAB (a fruit-flavoured antacid).

2000

The company alloted 25,00,000 equity shares of Rs. 10 each at a premium of Rs. 640 per share aggregating Rs. 1,625,000,000 on preferential allotment basis to FI/FIIs/MFs/OCBs and others in accordance with the SEBI Guidelines.

The Company decided to split the equity shares of Rs.10 each into 5 shares of Rs.2 each and also form a compensation committee to draft a scheme for offering equity shares to employees under ESOS.

The Company was in the process of entering into a joint venture agreement with a US-based company for carrying out research and development (R&D) in the area of medicinal biotechnology.

Morepen Laboratories tied up with five leading generic companies -- Apotex, Novex Pharma, Genpharm, Novopharm and Technilab -- in Canada, among others, for supplying its non-sedative anti-histamine, Loratidine.

Shri. K. B. Suri, Chairman cum Managing Director expired on 28th October, and Shri Sushil Suri, Director was appointed as Chairman cum Managing Director.

2001

DiaMed AG signed a technology-cum-marketing joint venture with Morepen Laboratories.

Morepen Labs launched Optimal Rapid Malaria Test Kit – a product from DiaMed AG, leading in blood group serology.

The Company entered into a strategic manufacturing joint venture with the US-based Ameritek Inc, a global player in rapid diagnostic test kits

Morepen Labs entered into a marketing alliance with Beurer GmbH & Co to sell a range of diagnostic and therapeutic monitoring systems to monitor health at home.

2002

Apollo Hospitals Group and Morepen laboratories Ltd entered into a joint venture for emergency services.

Launched 'Dab' a new product in the gastro category.

Invested Rs.100cr as part of its plan to achieve sales of Rs.200cr in five years.

Created four SBU's via global generics, medicus, diagnostics and fast moving health goods.

Acquired Lifespring, a chain of health and beauty stores at a consideration of Rs.120 million from Total Care Pvt. Ltd.

Acquired Lemolate, a premium brand of Yash Pharma Laboratories Ltd in the cough and cold category.

Hiked its expenditure by more than Rs.30 cr for its R & D initiatives.

Increased its production capacity by two times for Loratidine to around 24 tonnes in anticipation of the expected demand from US market.

Appointed Mr. Sanjay Suri as the Director on the Board of the company.

Signed Marketing Joint Venture with Italian Diagnostic company, A Menarini, to market the latter's glucometer range under the company's umbrella in India.

Members of USFDA approved Loratadine as an Over-the counter Allergy Drug.

Invested Rs.12 cr in Lifespring.

2003

Tied up with Analyticon to market urine analysis reagent strips.

Got 180-day marketing rights for the drug in the US market

Filed an international patent under the Patent Cooperation Treaty for manufacturing process of Desloratadine

Mr. Sanjay Suri and Ms Kanta Suri resigned from their directorship of the company.

BOD of the company approved GDR issue.

Signed an agreement of collaborative research program with National Institute of Pharmaceutical Education and Research.

Received clearance from Luxembourg Stock Exchange in respect of company's GDR offering.

Alloted 5,000,000 GDR's representing 50,000,000equtiy shares of Rs.2 each at a price of USD 3.05 per GDR.

Debt Recovery Tribunal put a hold on the proceedings of the lab's 0.25 million GDR issue.

Extended the financial year by 6 months because of declining sales scenario and difficult debt restructuring phase.

Applied for the international process and product patents for the drug Fluvastatin Sodium.

CLB approved fixed deposits repayment plan of the company.

Accomplished large export order of Loratadine.

Bagged 15 year supply contract cum licensing agreement from Generix.

Received US Food and Drug Administrator approval for active pharmaceutical ingredient (API) manufacturing facilities at Masulkhana, Himachal Pradesh.

2004

Morepen Labs got approval for international patent of a new crystalline form (VI) of Atorvastatin, the cholesterol-lowering drug

2006

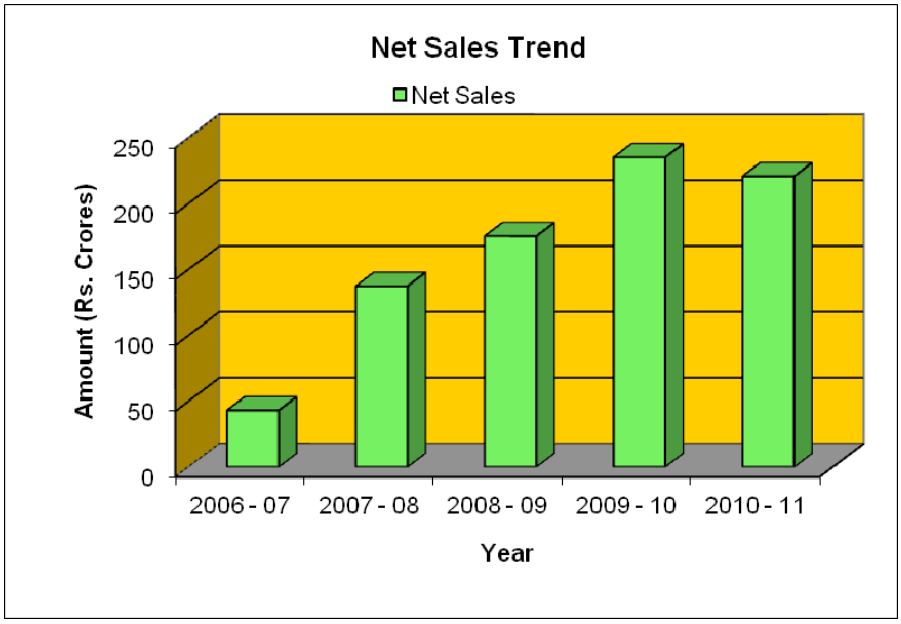
The Serious Fraud Investigation Office (SFIO) started an investigation into all allegations of mismanagement and Company Law violations

Source: www.morepen.com

Key Performance Indicators

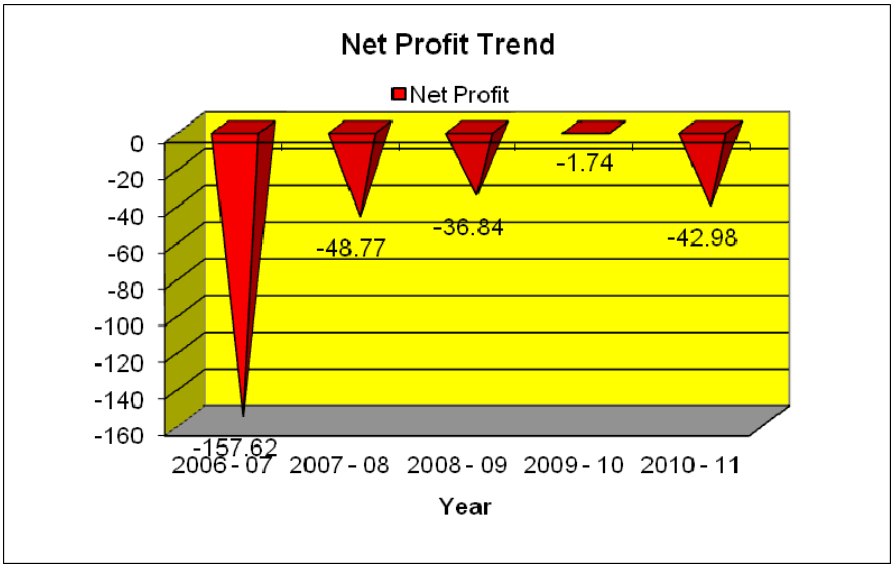
Growth in turnover over the past five years with decline in 2010-11

	Rs. in Crores
Year	**Net Sales**
2006 - 07	43.09
2007 - 08	137.32
2008 - 09	175.18
2009 - 10	235.07
2010 - 11	220.75



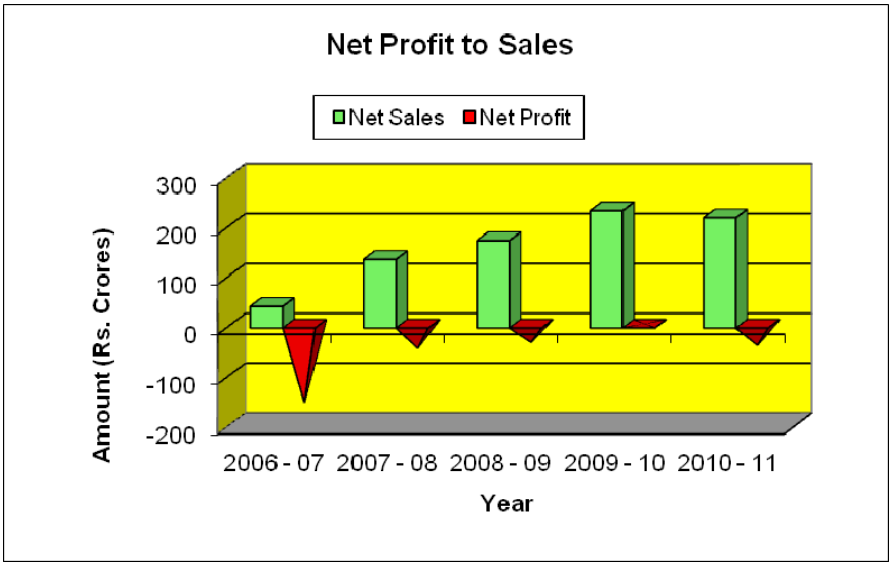
Losses over the past five years

	Rs.in Crores
Year	**Net Profit**
2006 - 07	-157.62
2007 - 08	-48.77
2008 - 09	-36.84
2009 - 10	-1.74
2010 - 11	-42.98



Declining proportion of net profit to sales

	Rs. in Crores	
Year	Net Sales	Net Profit
2006 - 07	43.09	-157.62
2007 - 08	137.32	-48.77
2008 - 09	175.18	-36.84
2009 - 10	235.07	-1.74
2010 - 11	220.75	-42.98



Financials

Morepen Laboratories FY2011 Financials

Highlights of FY11 standalone financials

- Revenues at Rs. 220.75 crores grew by 10% over the last year.
- During the year the company's Sales and operating income went up to Rs. 211 crores against Rs. 195.83 crores in the previous year.
- During the year operational surplus came down to Rs. 9.40 crores from Rs. 13.60 crores in the last year, on account of the margins squeeze.

STANDALONE FINANCIAL PERFORMANCE OF THE LAST 5 YEARS – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	220.75	235.07	175.18	137.32	43.09
Operating Profit	7.42	14.04	2.64	-5.24	-7.82
PBT (after extra-ordinary items)	-42.98	-1.72	-36.57	-48.57	-132.95
Reported Net Profit	-42.98	-1.74	-36.84	-48.77	-157.62

Highlights of FY11 consolidated financials

- FY11 consolidated revenues at Rs. 232.74 crores, down from Rs. 251.02 crores last year.
- Operating profit down to Rs. 5.95 crores from Rs. 11.72 crores last year
- Net loss up at Rs. 46.95 crores from a loss of Rs. 6.27 crores last year

FINANCIAL PERFORMANCE (CONSOLIDATED) – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	232.74	251.02	195.40	158.72	85.25
Operating Profit	5.95	11.72	4.09	-0.91	19.81
PBT (after extra-ordinary items)	46.87	-6.22	-41.31	-54.63	-133.06
Reported Net Profit	46.95	-6.27	-41.93	-54.86	-158.66

Source: http://www.moneycontrol.com/financials/morepenlaboratories/profit-loss/ML06#ML06

Capital Structure

Capital Structure (Morepen Laboratories)

Period		Instrument	Authorized Capital	Issued Capital	- P A I D U P -		
From	To		(Rs. cr)	(Rs. cr)	Shares (nos)	Face Value	Capital (Rs. cr)
2010	2011	Equity Share	90	89.97	449826203	2	89.97
2009	2010	Equity Share	90	89.97	449826203	2	89.97
2008	2009	Equity Share	90	71.47	357335790	2	71.47
2007	2008	Equity Share	90	71.47	357335790	2	71.47
2006	2007	Equity Share	60	42.21	211040000	2	42.21
2005	2006	Equity Share	60	42.21	211040000	2	42.21
2003	2005	Equity Share	60	30.21	151040000	2	30.21
2002	2003	Equity Share	35	28.1	140500000	2	28.1
2001	2002	Equity Share	35	18.1	90500000	2	18.1
2000	2001	Equity Share	35	18.1	90483000	2	18.1
1999	2000	Equity Share	35	18.1	18096452	10	18.1
1998	1999	Equity Share	20	15.6	15600000	10	15.6
1997	1998	Equity Share	20	15.6	15600000	10	15.6
1996	1997	Equity Share	20	15.6	15600000	10	15.6
1995	1996	Equity Share	20	7.8	7800000	10	7.8
1994	1995	Equity Share	15	5.2	5200000	10	5.2
1992	1994	Equity Share	15	5.2	5200000	10	5.2
1991	1992	Equity Share	5	0.5	500000	10	0.5
1990	1991	Equity Share	0.25	0.2	20000	100	0.2

Source : http://www.moneycontrol.com/financials/morepenlaboratories/capital-structure/ML06#ML06

Shareholding Pattern:

CATEGORY OF SHAREHOLDER	NO. OF SHARE-HOLDERS	TOTAL NO. OF SHARES	TOTAL NO. OF SHARES HELD IN DEMATERIALIZED FORM	TOTAL SHAREHOLDING AS A % OF TOTAL NO. OF SHARES AS A % OF OF (A+B)	AS A % OF (A+B+C)	SHARES PLEDGED OR OTHERWISE ENCUMBERED NO. OF SHARES	AS A % OF TOTAL NO. OF SHARES
(A) Shareholding of Promoter and Promoter Group							
(1) Indian							
Individuals / Hindu Undivided Family	36	41,241,750	2,724,678	9.17	9.17	-	-
Bodies Corporate	21	114,129,838	2,106,410	25.37	25.37	610,000	0.53
b Total	**57**	**155,371,588**	**4,831,088**	**34.54**	**34.54**	**610,000**	**0.39**
(2) Foreign							
Total shareholding of Promoter and Promoter Group (A)	**57**	**155,371,588**	**4,831,088**	**34.54**	**34.54**	**610,000**	**0.39**
(B) Public Shareholding							
(1) Institutions							
Financial Institutions / Banks	16	6,617,940	400	1.47	1.47	-	-
Insurance Companies	9	22,484,570	22,257,945	5.00	5.00	-	-
Foreign Institutional Investors	2	58,530,000	-	13.01	13.01	-	-
b Total	**27**	**87,632,510**	**22,258,345**	**19.48**	**19.48**	-	-
(2) Non-Institutions							
Bodies Corporate	1,030	21,910,961	20,139,917	4.87	4.87	-	-
Individuals		-	-	-	-	-	-
Individual shareholders holding nominal share capital up to Rs.1 lakh	141,321	163,256,924	106,418,113	36.29	36.29	-	-

Individual shareholders holding nominal share capital in excess of Rs. 1 lakh	129	15,236,033	15,070,396	3.39	3.39	-	-
Any Others (Specify)	467	6,418,187	6,418,187	1.43	1.43	-	-
NRIs/OCBs	296	3,906,690	3,906,690	0.87	0.87	-	-
Clearing Members	164	2,240,367	2,240,367	0.50	0.50	-	-
Trusts	7	271,130	271,130	0.06	0.06	-	-
b Total	**142,947**	**206,822,105**	**148,046,613**	**45.98**	**45.98**	-	-
tal Public areholding (B)	**142,974**	**294,454,615**	**170,304,958**	**65.46**	**65.46**	-	-
Total (A)+(B)	**143,031**	**449,826,203**	**175,136,046**	**100**	**100.00**	**610,000**	**0.14**
(C) Shares held by Custodians and against which Depository Receipts have been issued-m	**-**	**-**	**-**	**-**	**-**	**-**	**-**
(1) Promoter and Promoter Group		-	-	-	-	-	-
(2) Public		-	-	-	-	-	-
Sub Total		-	-	-	-	-	-
Total (A)+(B)+(C)	**143,031**	**449,826,203**	**175,136,046**	**-**	**100.00**	**610,000**	**0.14**

Source: http://www.moneycontrol.com/company-facts/morepenlaboratories/shareholding-pattern/ML06#ML06

Morepen Laboratories Share Price Data vs. competitor companies as on 1-Mar-12

Company Name	Last Price	% Chg	52 wk High	52 wk Low	Market Cap (Rs. cr)
Sun Pharma	548.85	-0.20	565.75	411.00	56,837.92
Dr Reddys Labs	1,654.00	0.94	1,716.00	1,387.00	28,045.28
Cipla	315.45	-0.43	359.00	273.60	25,328.15
Lupin	482.30	0.40	509.50	375.00	21,540.58
Ranbaxy Labs	425.40	-0.70	570.00	366.50	17,953.23
GlaxoSmithKline	2,080.10	0.25	2,475.00	1,830.00	17,619.07
Cadila Health	711.30	-1.65	983.50	629.00	14,563.76
Divis Labs	742.95	1.96	842.50	582.05	9,859.18
Glenmark	309.65	0.47	351.20	241.60	8,376.50
Piramal Health	443.20	-1.61	550.00	340.00	7,648.00
Wockhardt	517.80	6.94	517.80	251.25	5,666.59
Biocon	275.45	0.18	390.05	240.10	5,509.00
Aventis Pharma	2,207.00	-3.02	2,429.95	1,801.00	5,082.86
Torrent Pharma	565.00	2.46	686.95	499.00	4,780.54
AstraZeneca	1,867.65	-1.34	1,933.00	1,081.00	4,669.13
Ipca Labs	343.30	-0.12	351.00	230.20	4,319.66
Pfizer	1,219.45	-0.81	1,636.20	1,071.55	3,639.01
Aurobindo Pharm	111.75	-0.49	209.40	80.35	3,253.28
Abbot India	1,512.35	-1.54	1,683.00	1,201.00	3,213.64
Strides Arcolab	549.10	1.95	612.00	276.25	3,207.48
Jubilant Life	189.80	0.03	227.00	148.45	3,023.16

Novartis India	741.00	0.65	944.00	592.15	2,368.30
Fresenius Kabi	146.70	7.32	146.70	81.65	2,321.20
Wyeth	830.05	-1.76	1,074.80	775.10	1,885.88
Sun Pharma Adv	79.00	-2.05	101.75	64.85	1,636.22
Orchid Chemical	185.70	-1.75	324.65	112.25	1,308.11
Plethico Pharma	363.70	-1.33	395.00	330.55	1,239.00
Unichem Labs	130.25	-1.70	224.00	101.15	1,176.44
Merck	610.75	-2.02	728.80	553.00	1,013.81
Claris Life	146.40	0.69	199.45	98.10	934.29
Alembic Pharma	46.60	3.56	51.00	34.00	878.48
Natco Pharma	276.35	-1.43	298.00	197.25	860.77
Elder Pharma	339.05	0.34	435.00	328.00	696.30
Indoco Remedies	410.00	-0.92	485.00	360.00	503.76
Ajanta Pharma	416.70	-2.49	434.00	185.75	487.89
Panacea Biotec	78.00	0.26	199.45	70.00	477.76
TTK Healthcare	416.20	-0.43	680.70	350.00	323.22
Parenteral Drug	115.00	0.88	212.95	76.60	297.47
Alembic	18.20	0.28	75.70	13.55	243.00
Amrutanjan Heal	804.85	-0.50	996.80	566.30	235.26
Parabolic Drugs	33.50	-0.30	52.70	25.90	207.34
Ahlcon Parent	249.90	-4.98	307.95	47.50	179.93
Suven Life Scie	14.61	-2.27	25.70	11.50	170.55
Morepen Lab	3.75	-2.85	6.30	2.65	168.68

Source: http://www.moneycontrol.com/stocks/top-companies-in-india/market-capitalisation-bse/pharmaceuticals.html

Corporate Governance

The mechanism of Corporate Governance is aimed at ensuring the greater transparency and better and timely reporting of the affairs of the Company to its stakeholders. The element of Corporate Governance contributes in generating the value for its Stakeholders at large. The Company conducts its business affairs with strict compliance of the principles of Corporate Governance and in the process strives to adopt various legal and regulatory measures with the ultimate objective of the creation and maximization of stakeholders' wealth.

1. BOARD OF DIRECTORS
COMPOSITION AND CATEGORY OF DIRECTORS AS ON MARCH 31, 2011

Category	No. of Directors	%
A. Executive Director		
Mr. Sushil Suri (Promoter)	1	20
Dr. A. K. Sinha	1	20
B. Non Executive Director		
Promoter	Nil	Nil
Mr. Manoj Joshi, Mr. Sukhcharan Singh, Mr. B. R. Wadhwa (Independent)	3	60
Total	**5**	**100**

The Chairman of the Board is an Executive Director.

DIRECTORS' PROFILE

Sl. No.	Name of Director	Qualification	Nature of Expertise	No. of Companies in which they hold directorships
1.	MR. SUSHIL SURI	B.Sc., FCA	MANAGERIAL ENTERPRENEURSHIP	1
2.	MR. MANOJ JOSHI	M. COM IN BUSINESS ADMINISTRATION	BOARD LEVEL MANAGEMENT POLICY MANAGEMENT AND PUBLIC ADVOCACY	1
3.	MR. SUKHCHARAN SINGH	B.A, RETIRED INSPECTOR GENERAL OF POLICE	ADMINISTRATION	2
4.	MR. B. R. WADHWA	FCA, B.COM	TAXATION AND FINANCE	1
5.	DR. A. K. SINHA	M.Sc., PHD	TECHNICAL	1

Market share & Marketing Strategy

Morepen Laboratories has a worldwide presence touching almost 40 countries worldwide. The company has reached out to almost each Continent.

Domestic Markets

The company is represented throughout India by way of its presence in Branded Formulations segment, wider penetration of its Diagnostic products both homes (Home Health Products) as well as hospitals (Clinical Diagnostics Products) and brand value of its OTC products.

Global Markets

Exports API to US and European markets. Also exports to Israel, Turkey, IRAN, CIS and SE Asian markets and neighboring markets like Pakistan, Bangladesh

Morepen's market reach continent wise is as follows:

ASIA	AFRICA
India Bangladesh China Indonesia Japan Pakistan Singapore Taiwan Thailand Vietnam	Algeria Iran Israel UAE Dubai
AMERICA	**EUROPE**
Brazil Canada Columbia Panama USA	Bulgaria Croatia Germany Georgia Poland Russia Slovakia Spain Switzerland Turkey

Morepen today is the largest producer of Loratadine in the World and presently has, over 90% market share of generic Loratadine in the US market.

Morepen's entire product range can be divided into the following categories:

- API
- Domestic Formulations
- Diagnostics
- OTC

PRODUCT RANGE

- **API**

Manufacturer and Exporter of complex and high margins molecules (APIs/Intermediates) for regulated markets of USA and also for non-regulated markets

- **Domestic Formulations**

Markets over 100 branded formulations in 8 major therapeutic segments

- **Diagnostics**

Markets under its own brand name Clinical & Home Health devices and Blood Banking machines

- **OTC**

Markets brands like Burnol, Lemolate, Sat-Isabgol, Option -72, Head-X, Fever-X , C- Candy and others Over the Counter (OTC) products

The company's marketing strategy is to focus on a few lifestyles therapeutic segments such as Cardiovascular, Diabetes, Neuropsychiatry, Asthma and Allergies and a few other select categories as Morepen believes that all these categories are large and growing and they represent lifestyle chronic diseases that have long-term treatment therapies. Additionally, a number of molecules are going off patent in the next few years in these segments.

As a part of its marketing strategy the company tries to:

- It focuses on off-patent drugs backed by high decibel ad and marketing push
- In order to minimize the risks, it has developed a portfolio of products, which will sequentially go off-patents
- It has positioned itself as a low cost producer and supplier of generics
- Target categories which are huge in Value & Volume with little competition.
- Launch multiple products in quick succession to keep sales team motivation high and retail interest alive.

- Launch a few firsts in the country like pills to keep people alert when they are feeling lethargic or aid people in sleep when they are feeling stressed out.
- Competitive pricing & better margins to the trade.

Morepen's Distribution Network:

- Direct coverage currently up to 75000 outlets.
- Increase retail penetration to 100000 outlets.
- Sales team increased to 200 from 100 to cater to the above.
- Penetrate distribution up to class IV towns from current class III

On the domestic side, Morepen has a large distribution base all over India, with company warehouses in all states and strong sales and marketing teams with more than 300 experienced people. Morepen associates with approximately 80000 doctors and over 100000 pharmacies for its pharmaceutical products and has presence in over 200,000 retail outlets for its Health products (OTC). Earlier Morepen focused only on the GPs (General Practitioners) but now the focus will be on specialists. Morepen was the first company to emphasize the need for Self-health in the country and thus created a brand "Dr. Morepen". Morepen also has tie-ups with several international diagnostics giants like Beurer of Germany, Diamed AG of Switzerland, Hemocue of Sweden & Menarini of Italy for exclusive marketing and servicing in India. Morepen had also acquired two brands and a chain of Health and Beauty stores-Lifespring. Expansion plans for opening new stores is on with a clear strategy to be present in every locality.

During 2010-11, the subsidiary company, Dr. Morepen re-organized the distribution channels with a view to expand the reach of its 'OTC' products throughout the country. The expansion of existing markets and coverage of previously un-covered markets with the help of increased sales force has the desired impact in terms of creation of fresh demand. The company re-worked its OTC distribution and marketing model. During the year markets were cleansed and reorganized, saleable stocks were redistributed and revamped. During the year, the company did a major turnaround in its product distribution strategy wherein goods, which in earlier years were being sold on credit, during the current year, were sold against receipt of money in advance. Strong super distributor and trade policies have enabled the company to safe guard its interests and also drive the business forward on the profitable growth path.

For international sales, Morepen has collaboration with the top drug manufacturers like Novartis, Merck etc and supplies drugs in bulk to them. In fact, Loratadine is supplied by these manufacturers in USA. Morepen has also tied up with DrugMax Inc of USA, to form MorepenMax and will convert high value bulk drugs to dosage forms for further value addition and will also outsource blockbuster drugs to manufacture dosage forms for US market.

Research & Development

Morepen Laboratories has developed a hi-tech Pharma complex at Morepen Village, Baddi (HP) on 60 acres of land that has various multipurpose pharma facilities for API & finished dosages and a Research Centre. Innovation in pharmaceuticals is not possible without Research & Development. Morepen has created an excellent in-house R&D center, focused on identifying and manufacturing high value added, complex new molecules for introduction in the generic market.

Sophisticated, state-of-the art instruments like HPLC, GC, FTIR, UV spectrophotometer are used for standardisation of manufacturing processes.

Key areas in which the company carries out R&D include:

- New innovative non-infringing processes and development of cost effective propriety technologies
- Maximising utilisation of indigenous raw materials and imports substitution.
- Development of novel drug delivery systems.
- Development of products based on medicinal plants.
- Development of safety and environment conservation methods.
- Process and product development for existing and new products.

The company tries to remain committed in building its IPR (Intellectual Proprietary Rights) portfolios to stay competitive in the market place. During the year 2010-11, the company has filed 2 new process patents which have taken the tally of patents filed by the company to 52. The company has been granted patents on 'Desloratadine' in INDIA. Furthermore, the patent on Montelukast is in final examination phase in US, Canada, INDIA as well as Europe.

Key areas in which R & D is carried out by the Company as per the Annual Report 2010-11

- Innovation and up gradation of existing technologies/products to meet customer requirements.
- Development of new dosage forms in different therapeutic categories for domestic market for in-house marketing as well as for contract manufacturing.
- Development of safe and environment friendly production process.
- Development of cost effective, eco-friendly & non-infringing processes of various API's & intermediates.
- Product development in formulation for export as per the registration requirements and making the dossier for the same.

- Improvement / reworking on the existing formulations to make the products cost effective and improve quality.
- Development of novel processes & increases the intellectual property of the organization.
- Development of finished formulation with In-House developed API with the target to offer the product for domestic market to third party marketing companies.

Benefits derived as a result of R & D activities

- Yield improvement and reduction in the input quantities of raw material resulting in cost reduction and economisation.
- Process/Quality improvements and product up-gradation as per customer requirements.
- Addition of several new high value products like Aliskiren, Rosuvastatin & Voglibose etc.
- Enhanced global presence / visibility.
- Process simplification and standardization of parameters resulting in uniform quality and better efficiencies.
- Formulation product registration in foreign markets.
- Newly developed research work was utilized in the production of commercialized products.
- Increase in CRAM Business with the In-House developed API based formulation.

Future plan of action

- Plan for the product registration of formulation products with special reference to Europe, China and CIS countries.
- Bioequivalence study of certain formulation products for registration for export market.
- Identifying the new potential drugs and their development and registration for domestic market.
- Continuous investment of resources in augmenting R & D capabilities and productivity.
- To improve the quality of the intermediates of various API's for sale in various countries.
- Greater focus on innovative, commercially viable process know-how for both APIs and dosage forms.
- Greater focus on the expansion of intellectual property on all the work carried out in R&D.
- To develop and commercialize API's which has good potential in international market with early patent expiry.

FY 2009-2010, 2010-2011 Expenditure on R&D:

(Rs. in Lacs)

S. No.	Particulars	Year ended 31.03.2011	Year ended 31.03.2010
i)	Capital	-	-
ii)	Revenue	149.40	170.30
iii)	Total R&D expenditure	149.40	170.30
v)	Total R&D expenditure as a percentage of total turnover	0.70%	0.87%

Morepen Labs has reported the following efforts made towards technology absorption, adaptation and innovation in FY2010-11:

1. The Company is continuously adopting innovative processes in the manufacture of all of its API's and intermediates as well as in formulations as explained above.
2. Benefits derived as a result of the above efforts e.g. product improvement, cost reduction, product development, import substitution, etc.
3. Internationally competitive prices and high quality products, improved productivity/process efficiencies, foreign exchange earning/savings and other benefits as explained in 1(b) above.

76 Process Patents filed

20 DMFs filed

Lessons learned - Critical Success Factors that didn't work

Underestimating competition

Once Loratadine went off patent, the price of 'Claritin' the brand for Loratadine in the US collapsed - from US $ 8000/kg to US $ 1000/kg and then towards US $ 600/kg. This was a knockout blow to Morepen- 24 tpa was initially planned to be produced and then raised to 36 tpa. A US $ 200 Million market crashed to under US $ 20 Million!

This phenomenon of prices of patented drugs crashing significantly once off patent was not uncommon. Morepen must have realised this but what they did not plan for is that the Price will fall over 90%! So 'Loratadine' collapsed and so did Morepen.

Even in the domestic markets, it has faced stiff competition. It had hoped to dislodge 'Eno', a major player in the Rs 400 crore antacid market on basis of its strong marketing. It faced a stiff challenge and could not sustain in the market or disturb the leadership of Eno.

Managing patent battles

Morepen Laboratories had bet big time on 'Loratadine' and had hoped to capitalise in the US Market after this drug went off patent. In 1999, it had secured the USFDA approval for 'Loratadine' and had dedicated a separate Manufacturing Plant for supplying to the US market. It had even entered into an Exclusive Selling Rights agreement for six months with Geneva Pharma (part of Novartis) once the drug went off patent. However, Schering Plough, the patent holder managed to obtain six months extension on grounds of pediatric use and hence Morepen's entry was delayed by six months.

Need for stronger financial management

1. **Impact on cash flows and inventory costs**

   Morepen claims that the delayed launch of Loratadine in USA affected cash inflows and added up inventory costs. It led to working capital being diverted to pay off interest and short term loans.

2. **High Debt burden**

   Morepen has a very high debt burden coupled with a very high interest rate burden brought about by its funding pressures. This directly impacts the company's bottomline.

3. **Debt repayment and funding issues**

The company defaulted on its loan repayments; banks froze its working capital credit line. The Debt Recovery Tribunal puts hold on the proceedings of the lab's 0.25 million GDR issue. This vicious cycle of no funds, no repayment and no repayment, no funds continues to haunt the company till now.

4. **Cost inefficiencies and poor return on capital employed (ROCE)**

   Morepen's ROCE as compared to its peers/competitors is very poor as can be seen in the accompanying snapshot on the next page:

Company	Market Cap (Rs. in Cr.)	P/E (TTM) (x)	P/BV (TTM) (x)	EV/EBIDTA (x)	ROE (%)	ROCE (%)	D/E (x)
Sun Pharma.Inds.	57,776.12	36.13	8.65	29.33	22.3	23.3	0.01
Dr Reddy's Labs	28,621.73	33.03	4.75	22.23	15.0	15.2	0.17
Cipla	24,757.42	23.66	3.75	18.79	15.4	17.9	0.04
Ranbaxy Labs.	17,590.63	24.53	9.14	14.48	21.5	16.0	0.82
Cadila Health.	14,256.05	23.45	6.82	21.79	32.9	27.5	0.31
Alembic	226.95	0.00	1.27	306.46	-5.2	-1.4	0.96
Morepen Labs.	169.59	0.00	0.66	45.07	0.0	0.0	0.35
Phaarmasia	120.79	0.00	14.80	0.00	1.1	1.5	0.00

This is a direct indicator of its poor profitability.

However, what should still help the company are the following factors which are its strengths:

- Its State-of-art, global scale facilities
- Strong focus on R&D
- Global Joint Ventures which leverage partner strengths

Challenges

- Apart from risks faced by the pharmaceuticals industry at large, the global Generics business faces risk associated with regulatory issues and product liability, especially in developed markets.
- Further, innovator pharmaceutical companies also continuously work on developing new ways to hold on their patented drugs to delay entry of generic versions. With more drugs going off-patent, the Generics space is becoming more competitive even in the Emerging countries.
- Manufacture of pharmaceuticals is strictly regulated and controlled by authorities across the world. Regulators across the world have become stricter, in respect of compliance to requirements. In the Indian pharmaceuticals market, price of certain pharmaceutical products is regulated by the Drug Pricing Policy through the Drug Pricing Control Order, 1995 (DPCO).
- The API business is largely export oriented, whereas Medipath business involves imports for most of its inputs.
- The sharp movements in foreign exchange rates impact the company's financial results.

Opportunities & Future plans

- The accumulated losses of the company at the end of the financial year are not more than fifty percent of its net worth so the company cannot be said to be sick as of now.
- The value of the global pharmaceutical market is expected to grow 5-7% in 2011, to $880 billion, compared with a 4-5% growth in last year. It is expected to grow at an average growth rate of around 6.5% during 2011-2013. During past 2 years, the pharma market had experienced a slump however it is expected to reach $1.1 trillion by 2015. In 2011, products with sales of more than $30 billion are expected to face the prospect of generic competition in the major developed markets. The future growth will be driven by low cost factor, increasing prevalence of diseases worldwide, and rising per capita income of consumers. Sales of generic drugs will emerge as the most prominent segment of the pharma market, indicating large opportunities for generics manufacturers to tap.
- The share in global pharmaceutical spending for US and top five European national markets will decline from 61% in 2005 to 43% in 2015. The share of high-growth emerging markets, led by Brazil, Russia, India, China and others, will move up to 28% by 2015, up from only 12% in 2005. These emerging countries are forecasted to grow at a rate of 15-17% in 2011, to $170-180 billion. Gains in pharmaceutical spending in the emerging markets will be driven by overall strong economic growth and governments' commitment to expand healthcare access. Many of these markets are benefiting from greater government spending on healthcare and broader public and private healthcare funding, which is driving greater demand and access to medicines. Of the total increase in spending, approximately 20% will come from branded products.
- The next five years also will see an accelerating shift in spending toward generic drugs, whose share of pharmaceutical spending will rise to 39% in 2015, up from 20% in 2005. The level of patient expiries will continue to have a strong effect on the global pharmaceutical market. Spending for branded products in developed markets will remain at the same level in 2015 as it was in 2010. Globally, market share for branded medicines, which fell from 70% in 2005 to 64% in 2010, is expected to decline further to 53% by 2015.
- Pharma industry is growing at a rapid rate in emerging countries, such as India, China, Brazil, Russia, among others, while a slowdown in the growth has been encountered in the developed markets.
- Morepen continues to produce and supply high quality drugs, formulations and diagnostic products at competitive prices to exports and domestic markets, to grow its business in the coming years. The company's engagement in its current business holds great potential and would generate good return on its capital employed. The company strives to achieve leadership position in its areas of operations. The company's API business continues to file new DMFs (Drug Master Files) and process patents and improvements, to generate remunerative product portfolio. The company is working continuously to improve upon its knowledge base, across

technical, regulatory and other related matters, for availing of business opportunities across its way.

- The future growth model of the company will mainly focus on the formulations. Earlier the company was more into bulk drugs. Traditionally all the big brothers started as bulk companies and they slowly turned to formulations. Five years down the line 75% of sales will be coming from formulations and OTC, whereas 25% of the sales will come from bulk drugs.
- In formulations, Morepen's major focus will be on the life style categories primarily in the categories of Neuro-psychiatric, Cardiac and Chest and Diabetes where they are launching new products. Another segment that is very popular is gynecology.
- Out of the existing portfolio Morepen is picking up dermatology, gastrology and respiratory tract. So these three segments are coming out of the existing portfolio. But the major focus will be shifting to the formulation and OTC segments.
- The company's integrated manufacturing complex at Baddi and Parwanoo is ideal for taking up contract manufacturing for third party operations. The Baddi complex is made up of ten plants, and each has in-built customized temperature controls and quality systems in place suited to the product profile. Depending upon the manufacturing requirements of the different products, Morepen can provide customer specific environs. The company has expanded its activities in the field of third party manufacturing for formulations and API intermediates. The units are marked by skilled workforce, world-class equipment, R&D facilities and internationally accepted Environment, Health and Safety legislations. The third party formulation manufacturing business has recorded an increase of 7% over the last year and Morepen can be expected to build it up further.
- Despite all the above factors, Morepen will find the going tough because of working capital problems, damaged goodwill, a more competitive pharmaceutical industry both in developed and emerging markets.

Part II

Case Studies – Biotechnology Industry

1. **Suven Life Sciences Ltd.**
2. **Avesthagen Ltd.**

Biotechnology Industry: Brief Background

Biotechnology is a field of applied biology that involves the use of living organisms and bioprocesses in engineering, technology, medicine and other fields requiring bio- products. Application of scientific and technical advances in life science to develop commercial products is biotechnology.*

Government of India set up the Department of Biotechnology (DBT) under the Ministry of Science and Technology in 1986 with the aim of enhancing the Biotech Industry in India. Since then DBT has produced one of the best scientists of the country since its establishment. India has become the Hub of Biotechnology since the last decade and has become the main center of attraction for global investments due to the skilled and knowledgeable manpower available in India. Due to the rich resources available in the country, India has become one of the major areas for setting manufacturing units and Research laboratories by the MNC's.

Biotechnology is a dynamic field which is inherited from various disciplines such as Biology, Genetics, Cytology Chemistry, Pharmacology, Bioinformatics and impacting important areas such as Medicine, Agriculture and environment.

Indian Biotechnology industry is considered as one of the sunrise sectors in India. The industry can be classified into five different segments - Biopharma, Agri-biotech, Bioinformatics, Bio-industrial and Bio services with each concentrating on a particular area.

Most of leading Pharmaceutical companies are also in Biotechnology sector.

In Biotechnology following two companies were selected for case study:-

i. Suven Life Sciences Ltd., Hyderabad (Success Story)

ii. Avesthagen Ltd., Bangalore (Lessons Learnt)

Case Study - Suven Life Sciences

Corporate Profile of Suven Life Sciences

Industry Name	Biotechnology
Year Of Incorporation	1989
Regd. Office:	
Address	SDE Serene Chambers, Road No. 5, Banjara Hills
District	Hyderabad
State	Andhra Pradesh
Pin Code	500034
Tel. No.	040-23541142, 040-23543311
Fax No.	040-23541152
Email: investorservices@suven.com	**Internet:** http://www.suven.com
Auditors	Karvy & Company
Company Logo	

Background

Suven Pharmaceuticals Limited was promoted in 1989 by Mr. Jasti Venkateswarlu and Mrs. Jasti Sudha Rani for the manufacture of bulk drugs and drug intermediates. The company was incorporated as a Private Limited Company on 9th March, 1989 in the state of Andhra Pradesh.

Subsequently on 4th January, 1995 it was converted into a Public Limited Company in terms of special resolution dated 25.11.94 U/s. 31(1)/44 of Companies Act.

The Company develops and manufactures drug intermediates, under contract from the drug's global patent holders.

The company's shares are listed on Bombay Stock Exchange (BSE), National Stock Exchange

(NSE), and Hyderabad Stock Exchange (HSE).

Suven has a state of the art R&D center recognized by the Department of Scientific & Industrial Research (DSIR), Ministry of Science and Technology, Government of India as well as world class manufacturing facilities in the business of Pharmaceuticals and Fine Chemical Intermediates for Global Life Science Companies for New Chemical Entities (NCE's) as the thrust area.

The Company is committed to provide full spectrum of quality services and products in Drug Discovery and Development Services (DDDSS), Contract Research and Manufacturing Services (C-R-A-M-S), Clinical Research Operations (CRO) and Collaborative Research Partnership (CRP). Exports is a thrust area of the company.

So far the Company has twelve (12) internally-discovered therapeutic drug candidates currently in preclinical stage of development targeting conditions such as ADHD, dementia, depression, Huntington's disease, Parkinson's disease and obesity in addition to developmental candidate SUVN-502 for Alzheimer's disease and Schizophrenia.

Suven claims to be a self funded drug discovery company which has utilized the internal accruals without borrowing any money from the banks for all the Discovery activity. Over the years, the company could generate this kind of pipeline (13 molecules in all) while filing 37 product patents globally.

Source: http://www.suven.com

Chronological history

1989

Incorporation as Suven Pharmaceuticals Pvt. Ltd.

1990

Commenced Operations

1991

Expanded into Fine Chemical Intermediates.

1992

Commenced export of Fine Chemical Intermediates.

1994

Initiation of 'C-R-A-M-S' business model (Contract Research And Manufacturing Services)

1995

Went Public (IPO)

1996

First sale from 'C-R-A-M-S'.

1997

ISO 9002 Certification.

1999

Recognition as an Export House

Acquired a Drug Unit at Hyderabad, converted into Research center and Pilot Plant

The Company entered into an agreement with NSDL and CDSL for dematerialisation of shares.

The company bagged export orders of Rs 21 crore

2001

New Suven Research Center (SRC) inaugurated at Hyderabad

Recognition of SRC as in-house R & D unit by Department of Scientific & Industrial Research (DSIR), India

Borregaard Industries Ltd, Norway, acquired 15% stake in the company

2002

cGMP Lab at SRC commissioned

Pfizer Ltd and Suven Pharmaceuticals Ltd tied up with the Bombay College of Pharmacy to set up an academy for clinical excellence (ACE) , in Mumbai.

2003

Acquired assets of New Jersey, USA based Synthon Chiragenics Corporation

Name changed to Suven Life Sciences Limited

Borregaard Industries Ltd offloaded its entire 17.05 per cent stake (7.50 lakh equity shares) in Suven Life Sciences Ltd

Suven Life Sciences USA LLC a wholly owned subsidiary of Suven Pharmaceuticals Ltd. acquired Synthon Chiragenics Corporation New Jersey USA

2004

Got ISO 14001:1996 certification for Unit - 1 (Suryapet) and Unit - 2 (Jeedimetla)

Suven Life Sciences Ltd informed the stock exchanges that its shareholders at the

extraordinary general meeting held on Jan 05 had approved the sub-division of equity shares into face value of Rs 2 each from the face value of Rs 10 each.

Suven Life Sciences BoD approved preferential shares issue

The company confirmed that its board of directors on Jan 19 had allotted 30 lakh equity shares of face value of Rs 2 each on preferential basis to four investors (Emerging Markets Management LLC, Aeneas Portfolio Company LP, Commonwealth Equity Fund Ltd, Batterymarch Financial Management Inc, and Mr. Rambabu Chirumamilla was given 5 lakh shares).

Two units of Suven Life (Suryapet & Jeedimetla) got ISO confirmation

2005

Suven awarded 2005 - Partner of Choice in Drug Discovery for CNS by Frost & Sullivan

Suven awarded Phase III Clinical study for Chronic Low Back pain.

2006

Suven received National Accreditation Board for Testing and Calibration Laboratories (NABL) certification

Suven and Lilly Establish Drug Discovery Collaboration

Amalgamation of ASIAN CLINICAL TRIALS (ACT)

All the units got Certification for ISO 9001 , ISO 14001, OHSAS 18001.

2007

Suven Unit III cGMP facility accepted by USFDA for manufacture of API's

The company entered into collaboration with University of Minnesota to develop drugs to treat HIV infection

Suven Life Sciences secured two Product Patents in Australia & New Zealand for their New Chemical Entities (NCEs)

Suven secured two Product Patents from European Patent Office (EPO) for the treatment of Neurodegenerative diseases. The patents are valid until June 2022.

Suven obtained 1st Product Patent from US Patent office.

Suven issued Bonus Shares in the Ratio of 1:1.

The Company split its shares' face value from Rs 2/- to Rs 1/-.

2008

Suven obtained 2nd Product Patent from US Patent office

The company established second CNS Drug Discovery Collaboration with Lilly

The company secured two product patents in all Russian countries (Eurasia Region)

Suven got two product patents in Korea and Mexico

Suven Life Sciences ACT entered into an alliance with VPSCRO

The company got two product patents for NCEs in South Africa and China

Suven granted Certificate of Suitability (CEP) for Tamsulosin Hydrochloride.

2009

Suven participation at Biotech Showcase 2009.

Suven's UNIT-I receives US FDA acceptance.

Suven achieved 1st Milestone payment in Drug Discovery collaboration

Suven secured two U.S. patents relating to new chemical entities (NCEs) for treatment of disorders associated with neurodegenerative diseases

The company announced that the European Patent Office (EPO) has Issued 3 new Patents

corresponding to three New Chemical Entities (NCEs) for the treatment of disorders associated with Neurodegenerative diseases and these Patents are valid until 2022,23 and 24 respectively.

2010

Suven Life Sciences presented at International Conference on Alzheimer's Disease (ICAD)

Suven Life Sciences bagged Pharmexcil's Gold "Patent Award"

2011

Suven Life Sciences bagged "Bio-Excellence Award at Bangalore India Bio 2011"

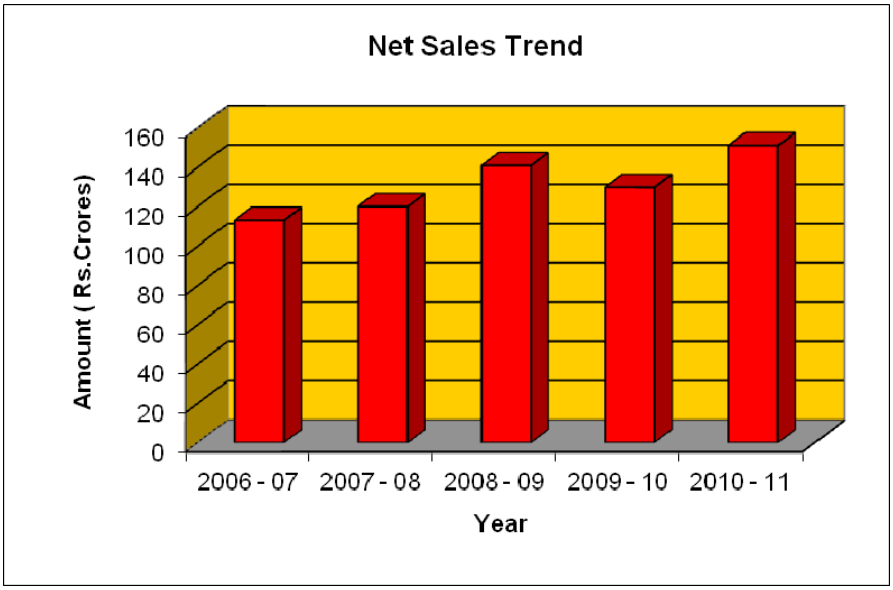
Suven Life Sciences bagged Pharmexcil's Gold "Patent Award"

Source: http://www.suven.com

Key Performance Indicators

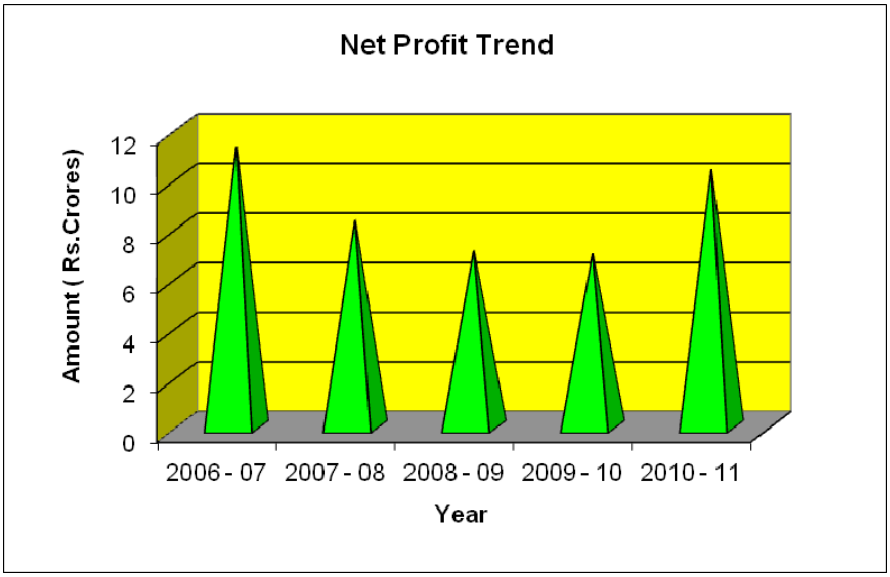
Consistent growth in turnover over the past five years

	Rs. in Crores
Year	Net Sales
2006 - 07	113.06
2007 - 08	119.98
2008 - 09	140.83
2009 - 10	129.82
2010 - 11	151.04



Consistent growth in net profit over the past five years

	Rs. in Crores
Year	Net Profit
2006 - 07	11.32
2007 - 08	8.35
2008 - 09	7.12
2009 - 10	7
2010 - 11	10.4

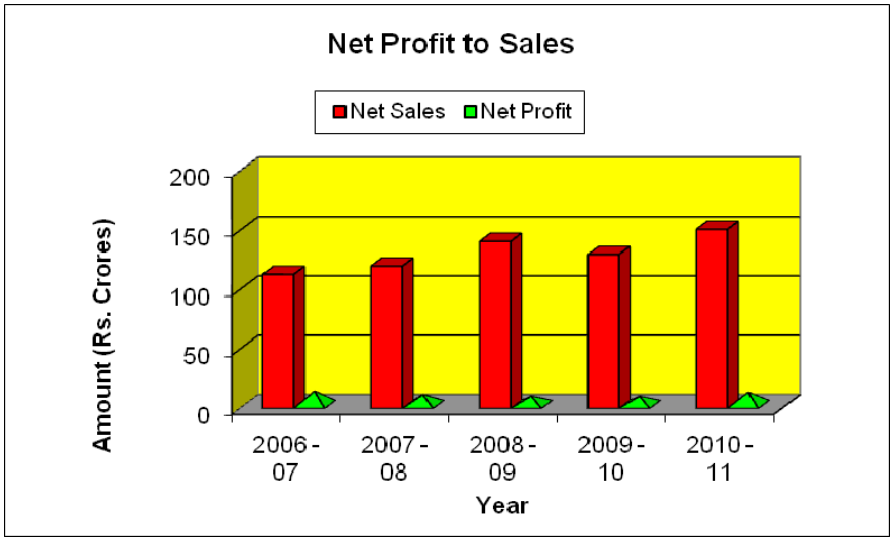


Consistent growth in exports

Year	Rs. in Crores Exports
2006 - 07	97.58
2007 - 08	87.47
2008 - 09	128.42
2009 - 10	116.87
2010 - 11	136.01

Growing ratio of net profit to sales

Year	Rs. in Crores Net Sales	Net Profit
2006 - 07	113.06	11.3
2007 - 08	119.98	8.4
2008 - 09	140.83	7.1
2009 - 10	129.82	7.0
2010 - 11	151.04	10.4



Financials

Suven Life Sciences FY2011 Financials

Highlights of FY11 standalone financials

- Growth in revenue - Rs 151.04 crores vs. Rs. 129.82 crores - 16.86%
- Growth in PAT - Rs.10.40 crores vs. Rs 7.0 crores - 48.55%
- Growth in EBIDTA Rs 14.86 crores vs. Rs.13.68 crores - 7.44%
- Suven's major thrust on innovative R&D in Drug Discovery continues with a spending of Rs 7.67 crores (16.5% on revenue) for the quarter ended Mar' 2011 and Rs. 31.14 crores (20.53% on revenue) for the year ended Mar' 2011 .
- The Company achieved an export turnover of Rs. 136.013 crores for the year ended 31st March 2011 representing 90.05% to total turnover. Foreign exchange earnings were Rs. 111.96 crores.

STANDALONE FINANCIAL PERFORMACE OF THE LAST 5 YEARS – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	151.04	129.82	140.83	119.98	113.06
EBIDTA	14.86	13.68	16.38	15.87	17.85
PBT	3.20	3.95	5.09	6.35	10.79
PAT	10.40	7.00	7.12	8.35	11.32

Source: http://www.moneycontrol.com/financials/suvenlifesciences/profit-loss/SLS01#SLS01

FINANCIAL PERFORMANCE (CONSOLIDATED) – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008
Total Income	119.98	113.26	90.11	66.24
EBIDTA	15.87	17.80	11.62	10.07
PBT after Exceptional Item	6.35	10.74	6.49	6.00
PAT after Minority interest	8.35	11.26	6.39	2.41

Capital Structure

Capital Structure (Suven Life Sciences)

Period		Instrument	Authorized Capital (Rs. cr)	Issued Capital (Rs. cr)	- P A I D U P -		
From	To				Shares (nos)	Face Value	Capital (Rs. Cr.)
2010	2011	Equity Share	20	11.67	116731988	1	11.67
2009	2010	Equity Share	20	11.59	115874400	1	11.59
2008	2009	Equity Share	20	11.59	115874400	1	11.59
2007	2008	Equity Share	20	11.57	115710200	1	11.57
2006	2007	Equity Share	20	5.76	28816625	2	5.76
2005	2006	Equity Share	10	5	25000000	2	5
2004	2005	Equity Share	10	5	25000000	2	5
2003	2004	Equity Share	10	5	25000000	2	5
2002	2003	Equity Share	10	4.4	4400000	10	4.4
2001	2002	Equity Share	10	4.4	4400000	10	4.4
2000	2001	Equity Share	10	4	4000000	10	4
1999	2000	Equity Share	10	4	4000000	10	4
1998	1999	Equity Share	5	3.57	3573000	10	3.57
1994	1998	Equity Share	5	3.2	3200000	10	3.2
1993	1994	Equity Share	5	2.05	2050000	10	2.05

Source: http://www.moneycontrol.com/financials/suvenlifesciences/capital-structure/SLS01#SLS01

Shareholding Pattern:

CATEGORY OF SHAREHOLDER	NO. OF SHAREHOL	TOTAL NO. OF SHARES	TOTAL NO. OF SHARES HELD IN DEMATERIALIZED FORM	TOTAL SHAREHOLDING AS A % OF TOTAL NO OF SHARES AS A % OF (A+B)	AS A % OF (A+B+C)	SHARES PLEDGED OR OTHERWISE ENCUMBERE NUMBER OF SHARES	AS A % OF TOTAL
(A) SHAREHOLDING OF PROMOTER AND PROMOTER GROUP							
(1) Indian							
Individuals / Hindu Undivided Family	6	74,052,828	74,052,828	63.44	63.44	-	-
Sub Total	**6**	**74,052,828**	**74,052,828**	**63.44**	**63.44**	-	-
(2) Foreign							
Total shareholding of Promoter and Promoter Group (A)	**6**	**74,052,828**	**74,052,828**	**63.44**	**63.44**	-	-
(B) Public Shareholding							
(1) Institutions							
Mutual Funds / UTI	1	18,000	-	0.02	0.02	-	-
Foreign Institutional Investors	1	77,586	77,586	0.07	0.07	-	-
Sub Total	**2**	**95,586**	**77,586**	**0.08**	**0.08**	-	-
(2) Non-Institutions							
Bodies Corporate	649	4,365,197	4,347,197	3.74	3.74	-	-
Individuals		-	-	-	-	-	-
Individual shareholders holding nominal share capital up to Rs. 1 lakh	39,389	28,717,301	27,556,714	24.60	24.60	-	-

Individual shareholders holding nominal share capital in excess of Rs. 1 lakh	9	1,823,294	1,703,294	1.56	1.56	-	-
Any Others (Specify)	494	7,677,782	7,353,582	6.58	6.58	-	-
Non Resident Indians	455	7,625,760	7,301,560	6.53	6.53	-	-
Clearing Members	36	39,288	39,288	0.03	0.03	-	-
Trusts	3	12,734	12,734	0.01	0.01	-	-
Sub Total	**40,541**	**42,583,574**	**40,960,787**	**36.48**	**36.48**	-	-
Total Public shareholding (B)	**40,543**	**42,679,160**	**41,038,373**	**36.56**	**36.56**	-	-
Total (A)+(B)	**40,549**	**116,731,988**	**115,091,201**	**100.00**	**100.00**	**-**	**-**
(C) Shares held by Custodians and against which Depository Receipts have been issued-m	**-**	**-**	**-**	**-**	**-**	**-**	**-**
(1) Promoter and Promoter Group		-	-	-	-	-	-
(2) Public		-	-	-	-	-	-
Sub Total		-	-	-	-	-	-
Total (A)+(B)+(C)	**40,549**	**116,731,988**	**115,091,201**	**-**	**100.00**	**-**	-

Source: http://www.moneycontrol.com/company-facts/suvenlifesciences/shareholding-pattern/SLS01#SLS01

Suven Life Sciences Share Price Data vs. competitor companies as on 9-Mar-12

Name	Last Price	Market Cap. (Rs. cr.)	Sales Turnover	Net Profit	Total Assets
Sun Pharma	570.15	59,043.71	1,933.12	1,383.80	6,731.06
Dr Reddys Labs	1,702.25	28,863.41	5,249.07	893.31	7,465.00
Cipla	307.55	24,693.85	6,123.84	967.12	7,054.34
Lupin	501.90	22,415.96	4,508.50	809.98	4,135.95
GlaxoSmithKline	2,084.00	17,652.11	2,146.43	563.69	1,935.96
Ranbaxy Labs	415.85	17,550.19	7,475.90	-3,052.05	9,393.11
Cadila Health	700.05	14,333.42	2,919.88	610.38	2,653.90
Divis Labs	744.85	9,886.71	1,318.52	435.57	1,851.10
Piramal Health	484.30	8,357.23	1,990.05	12,896.91	11,984.78
Glenmark	303.90	8,220.95	1,154.63	212.18	3,122.86
Wockhardt	520.60	5,697.23	1,754.92	-132.07	2,568.61
Biocon	268.25	5,365.00	1,566.62	459.25	2,115.45
AstraZeneca	2,075.70	5,189.25	594.03	64.13	179.70
Aventis Pharma	2,171.80	5,001.79	1,229.70	191.20	1,014.15
Torrent Pharma	572.90	4,847.38	1,778.19	290.86	1,665.09
Ipca Labs	347.20	4,368.74	1,881.10	255.37	1,584.17
Pfizer	1,223.35	3,650.65	1,244.64	226.34	1,163.45
Strides Arcolab	574.65	3,361.79	529.44	73.56	2,647.98
Aurobindo Pharm	114.85	3,343.53	4,133.12	593.80	4,887.33
Abbott India	1,539.65	3,271.65	1,018.95	60.94	305.38
Jubilant Life	179.80	2,863.87	2,206.30	279.63	5,129.93
Nectar Life	23.50	527.01	1,063.22	101.87	1,517.17

Ajanta Pharma	428.90	502.18	457.15	46.45	373.82
Shilpa	206.80	496.82	257.49	50.52	286.18
Indoco Remedies	396.85	487.60	486.36	51.05	450.12
Hikal	274.55	451.36	493.51	44.29	927.95
Panacea Biotec	72.55	444.37	1,152.39	135.05	1,520.49
Sterling Bio	11.15	298.68	1,661.95	19.95	6,214.79
Parenteral Drug	112.05	289.84	397.23	8.86	576.74
Surya Pharma	11.75	238.23	1,608.22	104.90	1,638.62
Alembic	17.10	228.31	200.99	-12.90	277.37
Amrutanjan Heal	773.85	226.20	103.41	9.46	129.56
Parabolic Drugs	31.75	196.51	634.85	52.36	853.41
Morepen Lab	3.85	173.18	217.35	-42.98	519.31
Suven Life Scie	**14.45**	**168.68**	**150.43**	**10.40**	**192.50**

Source: http://www.moneycontrol.com/stocks/top-companies-in-india/market-capitalisation-bse/pharmaceuticals.html

Corporate Governance

BOARD OF DIRECTORS

Mr.Venkat Jasti,
Chairman & CEO

Mr.Venkat Jasti is a Post Graduate in Pharmacy from Andhra University, Visakhapatnam, and also a Post Graduate in Pharmacy from St. John University, New York, specializing in Industrial Pharmacy. Having registered himself as a Registered Pharmacist, he successfully managed M/s Clinton Bergen Drug Company, M/s Park Way Central Pharma and M/s Kayes Drug Company, NJ, USA. He was the president elect of Essex County Pharmaceutical Society of NJ which no other Indian occupied till now.

He returned from USA to India in 1988-89 and promoted this company in 1989. Since then, he been successfully managing the company as Managing Director providing the right direction and leadership in developing technologies, upgrading the facilities, development of export markets etc.

Mr. Jasti has been the Past President of Indian Pharmaceutical Association, and Chairman of Local Organizing Committee for the 52nd Indian Pharmaceutical Congress held at Hyderabad and was President of Bulk Drug Manufacturers Association of India (BDMA) till September, 2004.

He is the Ex-Chairman for Pharmexcil (Pharmaceutical Export Promotion Council) an exclusive statutory body for the promotion of exports of all pharma and biotech products which was set up by Govt. of India.

Mr. Jasti is the Chief architect for the formation of A.P. Chief Minister's task force for Pharma during 2001 and responsible for the creation of Pharma City at Vizag by Govt. of Andhra Pradesh and Pharmexcil (Pharmaceutical Export Promotion Council) head quartered at Hyderabad by Govt. of India.

Dr. M.R. Naidu,
Director

Dr. M.R. Naidu is a Doctorate in Science and Graduate in Mechanical Engineering. He had memberships in Professional Bodies like American Society of Mechanical Engineers, Planning Executives Institute and Indian Institute of Engineers.

Dr. M.R. Naidu was a former Chairman and Managing Director of M/s. Bharat Heavy Plates and Vessels Limited (BHPV) and Hindustan Machine Tools Limited (HMT) and having vast experience in Technical and Administrative Sectors. He held the position of President, The Andhra Petrochemicals Ltd, the U.B. Group. He is assisting the company in all technical aspects.

Smt. Sudha Rani Jasti,
Whole-time Director

Smt. Sudha Rani Jasti is a Graduate in Sciences. She assisted the Chairman & CEO in running the business in U.S.A. She actively participates in the administrative matters and operations of the Company.

Dr. K.V. Raghavan,
Director

Dr. K.V. Raghavan is a Fellow of the National Academy of Engineering, Indian Institute of Chemical Engineers (IIChE) and A.P. Academy of Sciences and a Distinguished Fellow of University of Grants Commission (UGC). He was appointed as the Director of Central Leather Research Institute (CLRI), Chennai in 1994.

He took over the Directorship of Indian Institute of Chemical Technology, Hyderabad in 1996. On successful completion of this tenure, he was appointed at Scientist in Director's Grade at IICT in October 2003. He took over as the Chairmanship of Recruitment and Assessment Centre of DRDO in May 2004.

Mr. D.G. Prasad,
Director

Dr. D. G. Prasad has been a career banker for over 33 years. After being with Canara Bank for over 8 years, Mr. Prasad joined Exim Bank in 1983, in its formative phase. He holds considerable expertise in trade finance, international finance, merchant banking, corporate strategies, mergers and acquisitions,

loan syndications, forfeiting, international negotiations and co-financing with multilateral agencies. He was trained in 'Treasury Management' at Credit Suisse, Switzerland; 'International Banking and Development' at the International Development Ireland at Dublin and London and 'Advanced Agribusiness Management' at Cornell University, Ithaca, New York, USA. He has been a guest faculty at business schools on international finance and international marketing.

Dr. Martin Tolar,
Director

Martin Tolar MD, PhD, is the President & CEO of NormOxys, Inc., a private biopharmaceutical company based in Boston, USA and Strasbourg, France, focused on developing a new class of small molecule drugs that allow the body to deliver oxygen more efficiently to tissues that need it, and offer breakthrough treatments for cancer, congestive heart failure, anemia, macular degeneration and late Alzheimer's disease.

Previously, Dr. Tolar worked at CoMentis, Inc., as the Chief Scientific Officer and later Executive Vice President & Chief Business Officer.

Dr. Tolar holds an MD degree. Dr. Tolar has published a number of scientific publications in the area of Neurosciences and served as an Assistant Professor in the Department of Neurology at Yale University School of Medicine.

Prof. Syed E Hasnain
Director

Prof. Syed E. Hasnain is the Ex-Vice Chancellor of the University of Hyderabad. Before he became the vice chancellor in Dec 1995, he was the first Director of CDFD since 1999.

He holds a PhD degree from JNU [1980]. He also received post-Doctoral Fellowship from the University of Alberta, Canada. He has been nominated by the Prime minister of India for the membership of the Scientific Advisory Council to the Prime Minister, the highest decision and policy making body for Science and Technology for the country. He is also the recipient of Padmashri Award from President Abdul Kalam.

Dr. Hasnain has authored more than 175 original research papers and several book chapters. He has about a dozen patents filed in India and abroad.

Market share & Marketing Strategy

Suven Life Sciences operates in the following product categories:

- Active Pharmaceutical Ingrédients (API's)
- Intermediates
- Advance Intermediates

The company is engaged in discovering drugs for unmet medical needs in Central Nervous System (CNS) disorders.

The Company is also committed to provide full spectrum of quality services and products in Drug Discovery and Development Services (DDDSS), Contract Research and Manufacturing Services (C-R-A-M-S), Clinical Research Operations (CRO) and Collaborative Research Partnership (CRP).

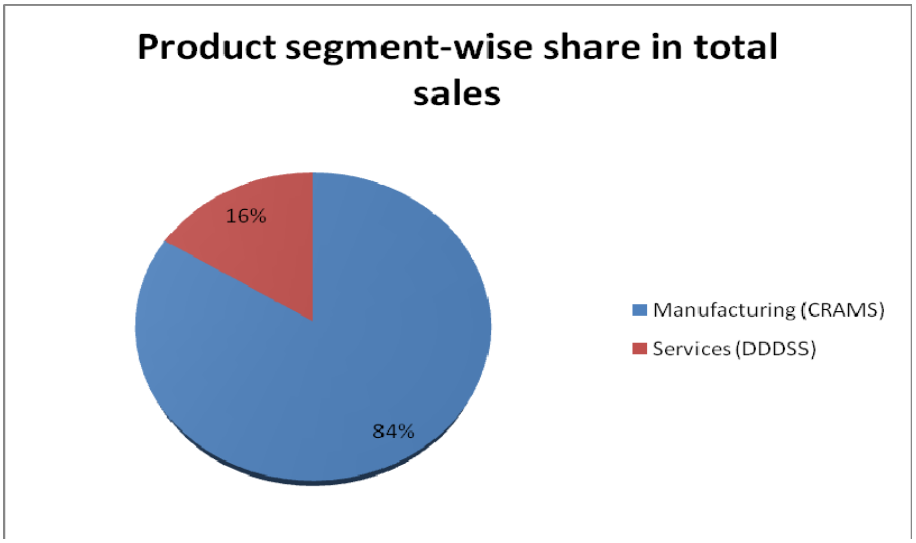
Suven provides world class Drug Discovery and Development Support Services (DDSS) and Contract Research and Manufacturing Services (CRAMS) to the global Pharmaceutical industry. It has provided CRAMS to 22 Global life science majors over the past decade. About 90% of Suven's current revenue as on March 07 was accounted by Crams, with the rest coming in from the API business.

SUVEN's `C-R-A-M-S' has been in existence since 1991 serving as many as 22 global Life Science and Fine Chemical Companies by developing and supplying cost effective Pharmaceutical and Agro Chemical Intermediates for New Chemical Entities (NCE's) meeting world standards of Quality, Speed and Respect for Environment.

The company later entered in contract research space by providing Drug Discovery (DD) and Development Support Services (DSS). Suven was one of the earliest players to enter Custom Synthesis business in India, having executed over 250 projects in various stages of clinical trials. Currently, Suven is undertaking 52 different contracts at various stages - 5 are in Phase 3, 26 are in Phase 2 and 21 are in Phase 1.

From a reporting perspective, the company has identified the following segments as its reportable segments:

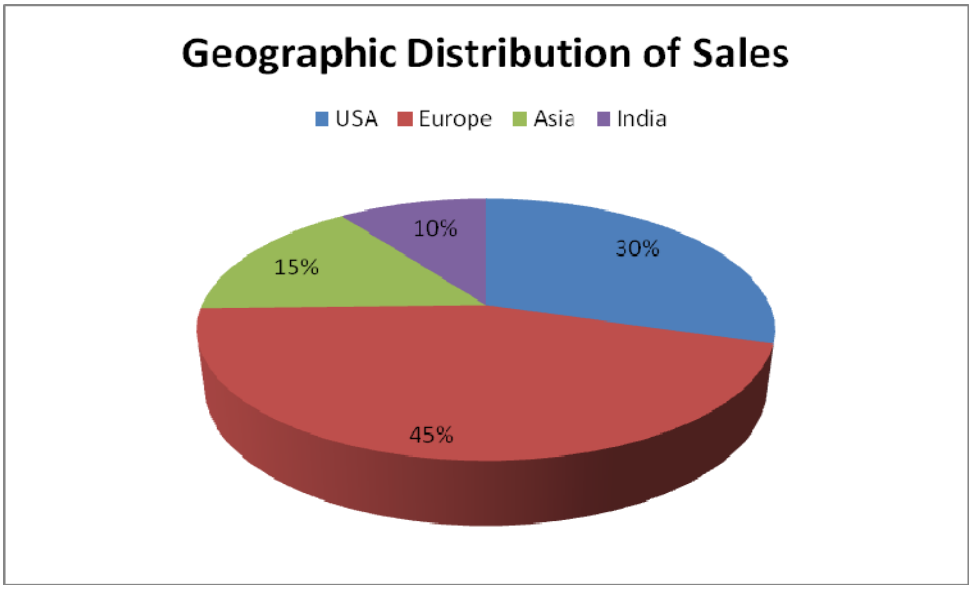
1. Manufacturing (CRAMS)
2. Services (DDDSS)
3. Research and Development
    a. Manufacturing (CRAMS) - Intermediates under contract services products are developed and produced on an exclusive basis under contract manufacturing services
    b. Services (DDDSS) - Which consists of Collaborative Research Projects (CRP, Clinical Trials and Testing and Analysis services



The Company operates in the following geographical reportable segments:

1. India-The Company sells Bulk Drugs and Intermediates and Fine Chemicals.
2. U.S.A -The Company sells Intermediates
3. Europe--The Company sells Bulk Drugs and Intermediates
4. Asia-The Company sells Bulk Drugs and Intermediates

The chart below depicts the geographic distribution of sales in the year 2010-11:



Suven's top 3 domestic competitors are:

1. Sai Advantium
2. Syngene
3. Glenmark

Suven's top 3 overseas competitors are:

1. LONZA
2. AMRI
3. DSM

Research & Development

Specific areas in which R&D is carried out by the Company as reported in the Annual Report FY 2010-11:

Suven's innovative R&D continues to focus on unmet medical needs in the area of Central Nervous System (CNS) disorders.

During the year their clinical drug candidate SUVN-502 completed all the long term chronic studies like 6-month rat tox, 9-month dog tox and developmental tox studies like prenatal development tox in rats and rabbits, embryo-fetal development tox in rats and male fertility tox in rats very successfully and demonstrated very high margin of safety (MOS).

Benefits derived as a result of the above R&D:

Suven's continued innovative drug discovery resulted in the grant of 18 product patents from various countries.

The high margin of safety achieved from the long term regulatory tox studies enabled Suven to prepare for the submission of IND to conduct phase 2a Proof of Concept clinical trials for the clinical candidate SUVN-502 in patient population.

Future plan of Action:

- Plan to submit IND with US FDA for Phase 2 - a clinical trial of SUVN-502.
- Advance 2 of the preclinical candidates into Phase 1 clinical trials.

Suven's continuing thrust on innovative R&D in the area of CNS disorders involved an expenditure of Rs. 3338.79 lakhs which is 22.10% of the turnover during the year 2010-11. Suven's lead clinical candidate SUVN-502 has successfully completed long term regulatory safety toxicology studies. These regulatory tox studies are essential for FDA approval to initiate human phase 2a clinical trials in patient population. These studies have demonstrated very high Margin of Safety (MOS) paving the way to commence Phase 2a PoC (Proof of Concept) studies during the fiscal 2011/12. The Company has twelve internally-discovered therapeutic drug candidates currently, in pre-clinical stage of development targeting conditions such as ADHD, dementia, depression, Huntington's disease. Parkinson's disease and 2 out of that pipeline is expected to move into Phase 1 clinical studies during the fiscal 2011/12.

FY 2010-2011 Expenditure on R&D:

	Year Ended 31st March, 2011	Year Ended 31st March, 2010
Expenditure on R&D	Rs. In Lakhs	Rs. In Lakhs
a) Capital	224.44	245.24
b) Revenue	3114.35	3415.07
c) Total	3338.79	3660.31
d) Total R&D expenditure as % of Total Turnover	22.10 %	28.19 %

Efforts, in brief, made towards technology absorption, adoption and innovation.

Suven's CRAMS division has done innovative process R&D resulted in the development of non infringing process for some of the intermediates.

Benefits derived as a result of the above efforts, e.g. product improvement, cost reduction, product development, import substitution etc.

Efforts of innovative process R&D resulted in the grant of 5 process patents and also achieved revenue generation.

Critical Success factors and key enablers

The following factors have played a key role in the success of the company:

- HUMAN RESOURCES - Suven invests heavily in their people. The challenge is to ensure that the investment is effective, attracting and retaining people with great skills, and motivating them to do the right things in the right way. To handle these challenges Suven has put in place a continuous training process to keep employees updated on latest developments in the R&D space. Since the company is in the drug discovery arena not many trained people are available, hence the focus at Suven has been to train the fresh graduates to meet our requirements by training new recruits before they get into a specific area of research.
- RISK MANAGEMENT - Suven endeavors to adopt best compliance practices to extremely stringent process standards of Good Laboratory Practice (GLP), Good Manufacturing Practice (GMP) and pharmacovigilance. The company is complying with high standards of multiple regulators such as US FDA, DCGI etc which increases efforts on the part of the company but also builds up trust of its clients. The Company has also taken appropriate insurance covers to safeguard its assets and its various operations.
- R&D - Suven maintains its thrust on innovative R&D in the area of CNS disorders. The spend on this account was Rs. 3338.79 lakhs which is 22.10% of the turnover during the year 2010-11.
- Incredible export potential - The Company has continued to achieve 90% export turnover which is to the tune of Rs. 13601.37 lakhs out of the total turnover of Rs. 15104.23 lakhs in the year 2010-11
- Increasing health consciousness
- New innovative therapeutic products
- Globalization
- Drug delivery system management

- Contract manufacturing
- Clinical trials & research
- Drug molecules

Challenges

- Suven's foray into discovering drugs for cognitive improvement in AD, ADHD, Schizophrenia, Parkinson's and Huntington's disease in addition to other CNS disorders like depressive disorders and pain is a risky business and it can take decades to turn a new product concept into something of real value. Often, commercial value is not realized until the first evidence of that the drug works in patients is demonstrated which is referred to as the 'clinical proof of concept'. Thereafter, additional millions of dollars of investment are required to conduct the clinical trials necessary to substantiate safety and efficacy claims for market approval. The rewards for successful CNS research in general and Alzheimer's in particular are clearly high, but are associated with significant challenges. It takes 13 to 16 years to get a CNS drug to market compared with 10 to 12 years for a non-CNS drug. Approximately 11% of all new drugs that enter clinical trials make it to the market but for central nervous system (CNS) drugs only about 8% becoming available to the public.
- The company is scouting for a foreign partner to take its molecule SUVN-502 into human trials, having completed animal studies on the experimental drug to treat schizophrenia and Alzheimer's disease. The company needs to out-license the molecule to establish "proof of concept"—evidence that it will work on humans—in the so-called phase II(a), or initial stage of phase II, of drug discovery that need to be conducted on at least 400 patients. Potential partners are risk averse; they would rather take up molecules that have already had their proof of concept established. Phase II(a) trials will cost as much as $25 million, which is a risky investment for a company the size of Suven. Failure to find a partner may mean that Suven will have to fund the trials with borrowed money, but convincing the board may be difficult.
- When the people are living longer there exists huge unmet medical needs for the treatment of Alzheimer's disease, other cognitive disorders, stroke, multiple sclerosis, Parkinson's disease, and major psychiatric disorders, hence the demand for innovative CNS therapeutics will grow rapidly in the years ahead which is why Suven is focusing on this area. So far the company has twelve (12) internally-discovered therapeutic drug candidates currently in preclinical stage of development targeting conditions such as ADHD, dementia, depression, Huntington's disease, Parkinson's disease and obesity in addition to developmental candidate SUVN-502 for Alzheimer's disease and Schizophrenia.
- The year 2010 was shaped with challenges for the pharmaceutical industry post global recession continuing to put pressure on drug discovery, compliance and customer interactions. These

pressures have been further escalated by ongoing industry challenges including an anemic drug pipeline.

- In addition, most large pharmaceutical companies are facing a high proportion of patent expirations between 2011 and 2014, which is expected to have negative impact over $150 billion of revenues of branded drugs. Demand from emerging markets is also shifting traditional sales and marketing practices.
- In summary, the company perceives the following threats:
    a. Small number of discoveries
    b. Competition from MNCs
    c. Transformation of process patent to product patent (TRIPS)
    d. Outdated Sales and marketing methods
    e. Non-tariff barriers imposed by developed countries
- Other challenges for the company are shared by other players in the biotech and pharma industries:
    a. Low Indian share in world pharmaceutical market (about 2%)
    b. Lack of strategic planning
    c. Fragmented capacities
    d. Low R&D investments
    e. Absence of association between institutes and industry

Future plans

- Over the years Suven could generate a pipeline of 13 molecules in all while filing 37 product patents globally. The company hopes to achieve the clinical proof of concept success in one of the molecules in the very near future.
- SUVEN has already gained experience in Collaborative Research Partnership (CRP) with Eli Lilly a global pharma major and endeavors to sign up more such collaborative research partnerships with global pharma majors in the years to come.
- So far Suven has twelve (12) internally-discovered therapeutic drug candidates currently in preclinical stage of development targeting conditions such as ADHD, dementia, depression, Huntington's disease, Parkinson's disease and obesity in addition to developmental candidate SUVN-502 for Alzheimer's disease and Schizophrenia. Over the years Suven generated this kind of pipeline (13 molecules in all) while filing 37 product patents globally. The company hopes to achieve the clinical proof of concept success in one of the molecules in the very near future.

Suven is hopeful of achieving a breakthrough in its Drug Discovery R&D efforts with out-licensing of at least 1 molecule out of the 13 molecules in the pipeline which are at various stages of discovery and development.

- The company plans to increase profitability by taking all possible steps to achieve higher turnover in CRAMS, DDDSS and CRP business models in the years to come
- On the R&D front, Suven plans to submit IND with US FDA for Phase 2 a clinical trial of SUVN-502 and advance 2 of the preclinical candidates into Phase 1 clinical trials.

Case Study – Avesthagen

Corporate Profile of Avesthagen

Industry Name	Biotechnology
Year Of Incorporation	1998
Regd. Office:	
Address	Discoverer, 9th Floor, International Technology Park
District	Whitefield Road, Bangalore
State	Karnataka
Pin Code	560066
Tel. No.	080 - 28411665/2308/2770/2766
Fax No.	080 - 28418780
Email : info@Avesthagen.com	**Internet** : http://www.Avesthagen.com
Auditors	Agarwal & Italia, SR Batliboi & Associates
Company Logo	AVESTHAGEN

Background

Avesthagen Limited is an integrated systems biology platform company headquartered in Bangalore, India with offices in Los Angeles, Santiago, Dubai, Cambridge and Singapore.

It was founded in 1998 by Villoo Morawala-Patell, who is the current Chairperson and Managing Director of the Company.

It operates in the fields of food, pharma and population genetics.

The group is made of two divisions, Healthcare (biologics, nutraceuticals, and molecular diagnostics) and Agriculture.

Biologics business segment: eight molecules under development, of which two are at clinical stage. Therapeutic areas cover oncology, cardiovascular, anemia, autoimmune disorders

and arthritis

Nutraceuticals business segment: develop, manufacture and market scientifically validated bioactives on a wholesale basis, functional foods and dietary supplements under the Good Earth™ (India) and Avesta™ (USA) brands, respectively. Additionally, Avesthagen has seven proprietary bioactive supplements under development (clinical stage)

Molecular Diagnostics business segment: focus on cancer stem cells research, molecular diagnostics development and protein expression system called pAVGEN™. Hosts large scale population genetics program (Avestagenome Project).

Agriculture business segment: environmentally adjusted crops (stress resistance, namely drought and salinity) and nutrition enhancement (oil content, nutritional content).

Born in a small lab inside the National Center for Biological Sciences (NCBS), in Bangalore, Avesthagen today has its wings spread across boundaries, with around 450 employees.

The main shareholders and JV partners include the following:

- ICICI Venture Emerging Sectors Funds - the lead investor in Avesthagen.
- Tata Industries Limited
- Godrej Industries Limited
- CIPLA Limited - Meditab Specialities Pvt. Ltd.
- BioMérieux SA
- FID Funds (Mauritius) Limited
- Daninvest.com SA (Groupe Danone)
- Groupe Limagrain
- Bennett, Coleman Co. Ltd. (BCCL)
- NYLIM New York Life Investment Management India Fund

Avesthagen entered into joint ventures with many companies over the years including Cipla, Groupe Limagrain, BioMérieux, Groupe Danone, Nestle Nutrition and Godrej Industries for various reasons – marketing, finance, technology for product development and exports. Many of these JVs turned sour and the JV partners exited the joint venture for various reasons.

Cipla terminated the JV agreement with Avesthagen in August 2009 due to Avesthagen's alleged failure to meet targets. Under their mutual agreement, Avesthagen was supposed to develop biosimilar products and Cipla would have used its strong marketing force to commercialise and market it. Cipla was, however, not happy with the progress of Avesthagen's research.

There have been similar negative stories in the press around Avesthagen's other partnerships including one with Nestle. The company has been in the red for the past four years and is rumoured to be facing multiple problems including:

- Inability to raise funds from the capital market through a public issue in 2008 as per plan
- Lack of interest shown by venture capitalists and PE funds in funding biotech research and development companies
- Exits of JV partners and exits of many senior management resources
- Mounting debt
- Poor cost management
- Non-payment of dues to creditors and salaries to employees
- Shutting down of manufacturing plants and offices

There are also stories in the press of non-payment of statutory dues by the company and of mis-management and corporate governance issues.

Sources:

1. http://www.Avesthagen.com
2. http://www.livemint.com/2009/03/17233946/Losses-exits-roil-biotech82.html

Chronological history

1998

Avesthagen was founded by Dr. Villoo Morawala-Patell

2001

- Avesthagen started its business operations
- Avesthagen raised $1.5 million from ICICI Venture Funds as first round of venture funding
- Global Trust Bank became a strategic investor by investing Rs. 2 Crore
- TATA Industries Ltd. picked up 5% stake in Avesthagen
- Avesthagen announced an exclusive tie-up with the US-based Genetic Id Inc, thus becoming the first Indian Company to offer globally approved testing and certification for Genetically Modified Organisms (GMO's).

2002

- Avesthagen tied up with pharma major AstraZeneca for drug discovery program in tuberculosis (TB).
- Avesthagen rated amongst the top five life sciences companies for its business plan presented at the TiEcon, 2002 (the world's largest conference on entrepreneurship held in Silicon Valley, US) held at Westin, Santa Clara, California.
- Wipro ties up with Avesthagen to explore BT

2003

- The one billion euro French biotechnology giant, bioMerieux, in collaboration with Avesthagen, is setting up a global research project in Bangalore to develop diagnostic solutions for Tuberculosis (TB).
- Avesthagen announced the launch of new facilities in Andhra Pradesh in International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) at Patancheru
- Avesthagen entered into an alliance with bioMerieux to develop diagnostic kit based on the Affymetrix gene chip technology.
- Avesthagen tied up with Imperial College London for population genomics study. The project is expected to focus on systemic lupus erythematosus (SLE) a generalized autoimmune disease
- Avesthagen tied-up with state government of Andhra Pradesh and the international Crop Research Institute for Semi Arid Tropics (ICRISAT) to provide technological support to the emerging food, water and seed-testing sectors.
- Avesthagen and Kerala Government signed an MoU and agreed to set up a special purpose vehicle (SPV),
- Avesthagen gets US patents for multiple use technology

2004

- Avesthagen tied up with CIPLA Ltd.
- Avesthagen received Rs. 2.75 crore CSIR grant for DHA research
- Avesthagen obtained exclusive market rights to Raisio's top-selling product, Benecol, in India.
- Godrej Industries Ltd. picked up Stake in Avesthagen
- Ranbaxy Laboratories Ltd and Avesthagen have signed a long term collaborative research agreement in the area of new drug discovery research
- Ahmedabad based Intas Pharmaceuticals Ltd and Avesthagen have entered into a collaboration wherein Avesthagen will develop novel laboratory and pilot plant scale processes for expression of

recombinant proteins for Intas.

- Avesthagen and Nordic Bio-sciences, a subsidiary of the Denmark-based Center for Clinical & Basic Research (CCBR), have announced a strategic joint venture Avesta Nordic Research Pvt. Ltd

2005

- Avesthagen ties up with US Company Sequenom
- Expansion of Laboratory and Office space (14,500 sq ft) into Innovator building at ITPL
- Acquisition of Good Earth Foods Pvt. Ltd.
- Inception of Avesta Biotherapeutics & Research Pvt. Ltd (JV with Cipla Ltd, India)
- Strategic alliances with Nestle Nutrition SA, Novartis AG and with TNO Quality of Life
- Dr. Patell received the GR8! Women Award for Science & Technology
- Series B – follow-on investments by bioMérieux SA, France, and Godrej Industries Ltd, India.
- Granting of "Pearl Millet" patent in Australia

2006

- Signed agreement for construction of new headquarters with Ascendas within ITPL campus, Bangalore.
- Winner of the Red Herring Asia Award for "Disruptive Innovation"
- Expansion of Laboratory and Office space (4,000 sq ft) into Discoverer building at ITPL
- Grant from Indian Department of Biotechnology under the SBIRI scheme.
- R&D tie up with Group Danone
- Strategic Alliance with Groupe Limagrain, France and inception of Atash Seeds Pvt. Ltd.
- Extension of Nestlé Nutrition Deal
- Dr. Villoo Morawala-Patell receives the BioSpectrum Entrepreneur of the Year Award 2006

2007

- Avesthagen got patent for salt tolerant rice
- Avesthagen IP model achieved global benchmark valuation of Euro 115 mn
- The company announced the closure of Series "C" round Euro 25 mn. New Investors - Fidelity, Daninvest, Limagrain and Bennett Coleman Co. Ltd.
- AVESTHAGEN-ONE, Avesthagen breaks ground for its new corporate headquarters and R&D center at International Technology Park, Whitefield, Bangalore
- Avesthagen launched THE AVESTAGENOME PROJECT™, undertook path breaking project for Novel Therapies and Diagnostics
- The Avestagenome Project™ Nature, March 29, 2007
- Dr. Villoo Morawala-Patell received the 2006 FICCI AWARD
- Avesthagen and Manipal Acunova announce collaboration in drug discovery, pre-clinical, clinical research including regulatory matters
- Avesthagen received INR 225 Million Share Capital Investment from NYLIM India Fund
- Avesthagen-Limagrain announced co-acquisition of majority stake in two seed companies
- Avesthagen entered into agreement with Malaysian Biotechnology Corporation to manufacture Bio Similar products
- Dr. Villoo Morawala-Patell's profile was published in Nature Biotechnology, July

2007

- Secured loans that are given against the assets of the company went up by 31%
- Interest costs nearly doubled for Avesthagen.
- Avesthagen acquired US Dietary Supplement Company Renaissance Herbs, Inc. (RHI)
- Avesthagen-CIPLA Joint Venture acquired Siegfried Biologics GmbH company
- Dr. Villoo Morawala-Patell took over as Chairman of Avesthagen

2008

- Avesthagen became Avesthagen Limited
- Avesthagen Limited launched Avestaä brand of plant–based bioactives
- Parsi communities in Hyderabad, Navsari and Surat provided participative support to The AVESTAGENOME Project™.
- Avesthagen began Phase III Human clinical Studies for its AVESTA BRAND OF Bioactives.doc
- Affymetrix signed an agreement With Avesthagen Limited
- Avesthagen Limited and DuBiotech decided to enter into a Joint Venture
- Avesthagen Limited and Limagrain introduced India's first 100% Biodegradable Plastic
- France Government honored and awarded Dr. Villoo Morawala–Patell 'Officer of the National Order of Merit'
- Avesthagen launched whole wheat crackers with TeestarTM - a clinically validated bioactive that would help those who are prone to Type II diabetes.
- Avesthagen partnered with ShigaMediX to develop vaccines for cervical cancer and tuberculosis
- ABRPL got RCGM's Nod for Pre-Clinical Evaluation of Biopharmaceutical Products
- The firm's financial results showed it to be in the red in the previous fiscal year: it incurred a net loss for the year 2007-08
- Avesthagen shelves its plans to raise funds from the primary market due to the slowdown in the global capital market. Instead, the company started looking at raising money from private investors to tide over the crisis
- Avesthagen and ICMR joined to promote biomedical research in India
- ICICI Venture, one of the earliest investors in the company, withdrew its director K. Ravindra with immediate effect on 18 December 2008
- A number of senior executives and directors left the company: Samaresh Parida, chief operating officer; J. Rajagopalan, chief financial officer; Sandip Dang, chief executive of Avesta Good Earth Foods Pvt. Ltd, one of the 12 subsidiaries of Avesthagen; Deepak Mullick, director of the bio-agriculture division; Narayan Seshadri, additional director from the Halcyon Group; Emmanuel Rougier, director from Groupe Limagrain; and Jochen Ebert, director from Groupe Danone.
- Dr. Villoo Morawala-Patell received the 'Astitva Award' for Excellence in Science and Technology
- Avesthagen Limited's Intellectual Property for Diabetes Management valued at $470 million
- Avesthagen Limited's got "License To Heal": to Manufacture Bioactives for Ayurvedic Drugs
- Dr. Villoo Morawala-Patell awarded for Achievement in Innovation and Creation of Value. Award Conferred By The Adolfo Ibanez University

2009

- Avesthagen Limited appointed two independent board members
- Avesthagen sailed into Latin American waters. Formed Avesthagen Latam SpA to tap a large emerging market for its technologies, products and services. Announced strategic alliance with Chilean biotech company - Uxmal S.A. The venture was actively supported by the Chilean government.
- Avesthagen and The Harvard Medical School (HMS) Department of Genetics signed an MOU to share knowledge and services in the field of Genomics
- Avesthagen and VTT Technical Research Centre of Finland, signed MOU to conduct product-based research projects in the field of Theranostics
- CIPLA terminated its marketing agreement with Avesthagen due to Avesthagen's alleged failure to meet its target sand starts looking at selling its 5.8% stake in the company.
- Avesthagen redefined funding model – company to enter into strategic partnerships by monetizing its operations at individual levels of research and development and patents
- Avesthagen revived IPO plans
- Avesthagen formed global Joint Venture with Limagrain in ATASH Seeds Private Limited 'Novel seeds for the challenges of the changing environment'
- Dr. Villoo Morawala Patell received prestigious 'Karmaveer Puraskar' in Nov 2009 by iCONGO (Indian Confederation of NGOs) & Karmaveer Puraskar is a National Award for Social Justice & Citizen Action

2010

- Avesthagen Limited was granted Patent registration for trapezoidal packaging design of its Good Earth Foods range of Products.
- Sent first batch of cell lines for cGMP production of Clinical grade biosimilars to Inno Biologics, Malaysia
- Avesthagen moves towards Clinicals of its biosimilar AVENTTM

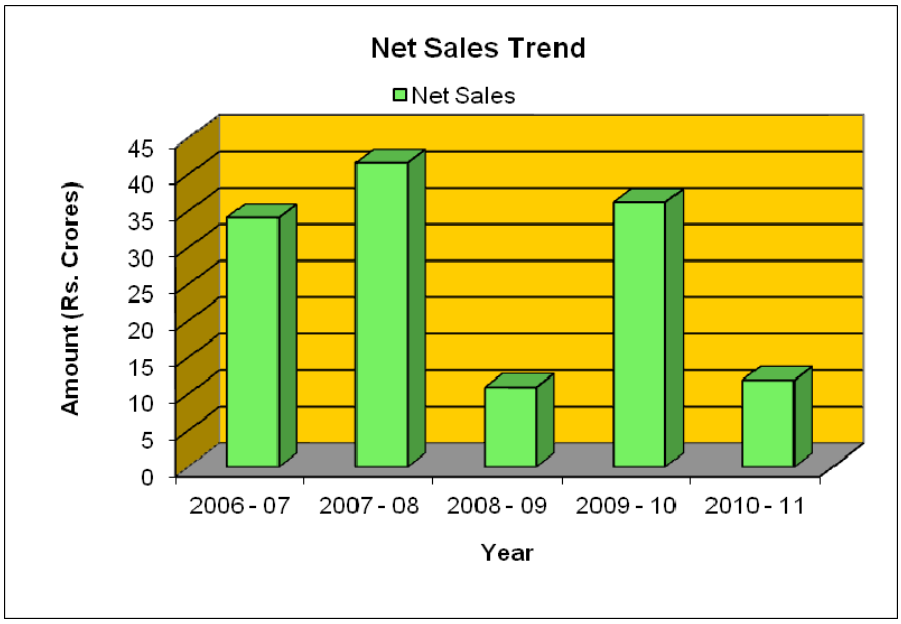
2011

- Avesthagen introduced first-in-class vegetarian DHA omega 3 essential fatty acid. Scouting for global licensing partnerships, manufacturing facilities.
- Avesthagen completed the first Whole Genome Sequence of a Parsi Breast Cancer Patient.
- Avesthagen launched commercial Whole Genome Scanning. Bringing Personalized Genomics to your doorstep.
- Avesthagen started Clinical Trials for its leading biosimilar - AVDESP™
- Avesthagen granted US patent for its efficient Sunflower transformation and eco-friendly sugar selection method replacing antibiotic marker technology in GM Crops.
- Avesthagen granted US Patent for Environmentally Adjusted Crops (EAC)® technology for oxidative stress-tolerant Rice
- Avesthagen Limited formed JV in its subsidiary Dhanvantari Botanicals for Wellness
- Avesthagen, Sava Medica formed venture to retail nutraceuticals
- Manipal Health Enterprises and Avesthagen unite to launch Predictive, Preventive and Personalized approach for diagnosis and treatment of diseases
- Manipal Health partnered Avesthagen for genome scan.

Key Performance Indicators

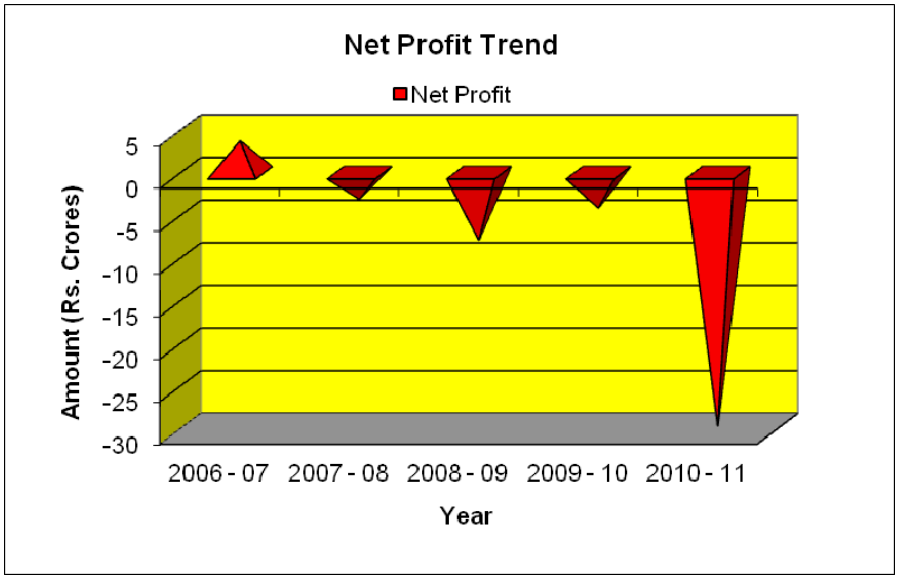
Inconsistent turnover trend over the past five years

	Rs. in Crores
Year	**Net Sales**
2006 - 07	34.08
2007 - 08	41.63
2008 - 09	10.89
2009 - 10	36.21
2010 - 11	11.86



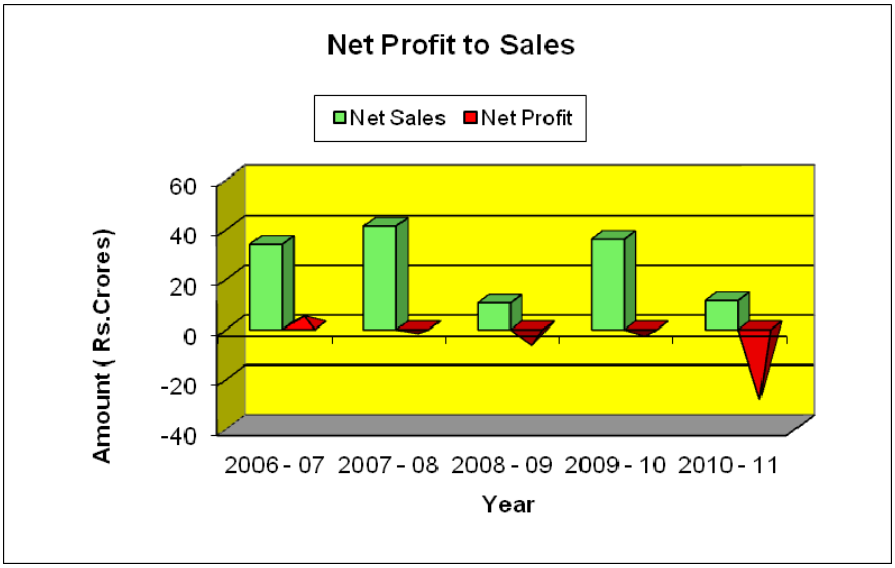
Continuing decline in net profit over the past five years

	Rs. in Crores
Year	**Net Profit**
2006 - 07	3.76
2007 - 08	-3.06
2008 - 09	-7.87
2009 - 10	-4.11
2010 - 11	-29.73



Declining proportion of net profit to sales

	Rs. in Crores	
Year	Net Sales	Net Profit
2006 - 07	34.08	3.76
2007 - 08	41.63	-3.06
2008 - 09	10.89	-7.87
2009 - 10	36.21	-4.11
2010 - 11	11.86	-29.73



Financials

Avesthagen FY2010-11 Financials

Avesthagen has not shared its annual report for the last few years. Neither is the annual report published by any financial website since the company is not listed. The corporate website of Avesthagen www.Avesthagen.com also does not provide the company's financial results.

The statistics below are based on the answers provided by Avesthagen to questions asked in the questionnaire.

STANDALONE FINANCIAL PERFORMANCE OF THE LAST 5 YEARS – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	11.86	36.21	10.89	41.63	34.08
Net Profit	-29.73	-4.11	-7.87	-3.06	3.76

Capital Structure

Avesthagen has not shared its annual report for the last few years. The annual report and other financials are also not published by any financial website since the company is not listed. Even the corporate website of Avesthagen www.Avesthagen.com does not provide the company's financial results or its capital structure details.

Shareholding Pattern

Avesthagen has not shared its annual report for the last few years. Previous reports (2006, 2007 and 2008) do not carry any details of the company's shareholding pattern.
The annual report and other financials are also not published by any financial website since the company is not listed. Even the corporate website of Avesthagen www.Avesthagen.com does not provide the company's financial results or its shareholding pattern details.

Avesthagen Share Price Data vs. competitor companies

Avesthagen is not listed hence no share prices are available

Corporate Governance

The Avesthagen Board is composed of the following members:

1. Dr. Villoo Morawala-Patell - Chairperson
   Founder & Managing Director, Avesthagen Limited, India
2. Mr. Jacques Vincent - Director
   Former Executive Vice President, Danone
3. Dr. Chris Bowler - Director
   Molecular Marine Biology, Ecole Normale Superieure, Paris
4. Mr. John Darbyshire - Director
   Nestle, Switzerland
5. Dr. Rolf Werner - Director
   Corporate Senior Vice President, Boehringer Ingelheim GmbH, Germany
6. Dr. Farah Zareer Morawala-Patell Socha - Director

Institute for Stem Cell Biology and Regenerative Medicine, India
7. Ms. Sanaya Morawala-Patell McGaw - Director
   University of Cambridge, UK
8. Mr. Koen Wentink - Director
   Chief Corporate Affairs, Avesthagen Limited, India

Details of some of the main management team members are provided below:

Dr. Villoo Morawala Patell
Founder, Chairperson & Managing Director
Dr. Villoo Morawala-Patell is an Academic Entrepreneur who founded Avesthagen in 1998. Avesthagen is globally recognized as a leading systems biology company with a unique model focused on the convergence of food, pharma and population genetics. Dr. Patell has long-standing professional relationships with individuals, institutions and corporates working in the domain of biotechnology across the world. She is a key member of the Task Force and Vision Group for Biotechnology, instituted by the State Government of Karnataka and founding member of the Association of Biotechnology Led Enterprises (ABLE). Dr. Patell was awarded the 'Officer of the National Order of Merit' by the President of the French Republic in April 2008.

Mr. Koen Wentink
Chief Corporate Affairs

Mr. Koen completed his Master of Science Degree in Agriculture (Crop Science) at Wageningen Agricultural University. The Netherlands with Majors in Plant Breeding, Crop Modeling and Business Administration, he has immense experience in productivity improvement and management control in Europe and Asia in diverse businesses. At Avesthagen, he is a member of the management team and responsible for ensuring corporate and legal functions of the company.

Dr. Vasant Gandhi
Executive Vice President, Corporate Business Development, Avesthagen Healthcare, and General Counsel, Avesthagen Ltd.

Dr. Gandhi has broad transactional and cross-functional expertise in legal, corporate development (licensing, alliance management, technology transfer and strategy), and commercial and development operations in the life sciences space. His professional experience includes Abraxis Bioscience (now Celgene), Amgen, Immunex Corporation and the National Cancer Institute. He holds degrees in law, science, and business.

Mr. Pierre Socha
Senior Vice President - Corporate Strategy & Planning

Pierre specialises in finance and strategy in the fields of life sciences and clean techs. He joined Avesthagen in 2002 and is heading the group corporate strategy since 2005. His role covers strategy development and implementation, corporate finance, competitive intelligence, global alliances, M&As and PMI. Over the years he held several management positions at Avesthagen: CEO, bioNutrition

Division (2008-2010), Managing Director - Europe (2004-2008) and Head Business Development, Biomarkers & Diagnostics (2002-2004). Pierre serves on several boards and industry bodies. Prior to joining Avesthagen, he worked as auditor and financial engineer for KPMG and Natixis respectively and as a research fellow at GREQAM-CNRS, France where he focused on game theory in clean techs and environmental economy.

Pierre holds a MSc. (Hons.) in Environmental Economics from Université de Provence (Aix-Marseille I), Faculty of Economy & Management (GREQAM, CNRS), France and a BSc. in Finance & Econometrics (Math Spe.) from Université Louis Pasteur (Strasbourg I), Faculty of Finance & Economy (BETA, CNRS), France.

Dr. Anil Ram Chauhan
Senior Vice President - Operations

Dr. Anil Ram Chauhan is a gold medalist from HPU and earned his Ph.D. in Genetics from College of Basic Sciences (PAU) and a MBA in International Business from Baruch College , New York. In 1984, he topped the Indian Agri. Scientists Recruitment Board in Plant Breeding. He has worked as Vice President (Marketing) in Indo-American Hybrid Seeds and as Business Head in Deepak Agro Solutions Limited and Emergent Genetics India Private Limited.

Dr. Sami N Guzder
Chief Scientific Officer - Science & Innovation

Sami N. Guzder obtained his B.Sc. (Hons) in Chemistry and a M.Sc. in Biochemistry from University of Bombay. He was awarded a Ph.D. in Biochemistry from Louisiana State University and did his Postdoctoral research work at the University of Rochester, New York As a Research Scientist at the Center for Molecular Science, University of Texas Medical Branch-Galveston he continued his work in the area of DNA repair and transcription.

At Avesthagen Dr. Guzder is Chief Scientist for the Science & Innovation division. Dr. Guzder is involved in the design and supervision of diverse R&D projects resulting in the development of molecular diagnostics for various diseases. Dr. Guzder is currently leading The AVESTAGENOME ProjectTM, which is a population genomics and systems biology based study on the Parsi population to uncover the basis of longevity and discovery of novel biomarkers and drug targets for certain diseases.

Dr. Renuka Jain
Chief Scientific Officer - bioNutrition

Renuka Jain obtained her B.Sc. and an M.Sc. in Botany from Jiwaji University, Gwalior. She was awarded a Ph.D. in Botany from Jiwaji University, Gwalior for research on the regulation of petal senescence. Dr. Jain then spent 3 years at the Umea Plant Science centre, Sweden and another year at University of Missouri-Columbia, USA for her post-doctoral research.

For the last two years, Dr. Jain has been heading the bioNutrition division and is involved in the supervision of various research and discovery projects for the development of novel plant bioactives for diabetes, cardiovascular health, calorie management, bone health.

Mr. Manan Bhatt
Senior Vice President - External Relations

Manan Bhatt has 27 years' rich experience in business development of Indo-European technology and investments having worked with MNCs such as IRI and ENI groups of Italy and BNP-Paribas of France. He also had 4yrs tenure with UNIDO (United Nations Industrial Development Organization) as the Representative of India in France, for the promotion of Indo-French technology investments and business partnerships. Since July 2003, Mr. Bhatt is working as senior vice president (external relations) with Avesthagen.

Marketing Strategy

Avesthagen primarily relies on alliances with other big pharmaceutical firms for distribution of its products. Its other source of revenue is through intellectual property licensing and job related services in healthcare and agriculture. It is still to acquire significant market share in any product category.Avesthagen operates in the Biodiagnostics, Enzymes and Human Health which it together categorizes as Preventive Nutrition and Personalised Healthcare.

Following a systems biology approach, Avesthagen developed AdePt, a comprehensive database of medicinal plants linked to disease conditions. The second was MetaGrid, which is an algorithm that links metabolites to efficacy at the cell assay level. And the company used these two technologies to partner with companies. Collaborating with several giants of global industry was one of its strategies. Avesthagen had partnerships for co-development and research with a number of companies but could not manage to retain all of them for various reasons. The company still partners with others for various reasons, gaining a marketing infrastructure/advantage being one of them.

The business model of Avesthagen is to combine IP & product development through in-house research and collaborations. Avesthagen continues to build an integrated, systems biology approach of capabilities, products, infrastructure and technology that allows for and facilitates ‘cross talk’ between numerous disciplines, leading to unique and innovative solutions.

Systems Biology Model - When it comes to discovery and scientific breakthrough Avesthagen believes in putting together rather than taking apart, integration rather than reduction. The pluralism of causes and effects in biological networks is better addressed by observing, through quantitative measures, multiple components simultaneously and by rigorous data integration and analysis. Systems biology is about looking at one event from different angles; it is about merging sciences at micro and macro levels. It means changing traditional scientific philosophy, in the full sense of the term.

Predictive Preventive Personalized Healthcare - Avesthagen believes that healthcare will be revolutionized by genomic and stem cell research, becoming predictive, preventive, and personalized. The goal of personalized medicine is, first of all, to use the advanced tools of molecular genetics to predict how patients will respond to drugs, reducing harm and increasing benefit. The dual combination of diagnostic and treatment technologies is at the heart of personalized medicine and will transform healthcare dramatically.

The company consists of four groups with specific focus areas:

Preventive Nutrition

1. The ***BioNutrition (or Food-for-Medicine^{TM}***) group focuses on developing scientifically validated bioactives from Indian medicinal plants for prevention or treatment of degenerative conditions such as diabetes, obesity, CVD and bone health. The company also works on performance enhancement, stress management, skincare, weight management, immunomodulation, pain management, osteoarthritis and digestion through use of proprietary tools. FFM products target both food and pharma markets and, coupled with global marketing strategies and the acquisition of two product driven businesses, the BioNutrition group is poised for sustainable fast growth. It hosts two wholly owned subsidiaries and large collaborative programs.

   On the Dietary Supplement front, Avesthagen markets scientifically validated natural ingredients. Many of the products have strong intellectual proprietary positions. These include trademarks and patents that employ process, composition and method of use claims. Products are manufactured in India and sold in the US and Japan in the form of pills and powders and worldwide though bulk volumes.

   The food wing develops nutritious alternatives for breakfast, daily snacks, and functional foods for all who strive towards promoting well-being through a healthy diet. The products target the discriminating health conscious consumer, who cares about using natural food ingredients for their nutrition requirements and those who believe that their health can be managed better through foods. Products are sold in India and Europe & US.

2. The **BioAgriculture (or Seed-for-Food^{TM})** group focuses on biotic & abiotic stress resistance, oil enhancement and developing functional foods from plants. It hosts three wholly owned subsidiaries, large collaborative programs with the likes of Limagrain and Godrej and sees itself as a vehicle of high quality seed transmutation, wherein crops are developed through a combination of genetic and genomic tools, conventional and markers assisted breeding, exploiting natural and directed variation and trans/cisgenics. The aim is to combine/create germplasm with in-house technologies to enhance trait based solutions for farmers in India and across the globe.

Personalised Healthcare

3. In the ***Science & Innovation*** group, technologies are being developed through collaborative R&D with global partners in the life sciences industry. It is the R&D heart of Avesthagen where new ideas are incubated and the main driver in the creation of high value IP. Over the years numerous collaborations have emerged from this program and evolved into new ventures. Others have also attracted equity investments in the parent company. The Science & Innovation business unit of Avesthagen employs a Systems Biology approach for the dissection of molecular mechanisms in human diseases and works towards delivery of innovative solutions for predictive, preventive, personalized healthcare. To take a product or a technology from concept to market is Science & Innovation's greatest strength.

   Science & Innovation currently covers four programs : AVESTAGENOME^{TM} (a flagship large scale population genomics study on Parsis), Cancer Stem Cells, Molecular Diagnostics and,

finally, Natural Drug Discovery.

4. Under the ***BioPharmaceuticals*** group a solid pipeline of biosimilars is being developed in partnership with Cipla Ltd. The group focuses on pathway engineering and development of novel expression systems, development of product specific bioassays and design of novel animal component free production media, generation of over-expressing stable cell lines, development of proprietary expression platforms and novel, scalable processes in microbial and mammalian systems. Scale-up, manufacturing and supply of commercial scale material is done through a joint venture with certified manufacturing facilities in India and Malaysia. The first products are expected to reach the market early 2011 and will be sold in unregulated markets through Cipla's distribution network. Regulated markets will be penetrated post patent expiry.

Under the preventive healthcare, the company introduced India specific whole genome scan diagnostics which can scan for 28 diseases. Onco screen - scanning for five types of cancer in one chip, and explore global opportunity through metabolomics (scientific study of a chemical composition) based signature for early detection of breast cancer.

In the personalised healthcare, six bio-actives and eight bio-similar developed by the company are in various stages of commercialisation. The bio-actives are two each related to diabetes, bone health and cardio-vascular. Under bio-similar company's products - Avdesp (erythropoietin), Avent (arthritics), Aveben and Avetux (both related to cancer) are to hit the market in two years. Also the company has few medicines under OTC and functional foods under Avesta Good Earth.

Avesthagen has built a number of collaborations including joint ventures and equity led deals with global partners generating significant IP portfolio – valued by independent parties at Euro 2 Billion.

It had tied up with CIPLA for commercialization of biosimilar products, however CIPLA was not happy with the progress and has terminated the marketing alliance.

The company also had tie-ups with France's Groupe Limagrain (the largest seed company in Europe) to create new varieties of seeds, with bioMerieux for diagnostics and alliances with Groupe Danone, and Nestle Nutrition and Godrej Industries. On the diagnostics side is the Avesthagenome project for which the company has already filed a patent for one of the markers in breast cancer which has also been published in a paper in science journal '*Nature*'.

Though the company has a dozen collaborations it is still eyeing new ones at different levels, the latest one being its alliance with Uxmal SA, a Chilean biotechnology company, for promoting R&D of bioactives for commercialization and use in functional foods, healthcare, cosmetics, etc. As per Avesthagen, they are going to market products in India by themselves, but are looking at partners for international distribution

In 2011, Avesthagen partnered with Sava Medica Ltd of Pune to float a 50:50 joint venture subsidiary — Dhanvantari Botanicals — to market a range of nutraceuticals products in the US and BRIS (Brazil, Russia, India, and South Africa) countries. Through this joint venture, Avesthagen granted and Sava Medica earned marketing rights for Avesthagen's seven over-the-counter (OTC)-formulated tablet

(including child-convenient dose such as fast-dissolving tablet), capsule and liquid forms for medical use. This transaction is part of Avesthagen's strategy to bring proprietary products, diagnostics, functional foods, and biological therapeutics focusing on metabolic disorders, cancer and neuro-degenerative disorders to consumers through partnerships. Under the terms of the deal, Avesthagen will receive upfront payments and a 15 per cent royalty on product net sales in the US and BRIS countries

As per the company, Avesthagen's top 3 competitors in India are Dr. Reddy's Laboratories, INTAS Pharmaceuticals and Panacea Biotech. Its top 3 global competitors are TEVA, Sandoz and P&G.

Research & Development

biopharmaceuticals

The mission of this division of Avesthagen is commercialization of cutting-edge, affordable health care solutions through global partnering programs from India.

Avesthagen has embarked on a programme to identify promising, early stage biopharmaceutical candidates across the globe that can be co-developed in India. The areas currently pursued for such product development programmes include therapeutics and diagnostics in cancer and autoimmune disorders. In addition Avesthagen has also developed a strong pipeline of biosimilars that will address specific therapeutic segments.

The core competencies in biopharmaceutical R & D include:

- Generation of stable mammalian cell lines over-expressing a recombinant protein
- Development of product specific bioassays
- Design of novel animal component free production media

Discovery and development engine at Avesthagen

- Research - Pathway engineering and development of novel expression systems
- Development – Proprietary expression platforms and novel, scalable processes in microbial and mammalian systems
- Manufacture - Scale-up, manufacture and supply of clinical grade material through ABRPL
- Co-development opportunities - Development of Novel Biological Entities in India

Drug discovery services

- Development & supply of cell-lines over-expressing drug targets
- Development and screening of compounds through cell based & biochemical assays
- Supply of laboratory grade proteins & antibodies
- Metabolomics for SAR studies

bioNutrition

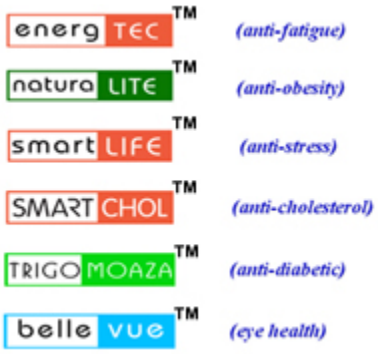
Avesthagen is involved in the research, manufacture and marketing of quality natural ingredients exclusively derived from traditional Indian medicine. Their ingredients have scientifically validated health benefits to promote wellness through prevention of specific degenerative conditions - diabetes, obesity, metabolic syndrome and bone loss.

The company claims to believe that technology is the way to reinvent the immense knowledge base of traditional medicine resulting in quality ingredients that add to taste and health needs. Traditional systems of Indian medicine such as Ayurveda promote the art of healthy living by applying self-knowledge and self-care. Avesthagen has established a wide network of access to sources of traditional Indian medicine that is used as a basis for the discovery and development of novel health ingredients.

Avesthagen offers its customers an array of services that include: product concept design, product co-development, optimization of organoleptic characteristics, scientific validation in peer-reviewed publications, design and management of clinical studies and marketing support to health professionals.

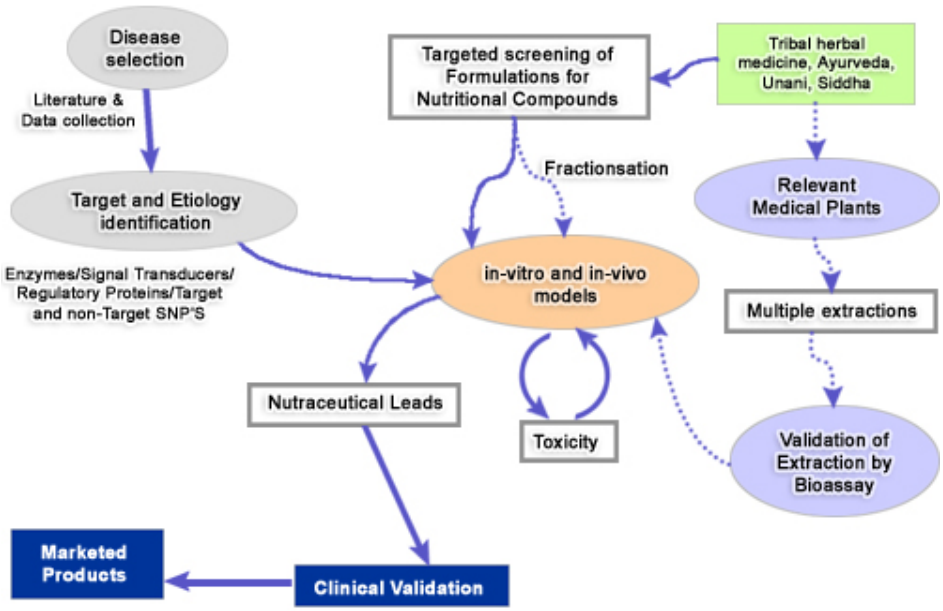
Products

In 2005-2006, Avesthagen has developed multiple scientifically validated ingredients and products to promote wellness through prevention of specific degenerative conditions - diabetes, obesity, metabolic syndrome, and bone loss, each of the diseases has a large market both for treatment and prevention.



The Development Cycle at Avesthagen

Avesthagen specializes in the discovery, development and marketing of quality ingredients aimed at degenerative conditions that combine nature, tradition and technology.



In addition to a well-defined development cycle, Avesthagen also offers the following technology advantages as part of its "Natural Products" platform:

ADePt™

ADePtTM is a proprietary Indian medicinal plant resource developed by Avesthagen that contains 3 complimentary data streams:

- Over 3000 formulations described in traditional medicine compendia like Ayurveda, Unani or Siddha compendia classified by disease states. The formulations consist primarily of one or more herbs. This is primary source for lead selection.
- Listing of more than 2500 medicinal plants, and extensive information about their ethno botanical uses, and pharmacognosy related information. This is used for adding validity to selected leads.
- Listing of the structure of molecules and profiles of more than 15,000 compounds common to plants reported to have biological activity across disease states. It is combined with a proprietary molecular profiling technology called MetaGridTM.

Etiology-based Cell-assays

A series of cell-free (enzymatic) and cell-based assays are conducted to screen and validate natural extracts specific to various etiologies within a medical condition. The assays are classified into two groups - outcome oriented and mechanistic. The assays, now standardized for variations within natural extracts, have proved invaluable as an indicator of bioactivity; in elucidating potential mode of action; and helping in better planning of in-vivo and human trials for efficacy.

MetaGrid™

MetaGrid™ is a proprietary comparative metabolite analysis tool for fingerprinting of phytoextracts. It enables tracking of up to 250 metabolites across different varieties, batches and extracts of a particular botanical. The result is better reproducibility of extracts and a more exacting tool for quality control at the manufacturing level than is currently available.

Solvent-free Extraction

Supercritical fluids extraction (SFE) is increasingly replacing organic solvents due to regulatory and environmental pressures on ozone-depleting emissions. SFE processes have eliminated the use of hexane and methylene chloride as solvents. With increasing scrutiny of solvent residues in pharmaceuticals, medical products, and nutraceuticals, and with stricter regulations on VOC and ODC emissions, the use of SFE is rapidly proliferating in natural extracts. Avesthagen has built competency to develop and implement supercritical CO2 extraction from lab to commercial scale to ensure "solvent-free" ingredients. This has the following advantages:

- No solvent residues. For industrial processes involving food or pharmaceuticals this is a big plus.
- SCF derived extracts are regarded as "nature identical".
- Retains biological activity and allows minimal product degradation, particularly for products such as polyunsaturated oils and complex lipids.

Recognition by India's Department of Scientific and Industrial Research (DSIR)

In 2004, Avesthagen received Rs. 2.75 crore CSIR grant for DHA research

In FY2006, Avesthagen received a grant from Indian Department of Biotechnology under the SBIRI scheme.

Lessons Learned / Critical Success Factors that did not work

Too many bets

The success of a pharmaceutical or a research company highly depends on the number of products in pipeline. Avesthagen seems to be going the right way and has over 560 patents. However, it appears that it has spread its bets too much, without focusing on execution and delivery in one or two areas. It requires a re-looking at its portfolio to ensure that it is investing in the right areas.

No sustained source of revenue

Revenue trends for the last 5 year indicate that there is no sustained source of revenue. 2011 revenue dropped by over 67%, however the reason for decline is not known. This has meant that the firm has been incurring losses for the past four financial years and the losses continue to mount every year.

Ability to raise funds

The firm has been very successful in raising PE funding and debt, however has faced significant issues in raising large public funding required for commercialization of products.

Avesthagen failed to raise money from an IPO in 2008 and even beyond as per its plan due to the collapse of the capital markets. This was compounded due to the biotechnology industry running into speed breakers in 2007-08, when growth came down to 21% from the previous five years' average growth of over 30%. The trend continued in 2008-09, when it grew 18 %, with revenues of Rs 12,137 crore. But 2009-10 saw the growth rates bounce back over 20%, something which did not benefit Avesthagen.

Missed commercialization opportunities

Avesthagen over the course of last 4-5 years has missed to capitalize on some the commercializing opportunities. It had formed a marketing alliance with CIPLA, to commercialize and market biosimilar products, however CIPLA terminated the alliance because it was not happy with the progress.

Nestle too terminated it’s partnership with Avesthagen. Under the partnership, Avesthagen was supposed to manufacture and supplied the active ingredient for bioactive nutritional products

Corporate Governance and Management issues

Between July 2007 and February 2008, five of the seven external directors resigned from Avesthagen. Other than that some of the top executives and directors also resigned by February 2008. Some of the directors complain that corporate governance and management issues as the top reason for resignation.

Part III

Case Studies - Process Engineering Industry

1. **Bharat Forge Ltd.**
2. **Crompton Greaves Ltd.**
3. **Amforge Industries Ltd.**
4. **Best & Crompton Ltd.**

Process Engineering: Brief Background

Process engineering (also called **process systems engineering**) focuses on the design, operation, control, and optimization of chemical, physical, and biological processes through the aid of systematic computer-based methods. Process engineering encompasses a vast range of industries, such as petrochemical, mineral processing, advanced material, food, pharmaceutical, and biotechnological industries.*

Process systems engineering was used for the first time in a Special Volume of the AIChE (**American Institute of Chemical Engineers)** Symposium Series in 1961. However, it was not until 1982 when the first international symposium on this topic took place in Kyoto, Japan, that the term PSE (Process Systems Engineering) started to become widely accepted.

India has well developed Process industry. Indian companies engaged in process engineering have a world class pool of talent in engineering and management skills, having proven track record in basic design, multidisciplinary detailed engineering, manufacturing of plant & equipment, transportation, installation, construction at sites, erection and commissioning of process plants.

In Process Engineering following four companies were selected for the case study:-

i. Bharat Forge Ltd., Pune (Success Story)

ii. Crompton Greaves Ltd., Mumbai (Success Story)

iii. Amforge Industries Ltd – Mumbai (Lessons Learnt)

iv. Best & Crompton Engg. Ltd – Chennai (Lessons Learnt)

Case Study – Bharat Forge

Corporate Profile of Bharat Forge

Industry Name	Process Engineering
Year Of Incorporation	1961
Regd. Office:	
Address	Mundhwa, Pune Cantonment
District	Pune
State	Maharashtra
Pin Code	411 036
Tel. No.	020-26702777
Fax No.	020-26822387
Email: secretarial@bharatforge.com	**Internet:** http://www.bharatforge.com
Auditors	Dalal & Shah
Company Logo	KALYANI

Background

Bharat Forge Limited (BFL), the flagship company of the USD 2.4 billion Kalyani Group, is a leader in delivering innovative auto-component solutions. The Pune based Indian multinational is a technology-driven global leader in metal forming having trans-continental presence across a dozen manufacturing locations, serving several sectors including automobile, power, oil and gas, rail & marine, aerospace, construction & mining, etc.

BFL today has the largest repository of

metallurgical knowledge in the region and offers complete service supply capability to its geographically dispersed marquee customers from concept to product design, engineering, manufacturing, testing and validation.

With manufacturing facilities spread across India, Europe, US & China, Bharat Forge manufactures a wide range of safety and critical components for the automotive & non-automotive sector; it is the country's largest manufacturer and exporter of automotive components and leading chassis component manufacturer.

BFL holds the distinction of being the first Indian automotive component manufacturing company that made a major breakthrough in China in 2003 by securing large business from First and Second Automotive Works, the two leading automobile manufacturers in that country.

BFL completed capacity expansion to set up dedicated state of the art facility for manufacture of critical & value added components for non automotive applications including rail & marine, Oil & Gas, power & construction and mining.

BFL has built a strong base of intellectual capital of over 6500 workforce. Highly skilled and motivated manpower, numbering over 1200 engineers engaged in various manufacturing disciplines are driving the company's global thrust. Over 80 personnel are engaged in R&D activities.

BFL is on the threshold of a breakout growth in non-automotive space and is currently spearheading a major up scaling of its capacity in forging, casting, fabrication, machining and assembly to launch its multi-sectoral growth plans across sectors such as Energy (Oil & Gas, Power), Transportation (Railway, Marine, Aerospace) and Construction & Mining.

The company came into existence in 1961 to meet the forging needs of the Indian Automobile Industry. The 70's witnessed a spurt in the Indian forging industry with more and more units coming up. For Bharat Forge, it was a period of consolidation and growth. With the largest integrated facilities in Asia and an unbeatable track record, Bharat Forge emerged as the undisputed leader - the first name in the forgings industry in India.

With an emphasis on diversification, the 80's saw Bharat Forge grow from a primarily automotive ancillary to an engineering enterprise focusing on technological supremacy, resilience and total customer-orientation.

Today, the art of forging metal is a tradition at Bharat Forge, and their products are built with the expertise necessary to accommodate various industries.

Since commencement of operations in 1966, BFL has achieved several milestones and is today among the largest and technologically most advanced manufacturer of Forged & Machined components.

Backed by a full service supply capability and dual-shore manufacturing model, Bharat Forge provides end-to-end solutions from product conceptualization to designing and finally manufacturing, testing and validation.

Some facts about BFL:

- Bharat Forge operates in three continents: Europe, North America and Asia.
- Manufacturing operations across nine locations and six countries – 2 in India, 3 in Germany and one each in Sweden, Scotland UK, USA & China.
- BFL's customers include the top five Passenger Car & top five Commercial Vehicle Manufacturers in the world. The list includes virtually every automotive OEM and Tier I companies.
- 6500 employees including over 1200 engineers
- Over 80 personnel engaged in R&D activities

- Over the last four years, the Company has successfully made several acquisitions: Carl Dan Peddinghaus and CDP Aluminiumtechnik (in Germany), Imatra Kilsta AB (in Sweden), and Federal Forge in the USA. BFL also has a majority stake in a joint venture with First Auto Works (FAW) called FAW Bharat Forge (Changchun) Company Limited that operates in China.

Sources:

1. http://www.bharatforge.com
2. http://www.moneycontrol.com/company-facts/bharatforge/history/BF03#BF03

Chronological history

1961

Incorporation of Bharat Forge Ltd. on 19th June at Mumbai. Established in collaboration with Steel Improvement and Forge Co., USA (SIFCO), the main object of the Company is to manufacture forgings and finished crankshafts.

1966

Commercial Production began

1971

Shares of Rs.100 each subdivided.

1976

9,30,000 Bonus Equity shares issued in proportion of 3:5.

1978

Pref. shares redeemed in 3 equal installments on 2nd January, 1st July and 1st January, 1979.

1981

The Company's technical collaboration with Sifco Industries Inc., of U.S.A., ended on 31st March.

1982

Balchandra Investment Pvt. ltd., became a wholly owned subsidiary of the Company and consequently, a deemed public limited company under Section 43-A of the Companies Act, 1956.

1983

Agreement concluded with Tokyo, Drop Forging Co., Ltd., of Japan for technology upgradation, cost optimisation and quality improvements in the Company's forging unit.

The Company concluded an agreement with Maharashtra Electronics Corporation Ltd. (MELTRON), to establish a joint venture to manufacture colour T.V. sets.

1984

Forge Investment Ltd. and Mundhwa Investment Ltd. became subsidiaries of Bhalchandra investment Ltd., with effect from 4th January.

1985

The company began exports into erstwhile USSR by winning a large contract for under carriage components.

The installed capacity of steel forgings at Pune further increased from 30,000 tonnes to 40,000 tonnes per annum.

Industrial licence for steel forgings endorsed for 7,200 tonnes and 42,800 tonnes per annum at Jalgaon and Pune units respectively.

The Company also received industrial licence for the manufacture of couplings with 600 tonnes per annum capacity at Mundhwa, Pune.

The Company entered into a collaboration agreement with Torsiflex Ltd., U.K. to obtain technology and know-how for the manufacture of couplings.

The Company privately placed with financial institutions, 3,80,000-15% secured redeemable non-convertible debentures (IV Series - PP) of Rs. 100 each, for working capital requirements. Also, 4,80,000-15% Fully paid secured redeemable non-convertible debentures (IV series-Rights) of Rs.100 each were issued on rights basis to finance its industrial machinery and couplings projects at Vaduth, Satara, and at Mundhwa, Pune.

7,50,000-10% fully paid secured redeemable convertible debentures (V Series) of Rs. 240 each issued on rights basis to finance its front

axle assembly projects and for the expansion of open forgings capacity and defence products machinery at Mundhwa, Pune.

1986

Letter of intent for machine components was partially converted into an industrial licence for the manufacture of some of the items such as defence products machinery etc. as included in the letter of intent at Mundhwa, Pune.

Registration obtained for the manufacture of assemblies, components, spares, accessories for metallurgical machinery, size reduction and crushing equipment, conveying equipment and size separation units with a total capacity of 1,200 tonnes per annum at Vaduth, Satara.

Registration for additional capacity of 700 tonnes per annum was obtained for the Vaduth unit, for the manufacture of other items of industrial machinery. The Company also undertook to market colour TV receivers and automotive components manufactured by other companies.

Name of the Company changed from Bharat Forge Co. Ltd., to Bharat Forge, Ltd. with effect from 30th April.

1988

Technology Upgradation. Investment in state-of-the-art forging technology.

Commissioning of 16000 MT press line

1991

Major breakthrough into Japan, USA and UK for critical supply of engine & chassis components.

The Company allotted 10,00,000-14% non-convertible debentures (7th series) of Rs.100 each on private placement basis.

The Company issued 19,00,000-18% secured redeemable non-convertible debentures (8th Series) of Rs.100 each on private placement basis with Mutual Funds.

1992

The Financial Services Division commenced for investment in various fund based areas. During the year, it diversified its portfolio into real estate development.

The company commissioned the 12,800 tonnes capacity screw type hot forging press.

1993

Fall in exports due to letter of credit not being opened at Ukraine and recessionary conditions in the thrust markets of Japan & W. Europe.

1995

The Company proposed to set up a plant for the manufacture of Finish Machined Crankshafts with a capacity of 1,80,000 nos. per annum at Pune.

The Company entered into a technical knowhow and assistance agreement with Metalart Corporation, Japan for the manufacture of small precision forgings.

1999

Bharat Forge turned out impressive results becoming the fifth-largest forging company in the world in volume terms.

2001

Commissioning of second 16000 MT press line.

First M&A - Acquired order book of Dana Kirkstall

Bharat Forge Ltd retrenched around 800 employees which represents close to one fourth of its total workforce at its manufacturing facility.

Bharat Forge reported a 16% drop in the revenue and 81% drop in the net profits.

2002

Investment of $ 80 million in Research & Development, Testing & Validation and state-of-the-art Heavy Duty Truck Crankshaft Machining facilities

Bharat Forge signed a contract with Dana Corporation's Spincer Europe Ltd., for the supply of forgings.

Leading Chinese Auto Dealer OEM awarded the company a large contract for the supply of engine components

2003

Bharat Forge Ltd secured the second largest customer in China. Guangxi Yuchai Machinery Co. a part of second Auto Works is among the Largest Auto companies in China, which is a stepping stone for acquiring a large size of the Chinese Markets.

New contracts won in the area of passenger car components.

BFL chosen by Ford Motor Company and Daimler Chrysler as a supplier of components for their global passenger car programs.

Board approved raising of raising long term resources

2004

BFL tied up with BITS-Pilani for offering employees an opportunity to enhance their education while continuing to work with the company and acquire degrees in BE and B.Tech.

2005

Bharat Forge Ltd received `outstanding organisation' award for quality from the National Institution for Quality and Reliability on April 23

Bharat Forge acquired Imatra Kilsta AB, Sweden & Scottish Stampings, Scotland

Bharat Forge Ltd signed a Joint Venture contract with FAW Corporation, China for its forging business

Established Global Manufacturing Footprint across Europe, North America & China through following acquisitions / Joint Ventures:

- CDP Bharat Forge
- Bharat Forge Aluminiumtechnik
- Bharat Forge America
- Bharat Forge Kilsta
- FAW Bharat Forge

2006

Investment of $ 100 million to set-up dedicated state-of-the-art forging & machining facilities for non-auto

Bharat Forge inks agreement with Maharashtra Govt. to establish SEZ

2007

Bharat Forge – BITS Pilani convocation ceremony held for the first batch of B.S. (Manufacturing Engineering) Programme.

Centre for Advanced Manufacturing takes shape in Baramati.

US $ 1 Billion target achieved

2008

Bharat Forge signed an MOU with NTPC to set up a Joint Venture Company for its foray into the Capital Goods sector.

Bharat Forge commissioned India’s Largest Commercial Open Forging Press

Alstom and Bharat Forge formed a JV in India to manufacture state-of-the-art super critical power plant equipment.

2009

Inauguration of Heavy Duty Crankshaft Forging & Machining Facility at Baramati

Ground Breaking & Foundation Stone Laying Ceremony of the Alstom Bharat Forge JV manufacturing facility at Mundra

Inauguration of the Ring Rolling facility at Baramati

Bharat Forge and AREVA sign MoU for Manufacture of Heavy Forgings in India

Bharat Forge received National Award for Best HR Practices - 2009

2010

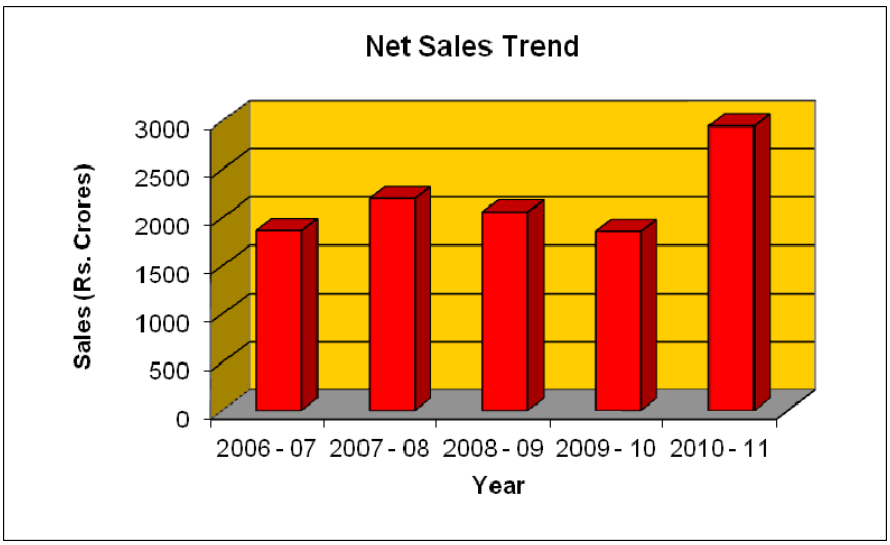
Ground Breaking & Foundation Stone Laying Ceremony of the Bharat Forge – NTPC Energy Systems Ltd. Manufacturing facility at Solapur

Establishment of Kalyani Centre for Technology & Innovation

Key Performance Indicators

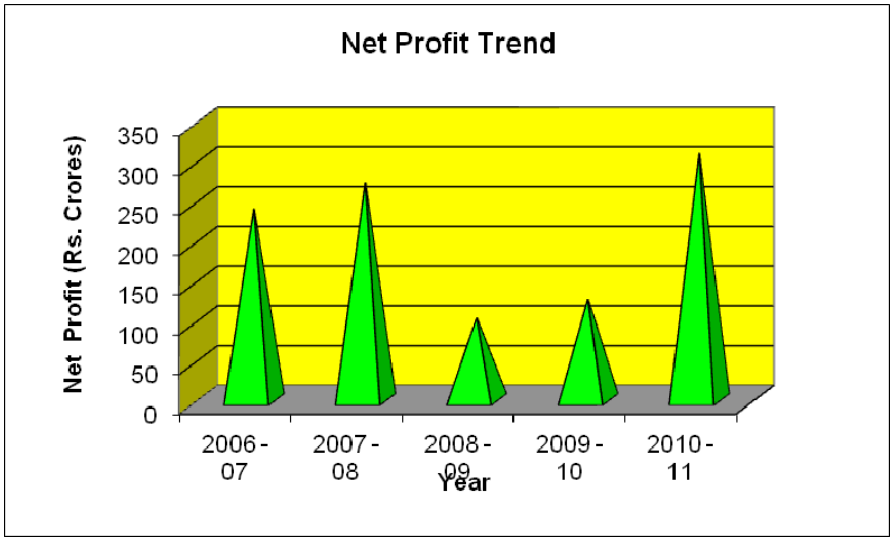
Consistent growth in turnover over the past five years

	Rs. in Crores
Year	Net Sales
2006 - 07	1864.43
2007 - 08	2196.5
2008 - 09	2057.56
2009 - 10	1856.4
2010 - 11	2947.34



Growth in net profit over the past five years

	Rs. in Crores
Year	Net Profit
2006 - 07	240.95
2007 - 08	273.59
2008 - 09	103.29
2009 - 10	127.05
2010 - 11	310.57

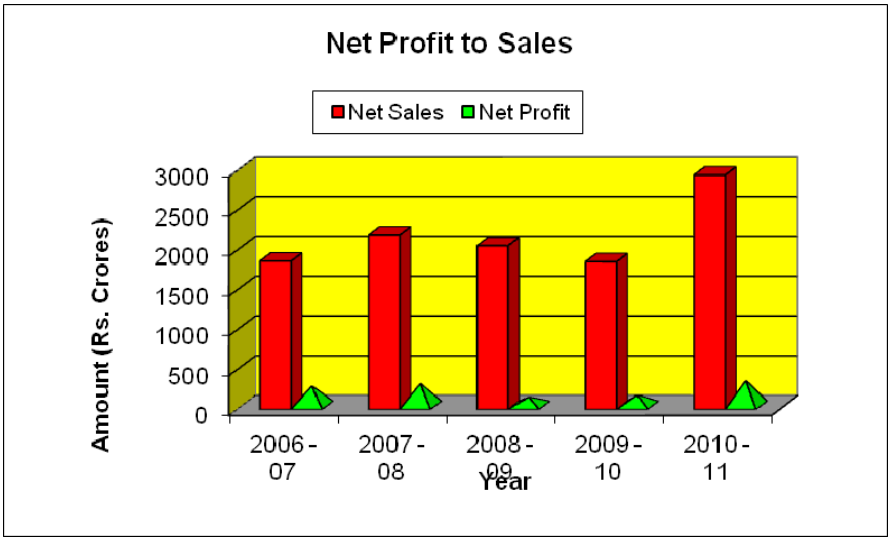


Growth in exports

	Rs. in Crores
Year	Exports
2006 - 07	751.27
2007 - 08	961
2008 - 09	1001.41
2009 - 10	710.89
2010 - 11	1219.51

Growing proportion of net profit to sales

	Rs. in Crores	
Year	Net Sales	Net Profit
2006 - 07	1864.43	240.95
2007 - 08	2196.5	273.59
2008 - 09	2057.56	103.29
2009 - 10	1856.4	127.05
2010 - 11	2947.34	310.57



Financials

Bharat Forge FY2011 Financials

Highlights of FY11 standalone financials

- Standalone operations out of India recorded 58.5% growth in revenues and a 144.5% growth in PAT
- Export growth of 72.6% was higher than the underlying market growth. The export growth was driven by new customer additions, strong performance of non auto, new product developments and entry into newer geographies.
- The Non-Auto business increased by 89.2% with major ramp up in the new facilities. The new facilities contributed Rs. 4,273 million to revenues against Rs. 1,907 million in FY2010 – growth of 124.1%. With the Non-Auto business gaining traction, it has emerged as key component for BFL's global business and accounts for 25% of the Company's consolidated sales in FY2011.
- The overseas subsidiaries witnessed a strong revival. With 45.2% growth in total income, PBT has turned around from a loss of Rs. 2,454 in CY2009 to a profit of Rs. 34 million in CY2010.

STANDALONE FINANCIAL PERFORMACE OF THE LAST 5 YEARS – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	29,935.47	18,887	21,064	22,849	19,453
EBIDTA	7,623.18	4,693	4,075	6,105	5,485
PBT	4,476.08	1,807	1,577	3,970	3,598
PAT	3,105.67	1,270	1,033	2,736	2,410

Source: http://www.moneycontrol.com/financials/bharatforge/profit-loss/BF03#BF03

Highlights of FY11 consolidated financials

- FY11 consolidated revenues at US$ 1.13 billion
- Total Income increased by 52.6% from Rs. 33,787.11 million in FY2010 to Rs. 51,544.41 million in FY2011.
- Operating profit before interest, taxes, depreciation and amortisation (PBDIT) increased by 118.7% from Rs. 3,895.99 million in FY2010 to Rs. 8,522.34 million in FY2011.
- Strong growth momentum in both domestic & global operations
- Non-auto contribution at 25% of consolidated business
- Order book of around US$ 1.40 billion in the capital goods business in a short span

FINANCIAL PERFORMANCE (CONSOLIDATED) – in Rs. Crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007	FY 2006
Total Income	51,544.41	33,787	48,427	47,516	42,752	30,851
EBIDTA	8,522.34	3,896	5,214	8,038	7,433	5,889
PBT after Exceptional Item	4,444.80	(645)	1,107	4,498	4,363	3,925
PAT after Minority interest	2,899.06	(634)	583	3,015	2,906	2,505

Capital Structure

Period		Instrument	Authorized Capital	Issued Capital	- P A I D U P -		
From	To		(Rs. cr)	(Rs. cr)	Shares (nos)	Face Value	Capital (Rs. Cr)
2010	2011	Equity Share	60	46.59	232794316	2	46.56
2009	2010	Equity Share	60	44.57	222652271	2	44.53
2008	2009	Equity Share	60	44.57	222652271	2	44.53
2007	2008	Equity Share	60	44.57	222652271	2	44.53
2006	2007	Equity Share	60	44.57	222652271	2	44.53
2005	2006	Equity Share	60	44.49	222262661	2	44.45
2004	2005	Equity Share	60	39.59	39550542	10	39.55
2003	2004	Equity Share	45	37.7	37667628	10	37.67
2002	2003	Equity Share	45	37.7	37667628	10	37.67
2001	2002	Equity Share	45	37.7	37667628	10	37.67
2000	2001	Equity Share	45	37.7	37667628	10	37.67
1999	2000	Equity Share	45	37.7	37667628	10	37.67
1997	1999	Equity Share	45	37.7	37667492	10	37.67
1996	1997	Equity Share	45	37.7	37667492	10	37.67
1995	1996	Equity Share	45	37.7	35867492	10	35.87
1994	1995	Equity Share	45	31.41	27872149	10	27.87
1993	1994	Equity Share	45	19.77	19734863	10	19.73
1992	1993	Equity Share	45	18.44	18434072	10	18.43
1991	1992	Equity Share	45	14.64	14631752	10	14.63
1990	1991	Equity Share	45	14.64	14635360	10	14.64
1989	1990	Equity Share	15	14.64	10545000	10	10.55
1986	1989	Equity Share	15	5.27	5272500	10	5.27
1980	1986	Equity Share	5	4.96	4960000	10	4.96
1978	1980	Equity Share	5	2.48	2480000	10	2.48
1976	1978	Equity Share	5	2.48	2480000	10	2.48
1971	1976	Equity Share	2	1.55	1550000	10	1.55
1964	1971	Equity Share	2	1.55	4760	100	0.05
1962	1964	Equity Share	2	0.75	2380	100	0.02
1961	1962	Equity Share	2.5	0.09	9256	50	0.05

Source : http://www.moneycontrol.com/financials/bharatforge/capital-structure/BF03#BF03

Shareholding Pattern

CATEGORY OF SHAREHOLDER	NO. OF SHARE-HOLDERS	TOTAL NO. OF SHARES	TOTAL NO. OF SHARES HELD IN DEMATERIALIZED FORM	TOTAL SHAREHOLDING AS A % OF TOTAL NO. OF SHARES AS A % OF (A+B)	AS A % OF (A+B+C)	SHARES PLEDGED OR OTHERWISE ENCUMBERED NUMBER OF	AS A % OF TOTAL SHARES
(A) Shareholding of Promoter and Promoter Group							
(1) Indian							
Individuals / Hindu Undivided Family	7	813,115	813,065	0.35	0.35	-	-
Bodies Corporate	15	97,089,055	2,087,697	41.71	41.71	-	-
Sub Total	**22**	**97,902,170**	**2,900,762**	**42.06**	**42.06**	-	-
(2) Foreign							
Total shareholding of Promoter and Promoter Group (A)	**22**	**97,902,170**	**2,900,762**	**42.06**	**42.06**	-	-
(B) Public Shareholding							
(1) Institutions							
Mutual Funds / UTI	46	15,469,785	15,464,985	6.65	6.65	-	-
Financial Institutions / Banks	29	21,885,340	21,877,465	9.40	9.40	-	-
Insurance Companies	4	8,337,309	8,337,309	3.58	3.58	-	-
Foreign Institutional Investors	93	25,647,085	25,645,240	11.02	11.02	-	-
Sub Total	**172**	**71,339,519**	**71,324,999**	**30.65**	**30.64**	-	-
(2) Non-Institutions							
Bodies Corporate	865	27,082,073	18,637,03	11.63	11.63	-	-

			8				
Individuals		-	-	-	-	-	-
Individual shareholders holding nominal share capital up to Rs. 1 lakh	57,766	22,420,747	18,966,067	9.63	9.63	-	-
Individual shareholders holding nominal share capital in excess of Rs. 1 lakh	37	9,682,322	9,573,022	4.16	4.16	-	-
Any Others (Specify)	1,906	4,358,285	1,695,120	1.87	1.87	-	-
Clearing Members	725	1,061,617	1,061,617	0.46	0.46	-	-
Trusts	92	2,696,025	46,050	1.16	1.16	-	-
Non Resident Indians	1,089	600,643	587,453	0.26	0.26	-	-
Sub Total	**60,574**	**63,543,427**	**48,871,247**	**27.30**	**27.30**	-	-
Total Public shareholding (B)	**60,746**	**134,882,946**	**120,196,246**	**57.94**	**57.94**	-	-
Total (A)+(B)	**60,768**	**232,785,116**	**123,097,008**	**100.00**	**100.00**	**-**	**-**
(C) Shares held by Custodians & against which Depository Receipts have been issued-m	**-**	**-**	**-**	**-**	**-**	**-**	**-**
(1)		-	-	-	-	-	-
(2)		-	-	-	-	-	-
Sub Total	**1**	**9,200**	**9,200**	-	-	-	-
Total (A)+(B)+(C)	**60,769**	**232,794,316**	**123,106,208**	**-**	**100.00**	**-**	**-**

Source: http://www.moneycontrol.com/company-facts/bharatforge/shareholding-pattern/BF03#BF03

Bharat Forge Share Price Data vs. competitor companies as on 16-Jan-12

Company Name	Last Price	% Chg	52 wk High	52 wk Low	Market Cap (Rs. cr)
Bharat Forge	286.05	0.32	370.50	231.00	6,659.08
Electrosteel	18.90	1.89	41.80	15.80	617.56
Mahindra Forg	53.50	0.47	88.75	46.05	493.10
Ahmednagar Forg	110.25	-1.74	155.25	78.25	405.17
Jayaswal Neco	14.66	-1.28	31.40	10.50	367.76
Nelcast	27.75	-1.77	29.45	14.92	241.43
Hinduja Foundri	64.95	0.00	110.10	54.75	186.61
RamkrishnaForge	87.15	-5.12	132.90	78.20	158.16
KIC Metaliks	186.70	3.04	350.00	152.00	132.54
MM Forgings	96.50	-3.40	144.00	81.10	116.48

Source: http://www.moneycontrol.com/stocks/top-companies-in-india/market-capitalisation-bse/castings-forgings.html

Corporate Governance

Bharat Forge believes that it is imperative and non-negotiable for a world-class company to adopt transparent accounting policies, appropriate disclosure norms, best-in-class board practices and consistently high standards of corporate conduct towards its stakeholders. Bharat Forge has consistently aimed at developing and internalising such policies and implementing best-in-class Actions that make it a good Model of corporate governance. To that effect, Bharat Forge has adopted practices mandated in Clause 49 of Listing Agreement and has established procedures and systems to be fully compliant with it.

As on 22nd December, 2011, the Board of Directors of Bharat Forge comprised of Sixteen Directors. The Board consists of Six Executive Directors including the Chairman and Managing Director, who is a promoter Director and 10 Non-executive Directors, 9 of whom are Independent Directors. The Board is composed of the following members:

Sr. No.	Name the Director	Category
1	B.N. Kalyani, Chairman & Managing Director	Promoter, Executive and Managing Director
2	S.M. Thakore	Non-executive, Independent
3	S.D. Kulkarni	Non-executive, Independent

4	P.G. Pawar	Non-executive, Independent
5	Dr. Uwe Loos	Non-executive, Independent
6	P.C. Bhalerao	Non-executive Director
7	Lalita D. Gupte	Non-executive, Independent
8	P.H. Ravikumar	Non-executive, Independent
9	Alan Spencer	Non-executive, Independent
10	Naresh Narad*	Non-executive, Independent
11	Dr. T. Mukherjee **	Non-executive, Independent
12	G.K. Agarwal, Deputy Managing Director	Executive
13	Amit Kalyani, Executive Director	Executive
14	B.P. Kalyani, Executive Director	Executive
15	S.E. Tandale, Executive Director	Executive
16	Sunil Kumar Chaturvedi, Executive Director	Executive

B N Kalyani

Promoter, Executive and Managing Director

Baba Kalyani is the Chairman of the Kalyani Group of companies and Chairman & Managing Director of the group's flagship – Bharat Forge Limited - India's largest manufacturer and exporter of automotive components. Born on 7th January 1949, Mr. Kalyani is a Mechanical Engineer from the Birla Institute of Technology and Science at Pilani, Rajasthan. He also has an M.S. in Engineering from the Massachusetts Institute of Technology, USA.

S M Thakore

Mr. S.M. Thakore, a solicitor, is a Partner in at solicitors' firm Talwar Thakore & Associates. Mr. Thakore also serves on the Boards of Alkyl Amines Chemicals Limited, Carraro India Private Limited, Carraro PNH Components (India) Private Limited, Morarjee Textiles Limited, Carborundum Universal Limited, DSP Merrill Lynch Fund Managers, Uni Deritend Limited and Uni Klinger Limited.

S D Kulkarni

Mr. S D Kulkarni is an Independent and Non- executive Director. He is a Chartered Accountant and was formerly Managing Director and Chief Executive Officer of Larsen and Toubro Limited.

P G Pawar

Mr. P.G Pawar, B.E. (BITS, Pilani) is an Independent and Non executive Director. Mr. Pawar also serves on the Board of P.P Holdings Ltd., Sakal Papers Ltd., Yog Industries Ltd., Finolex Cables Ltd., Kirloskar Oil Engine Ltd., Force Motors Ltd., Pan Gulf Group Ltd., Ajay Metachem Sud Chemie Pvt. Ltd., Sakal Printers Pvt. Ltd., United Risk Insurance Broking Company Pvt. Ltd., United Metachem Pvt. and other companies.

Prof. Dr. Uwe Loos

Prof. Dr. Uwe Loos, Graduate Engineer, PhD, is an independent and Non-Executive Director. Dr Loos was a Member of the Management Board of Porsche AG (1993), for production and logistics and was responsible for the introduction and implementation of a programme to establish worldwide competitiveness in manufacturing. He joined FAG in 1998, a leading ball bearing manufacturer and was appointed Chairman of the Board. During his tenure at FAG, he gained experience with its global operations including India.

P C Bhalerao

Mr. P.C. Bhalerao, B.E., M.B.A., D.T.M. is a Non-Executive Director of the Company. Mr. Bhalerao also serves on the Boards of Meritor HVS (India) Limited, Nandi Infrastructure Corridor Enterprises Limited, Kumar Housing &Land Development Limited, Sanghvi Movers Limited, Nandi Economic Corridor Enterprises Limited, CDP Bharat Forge GmbH, Bharat Forge Aluminiumtechnik & Co. KG. etc.

Lalita D. Gupte

Mrs. Lalita Gupte holds a Bachelor's Degree in Economics and a Master's in Business Management. Mrs. Gupte is an Independent Director of the Company since 5th December 2006. She retired, in October 2006, as the Joint Managing Director of ICICI Bank Ltd. At ICICI Bank, she has vast experience in International Business of the Bank and held leading positions in the areas of Retail and Corporate Banking, Leasing, Planning & Resources and other areas. She was instrumental in transforming ICICI Bank into a technology led leader in diversified financial services business. She is also a director of ICICI Venture Funds Management Company Limited, Godrej Properties Ltd., Firstsource Solutions Ltd., HPCL-Mittal Energy Ltd., Kirloskar Brothers Ltd., Swadhaar Finserve Pvt. Ltd., Nokia Corporation.

P H Ravikumar

Mr. P.H. Ravikumar is an Independent and Non-executive Director on the Board. Mr. Ravikumar has done Bachelors in Commerce and CAIIB, AIB from London. He has total work experience of 36 years in Banking and financial services. Mr. P.H. Ravikumar is a Director, on the Board of Directors of Federal Bank Ltd., Federal Bank Financial Services Ltd., Eveready Industries Ltd., Akruti City Ltd., SKS Microfinance Pvt. Ltd., and NABARD Consultancy Services Pvt. Ltd., amongst other companies.

Alan Spencer

Mr. Alan Spencer is an M.A. from Balliol College, Oxford. Mr. Alan Spencer is on the Board from 21st January 2008. He has vast knowledge and experience of the Automotive industry, being associated with

Ford Motors Company for 38 years. Mr. Alan Spencer also serves on the Board of NEFAZ, Russia and RABA, Hungary.

Naresh Narad

Mr. Naresh Narad, B.A., LL.B. and a Veteran IAS Civil Servant is an Independent and Non-executive Director on the Board. Mr. Naresh Narad has held various important positions in the Govt. of India and Govt. of Madhya Pradesh.

He has also held directorships in SAIL, IISCO, Rashtriya Ispat Nigam Ltd., National Mineral Development Corporation Ltd. and in four major Petroleum Companies viz. Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd., Hindustan Petroleum Corporation Ltd. and IBP Ltd.

Dr. T. Mukherjee

Dr. Tridibesh Mukherjee, M. Met., Ph.D. is an Independent and Non-executive Director on the Board. Dr. Mukherjee, a veteran Metallurgist and a researcher at heart, has authored 134 papers in his career spanning four decades. He has been a Visiting lecturer at University of Sheffield, UK and Adjunct Professor at I.I.T., Kharagpur. He is also a recipient of various prestigious awards. Dr. Mukherjee has total work experience of 42 years.

G K Agarwal

Mr. G K Agarwal, B.E. (Mech), MBA, has been on the Board since 01 April 1998. He was elevated as the Dy. Managing Director with effect from 23 May 2006. Mr. Agarwal serves on the board of BF Utilities Limited, CDP Bharat Forge GmbH, Bharat Forge Aluminiumtechnik GmbH &Co. KG, Bharat Forge Daun GmbH and Bharat Forge Hong Kong Limited.

Amit Kalyani

Mr. Kalyani is currently an Executive Director on the board of Bharat Forge Limited. While he is involved in the company's strategic planning & global business development initiatives, Mr. Kalyani also takes care of the overall group strategy and is responsible for the expansion of its steel business and driving the infrastructure business foray of the group.

B P Kalyani

Mr. B P Kalyani, B.E.(P), MBA, MS is an Executive Director of the Company, with effect from 23 May 2006. He has served with the Company for 24 years and was senior Vice President (FMD). He also serves on the Board of Kalyani Utilities Development Ltd.

S E Tandale

Mr. S.E. Tandale, BE (Mech) is an Executive Director of the Company with effect from 23 May 2006. He has served with the Company for 15 years and was Senior Vice President (International Trade Division).

He is also a director on the Boards of Bharat Forge America Inc., Bharat Forge Kilsta AB, Bharat Forge Scottish Stampings Ltd., FAW Bharat Forge (Chanchun) Co. Ltd. and Tecnica UK Ltd**.**

Sunil K. Chaturvedi

Mr. Sunil K. Chaturvedi is an Executive Director of the Company. He is a Commerce graduate and Chartered Accountant. He joined Indian Administrative Service, Government of India, in August 1988 and worked in various capacities till January 31, 2008. He has over 23 years of experience. He also serves on the Board of BF-NTPC Energy Systems Ltd.

Market share

Bharat Forge is India's largest manufacturer and exporter of automotive components and leading chassis component manufacturer in the world. With significant global market share, it is ranked among the leading forging companies in the world. With manufacturing facilities spread over 12 locations - 4 in India, 3 in Germany, and 1 each in Sweden, Scotland, North America and 2 in China, the company manufactures a wide range of safety and critical components for passenger cars, commercial vehicles and diesel engines. The company also manufactures specialized components for the aerospace, power, energy, oil & gas, rail & marine, mining & construction equipment, and other industries. It is capable of producing complex large volume parts in both steel and aluminium.

Bharat Forge specializes in Closed Die as well as Open Die Forgings. This requires utilization of a variety of metals. The types of metals forged are:

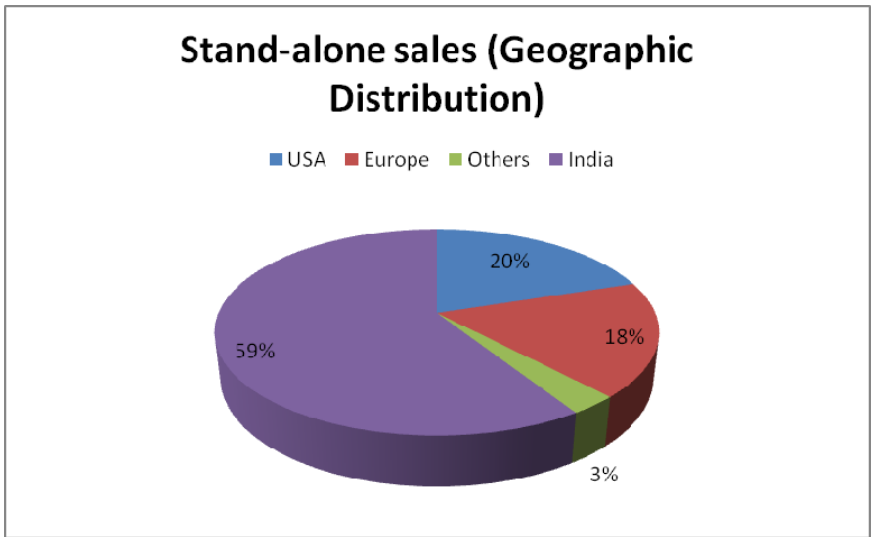
- Plain carbon steels like En8, AISI 1045, CK45, ClassIV etc.
- Low alloy steels like En16, AISI 4140, 41Cr4
- High alloy steels like stainless steels, manganese steels, AISI410, AISI304
- Aluminium steels like AK6, Mahle, DTD 5025
- Titanium alloys like Ti6AL04V, Ti5AI 2.3Sn
- Micro-alloy steels 38 MnS6, 38 Mn VS5

Bharat Forge is the largest manufacturer of crankshafts in India and the second largest worldwide with an annual production of over 5,000,000 crankshaft forgings. It enjoys a leadership position in the domestic market.

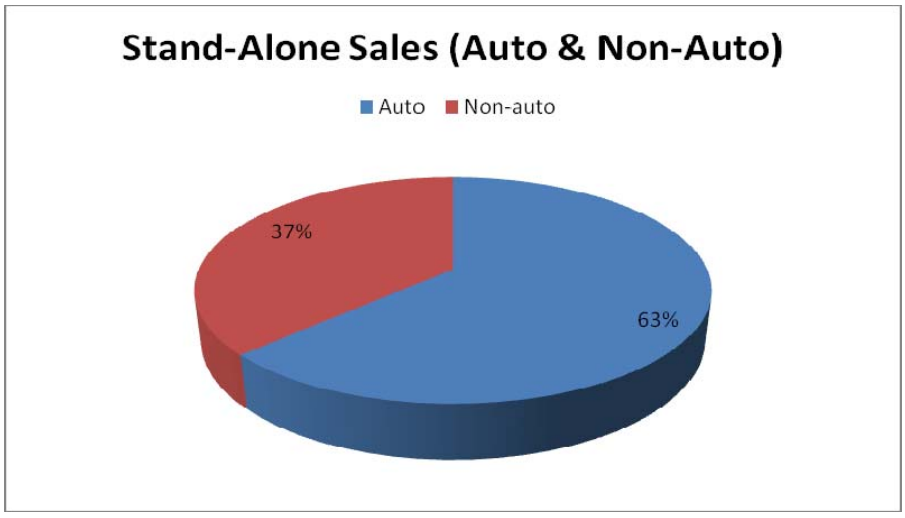
The company manufactures a wide variety of crankshafts ranging from single cylinder crankshafts for light duty applications to large 12 cylinder crankshafts for heavy duty applications like marine, power generation and heavy construction. The company manufactures crankshafts ranging from 2-2500kgs in

forged and machined category.

In terms of sales, India remains the largest market with 59% share of total standalone revenues. The other major markets are USA (20% share of stand-alone sales) and Europe (18% share of stand-alone sales). While domestic sales increased by a healthy 50.4%, sales to USA increased by 44.5% in FY2011. There has been a major revival in the European market, where sales grew by 89.7%, which has contributed to an increase in its share in total sales from 15% in FY2010 to 18% in FY2011.



Across these markets, BFL is active in the automotive and non-automotive sectors. Non-auto sales increased rapidly, both in the domestic Indian market as well as exports. Consequently, its share in total stand-alone sales increased from 30% in FY2010 to 37% in FY2011. Clearly, the non-auto segment has emerged as a significant contributor to the Company's growth.



AUTOMOTIVE SECTOR PRODUCT RANGE

- Crankshafts (Forged and Machined)
- Front Axle Beams (Forged and Machined)
- Pistons (Forged)
- Steering Knuckles (Forged and Machined)
- Steering Knuckles (Steel & Aluminium)
- Connecting Rods (Forged and Machined)
- Camshafts (Forged)
- Rocker Arms (Forged)
- Control Arms (Steel & Aluminium)
- Steering Arms (Forged & Machined)
- Spindles
- Wheel Carriers
- Piston Crowns

NON-AUTOMOTIVE SECTOR PRODUCT RANGE

- Oil & Gas
  - Gate Valve Bodies, Bonnets, Chokes, Wellheads, Shells & Plugs
  - Shaped Forgings for both surface & subsea.
- Marine & Power Generation
  - Engine Components like crankshafts, Connecting Rods
  - Propeller Shafts
- Energy Sector - Windmill
  - Main Shafts
  - Sun Gear Shaft – Gear Boxes
  - Spur Gears – Gear Boxes
- Aerospace
  - Engine Components
  - Structural Components
  - Landing Gears
- Construction
  - Engine components like crankshafts,
  - Connecting Rods
  - Ground Engaging Tips
- Railways
  - Engine components like crankshafts,
  - Connecting Rods, pistons
- Signaling equipment
  - Axle components

BFL's top 3 domestic competitors are:

4. Mahindra Forge
5. Amtek Auto Forging
6. Neepaz Forging

BFL's top 3 overseas competitors are:

1. Thyssen Krupp
2. Sumitomo, Japan
3. Alfing, Germany

Marketing Strategy

The global strategy of Bharat Forge is to have a footprint in Europe, North America and Asia. However, most auto manufacturers rarely move outside their captive vendor base to source components. In order to expand outside India, Bharat Forge has acquired/formed joint ventures to increase its presence overseas. The acquisitions have helped develop technical capabilities, customer relationships, and resources of its parent entity in order to provide wider capability and full service to its customers, and to strengthen its own position in the market.

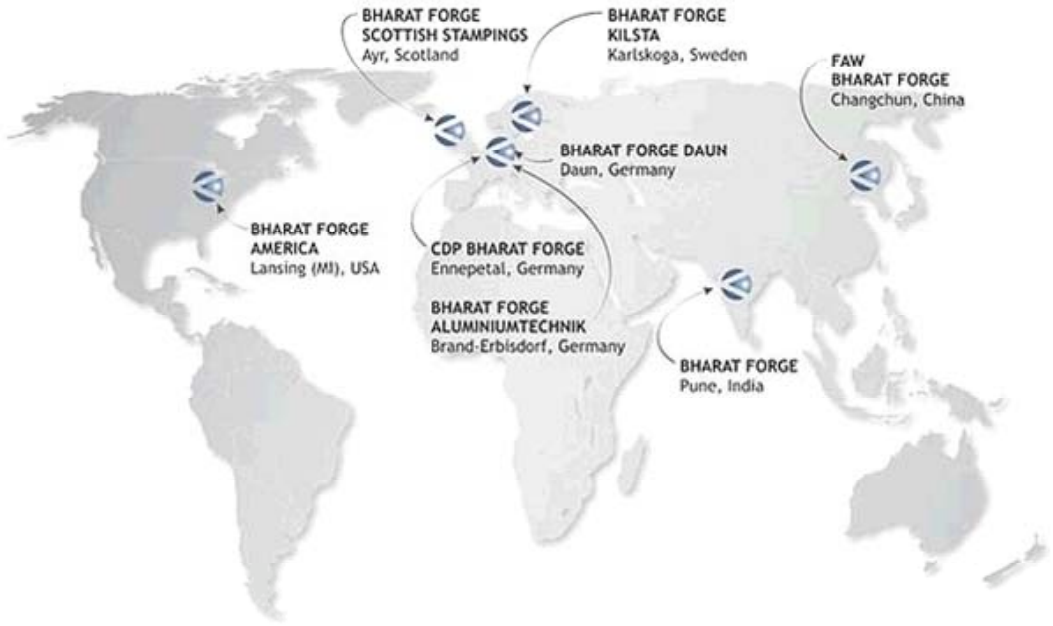
The company acquired Germany-based companies Carl Dan Peddinghaus (CPD) and Aluminium Technik in 2004 to increase its presence in Europe.

In North America, Kalyani saw an opportunity when Federal Forge, an automotive forging producer in Lansing, MI, filed for protection under Chapter 11 of the U.S. Bankruptcy Code in February 2004. He set up Bharat Forge America Inc. to acquire the 170,000-ft2 facility.

In the following year, it acquired Imatra Kilsta AB, in Sweden, along with its wholly owned subsidiary Scottish Stampings in Scotland, which together were known as the Imatra Forging Group. Imatra had been Europe's largest manufacturer of front axles. It also signed a Joint Venture contract with FAW Corporation for its forging business to increase its footprint in China. In 2008, Bharat Forge Ltd signed a Memorandum of Understanding (MOU) with NTPC Ltd, to set up a Joint Venture Company for its foray into the Capital Goods sector.

Following the acquisitions, BFL's customer list includes most of the world's major auto and truck makers and Tier I suppliers: General Motors, Ford, BMW, Audi, Volkswagen, Toyota, Scania, Iveco, ArvinMeritor, Detroit Diesel, ZF Lemforder, Wuxi Diesel-FAW, Guangxi Yuchai, Honda, Renault, Volvo, Caterpillar, and Cummins, among others.

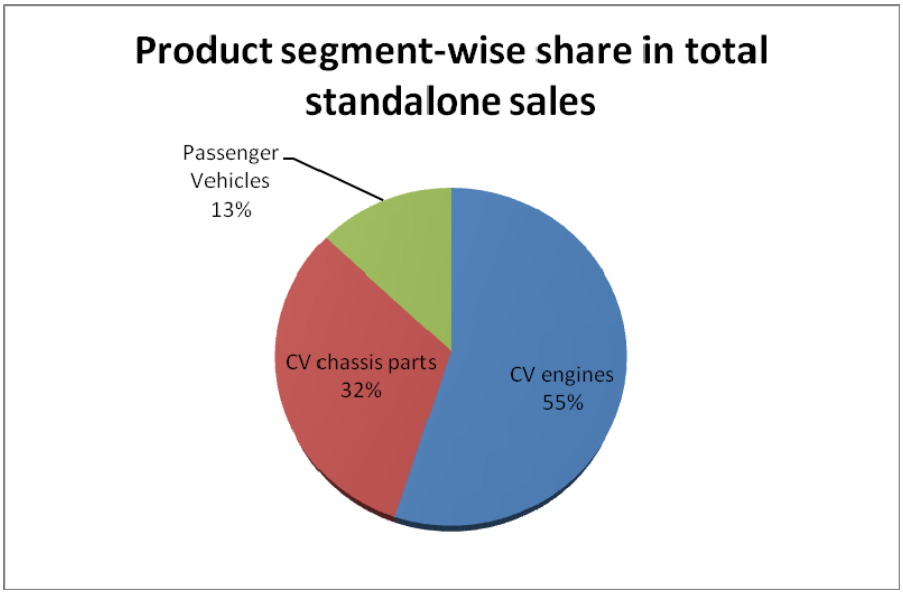
BFL draws a third of its sales from the domestic market with another 21% coming from exports to the US, its chief exports market, and Europe. BFL generates more than half of its revenues from supplying forging parts to commercial vehicles followed by passenger vehicles.



AUTOMOTIVE BUSINESS

The share of the different product segments in BFL's stand-alone sales for FY2011 is as follows:

- CV engines has the largest share of 55%;
- CV chassis parts follows with a share of 32%;
- while Passenger Vehicles has a share of 13%



NON-AUTOMOTIVE BUSINESS

While BFL already had some non-auto business in the Past, it was in FY2006 that the company decided to diversify and make a focused foray into this segment by investing significantly in new capacities and promoting new business development. It expanded its non-automotive forging capacity in two of its manufacturing facilities to relatively insulate itself from any negative surprises in the automotive segment. Five years since then, the Company has focused on addressing new markets and segments, increasing value addition and developing new customer relations globally.

With the enhanced capabilities, the Company has extended its business domain to oil and gas to railways, marine, power (thermal, wind and nuclear), construction and mining. Its customer base has increased from less than 15 in FY2006 to over 30 in FY2011. In this way, BFL has significantly increased its potential market size.

Essentially, there are two distinct markets for the non-automotive components business. First, there is the domestic market where the course of the business will be driven by increased infrastructure spends in the country, which is essential to sustain a high level of growth over a period of time. Planning Commission of India estimated an investment in infrastructure of approximately US$ 500 billion between 2007 and 2012. While there are certainly implementation issues regarding this plan, it is for sure that India will need a certain level of infrastructure and BFL is well positioned to leverage the opportunities from such development. In the domestic market, BFL is targeting the railway, marine and power segments. To reap the benefit of growing demand in the power sector, it has also entered into a joint venture with engineering company Alstom and power generation firm NTPC to manufacture supercritical power plant equipment in India. This JV is expected to contribute to the topline from FY13 onwards.

Research & Development

Bharat Forge has transformed a low tech labor intensive operation in 70's and to the current technically advanced, global scale, lean and diverse business set-up. This has been possible because of investment in R&D as well as technical collaboration with various firms. Bharat Forge focuses on R&D with a view to bringing about improved customers satisfaction and developing new business opportunities to pursue because of improvements in cost, quality and speed.

It formed technical collaboration with Sifco Industries Inc., U.S.A. in 70's and with Drop Forging Co., Ltd., Japan in 80's for technology upgradation, cost optimisation and quality improvements in the Company's forging unit. In 80's, it also formed a collaboration with Torsiflex Ltd., U.K to obtain technology and know-how for the manufacture of couplings.

The firm also invests wisely in modernization and rationalization of its plants in order to be globally competitive. Recently, in its American facilities, the firm has added robots and automation to not only reduce workforce costs but also to increase more capacity and improve process simulation capabilities.

As reported in the Annual Report 2010-11, Bharat Forge has been carrying out R&D in the following specific areas:

- Studies on effect of heat treatment parameters on residual stress and quench cracking.
- Effect of nitride layer on wear life of hot forging dies.
- Effect of strain rate on hot rolling and grain size control of austenitic stainless steels like 304, 316 and 321.
- Control of oxide inclusion cleanliness during ESR of martensitic and PH stainless steels.
- CFD modeling of vertical quenching of Rotor Shaft.
- Design of Regenerative Burner System for forging furnace.
- Effects of strain, strain rate and temperature on deformation of Inconel-718 Super Alloy.
- Effects of sulphide inclusions on mechanical properties.
- Fatigue strength of crankshaft.
- Mathematical modeling of die wear in hot forging.
- Simulation study on solidification defects like segregation cavities in ingot cast products in steel 20 to 35 MT ingots.

As per the same annual report, the company plans to continue pursuing research in the following fields:

- An improved combination of magnetic permeability, strength and impact properties by heat treatment.
- Simulation of heat treatment process for optimum properties of forging parts.
- Technology development on aerospace forging parts.
- Mathematical model development for crankshaft bending rigidity and bending stresses at critical regions.

FY 2010-2011 Expenditure on R&D:

Sr. No.	Particulars	(Rupees in lakhs)
i)	Capital	138.4
ii)	Recurring	614.0
iii)	Total R&D expenditure	752.4
iv)	TOTAL TURNOVER	2993.5
v)	Total R&D expenditure as a percentage of total turnover	0.25%

Bharat Forge has reported the following efforts made towards technology absorption, adaptation and innovation in FY2010-11:

i) Technology development on Ti-Al6-V4 material for aerospace requirements.

ii) Development of Rotor Shafts for steam turbine applications.

iii) Development of fatigue testing with different load ratios.

Benefits derived as a result of the above efforts e.g. product improvement, cost reduction, product development, import substitution

i) New processes developed.

ii) 'First Time Quality' with reduced development cycle time for new part development.

iii) Customer satisfaction and new business opportunities.

Critical Success factors and key enablers

Bharat Forge is considered to be a company with an entrepreneurial management team that understands the global industry well.

The following factors have played a key role in BFL's success in the process engineering industry in India and abroad:

Management Style & Leadership

Bharat Forge has emerged as one of India's growing business house by adopting sound management practices, adopting innovative technology, right strategic initiative at the right time and promoting employee engagement with the organization beside sound financial background.

The firm was formed to serve two somewhat disparate markets -- diesel engines used by farmers for irrigation and a nascent domestic auto industry - mainly buses and trucks as the passenger car market was very small in those days. At any rate, both irrigation and automobiles required engines, and engines required parts. Bharat Forge arranged for technical assistance from a firm in Cleveland, Ohio. It helped that the Kalyanis had close family ties with some of the region's leading industrial houses. Two of them, the Kirloskars and Tatas, ended up being among Bharat Forge's first customers.

Baba Kalyani is considered an outstanding leader- ambitious, but also an outstanding technical person with a very deep knowledge of tool design. He's been the key factor in increasing productivity going against the grain. They are able to get the most out of their machines instead of using labor costs for competitive advantage.

Well-timed risks

For Bharat Forge the decades from the 1960s to the 1980s was a time of consolidation within India's protected domestic market. It focused on technology and quality and carved out a reputation for reliability. Then in 1988, not long before India embarked upon economic reforms, Bharat Forge decided to take a big gamble: realizing that it was not possible to achieve economies of scale with a relatively low-technology and low-skilled workforce, it invested one billion rupees (at the time, turnover was only 1.5 billion rupees) in a sophisticated German-engineered plant.

Along with the investment in technology came an upgrade of manpower. Traditionally, Bharat Forge, like other Indian firms, had employed a poorly educated workforce often virtually indistinguishable from farm labor. Now it began the process of replacing them with the kind of educated workers who would be able to make the most of the new technology. Through a combination of attractive severance packages and attrition a third of the firm's 1,800-strong workforce was replaced. By the time the transition was completed, a largely blue-collar factory floor had become largely white collar.

HR Practices

Today, Bharat Forge employs about 6500 people, but 80% of them are college graduates and a third are engineers. The company has a highly qualified and motivated, engineering talent pool. The company gives utmost importance to HR practices and believes that people are its greatest asset and they must be continuously nurtured to retain leadership position.

In tune with this philosophy, Bharat Forge undertakes several training & development initiatives for the overall growth of its workforce significant amongst which has been the MoU it has signed with BITS Pilani. The other unique training initiatives include a Post Graduation in Manufacturing Management in collaboration with University of Warwick, U. K.; an M Tech. programme with IIT Mumbai tailored to suit

BFL's requirements with a view to promote Research & Development. BFL provides focused training to fresh ITIs through Apprentice Shop and on-going Talent Pipeline Program for fresh engineers from colleges in rural areas.

State-of-art, global scale facilities

BFL's global dual-shore manufacturing capability coupled with its use of world class technology has played a significant role in the company's growth. Dual shore manufacturing capability means that the company can supply all components to a client from two plants -- one in India as well as one closer to the client. The plants in the U.S. and Europe reduce supply chain risks while the flagship plant in India -- with economies of scale and relatively low-cost skilled labor -- helps keep costs down. Bharat Forge's overseas operations currently account for about 40% of turnover, and the company expects this to rise to 50% over the next few years.

Bharat Forge has a full service supply capability including Centres of Excellence in Europe and India for product development, design & engineering. It has state of the art, global Die & Tool Manufacturing facility, state of the art Global Forging & Machining Facilities and a Product Testing & Product Validation Facility. The company has the largest single location capacity worldwide.

These extensive resources combined with dedication to the highest professional standards enable BFL to support a wide range of their client's business needs.

BFL has a wide product profile across Auto & Non Auto segments and comprehensive CAD/CAM/CAE and product development capability.

Marketing

BFL is known to have the best 'Speed to Market' in the industry. The company also has the fastest product development time of around three weeks as compared to six months to one year taken by other manufacturers.

Export Orientation

Bharat Forge's new high-tech plant was already up and running when, in 1996, a sharp downturn in the domestic market forced it to look outwards more aggressively. The industry was fragmented worldwide; had it been dominated by a few big players it would have effectively shut out smaller ones. It was engineering intensive: skilled manpower mattered more than in labor-intensive industries such as shoes and textiles. Global auto companies were spread out across the world, which made them open to sourcing parts from a wide array of suppliers. Finally, in a capital-intensive and highly competitive industry, outsourcing to reliable high quality suppliers rather than investing the company's own resources began to make more and more sense. Between 1997 and 2005 Bharat Forge's exports grew more than seven-fold from $16 million to $117 million.

Cost Efficiency

The company has optimized its processes leading to lean manufacturing combined with state-of-the-art technology which gives it a cost edge.

R&D

BFL focuses on R&D with a view to:

- Develop new products
- Develop new processes
- Improve existing production processes
- Conservation of energy
- Pollution Control
- Achieve import substitution

Global 'De-Risking' - Growth and Acquisition Strategy

For years, nearly all of BFL's revenues came from India. So when the domestic auto sector began skidding in the mid-1990s, the company went overseas with a vengeance, ramping up its exports and its international deal making. It helped that the global forging industry was fragmented with many small players, making it easier for Bharat Forge to acquire companies outside India and build market share.

Since 2000, the company has spent nearly US$100 million buying firms in Europe and the U.S. More recently, Bharat Forge's export strategy has been coupled with a series of overseas acquisitions. In the last two years alone it has snapped up five small foreign companies. In 2005, it bought Sweden's Imatra Forging, Europe's largest manufacturer of front axels, for an estimated $57.5 million. In 2004 it bought German firm CDP Aluminiumtechnik for €6.3 million. The 2003 acquisition of Carl Dan Peddinghaus for £29 million gave Bharat Forge an infusion of new technology and access to customers such as BMW and Volkswagen. At present, Bharat Forge owns eight plants -- two in India, three in Germany and one each in Sweden, Scotland and the U.S. In addition, a new joint venture with FAW (formerly First Automotive Works) in China commenced production in March 2006. It gives Bharat Forge access to the Chinese market, which is four times larger than India's.

The acquisitions strategy is meant to bolster what the company calls its "dual-shore supply model." Today, operations in Europe contribute to more than 40% of overall company revenues, and the U.S. operations contribute 27%. Without the international acquisitions, Kalyani notes, it would have been "tough" to grow the company's market share and maintain an industry-leading position.

Challenges

- Bharat Forge considers lack of infrastructure and education in India as two of its major challenges. Compared to China, India's infrastructure -- power, roads, ports and airports -- is very poor. Firms like Bharat Forge have found ways around it. Nearly half of its power, for example, is generated in-house, but it can't do everything itself. The roads network is still under-developed, and the turnaround time at ports is sluggish compared to the hyper-efficiency of Hong Kong and Singapore.
- Companies like Bharat Forge need highly skilled manpower in a country where most manpower is not skilled. The deficiencies in Indian education system will lead to demand for technically skilled manpower outstripping supply. Some of the Indian technical institutes still use technology that's 30 or 40 years old. Factors that make India uncompetitive like power, transaction costs and tariffs also create competitive difficulties for companies like Bharat Forge. As an example, in India, firms pay higher duties on steel than on forgings. And though the heavy hand of government in business has lightened since liberalization, it shows no sign of disappearing and a plethora of arcane regulations are still faced by Indian businesses.
- High inflation and interest rates are impacting Bharat Forge as they are affecting growth in India
- Rising commodity prices, especially of raw material and energy - For BFL, not only does this have a negative macro effect of demand contraction due to worsening consumer and business sentiments, but also increasing costs of key raw materials like steel and fuel.
- The economic downturn that began in 2008 has pummeled the auto sector. According to Bharat Forge, the order books of original equipment manufacturers around the world contracted between 40% and 70% over the past year as car sales plunged and top customers, like General Motors and Chrysler, hit a wall. While things are now looking up, the company still needs to maintain its focus on reducing costs and streamlining processes. To that end, the company has been squeezing working capital, improving inventory management and removing operational bottlenecks to increase the productivity of its 6,500 employees worldwide. Engineers have begun using lightweight material to redesign crankshafts, reducing costs by 10%. To help save energy costs, a batch of crankshafts is now forged every 36 seconds, compared with 48 seconds earlier. Management, meanwhile, has taken salary cuts, and staff on the shop floor are doubling up on duties.
- Bharat Forge is now looking at moulding itself into what it calls a components business addressing automotive and industrial sectors & capital goods business, focused on the power sector. The company plans to diversify into many other sectors ranging from aerospace, oil and gas to railways, marine, power (thermal, wind and nuclear), construction and mining. While there is a "huge potential" in each of the company's new businesses the company's success depends on how well and how quickly Bharat Forge can master the new capabilities and get the right technology. The company will have to learn how to run a diversified venture, which can

"distract management time. A big challenge will be to revamp existing systems so that they meet the needs of a larger, and potentially very different, company. Sales and marketing strategies need overhauling, as do supply chains, distribution and sales channels and all kinds of processes that will keep the company running while it undergoes change.

- Changing the company culture to adjust to the global diversification will be a daunting challenge for the company since BFL sees itself first and foremost as a forging company. In any case, it is tough to leverage competitive strengths in unrelated sectors and diversification is always risky.

Future plans

- At present, India only exports about $1.8 billion in auto parts each year. Countries such as Mexico, Canada and Japan export between $25-35 billion. Analysts expect the global outsourcing in auto parts pie to keep growing -- from $110 billion in 2005 to $700 billion in 2015. The opportunities are vast. India's auto component exports have been growing at 25% annually, and have the potential to grow 15- or 20-fold over this period. To get there, firms like Bharat Forge will need to keep on performing. The company is expanding automotive manufacturing capacity by setting up a press line which is expected to be operational by April 2012. In addition, with the growing demand for machined products, there was a need to augment machining capacity. Consequently, investments have been committed to enhance machining capacity. The first step is to increase machining capacity from about 880,000 crankshafts to 1.2 million crankshafts annually. This capacity expansion requires investment of around Rs. 3,000 million in a phased manner over the next 2 years. BFL intends to further grow and consolidate its position by increasing customer base and penetrating deeper into global markets through its Indian and overseas operations.
- Bharat Forge's non-auto business, which accounted for slightly more than 20% of the company's revenues in the last fiscal year ended March 31, 2009, is projected to grow to 40% of revenues by 2012 and 75% by 2015. The company has started extending its business domain to aerospace, oil and gas to railways, marine, power (thermal, wind and nuclear), construction and mining. Its customer base has increased from less than 15 in FY2006 to over 30 in FY2011. In this way, BFL has significantly increased its potential market size. Diversification at Bharat Forge can work for two reasons, experts point out. The first has to do with the sectors that it has chosen to enter. Unlike auto making, these sectors are growing rapidly and are crying out for investments, not to mention suppliers. Electrical power is a case in point. Another reason is that Bharat Forge is using joint ventures -- such as the one with Alstom -- to get a toehold in new sectors and gain the technical know-how it lacks. Last June, for example, the company joined forces with India's top power generation company -- National Thermal Power Corp. -- to set up a greenfield facility to make castings, forgings, fittings and high pressure pipes for the power sector and others.
- For international joint venture partners, it's not just Bharat Forge's metallurgical expertise that makes it so attractive. The company's Indian roots are also helpful, particularly in sectors such as

nuclear energy, which is in the process of being opened up to private-sector firms for development. France's Areva, the world's largest supplier of nuclear reactors, is another new Bharat Forge partner. As part of one agreement, Bharat Forge will soon be making nuclear forgings at an industrial complex in India, and in another, the two companies will jointly manufacture pressurized heavy water reactors in a Rs. 1 billion (US$22 million) investment, according to a report in October by business news site Livemint.com.

- Meanwhile, U.S. companies -- which require permission from their government before entering into deals to develop nuclear energy in other countries -- are laying the groundwork for their entry into India. TendersInfo, an India-based research and consulting firm, reports that GE-Hitachi, for example, has plans for a 10,000 MW nuclear power plant in India and is in talks with a number of Indian companies, including Bharat Forge, to manufacture equipment for the plants.
- Construction is on in full swing to build a state-of-the art plant spanning 120 acres at the SEZ in Mundra, in Gujarat. It will be India's largest integrated facility for the production of turbine, generators and auxiliaries, with a total annual manufacturing capacity of 5,000 MW of turbine generators. The estimated total investment is around Rs. 17,000 million.
- Now, the question is whether Bharat Forge can achieve in other sectors what it has in auto parts. It already has two new dedicated plants to manufacture parts for customers in other sectors -- in Pune and Baramati

Case Study - Crompton Greaves

Corporate Profile of Crompton Greaves

Industry Name	Process Engineering
Year Of Incorporation	1937
Regd. Office:	
Address	C G House, 6th Floor,,Dr. Annie Besant Road,
District	Mumbai
State	Maharashtra
Pin Code	400030
Tel. No.	022-24237777 022-24237805
Fax No.	022-24237788 022-24237733
Email : investorservices@cgl.co.in	**Internet** : http://www.cgglobal.com
Auditors	Sharp and Tannan
Company Logo	

Background

Crompton Greaves (CG) is part of the dollar 3 millions Avantha Group, a conglomerate with an impressive global footprint. With a global turnover in excess of US$ 2 billion, Crompton Greaves Limited ('CG') has manufacturing facilities in Belgium, Canada, Hungary, Indonesia, Ireland, France, the UK, the USA, in addition to over 14 manufacturing and design locations in India. Employing 8700 people from different nations across the world, CG is a multi-national, multicultural, multi-product and multi-services company. It is diversified and differentiated, yet bound by the desire for customer delight and best-in-class global excellence.

Very few companies in the world can claim ten consecutive years of sequential growth — in sales, income, EBIDTA, EBIT, PBT and PAT. CG's top-line has been growing at a compound annual rate of 23% over ten years; and its debt-equity ratio is 0.14:1.

The origins of CG can be traced back to the pioneering work of Colonel REB Crompton, who, in 1878 founded a business at Chelmsford, Essex, England under the name of REB Crompton & Co., to engage in the manufacture and contracting of electrical equipment. Since its inception CG has been synonymous with electricity, in 1875 a Crompton 'dynamo' powered the world's very fast electricity-lit house in Colchester, Essex UK

REB Crompton & Co. merged with F&A Parkinson Limited, thereby establishing Crompton Parkinson Limited (CPL) in England. In 1937, CPL established its wholly owned Indian subsidiary 'Crompton Parkinson Works Ltd.', in Mumbai, along with a sales organization, 'Greaves Cotton & Crompton Parkinson Ltd.'

In 1947, with the dawn of the independence of India, the Company was taken over by Lala Karamchand Thapar, an eminent Indian industrialist who formed the Thapar Group. In 1966, Crompton Parkinson Works Ltd and Greaves Cotton & Crompton Parkinson Ltd. merged to create Crompton Greaves Limited (CG) in its present form.

In the 1960s, CG took its initial steps to revolutionize its portfolio, which till then comprised only motors and consumer products. It took a major leap in the electrical engineering segment, through the acquisition of transformer technology from Westinghouse Electric Corporation of USA, for manufacture of 400 kV transformers and aluminum wound transformers. This was followed by further expansion in the switchgear, vacuum interrupter and allied businesses. Its diverse portfolio now ranges from transformers, switchgear, circuit breakers, network protection & control gear, pumps and consumer appliances project engineering. HT and LT motors, drives, lighting, fans, and turnkey solutions in all these areas.

By 2005, the Company had emerged as one of the leading companies in the electrical engineering domain of India, in its three business areas of Power Systems, Industrial Systems and Consumer Products; and a serious contender in the global arena.

1. Power System includes transformers, switchgear, circuit breakers, vacuum interrupters, network protection & control gear, as well as design, execution and servicing of turnkey T&D as well as substation projects and solutions. This is the largest business which is now well entrenched throughout the world. It is a high value, high turnover business with a strong global footprint, contributing to approx 70 per cent of CG's consolidated revenue. The facilities are located in Belgium, Canada, Hungary, India, Indonesia, Ireland, France, UK and USA.

2. Industrial Systems is engaged in the business of power conversion equipment; a wider spectrum of High and Low Voltage rotating machines (motors and alternators), stampings, as well as railway transportation and signaling products. Industrial Systems is largely India focused with a very strong market presence and market leadership position in many segments. It also caters to foreign markets through its facilities in Hungary and exports. Its product portfolio includes motors and generators ranging from 100W to 100MW. CG enjoys a market leadership for AC Motors and the second position in AC Generators and DC Motors in India. CG is the largest manufacturer of Low Tension motors in India offering a range of AC and DC motors. To ensure the highest levels of customer

satisfaction, the latest designs have been incorporated for its range of product offerings, to achieve better performance as well as versatility in mechanical features. The products of this business have received many international certifications including CSA, UL, CE and Flame Proof Gas Group IIA and IIB certifications. The customer emphasis for this business group has been the textile, cement, sponge iron and large steel plants sectors, which are growing segments

3. Consumer Products it is one of the fastest growing business of CG. The company manufacture and market a spectrum of products ranging from fans, light sources and luminaries, pumps and household electrical appliances such as geysers, mixer grinders, toasters, irons and electric lanterns. CG enjoys substantial brand presence and goodwill in India.

Since 2005, CG has embarked upon an ambitious globalization strategy, growing both organically and inorganically

CG established its international manufacturing footprint in the year 2005 by acquisition of the Belgium based Pauwels Group, which gave CG additional manufacturing facilities for Power and Distribution transformers at Belgium, Ireland, USA, Canada and Indonesia. This was followed with a series of successful acquisitions - Ganz, Hungary in 2006; Microsol, Ireland in 2007; Sonomatra, France; MSE, USA in 2008 and PTS, UK in 2010 in its quest to establish a technology edge, increase its global market reach and enhance the product portfolio. The business domains of the new companies that joined the CG family, has charted the way for CG becoming a "full solutions provider" which has carved out for CG a position as a serious international player and a recognized transnational corporation.

Initially, CG`s foreign acquisitions operated their respective businesses under their individual brand names. To integrate these new entrants into the CG family, the first step was integration of processes, systems and technologies across all the acquired companies worldwide. The next step was to articulate the one single idea that provided a common thread through all the CG Group companies. The shared philosophy of all the companies - their core strength is the value they place on relationships, and the ability to provide solutions, which, in turn, strengthen these relationships. This realisation and initiative gave birth to CG`s new Brand Identity which was launched on 15th October, 2009, succinctly conveying this shared philosophy.

Whilst the Company`s name in India will continue to be Crompton Greaves, the names of all the foreign companies in the CG family start with "CG", thus establishing their lineage and uniting every company in the CG family with a common face to the internal as well as the external world, globally.

Today CG is India’s largest private sector enterprise. It has diversified extensively and is engaged in designing, manufacturing and marketing, technologically advanced electrical products and services related to power generation, transmission and distribution besides executing turn key projects. The company is customer centric in its focus and is the single largest source for a wide variety of electrical equipments and products. CG is fast emerging as a first choice global supplier for high quality electrical equipments.

CG has been aggressively investing in R&D, product certifications, product quality, productivity enhancement and operational excellence. CG`s Global R&D centre, located in India, has been recognised for its innovation and received the prestigious "National Award for the Best R&D Efforts" for its outstanding achievements in the Electrical Engineering

Sector in 2008. CG`s R&D strategy aligns with the Company`s Global Vision, and focuses on creating platform technologies, shrinking product development cycle time and enhancing CG's Intellectual Property capital.

Some facts about CG:

- CG is a public listed company, amongst the "A" (premier) category of listings on the Bombay and National Stock Exchanges of India and its GDRs are listed on the London Stock Exchange, with over 70,000 shareholders.
- Crompton Greaves is headquartered in self owned landmark building at Worli, Mumbai.
- CG is a Department of Scientific & Industrial Research (DSIR) recognised company for its role in R&D achievement.
- CG has manufacturing bases in Belgium, Canada, Hungary, Indonesia, Ireland, France, UK and US,
- CG has more than twenty manufacturing locations in India,
- The company employs more than 8000 employees worldwide with diverse nationalities and cultures.
- The company has worldwide marketing network of more than 150 representatives across the globe, offering the entire range of CG's products, solutions and services.
- CG spends considerable amount of funds in its R&D activities.
- CG was awarded the Business Excellence Prize, 2010 by the Confederation of Indian Industry (CII), a recognition received by very few companies in India.
- CG was awarded 'Annual Intellectual Property Award 2010-11' for securing the highest number of design registrations during the last five years.
- Annual survey of India's Most Valuable Brands by Brand Finance, in partnership with The Economic Times, placed CG as the 34th Most Valued Corporate Brand in India, with a brand value calculated at US$541 million.
- The Boston Consulting Group has, for the third time, included CG in its list of 100 New Global Challengers, which are the rising stars from rapidly developing economies and are reshaping global industries.

Sources:

1. http://www.cgglobal.com/
2. http://www.moneycontrol.com/company-facts/cromptongreaves

Chronological history

1937

The Company was incorporated on 28th April, as a private Limited company under the name, The Cromption Parkinson (Works) Ltd. The main objects of the Company were manufacture, distribution and sales, installation and servicing of electrical and allied equipment such as industrial motors, fractional horse power motors, control gear, power and distribution transformers, alternators, switchgear, tap changers, etc.

The Company also undertook the manufacture of railway equipments as well as electronic equipment and micro processor based systems in relation to communication, measurement, testing, automation and control, computers and also Research & Development and consultancy assignments in the areas of science and technology.

The Company had also undertaken manufacture and marketing of industrial electronics, consumer electronics, household appliances and railway signalling equipment.

Greaves Cotton & Cromption Parkinson Ltd., Mumbai (a company incorporated on 7th June, 1937) was a private company with the main objects of distribution and sale, installation and servicing of electrical and allied equipment

1947

It was a wholly owned subsidiary of Crompton Parkinson Ltd., England during the year.

1966

Greaves Cotton & Cromption Parkinson Ltd., Mumbai was amalgamated with the Company from 1st January, by an order of the Mumbai High Court dated 18th July.
After the amalgamation of GCCP, the Company's name was changed on 2nd August from Cromption Parkinson (Works) Ltd., to Cromption Greaves Ltd.

1975

The company had only one other technical collaboration agreement with Hitachi Ltd., Japan for the manufacture of moulded case circuit breakers, which was since expired

1978

It entered into various technical collaboration agreements with several renowned manufacturers from U.S.A., U.K., Europe and Japan.

It entered into technical collaboration agreement with Westinghouse Electric Corporation, U.S.A., for the manufacture of 400 KV transformers, aluminium wound transformers and high voltage vacuum interrupters, with Brush Electricals Ltd., U.K., for alternators, with Hawker Siddeley Power Transformers of U.K., for medium range on-load tap changers, with Emile Haefely, Switzerland, for current and potential transformers and condenser bushings, with Hundt & Weber, West Germany, for air circuit breakers, with Westinghouse Brake & Signals, U.K., for signaling relays and mosaic panels with Siemens AG, for push button electronic telephone instruments, with Hitachi Ltd., Japan, for motors and contractors and relays with Mitsubishi Electric Corporation, Japan, for SF6 gas circuit breakers with NEI Reyrolle, France, for auto recloser, with Power Conversion Inc., U.S.A., for lithium batteries and with Sekar Enterprises, U.S.A., for polymer concrete insulation.

1981

Kerala Electric Lamp Works Ltd. (formerly Toshiba Anand Lamps Ltd.,) became a subsidiary of the Company.

1986

The company jointly with the Punjab state Industrial Development Corporation Ltd., promoted another company under the name Punjab Power Generation Machines Ltd., for the manufacture of hydro turbines upto 20 MW in Punjab.

1987

An up-to-date plant for the manufacture of vacuum interrupters was commissioned at Aurangabad.

An up-to-date plant for the manufacture of industrial electronic items and a project for the manufacture of signalling systems commissioned at Nasik and an instrument relays project commissioned at Pithampur.

The diversification projects under implementation were fluid purifiers at Aurangabad, rural automatic exchange and line transmission equipment at Bangalore, transformers and reactors at Malanpur near Gwalior, and a software development centre at Mumbai and Bangalore.

The Company developed and introduced 33 KV SF6 breakers, local transformers and hydro generators.

A new R&D laboratory in the field of illumination added to the existing laboratories in the areas of power electronics, telecommunication and manufacturing engineering.

Goa Telematics Ltd., another company promoted jointly with Economic Development Corporation of Goa set up in Goa for the manufacture of moderns, data communication terminals, etc.

A new company under the name of CG-PPI Adhesive Products Ltd., jointly promoted with PI Adhesive Products Ltd., Ireland was set up in Goa for the manufacture of adhesive tapes for electrical and electronics application.

1988

The company developed and introduced supervisory control and data acquisition and programmable logical controllers.

The company commissioned under joint venture, plants for the manufacture of telematics at Goa and television receivers at Pithampur.

1989

The R&D wing progressed in developing and introducing new products such as magnetic amplifier transistorised AC drive, production line impulse tests, electronic chopper for fork lift truck and energy efficient ceiling fans.

1990

The rural telecommunication unit at Bangalore, the Transformers unit at Malanpur and M.P. and vacuum fluid purifier plant at Aurangabad were commissioned.

Fresh Collaboration agreements were entered into with Kato Electric Manufacturing Co., Ltd., Japan, for fluid purifiers, with Westinghouse Brake & Signals Holdings Ltd., U.K., for point machines and with Hitachi Ltd., Japan for lighting arresters.

New products developed and introduced by the R&D wing were new telephones such as feature phones, slim-line uninterruptible power supply of computers, automatic test systems for motors, MODCMS and data communication terminal 12 KV SF6 capacitor Switch and MCCR with Type C Co-ordination.

The adhesive tapes project at Goa and the turbine project at Punjab were implemented. A joint venture company under the name of CG-Teltec Ltd., with foreign equity participation was promoted by CG and Teltec of Denmark for the manufacture of radio communication equipment at Bangalore.

Another joint venture company was promoted

under the name of CG-Newage Electrical Ltd., with foreign equity participation from Newage International Ltd., U.K., for the manufacture of electric motors, generators and control systems thereof at Ahmednagar for the manufacture of motors and alternators was commissioned in May 1992.

Kerala Electric Lamp Works Ltd. (KELW) was amalgamated with the company with effect from 1st April. In terms of the Scheme of Amalgamation, the shareholders of KELW were to be issued 264 No. of equity shares of Rs 100 each of the Company in the proportion of one share of the Company for every 50 fully paid-up equity share of Rs 10 each of KELW

1991

The R&D wing progressed in developing new products such as automatic test systems for motors and transformers, impulse test systems, high performance polyurethane paint, ESMAP-2P, software for FEA of electrical products and computer graphic cards, such as CHROMA and an extended range of transistorized microprocessor-based AC drives.

1992

A joint venture project for manufacture of electric meters at Gurgaon and Company's plant for manufacture of lithium Batteries at Goa were commissioned.

The R&D unit developed new products like DC/AC current sensor and mixed dielectric insulation system for 220 KV coupling capacitors.

1993

A joint venture projects for manufacture micro motors at EPZ, Chennai and another for manufacture of solid state energy meters at Gurgaon, Haryana were commissioned. A joint venture unit for electronic battery chargers, a 100% export oriented unit at Chennai, was launched.

1994

A joint venture project for manufacture of medium voltage Ring main units at Nasik was commissioned. The Stampings factory at Mumbai launched the non silicon range of electrical steel stampings.

The Company submitted its bid to DOT for provision of Cellular services in seven circles in association with Millicons of Luxemburg.

A Company CG Communication Pvt. Ltd., was promoted to provide cellular mobile telephone services in the telecom services in India.

The Company undertook to invest 60% in CG Graphnet Pvt. Ltd., a Company formed for selling up a network for offering a diverse range of data and message handling services like E-Mail, Enhanced fax and other value added services.

It was also proposed to invest upto 40.5% in the share capital of Skycell Communications Pvt. Ltd., a company formed for providing cellular communication services.

The Company has established a well equipped electricals (LV) and an electronics laboratory at its Kanjur Complex, an Engineering laboratory and an EHV laboratory at Ambad, Nasik and an illumination engineering laboratory at Worli.

The Central R&D Laboratory set up at Kanjur was recognized by the Department of Science & Technology of the Government Of India.

New products such as electronic speed governor for hydel and steam turbines, Co-generation packages for the sugar industry for own use and to feed any surplus power into the grid, solid state inter locking for railway yards, block multiplexes for date communication for railway signalling, upgradation of soft stenters and transformer technology absorption of AVS controller from Powertec, USA, microprocessor based trip relay controllers for

air circuit breakers and micro processor based test measuring instruments were developed and introduced.

52,50,000 of Rs 10 each at a premium of Rs 200 per share allotted on private placement basis to FIIs.

1995

A modern transformer factory with the latest manufacturing equipment was set up at Bhopal with a present installed capacity of 5000 MVA per annum and capable of undertaking manufacture of 8000 KV or HDVC transformers in future. The transformer division also developed a 290 MVA, 220 KV class, 3 phase generator transformer, the largest 3 phase 220 KV class generator transformer in India.

Hind Condensor Ltd., Goa Telematics Ltd. (GTL) and Northern Digital Exchanges Ltd. (NODE) were amalgamated with the Company.

1996

The Company was restructured in four main business group viz. Power system, Industrial system, consumer products and Digital to ensure enhanced focus and effectiveness.

Indocom Industries Ltd., a 100% subsidiary of the company and Lumino Lamps Ltd. were amalgamated with the Company.

The Company accessed the international capital market with a GDR issue which was fully subscribed.

1997

The Kersons Manufacturing Company of India Ltd. (Kersons) and Goa Electricals and Fans Ltd. (GEFL) were amalgamated with the Company. Consequent to the amalgamation the company issued 1,11,030 and 4,792 shares to the shareholders of erstwhile GEFL and Kersons respectively.

Crompton Greaves, formed a joint venture with ELIN Energieversorgung (ELIN) of Austria to manufacture gas and steam turbine driven generators, up to 45 MVA capacity, and hydel generators.

Crompton Greaves Ltd., opens its Energy Conservation Cell at Chennai, New Delhi, Mumbai and Calcutta to help customers take on the soaring fuel prices.

The 50:50 joint venture between Thapar group company Crompton Greaves and Elin, Cg Elin power systems, would come up in Mandideep near Bhopal.

Crompton Greaves Power Systems group, one of the four Divisions of Crompton Greaves Ltd (CGL), has signed an MoU with Allied Signal Amorphous Metals to develop amorphous metal Transformers for the Indian and export markets.

NEC Corporation announced formation of a joint venture with Crompton Greaves Ltd, in Bangalore to manufacture microwave telecom systems, turning out such gadgets as very small aperture terminals and synchronous digital hierarchy microwave systems. Crompton will provide the technical knowhow and management support to the joint venture for which it will be paid fee and royalty on sales.

Goa Electricals and Fans Ltd. (GEFL), a joint sector company promoted by the Economic Development Corporation of Goa (EDC) and Crompton Greaves Ltd. (CGL), to be amalgamated with CGL under the provisions of the Sick Industrial Companies (Special Provision) Act, 1985.

Crompton Greeves-Powerware, the 49:51 joint venture between Crompton Greaves (CG) and the US-based Exide Electronics for the manufacture of UPS systems, to unveil its range of large UPS systems, in the 40-150 KVA range, in October.

Crompton Greaves joined hands with NEC of Japan to set up a joint venture for the manufacture of microwave radio equipment.

The US$ 800 million Austrian company Elin

initiated talks with Crompton Greaves to set up a new joint venture company in the power transmission and distribution sector

1998

CGL recently forged an alliance with Link Middle East Ltd. (LMEL) to form a 40:60 joint venture company, initially for the manufacture of medium voltage vacuum switchgear at Dubai.
Crompton Greaves in collaboration with Allied Electrical of the US to commence commercial production of newly developed transformer of higher rating.
CGPL became a wholly-owned subsidiary of CGL after the transfer of 110,000 equity shares held by Tamil Nadu Industrial Development Corporation to CGL in May.
Investment Information & Credit Rating Agency (ICRA) assigned an A1 rating to the Rs.150-crore short-term debt programme of Crompton Greaves Ltd (CGL). The rating indicates highest safety.

1999

PPGML, a company promoted by CGL and PSDIC in 1985 in Technical collaboration with Germany based Voest Alpine and Kossler, has facilities for manufacture of hydro-turbines upto 120 MW at Channo, Punjab.

Crompton Greaves Ltd. signed an MoU with Israel based Tadiran Telecommunications Ltd., for marketing and servicing Tadiran's Coral range of telecommunication product in the Indian subcontinent.
Crompton Greaves Ltd. (CGL) entered into a technical collaboration with Allied Signal Inc. for manufacturing Amorphous Metal Transformers (AMT).
The company also signed a four-year wage settlement with its employees at Nasik and Satpur.

2000

The Company entered into an agreement with Bharti Televentures Ltd., for the sale of its 40.5% shareholding in Skycell Communications Ltd. for a sum of approx. Rs 95 crores based on the enterprise value.
Gautam Thapar Managing director of Ballarpur Industries joined as Director in Crompton Greaves.
The informatics division of Crompton Greaves tied up with Remedy Corporation for consultation, implementation and Training of eCRM and eBusiness infrastructure solutions in India.
CGL signed an agreement with French company Schneider Electric for selling its low tension control gear business located in Nasik in Maharashtra.
CGL entered into an agreement for sale of its Low Tension Control Gear division located at Satpur, Nasik to Schneider Electric India Ltd for approximately Rs 76 crore.
The company hived off its joint venture subsidiary, Skycell Communication Ltd., for a total sale consideration of Rs 124 crore.
The Company introduced two new fan models called Gothica and Exotica

2001

The company launched indiawomenpower.com, a women specific portal, and a similar portal on tenders called tenderpower.com.

CG-Digital, a business unit of Crompton Greaves, launched a new range of digital and KTS/EPABX systems to suit varying needs of communication.

In a bid to reduce its manufacturing costs, the company bega importing electrical components from Chinese manufacturers for its consumer products division.

2002

Crompton Greaves Ltd informed BSE that the Company has divested its shareholding of 38% in CG Newage Electrical Ltd to Cummins India

Ltd at a price of Rs 220.50 per share

2003

Solaris Chemtech Ltd increased its holding in the company to 12.65 per cent after it acquired 9,50,000 shares from Greaves Ltd.

The company got approval for capital restructuring-according to which Rs 1520 million be utilised for adjustment against the balances in the following accounts as at March 31, 2003 and accretions/variations thereto during the period April 1, 2003 to July 31, 2003:

1. Miscellaneous Expenditure (to the extent not written off or adjusted)

2. Deferred Tax Asset and

3. Debit Balance in the Profit and Loss Account.

2004

Delisting of shares from Madras Stock Exchange
Crompton Greaves Ltd informed the exchange that the BoD at its meeting held on July 22, 2004, the Board approved the following changes in the company's BoD: Appointment of Gautam Thapar as Chairman. Resignation of Mr. KK Nohria as a Director. Both the above changes are effective from the conclusion of the AGM scheduled to be held on July 22, 2004
Crompton Greaves - Hitachi CG Motor Engg becomes a subsidiary of the Company

2005

Crompton Greaves keen on acquisitions in industrial systems

Crompton picking up stake in Belgian firm

2006

Crompton Greaves picks up Hungarian firms, to acquire stake in MCPPL and to establish presence in MP

2007

Crompton Greaves forayed into power distribution

CG to take over electricity supply in Nagpur, the second capital of Maharashtra, from January 2008.

2008

Crompton Greaves took over French firm

CG joined hand with Dutch company

CG to acquire MSE Power Systems and its group companies

CG won the Best Product Award & Certificate of Appreciation at Elecrama 2008 - 22/01/08

Crompton Greaves Ltd bagged the prestigious Greentech Gold Award 2007 in the Engineering Sector. This award was for Environmental Management systems for Green Products and Process Technologies developed at CG

2009

Acquisition of Sonomatra in France

CGL became the 1st Indian Company to make 1200 kV Power Product CVT)

Crompton Greaves got the Golden Peacock Innovative Product/Service Award- 2008

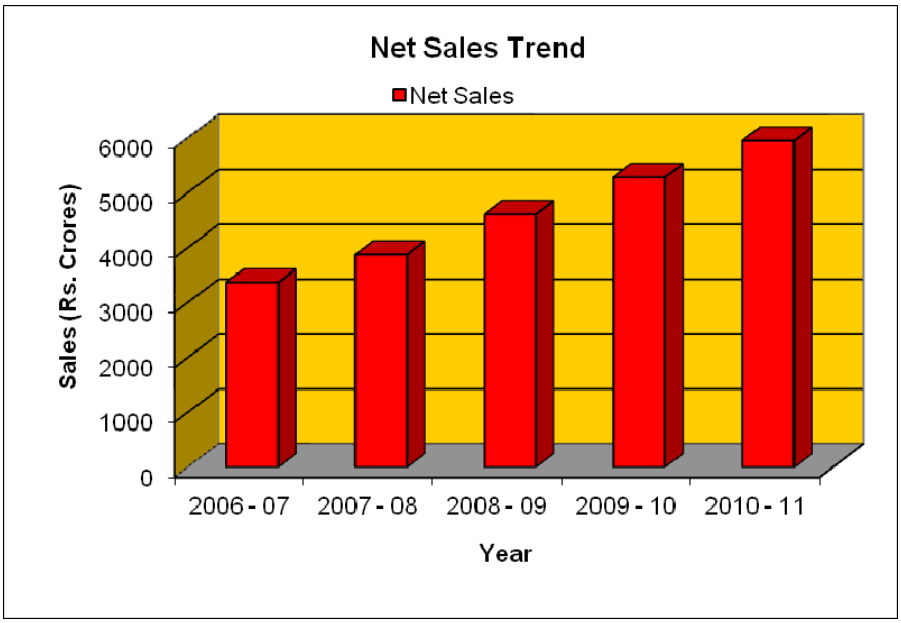
2010

CG enters into a JV with ZIV Aplicaciones y Tecnologia, S.L (ZIV)., headquartered in Spain, for establishing a JV Company in India, for the manufacture of Substation Automation Systems for Substations in EHV and UHV range, including protective relays, differential relays, bay control units, bus-bar systems, substation units, etc

Key Performance Indicators

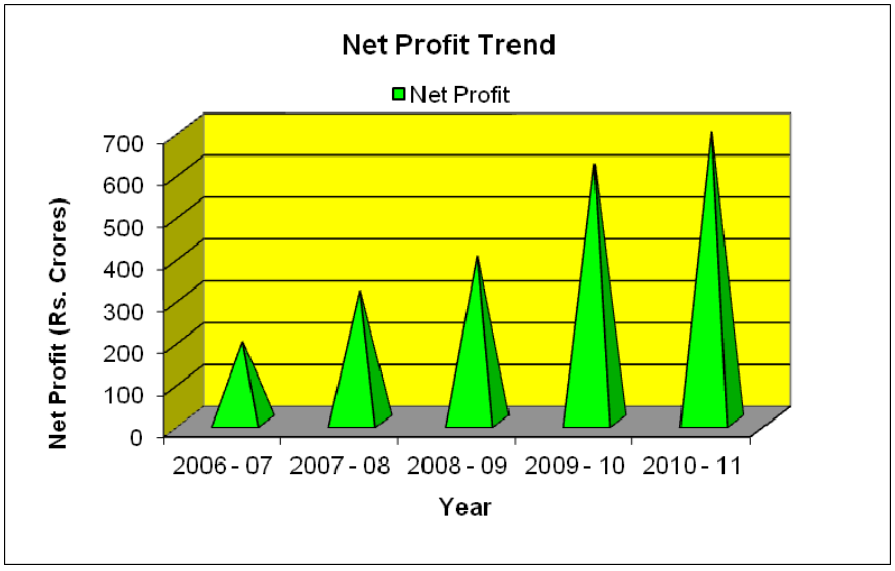
Consistent growth in turnover over the past five years

	Rs. in Crores
Year	**Net Sales**
2006 - 07	3368
2007 - 08	3876
2008 - 09	4611
2009 - 10	5284
2010 - 11	5951



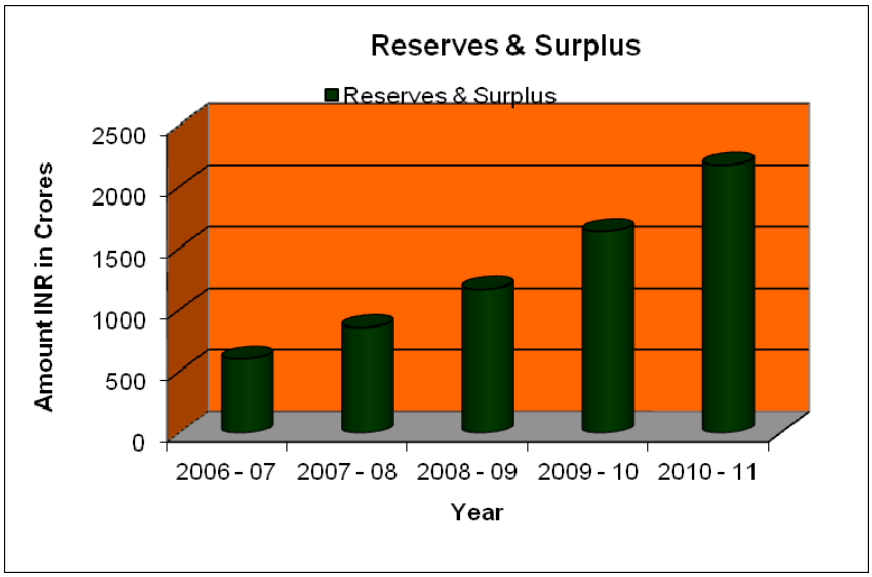
Consistent growth in net profit over the past five years

	Rs. in Crores
Year	**Net Profit**
2006 - 07	192
2007 - 08	314
2008 - 09	397
2009 - 10	617
2010 - 11	694



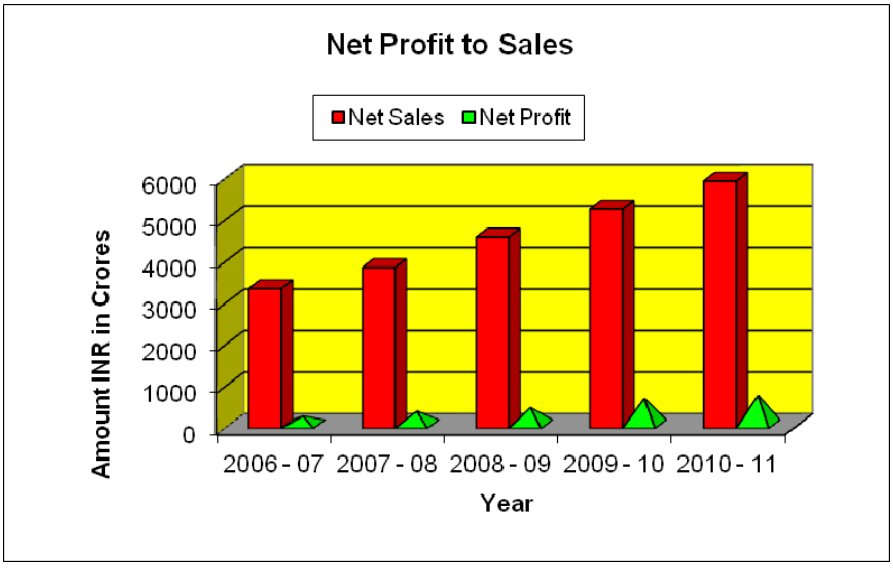
Consistent growth in reserves & surplus

	Rs. in Crores
Year	Reserves & Surplus
2006 - 07	601
2007 - 08	858
2008 - 09	1169
2009 - 10	1637
2010 - 11	2176



Consistent growth in proportion of net profit to sales

	Rs. in Crores	
Year	Net Sales	Net Profit
2006 - 07	3368	192
2007 - 08	3876	314
2008 - 09	4611	397
2009 - 10	5284	617
2010 - 11	5951	694



Financials

Crompton Greaves FY2010-11 Financials

Standalone Financials

- Sales Rs. 6356 crores, up 13.8%;
- Net Profit Rs. 694 crores, up 12%

STANDALONE FINANCIAL PERFORMANCE OF THE LAST 5 YEARS - in Rs. Crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	6356	5585	4,940	4,290	3,695
Gross Sales & Services	6277	5516	4,904	4,223	3,660
Net Sales & Services	5951	5284	4,611	3,876	3,368
EBIDTA	1012	927	674	553	377
PBT	927	870	614	486	307
PAT	694	617	397	314	192

Highlights of FY11 consolidated financials

- The consolidated net revenue of the Company during 2010-2011 grew by 9.5% at Rs.10,005 crore, as compared with Rs.9,141 crore the previous year.
- Consolidated profit before tax increased to Rs.1,229 crore, as compared with Rs.1,189 crore in the previous year, an increase of 3.4% over the previous year.
- Consolidated profit after tax (before minority interest, share of associate companies and extraordinary items) increased to Rs.919 crore as compared with Rs.824 crore in the previous year, an increase of 11.5 % over the previous year.
- Consolidated profit after tax (after minority interest, share of associate companies and extraordinary items) increased to Rs.889 crore compared with Rs.860 crore in the previous year, an increase of 3.3% over the previous year.
- The Company has succeeded in enhancing operating margins on account of productivity enhancements, upgradation of production facilities, R&D-led savings in raw material consumption, process technology improvements, global sourcing initiatives, better working capital management and a debt free financial structure.

FINANCIAL PERFORMANCE (CONSOLIDATED) - in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	10431	9469	9,090	7,247	6,039
Gross Sales & Services	10331	9376	9,031	7,181	5,934
Net Sales & Services	10005	9141	8,737	6,832	5,640
EBIDTA	1444	1371	1,054	811	588
PBT	1229	1189	867	615	436
PAT	889	860	560	407	282

Sources: http://www.moneycontrol.com/financials/cromptongreaves/profit-loss/CG#CG

Capital Structure

Capital Structure (Crompton Greaves)

Period		Instrument	Authorized Capital	Issued Capital	- P A I D U P -		
From	To		(Rs. cr)	(Rs. cr)	Shares (nos)	Face Value	Capital Rs. Cr.
2010	2011	Equity Share	276	128.31	641491536	2	128.3
2009	2010	Equity Share	260	128.31	641491536	2	128.3
2008	2009	Equity Share	125	73.32	366566592	2	73.31
2007	2008	Equity Share	125	73.31	366566592	2	73.31
2006	2007	Equity Share	125	73.32	366566592	2	73.31
2005	2006	Equity Share	60	52.38	52375116	10	52.38
2004	2005	Equity Share	60	52.37	52366656	10	52.37
2003	2004	Equity Share	60	52.38	52366656	10	52.37
2002	2003	Equity Share	60	52.38	52366656	10	52.37
2001	2002	Equity Share	60	52.38	52366656	10	52.37
2000	2001	Equity Share	60	52.38	52366656	10	52.37
1999	2000	Equity Share	60	52.38	52366656	10	52.37
1998	1999	Equity Share	60	52.16	52146611	10	52.15
1997	1998	Equity Share	60	52.16	52155071	10	52.16
1996	1997	Equity Share	60	52.04	52039249	10	52.04
1995	1996	Equity Share	60	45.39	45394133	10	45.39
1994	1995	Equity Share	60	44.28	44284800	10	44.28
1993	1994	Equity Share	60	39.03	39034800	10	39.03
1992	1993	Equity Share	60	60	2592264	100	25.92
1991	1992	Equity Share	30	19.2	1920264	100	19.2
1990	1991	Equity Share	30	19.2	1920000	100	19.2
1989	1990	Equity Share	20	19.2	1920000	100	19.2

1978	1979	Equity Share	10	9.6	960000	100	9.6
1973	1974	Equity Share	7.5	7.2	720000	100	7.2
1969	1970	Equity Share	4.8	4.8	480000	100	4.8
1968	1969	Equity Share	3	3	299890	100	3
1967	1968	Equity Share	3	3	300000	100	3

Source: http://www.moneycontrol.com/financials/cromptongreaves/capital-structure/CG#CG

Shareholding Pattern

CATEGORY OF SHAREHOLDER	NO. OF SHARE-HOLDERS	TOTAL NO. OF SHARES	TOTAL NO. OF SHARES HELD IN DEMATERIALIZED FORM	TOTAL SHAREHOLDING AS A % OF TOTAL NO. OF SHARES AS A % OF (A+B)	AS A % OF (A+B+C)	SHARES PLEDGED OR OTHERWISE ENCUMBERED NUMBER OF SHARES	AS A % OF TOTAL
(A) Shareholding of Promoter and Promoter Group							
(1) Indian							
Bodies Corporate	6	267,450,703	267,450,703	41.79	41.69	13,855,300	5.18
Sub Total	**6**	267,**450,703**	**267,450,703**	**41.79**	**41.69**	**13,855,300**	**5.18**
(2) Foreign							
Total shareholding of Promoter and Promoter Group (A)	**6**	**267,450,703**	**267,450,703**	**41.79**	**41.69**	**13,855,300**	**5.18**
(B) Public Shareholding							
(1) Institutions							
Mutual Funds / UTI	**29**	88,**002**,687	87,997,521	13.75	13.72	-	-
Financial Institutions / Banks	35	1,**489**,616	1,400,885	0.23	0.23	-	-
Central Government / State Government(s)	1	482	482	-	-	-	-
Insurance Companies	6	**49**,652,975	49,652,725	7.76	7.74	-	-
Foreign Institutional	.57	106,154,697	106,030,975	16.59	16.55	-	-

Investors							
Sub Total	228	245,**300,457**	245,**082,588**	**38.33**	**38.24**	-	-
(2) Non-Institutions							
Bodies Corporate	1,653	**57**,969,657	57,898,464	9.06	9.04	-	-
Individuals		-	-	-	-	-	-
Individual shareholders holding nominal share capital up to Rs. 1 lakh	130,013	50,**619**,932	43,269,262	7.91	7.89	-	-
Individual shareholders holding nominal share capital in excess of Rs. 1 lakh	57	7,758,370	7,544,975	1.21	1.21	-	-
Any Others (Specify)	3,675	10,820,608	10,673,221	1.69	1.69	-	-
Non Resident Indians	3,666	2,872,759	2,725,984	0.45	0.45	-	-
Overseas Corporate Bodies	4	102,821	102,209	0.02	0.02	-	-
Foreign Corporate Bodies	2	7,842,003	7,842,003	1.23	1.22	-	-
Foreign Nationals	3	3,025	3,025	-	-	-	-
Sub Total	**135,398**	127,**168,567**	**119**,385,**922**	**19.87**	**19.82**	-	-
Total Public shareholding (B)	**135,626**	**372,469,024**	**364,468,510**	**58.21**	**58.06**	-	-
Total (A)+(B)	**135,632**	**639,919,727**	**631,919,213**	**100.00**	**99.75**	**13,855,300**	**2.17**
(C) Shares held by Custodians & against which Depository Receipts have been issued-m	**-**	**-**	**-**	**-**	**-**	**-**	**-**
(1) Promoter and Promoter Group		-	-	-	-	-	-
(2) Public	1	1,**571**,809	1,571,809	-	0.25	-	-
Sub Total	**1**	**1,571,809**	**1,571,809**	-	**0.25**	-	-
Total (A)+(B)+(C)	**135,633**	**641,491,536**	**633,491,022**	**-**	**100.00**	**13,855,300**	**2.16**

Source: http://www.moneycontrol.com/company-facts/cromptongreaves/shareholding-pattern/CG#CG

Crompton Greaves Share Price Data vs. competitor companies as on 14-Feb-12

Company Name	Last Price	% Chg	52 wk High	52 wk Low	Market Cap (Rs. cr)
Siemens	791.05	-1.91	951.00	627.05	26,919.03
ABB	865.00	1.60	907.50	541.10	18,330.07
Crompton Greave	153.25	-2.70	297.00	107.15	9,830.86
Havells India	507.40	4.64	507.40	306.10	6,331.07
Techno Electric	252.00	-0.20	280.00	175.00	1,438.70
HBL Power	19.85	-6.15	24.35	12.20	502.21
Honda Siel	415.05	1.05	463.40	261.85	420.99
Bharat Bijlee	707.45	0.50	1,183.35	511.00	399.82
Numeric Powe	299.00	3.07	308.25	152.00	302.16
Emco	34.75	-0.14	71.50	27.40	226.35
Kirl Electric	36.10	0.56	57.60	25.50	182.38
Elpro Int	311.10	-4.28	503.00	270.55	143.47
Birla Power Sol	0.65	0.00	1.45	0.50	138.79
Modison Metals	40.00	1.14	49.95	24.40	129.80
Easun Reyrl	60.30	-0.08	97.90	47.20	125.44
Jyoti	63.95	6.58	104.50	44.35	109.54

Source: http://www.moneycontrol.com/stocks/top-companies-in-india/market-capitalisation-bse/electric-equipment.html

Corporate Governance

As a globally oriented company, CG is continuously focused in enhancing shareholder value through aligning its Corporate Governance framework and practices to international standards. Its Vision 2015 aims to create a sustainable growth pattern where growth subsumes building capabilities in qualitative growth enablers such as technology, quality, productivity, human resources & leadership, with high thresholds of governance in all its facets.

CG's Board of Directors consists pre-dominantly of Independent Directors and stands committed to the core principles of integrity and full disclosure. The Board of Directors currently consists of nine members, out of which seven are independent; and has constituted three Board committees to ensure Board oversight and governance.

The Board is composed of the following members:

Mr. Gautam Thapar

Non-executive Chairman

Mr. Gautam Thapar is Chairman & CEO of India's foremost diversified corporation, the Avantha Group. Mr. Thapar began his education at the prestigious Doon School, where he imbibed a liberal education. After studying chemical engineering in the U.S.A., he returned to India and started his career as a factory assistant in one of the organisation's manufacturing companies. He rose steadily and became Group Chairman on 1st July 2006. He sits on the boards of various companies in India and overseas. In 2008, he received the coveted Ernst & Young Entrepreneur of the Year Award for Manufacturing.

He has been appointed Board Member of the National Security Advisory Board, a key component of the National Security Council of India, the apex agency looking into the nation's political, economic, energy and strategic security concerns. He is President of Thapar University, one of the top twenty technical schools in India. He is Chairman of The Aspen Institute India, which aims to internationalize India's business, political and cultural leadership. He is President of All India Management Association (AIMA), the apex body of professional management in India. He also takes an avid interest in promoting the game of golf, and is President of the Professional Golf Tour of India (PGTI).

Sudhir M Trehan

Non-executive Vice Chairman

Sudhir Trehan is the Non-Executive Vice Chairman of the Board. Mr. Trehan was employed with CG for 28 years in various senior positions and was Managing Director from 3rd May 2000 to 1st June 2011. Under his leadership, CG transformed itself from a modest Indian company to a multinational, multi-cultural, multi-product and multi-services company with a manufacturing presence in 10 countries, with a place of pride amongst the top ten largest transformer manufacturers globally.

Mr. Trehan is a gold medalist engineering graduate from the renowned Birla Institute of Technology at Ranchi. He has completed his Post Graduate studies (M.S.) from the State University of New York, Stony Brook, USA.

Mr. Trehan was the recipient of the 'Business Standard CEO of the Year' Award for 2008-2009. He is also actively involved in various national industry forums like IEEMA, CII and AIMA. He is also Executive Chairman of Avantha Power & Infrastructure Limited, Member of the Avantha Management Board and Chairman of the Board of Governors of Thapar University. Mr. Trehan is also a Member of the Risk & Audit Committee of the Company.

Laurent Demortier

CEO and Managing Director

Laurent Demortier has been appointed as the CEO and Managing Director of CG from 2nd June 2011. Mr. Demortier holds an MBA from the prestigious Wharton School of the University of Pennsylvania, USA and a Masters Engineering Degree in Physics from Ecole Centrale Marseille, France.

Prior to joining CG, he was Senior Vice-President, of Alstom Power Sector, in-charge of the Power Automation and Control Business Unit. During his eleven years with Alstom, Mr. Demortier has spent eight years within Transmission and Distribution (T&D) and the last three years within the Power Business. Prior to Alstom, Mr. Demortier held several Senior Managerial positions with the Honeywell Group.

In his career spanning 25 years, Mr. Demortier has led divestment, integration, acquisition, turnaround and organic growth mandates across the Americas, Asia, Europe, Middle East and Africa, with considerable exposure to emerging markets.

Scott Bayman

Non-executive Independent Director

Mr. Bayman holds a Bachelor of Science degree in Business Administration from the University of Florida, USA, and a Master's degree in Management from the Alfred P Sloan School of Management, MIT, Massachusetts, USA.

During his 20-year career with the General Electric Company (GE), he has held several senior positions of responsibility, before being elevated to the status of Vice President, Worldwide Marketing and Product Management for GE Appliances. Thereafter, he was positioned as President and CEO of GE – India. He is a senior advisor to the Board of the US-India Business Council and is past Chairman of the American Chamber of Commerce, India.

Dr. Omkar Goswami

Non-executive Independent Director

Dr Goswami is also a Chairman Risk & Audit Committee and a member of the Remuneration Committee. Dr Goswami is the Founder and Executive Chairman of CERG Advisory Private Limited, a company engaged in corporate advisory and consulting services for companies in India and abroad.

Dr Goswami has taught and researched economics at various universities and has been associated as advisor to several government committees and international organisations like the World Bank, the OECD, the IMF and the ADB, during his career spanning more than 29 years. He has also served as Chief Economist with the Confederation of Indian Industry.

Sanjay Labroo

Non-executive Independent Director

Sanjay Labroo is also the Chairman of the Remuneration Committee of the Company and a Member of the Risk & Audit Committee, Mr. Labroo holds a dual Degree in Finance and Management from the Wharton Business School, USA. Mr. Labroo is the founding Managing Director & CEO of Asahi India Glass Limited (AIS).

Mr. Labroo has been nominated by the Government of India as a Director on the Central Board of the Reserve Bank of India. He is also associated with various Trade Organisations and Chambers of Commerce. Mr. Labroo is currently a Member of the Executive Committee of the Auto Components Manufacturers' Association and a Member of the Managing Committee of the All India Flat Glass Manufacturers' Association.

Suresh Prabhu

Non-executive Independent Director

Suresh Prabhu is also a Member of the Risk & Audit Committee. Mr. Prabhu is a Chartered Accountant with a Degree in Law; and has also been conferred an Honorary Doctorate by the International Forestry Resources and Institutions. An ex Union Cabinet Minister of Power, Industry, Energy, Environment & Forests, Chemicals & Fertilizers, Heavy Industry and Public Enterprises, and a Member of Parliament from 1996 till 2009, Mr. Prabhu has left an indelible mark on Indian politics and an impeccable reputation as a performing minister.

Mr. Prabhu has also led, and represented India in several Bilateral, International summits and Parliamentary forums, such as G8+5, EU-Asia, World Water Forum, UNESCO, GLOBE and Parliamentary Network of World Bank, India-USA, India-Japan and India-Germany strategic dialogues. Mr. Prabhu currently chairs the Global Water Partnership (South Asia) and is a member of the United Nations Commission for biodiversity and land use change. He is also a Senior Advisor to the UN.

Meher Pudumjee

Non-executive Independent Director

Ms Pudumjee holds a Master's Degree in Chemical Engineering from the Imperial College of Science & Technology, London; and, is the Chairperson of Thermax Ltd, a company focused in the business of providing solutions for energy and environment management. Ms Pudumjee played an active role in the turnaround of Thermax in 2002, divesting non-core businesses and restructuring business portfolios.

Satya Pal Talwar

Non-executive Independent Director

Mr. Talwar has 40-years of experience in operational and policy formation in Commercial and Central Banking. He was the Deputy Governor of the Reserve Bank of India. Mr. Talwar holds a degree in Law, is a Certified Associate of the Indian Institute of Bankers and a member of the Indian Council of Arbitration. He has held several eminent positions such as Chairman, Indian Banks Association,

Chairman and Managing Director of three nationalised banks and has also served on the Boards of the Securities and Exchange Board of India, banks, insurance companies and financial corporations in India and abroad. He is also a Member of the Risk & Audit Committee.

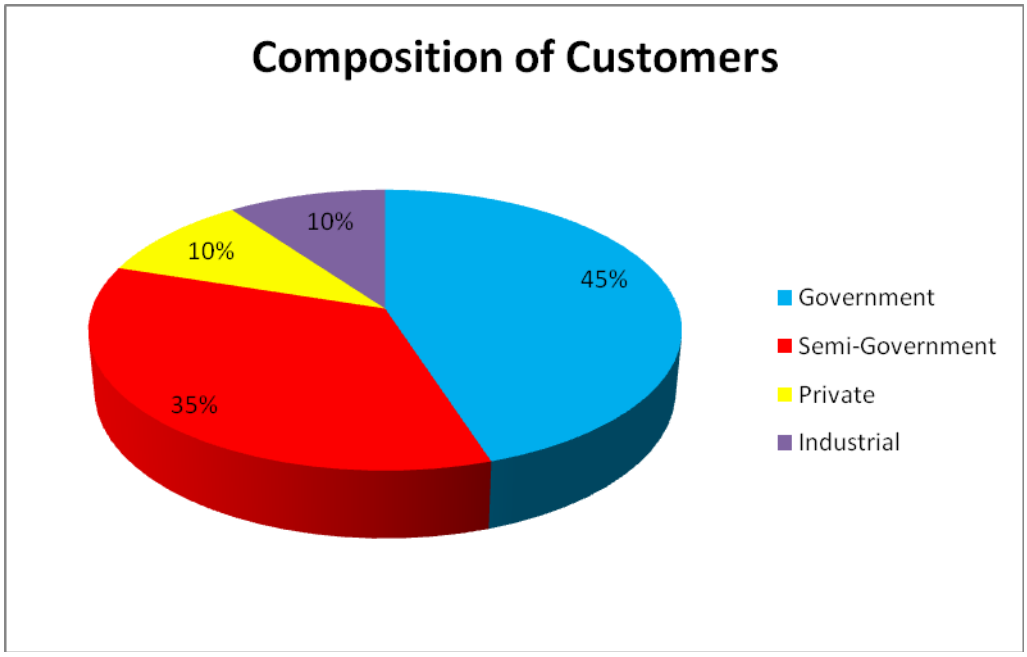
Dr. Valentin von Massow

Non-executive Independent Director

Dr von Massow is an eminent professional and a much sought after International Consultant, who for 19 years had been associated with The Boston Consulting Group (BCG), which is amongst the most reputed Management Consulting Firms in the world. During his tenure with BCG, he held various senior positions, rising to Vice President and Director of BCG Inc. working at various international offices of BCG. He brings with him a rich global experience of business models, governance, strategy and operations. Since 2005, Dr Massow is an independent Consultant, based in London.

Market share

CG's business operation consist of 22 manufacturing divisions spread across Gujarat, Maharashtra, Goa, Madhya Pradesh and Karnataka, supported by a well knit marketing and service network through 14 branches in various states under overall management of 4 regional sales offices located in Delhi, Kolkata Mumbai and Chennai. The company's customer base includes State Electricity Boards, Government bodies and large companies in private and public sector.



The company's 22 divisions/ regions have been accredited with ISO9001:2000certification; Seven manufacturing units have been accredited for ISOI 14001 and four units for OHSAS 18001. The Light sources division is one of the few business units in India in lighting industry to receive dual certificate of ISO 9000: 2000 was well as ISO14001 and OHSAS 18001, Certification for Occupation Health and Safety

management system .The company's Fans, Motors, Automation and control products are approved by the CSA, BASEEFA, and CE.

The company is divided into three strategic business units; Consumer Products, Power Systems and Industrial systems.

- Consumer products include fans, luminaries, light sources and agricultural and domestic pumps.
- Power systems consist of designing, manufacturing and servicing electrical products such as transformers, switchgears, capacitors and engineering projects. The company incorporates all the segments of the power industry from complex industrial solutions to basic household requirements.
- Industrial Systems consist of manufacturing electric motors including fractional horse power motors, LT motors, alternators, DC machines and rail transportation motors.

Products & Services

• **Power Systems**

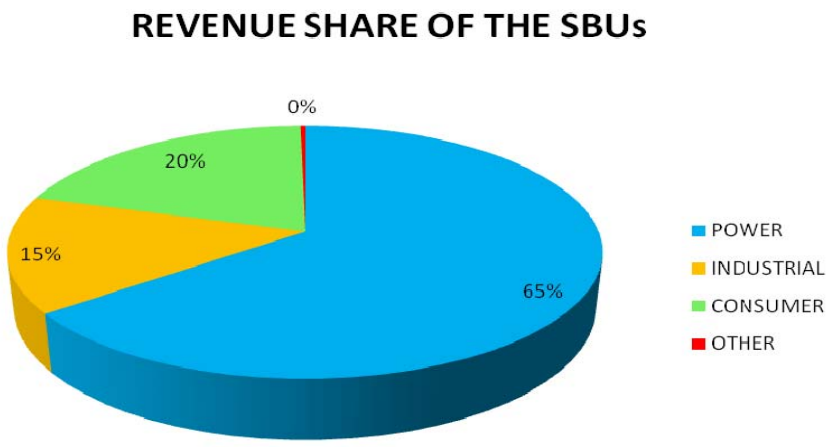
- Transformers and Reactors
- Swtichgear Products-MV/HV/EHV/UHV
- Instrument Transformers-MV/HV/EHV/UHV
- Power Quality Solutions
- T&D Systems/Engineering Solutions
- Protection Control & Automation
- Services for Power Systems
- Transformer & Switchgear Components
- LV Switches & Panel Products

• **Industrial Systems**

- Motors: High/Low Voltage AC&DC
- Generators/Alternators
- Traction Motors/Alternators/Control Electrics
- FHP/Commercial Motors
- Railway Signaling and Coach Applications
- Drives and Automation,
- Stampings and Laminations
- Services for Industrial Systems

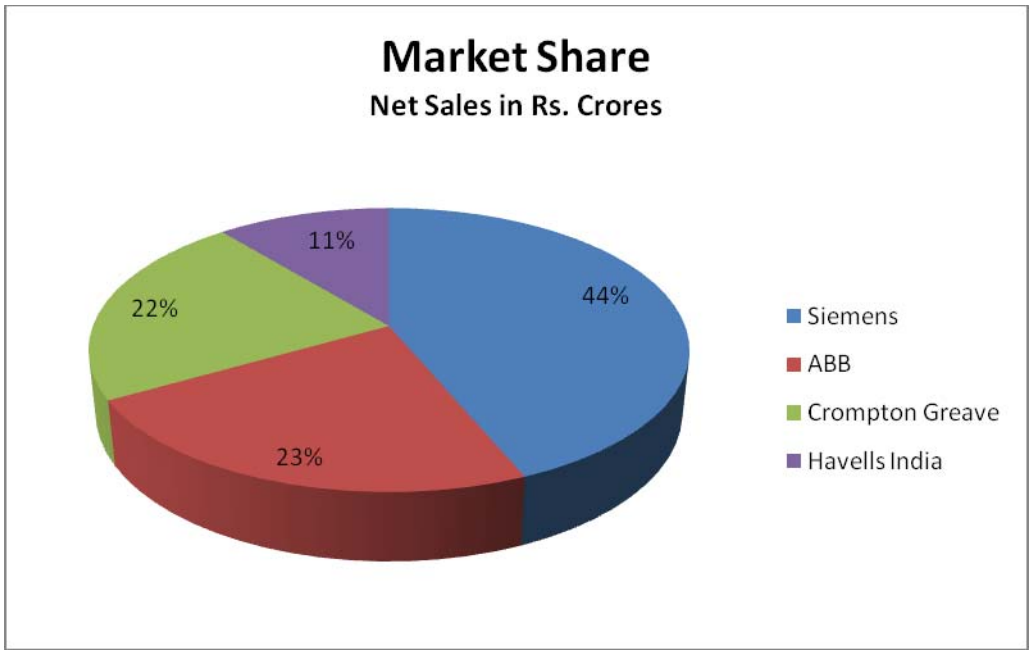
• **Consumer Products**

- Fans
- Appliances & Wiring Accessories
- Lighting
- Pumps
- Home Automation
- Integrated Security Systems



The company is also engaged in telecommunication products, transmission products, access products and terminal equipment. Almost two-thirds of its turnover accrues from product lines in which the company enjoys a leading position.

Power is the biggest business segment of Crompton Greaves and has the maximum share in its revenues and profits. This is a high turnover, high value segment but has slow cash generation cycle. Crompton Greaves is the largest manufacturer of transformers in India. The company produces power transformers, distribution transformers, extra high voltage (EHV) and medium voltage (MV) circuit breakers, gas insulated switchgear, EHV and MV instrument transformers, lightning arrestors, isolators, vacuum interrupters and electronic energy meters.



Crompton Greaves's top 3 competitors are Siemens, ABB and Havells India.

Marketing Strategy

Industrial marketers have to develop their capabilities in supplying complex "total solutions" that include both tangible products and intangibles that is services. The process of acquiring and delivering such products entails coordinating the activities of buyers and sellers, as the details of each equipment are agreed during often-extensive interaction between the two sides. The relationships between employees in the buying and selling's firms are therefore important before during and after delivery. The term "Technical Product Marketing" embraces all this. Marketing of technical solutions for electrical distribution substation is synonymous with project marketing that in turn encompasses relationship and industrial marketing. Industrial marketing management is also called Business-to-Business marketing; it is defined by the nature of the customer- a profit seeking or a budget constrained organization seeking help in achieving its goal through the purchase of goods and services. Industrial marketing is unique in its concern for long term strategic relationships with customers, the complexity of the buying process, and the mutual dependence of technology at the core of buyer seller relationship.
The four key dimensions in applying the marketing concept to Industrial Marketing are:

- Aiming for improved profit performance, with sales volumes and market share but not as important as in consumer marketing
- Identifying customer needs, which require understanding the economics of the customer's operations, then structure of the industry within which they operate and how they compete
- Selecting customer groups for emphasis, the classic problem of market segmentation, which takes on special meaning in industrial marketing because of the high degree of buyer seller interdependence after the sale
- Designing the product/service package, where there is seldom a standard product itself and the product must be invented.

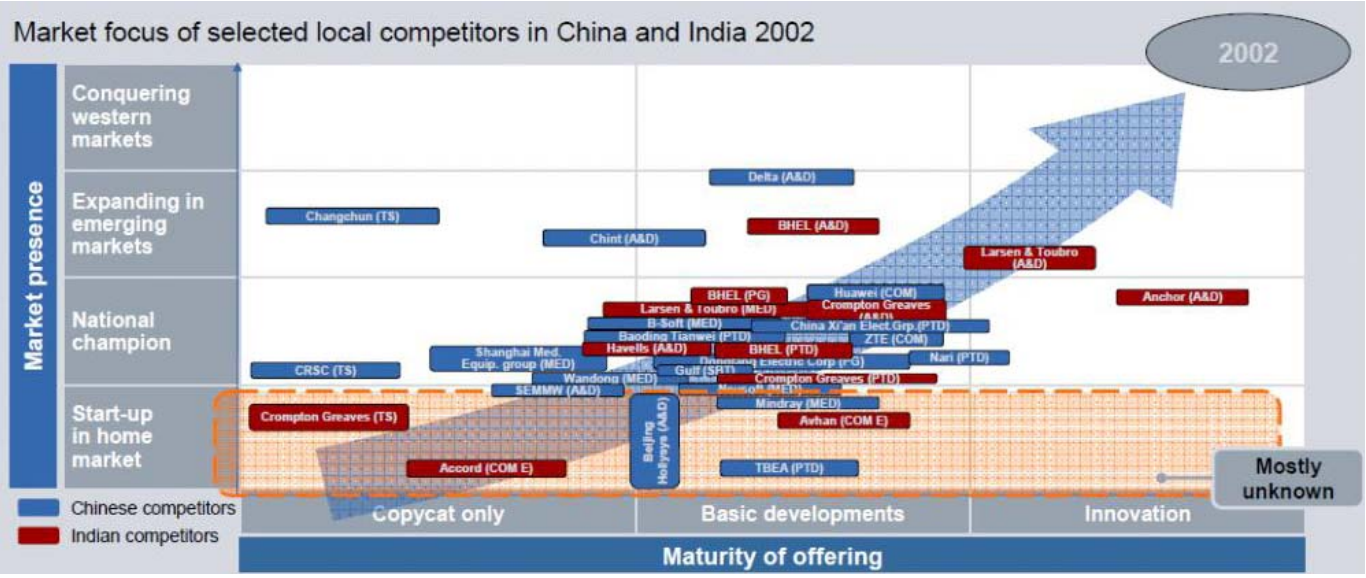
The company has a worldwide marketing network of more than 150 representatives across the globe, offering the entire range of CG's products, solutions and services. The company employs engineering professionals for market development. The company's 22 divisions spread across Gujarat, Maharashtra, Goa, Madhya Pradesh and Karnataka are supported by a well knit marketing and service network through 14 branches in state capitals under overall management of four regional sales offices located in Delhi, Kolkata, Mumbai and Chennai.

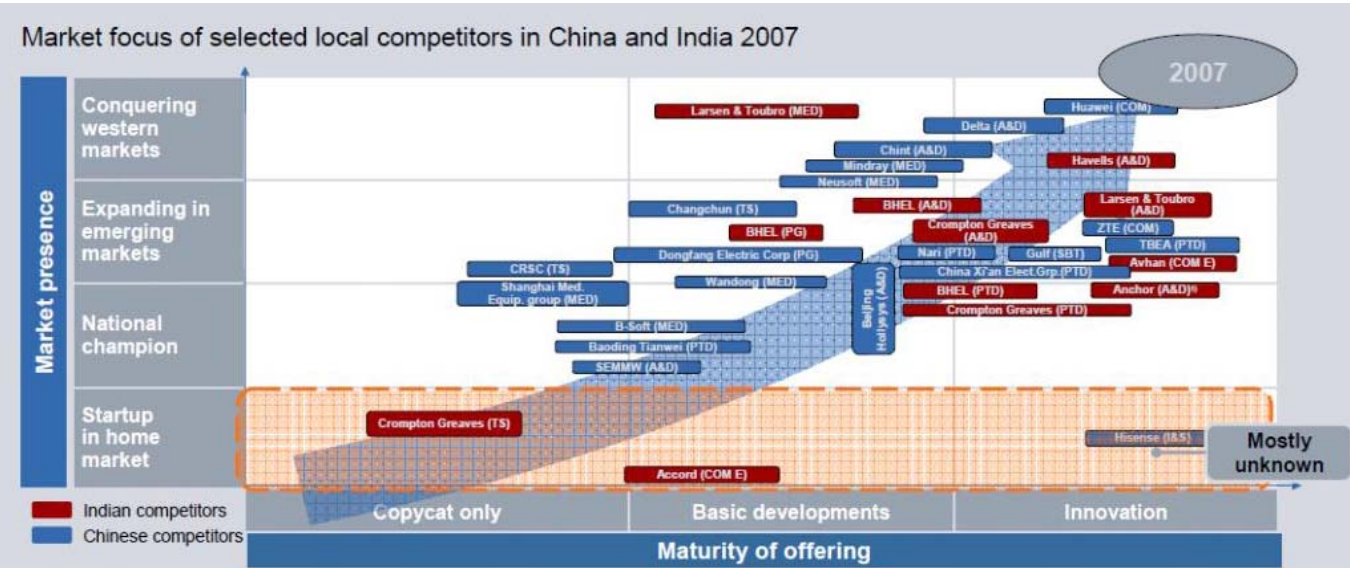
With India accounting for only 3% market share of transformers and switchgears in the world, Crompton Greaves made the decision to acquire international companies to establish a strong global footprint. They acquired European giants like Pauwel's, Ganz and Microsol which catapulted the company on a global scale making it fall in the top ten manufacturers of transformers in the world. Pauwel is a leader in the design and manufacture of 3-phase distribution and power transformers. It leads the market in the production and retrofitting of substations and in providing integrated solutions and services to international T&D market. Ganz is in the business of contracting and sub-contracting turnkey solutions in power transmission and distribution, substations and industrial electrical systems. Microsol has a technological edge in the substation automation business. It has complete hardware development

capabilities to produce customized interface boards. It has expanded into a full line developer and supplier of automation equipment and solutions as well as network enabled products.

In order to sell products internationally, it has build distribution relationships with reputed international firms. For example, it signed an agreement with Schneider Electric for selling its low tension control gear business located in Nasik

According to industry benchmarks, Crompton Greaves has leaped from focusing on basic development to focusing on innovative work and has correspondingly expanded itself from being a national player to an international player since 2002.





Research & Development

Crompton Greaves has leveraged technical collaboration, its in-house R&D and acquisitions to expand, build new products and become operationally efficient. The Company's "Technology Vision 2015" steers the Company's efforts on development of new products. During the year, a significant percentage of the turnover generated in India was through recent products developed, which were less than 3 years old (new products accounted for 23% of total CG India sales). The Company has also launched initiatives for eight platform technologies which would be pursued in the near future.

In the Company, R&D projects are undertaken in India as well as at overseas locations, driven centrally by the Global R&D Centre in India. A collaborative approach on project selection, prioritization and regular reviews ensures adequate focus on commitments and time-frames which keeps the R&D efforts aligned with its Technology Vision and business priorities, at all times.

Towards attaining global leadership in high voltage power products, the Company has also established one of the world's largest Ultra High Voltage (UHV) Research Centres at Nashik, which would be operational by 2012. This UHV research centre is a giant leap towards fulfilling the Company's cherished objective of positioning itself as the dominant player in the Ultra High Voltage arena.

The recent development of products suitable for Extra High Voltage transmission of 1200 kV is a testimony to the success of the focused approach of recent years. The Company has been in the forefront for developing high voltage products and after developing products of up to 800 kV, over the last two years has indigenously designed and developed the first 1200 kV Current Voltage Transformer and first 1200 kV Surge Arrester in the world for a research station being established by Power Grid Corporation of India Limited (PGCIL), the largest power utility in India.

Summary of the Company's achievements in R&D during FY2011:

❖ **New Product (NP) Development**

The Company has a clear metric to determine NP development.

- In FY2011, for CG Power India, NP accounted for 22% of the SBU's total sales revenues. For CG Industrial Systems, it was 21%. And for CG Consumer Products, it was 27%.
- For CG Power India, some of the new products were the 765kV, 333MVA single phase auto transformer; the 200MVA, 400kV/132kV/33kV auto transformers for the Power Grid Corporation of India Limited (PGCIL); the 200MVA, 400kV single phase generator transformer for the National Thermal Power Corporation's (NTPC's) Simhadri unit, the 245MVA, 420kV/21kV single phase step up generator transformer for NTPC's Korba unit; and the 45MVA auxiliary transformer for NTPC's Simhadri unit. All these have been either delivered or successfully tested.
- For CG Industrial Systems, R&D has helped in creating new products such as different models of high tension vertical motors, high efficiency alternators and new general purpose motors up to 1HP.

- For CG Consumer Products, R&D has played a role in successfully introducing several new products, such as the 4" submersible jacketed pump-set; a new design of a three-phase open submersible pump; more efficient pedestal and table fans; and a Solarium Plus instant water heater.

IPR Achievements in FY2011

Patents applied for - 159

- **37 - CG Power India**
- **18 - CG Consumer Products**
- **44 - CG Industrial Systems**
- **60 - Global R&D**

Design registrations - 161

IPRs in total - 320

Patents granted – eight

- **Five patents - India**
- **Two – USA**
- **One – Russia**

❖ **Other significant developments in CG's Global R&D during FY2011**

- Successfully developing a 36kV isolator with 12% cost reduction.
- Enhancing the capacity of a 245kV circuit breaker from 3,150 amperes to 4,000 amperes.
- Delivering the first N-Series motor, where the test results exceeded the benchmarked parameters.
- Completing the design and development of a SCADA system based on the IEC101 and IEC104 protocols, and receiving orders for their supply.
- Developing and commercialising smart LED street lighting solutions, with the first integrated package being sold in August 2010.
- Reducing the height of the 72.5kV breaker interrupter by 15%.
- Reducing the weight of the 315MVA power transformer by 8.5%, and power loss by 148kW.

❖ **Technology Initiatives**

During FY2010, several platform technology initiatives were identified. In FY2011, these were rolled out. Some of these involved areas such as designing high tension motors with low noise and vibration; developing nano-based insulation technology for instrument transformers; GIS technology; medium voltage drives technology; vacuum interrupter technology; high efficiency CFL technology for indoor lighting; and high temperature, high reflective coatings for luminaires.

❖ **Technology Networks**

R&D sustains 21 technology networks consisting of experts and their laboratories in India and abroad. Ten such networks were added in FY2011. These cover power systems, power quality, high voltage

products, cryogenics and vacuum technology, dielectrics, drives, rotating machines, solar energy, wide area monitoring, material science, reliability, electronics and others.

❖ **Integration with CG's overseas units**

There have been several R&D projects initiated in FY2011 in association with CG Global's units in Belgium, Hungary, Ireland, Canada, Indonesia and the US.

Snapshot of Crompton Greaves' R&D expenditure

	Year Ended 31st March, 2011
Expenditure on R&D	in Rs. Lakhs
a) Capital	3800
b) Revenue	4900
c) Total	8700
d) Total R&D expenditure as % of Net Turnover	1.46%
e) Total R&D expenditure as % of profit before tax and extraordinary item	9.38%

The Board of Directors of CG has set some challenging targets for Global R&D by 2015. These are:

- At least 25% of total sales should come from integrated solutions business.
- At least 15% of total sales should come from new products.
- At least 15% of total sales should come from superior, knowledge-based products and services.
- There should be five major breakthroughs in platform technology and CG's technology should be benchmarked with the top three players in the world in the respective businesses.
- The cycle time for new product development should be reduced by 75% compared to what it was in FY2008.
- There should be no less than 1,000 IPRs.
- In achieving the above, the R&D budget should increase to 4% of total sales.

The Company's efforts at innovation was recognised by the Industry, when it received the "India Power Award for R&D efforts" for New Product Development, for its 765 kV SF6 circuit breaker.

Recognition by India's Department of Scientific and Industrial Research (DSIR)

In FY2011, the DSIR officially recognized 11 R&D units within CG's SBUs in India: four in CG Power India, three in CG Industrial Systems; and four in CG Consumer Products. The balance three technology centres are in the process of applying for recognition.

These recognitions are an indication of the quality of R&D work carried out by the Company; they also allow the units to claim fiscal benefits on account of R&D.

Critical Success factors and key enablers

The following factors have played a key role in Crompton Greaves successes in India and abroad and continue to work in its favour:

- Crompton Greaves' wide range of quality products of international standards enables the company to provide solutions to customers across different segments including thermal/hydro power generation clients, transmission and distribution agencies and industries
- CGL has a major presence in the domestic Indian market and a widely installed equipment/ customer base
- The company's sound governance and management structure including CGL management's strategy of pursuing only those orders which are comparatively more profitable than others has worked in the favour of the company
- Crompton Greaves' goodwill and brand image (some of the products like fans and lightings have been accredited 'Super brand' status) is a major strength
- The company's focus on R&D and innovation enables it to anticipate and meet customer needs and perform significant technology absorption and adaptation capability to suit local needs
- Crompton Greaves well-structured and validated business model including its well-structured marketing network of more than 150 representatives offering the entire range of CG's products, solutions, delivery and services
- CG's promptness in providing after-sales service and the company's superior understanding of Indian conditions
- CG's global presence
- CG's efforts to improve the order execution cycle have paid dividends in terms of improving business
- Low debt-equity ratio meaning minimal interest payments
- Centralised buying of raw materials, as also its efforts at improving efficiency through better designs
- Highly committed technical, engineering and managerial manpower
- A growing economy with a high demand for infrastructure
- The outlook for the company remains strong, as its expansion strategy through acquisition has paid off, backed by a strong cash position. It has also managed its input prices well, which dented the profits of most engineering companies.

Challenges

- Slowdown in the economy has impacted all sectors of industry - the company, which recorded nearly the same growth in profits over the past quarters, is among the few which managed to weather the slowdown well. However, sales growth is mixed with domestic division growing by nearly 20% whereas the international division, which contributed nearly one-third to sales, recording a similar decline.
- Increase in commodity prices has led to a rise in raw material costs directly impacting margins
- Lack of orders in the power sector and intense competition has clearly impacted the price negotiation power of engineering companies resulting in a severe margin squeeze-out.
- The profit growth has come about with significant cost-cutting measures, mainly in staff and other costs, improving the operating margin by almost five-percentage point. However, employee costs for international operations remains high at more than 20% of revenues, which is a sore point for the company. While input prices rose, it was still moderate as compared to the increase for other engineering companies, at 5%. However, most of the increase has been seen in domestic operations, with global operations managing to keep input costs under control.
- Integration of the acquired companies is and will continue to remain a major challenge for the company
- While the lack of growth in international markets is a drag on topline, Crompton Greaves has used this to its advantage though buyouts, as the targets were available at more attractive prices.
- Inadequate recovery from traditional customers like utilities/SEBs results in higher working capital requirements adversely affecting profitability
- International players consolidating and setting up local manufacturing bases pose a direct threat
- Increased competition from large MNCs with greater financial and strategic muscle and a speedier response time is another challenge
- High technical and commercial losses in the power distribution sector
- Delay/deferment of projects often adversely impacts domestic business

Future plans

CG expects strong volume growth in domestic business; led by power and consumer segments. Industrial products business is showing signs of recovery and will contribute to growth. Despite intensifying competition in the power T&D business, particularly transformers, the company has improved margins considerably in this segment. Though there is limited upside to margins from the prevailing level, the company is best positioned to maintain them based on better-cost structure and a high degree of indigenisation. Earnings in international business will largely be driven by margin expansion, even as volume growth is expected to be muted.

CG has been awarded a contract for acting as the distribution franchisee of Maharashtra State Electricity Distribution Company Limited (MSEDCL) for power distribution in the Jalgaon Circle (Maharashtra) for a

period of ten years. A Letter of Intent for the same has been executed between CG and MSEDCL. CG will attempt to reduce currently high levels of technical and commercial losses by modernising the distribution infrastructure, improving collections, and bringing in place more efficient management, vigilance and application of corporate best practices.

The outlook for FY2012 is more positive than before. CG sees significant growth in its power systems business in India, Asia, as well as in Europe and the Americas. Power transformer demand is picking up everywhere, and so too is the demand for distribution transformers in Europe and the Americas. Wind energy is back in a reasonably significant manner, and CG ought be able to leverage its strengths in this sector. One thing is becoming clear. Future success for CG will depend upon being an end-to-end solutions provider in all its businesses, especially power and industrial systems. Given CG's acquisitions up to date, including Emotron and QEI, and potential acquisitions that it is pursuing, the Company is now well poised to becoming a global end-to-end solutions provider.

Case Study - Amforge Industries

Corporate Profile of Amforge Industries

Industry Name	Process Engineering
Year Of Incorporation	1971
Regd. Office:	
Address	108-111, Raheja Chambers.
District	Mumbai
State	Maharashtra
Pin Code	400021
Tel. No.	022-66365962/63
Fax No.	022-66365964
Email : amfcosec@mtnl.net.in	**Internet** : http://www.amforgeindia.com
Auditors	Bansal and Associates
Company Logo	

Background

Amforge Industries Limited was incorporated in April, 1971 as a private limited company under the name of Hakimrai Jaichand Forgings Private Limited by Makar family for manufacture of forgings. The name of the Company was changed to Amforge Industries Limited in December, 1985.

Amforge went Public in 1986 and listed on Mumbai, Delhi and Ahmedabad Stock Exchanges. Presently, the shares are listed only on Bombay Stock Exchange Limited after voluntary delisting from Ahmedabad and Delhi Stock Exchanges.

Amforge won the Best Vendor Award from

Yamaha Motors for the year 2002 and Global Sourcing Partner from Behr India - 2005

Amforge demerged its Chakan plant as per the Hon'ble Bombay High Court's Order dated 21st March, 2006 sanctioning the Composite Scheme of Arrangement envisaging demerger of Chakan plant and its merger with Mahindra Automotive Steels Pvt. Ltd w.e.f. 1st April, 2005.

Amforge is continuing with its manufacturing activities of steel forgings viz. Crankshafts, Connecting Rods, Bevel Gears, Bridge Fork Bottoms, etc. at its Chinchwad plant (Pune) Forging Capital of India, catering to Automotive Industry.

This plant, with its optimum resource pool of technically qualified manpower, with all logistical and infrastructure facilities in place and coupled with capability of continuously exceeding Customers' expectation by serving complete range of small segment forgings to almost all major OEMs, directly or indirectly, enjoys "Preferred Vendor" status.

Quality Accreditations like ISO/ts 16949:2002, ISO 9001: 2000 and TS:14001 are in place.

The company's strengths were:

- Its strong, young and experienced technical team
- 100% Equipped with CAD-CAMs
- Good Die Manufacturing Capacity.
- Strong Quality Assurance Team.

The plant was closed in 2008 due to recession particularly in the automobile industries and a lock-out was subsequently declared in May 2009, due to workers unrest.

Chronological history

1971

The Company was Incorporated as a private limited company on 21st April, 1971 under the name of Hakimrai Jaichand Forgings Private Limited by Yogiraj J. Makar and Surindernath J. Makar. It became a public company in January 1986.

The company engaged in the manufacture of forgings. It also supplies forgings as original equipments to Defence factories, Railways and public sector undertakings.

The company entered into a technical services agreement with Goshu Forge Company Limited, Japan for the manufacture of close tolerance forgings to meet the international standards in terms of quality and price.

1985

The name of the Company was changed to Amforge Industries Private Limited with effect from 9th December.

All shares issued for cash.

1986

30,00,000 bonus equity shares issued in proportion 3:1 February 1986.
The Company installed a 2,500 tonnes capacity forging press imported from Japan for the manufacture of close tolerance forgings to cater to both the domestic and export markets.
10,00,000 No. of equity shares of Rs 10 each at a premium of Rs 10 per share linked to 1,00,000-15% secured non-convertible debentures (I-series) of Rs 100 each were issued for cash at par during April.

1987

The heat treatment plant at Bhandup factory was commissioned during the year.
With a view of expansion, the Company acquired land at Khopoli for manufacture of heavier forgings upto 250 kgs. With the commissioning of the expansion project, the capacity would increase to 35,000 tonnes of forgings per annum.
The Company raised an amount of Rs 2 crores by private placement of debentures with UTI, LIC and ICICI to meet its long-term working capital requirements.

1990

On 2nd June, the Company offered 2,78,250-12.5% secured fully convertible debentures of Rs 70 each for cash at par. Of these, 2,65,000 debentures were offered to the shareholders on Rights basis in prop. 1 debenture : 5 shares (all were taken up).
In addition, 13,250 debentures were issued to the existing employees (including Indian working directors of the company) on an equitable basis

1991

The technology upgradation-cum-expansion project for manufacture of medium range close tolerance forgings was partly commissioned.

1992

The margins remained under pressure due to continued recession, reduced demand, hike in input costs and finance charges. The Khopoli unit was geared up to undertake several new, critical and high profile jobs.

To consolidate infrastructural facilities further, a new heat treatment line was installed and partly commissioned.

Exports were affected due to problems in East Europe and the general overall recessionary trends in the international market.

A new heat treatment line was installed.

The Company proposed to set up new manufacturing facilities at Pune, which would

enhance the capacity by 20,000 tonnes per annum.

1994

Isha Steel Processors Ltd. was amalgamated with the company with effect from 1st April. With effect from 1st April, Tru Wheels Limited (TWL) was also amalgamated with the company.

19,99,960 No. of Equity shares to be allotted to the Shareholders of erstwhile Isha Steel Processors Ltd. pursuant to the scheme of amalgamation.

1995

The margins were affected mainly because of increase in input costs due to excessive competition.
The expansion project at Chakan in Pune for manufacture of High quality precision forgings was commissioned.
The Company issued 24,23,368 Zero Percent Unsecured Fully Convertible Debentures (ZFCDs) of Rs 35 each with Tradeable Detachable Warrants on Rights basis. In terms of letter of offer, the ZFCDs on allotment were converted into equity shares of Rs 10 each at a prem. of Rs 25 per share.
24,68,370 No. of equity shares issued to the shareholders of ISPL and TWL on amalgamation.

1996

24,23,369 No. of equity shares allotted on conversion of zero per cent unsecured fully convertible debentures of Rs 35 each.

2002

Amforge Industries Ltd announced the following changes in the management structure of the company:
(1) Shri Yogiraj Makar resigned as Chairman & Managing Director of the company due to old age, with effect from March 31, 2002. He continued as part-time Director
(2) Shri Puneet Makar was appointed as Chairman & Managing Director of the company w.e.f. April 1, 2002

Shares delisted from Delhi and Ahmedabad Stock Exchanges

2008

The plant was closed in 2008 due to recession particularly in the automobile industries.

2009

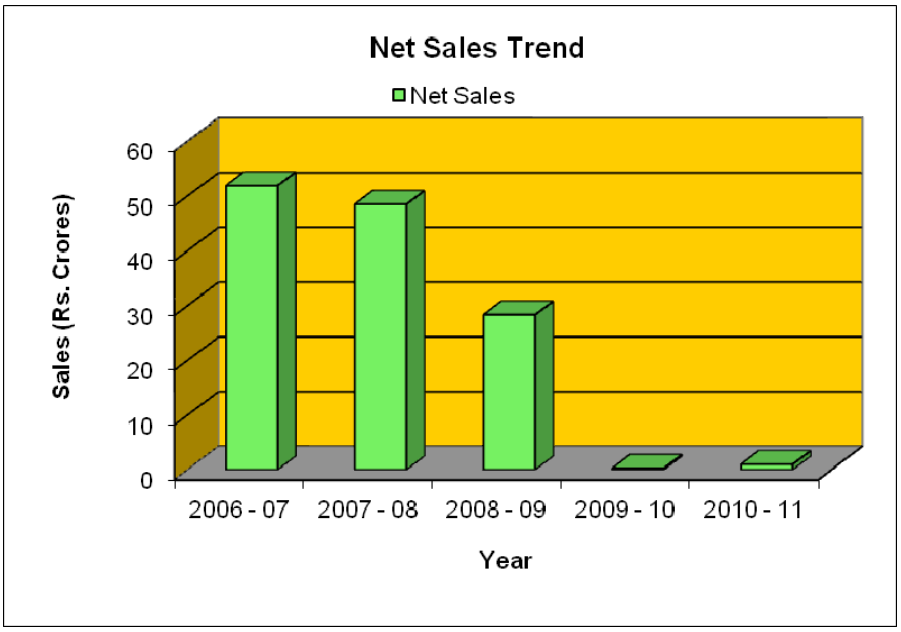
Amforge Industries Ltd appointed Shri. Puneet Makar as Managing Director of the Company.

Lock-out declared in May 2009, due to workers unrest.

Key Performance Indicators

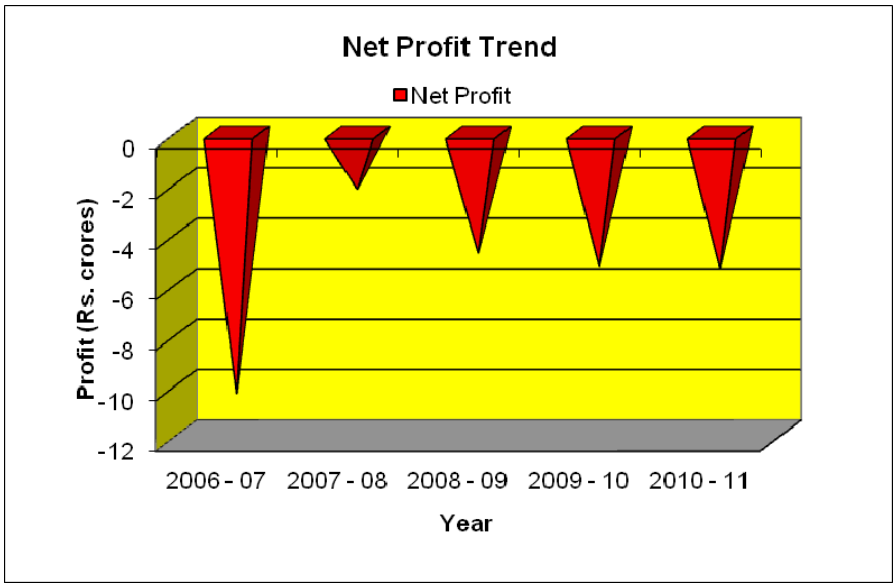
Steep decline in turnover over the past five years

	Rs. Crores
Year	Net Sales
2006 - 07	51.9
2007 - 08	48.47
2008 - 09	28.33
2009 - 10	0.29
2010 - 11	1



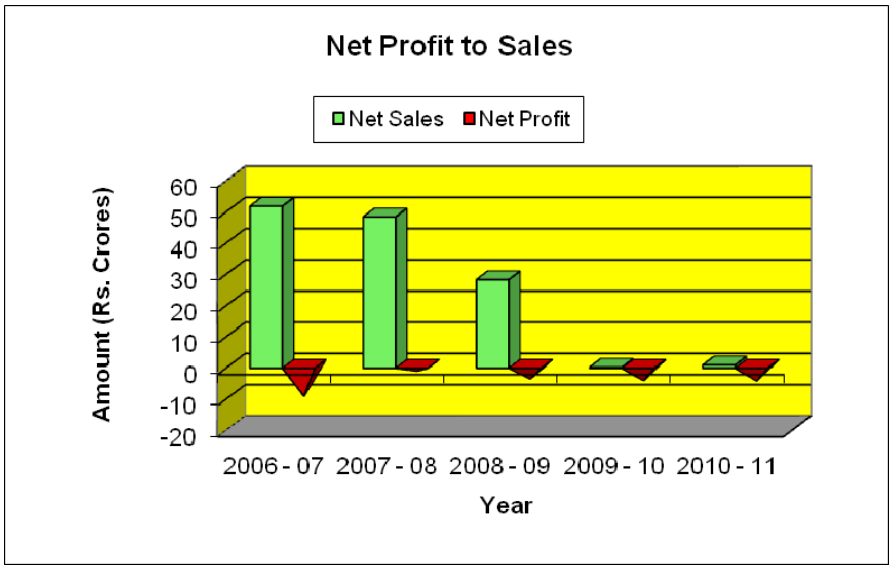
Continuous losses over the past five years

	Rs. in Crores
Year	Net Profit
2006 - 07	-10.34
2007 - 08	-2.23
2008 - 09	-4.77
2009 - 10	-5.28
2010 - 11	-5.4



Declining proportion of net profit to sales

	Rs. in Crores	
Year	Net Sales	Net Profit
2006 - 07	51.9	-10.34
2007 - 08	48.47	-2.23
2008 - 09	28.33	-4.77
2009 - 10	0.29	-5.28
2010 - 11	1	-5.4



Financials

Amforge Industries FY2010-11 Financials

Standalone Financials for FY11

- The company has suspended manufacturing activity for the past two years
- Sales turnover of Rs. 1 crore up from Rs. 0.29 crores last year
- Loss down to Rs. 5.4 crore, from Rs. 5.28 crores;

STANDALONE FINANCIAL PERFORMANCE OF THE LAST 5 YEARS - in Rs. Crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	1.00	0.29	28.33	48.47	51.90
EBIDTA	-8.47	-3.41	-7.92	-1.81	0.44
PBT	-7.65	-5.40	-8.24	-1.36	-9.01
PAT	-5.40	-5.28	-4.77	-2.23	-10.34

FINANCIAL PERFORMANCE (CONSOLIDATED) - in Rs. Crore

	FY 2011	FY 2010	FY 2009
Total Income	1.06	0.32	29.37
EBIDTA	-8.47	-3.41	-7.92
PBT	-7.66	-5.41	-9.14
PAT	-5.41	-5.30	-5.69

Prior information is not available

Source: http://www.moneycontrol.com/financials/amforgeindustries/profit-loss/AI14#AI14

Capital Structure

Capital Structure (Amforge Industries)

Period		Instrument	Authorized Capital	Issued Capital	- P A I D U P -		
From	To		(Rs. cr)	(Rs. cr)	Shares (nos)	Face Value	Capital
2009	2010	Equity Share	19.75	2.96	14820206	2	2.96
2008	2009	Equity Share	19.75	2.96	14820206	2	2.96
2007	2008	Equity Share	19.75	2.96	14820206	2	2.96
2006	2007	Equity Share	19.75	2.96	14820206	2	2.96
2005	2006	Equity Share	19.75	2.96	14820206	2	2.96
2004	2005	Equity Share	19.75	14.82	14820206	10	14.82
2003	2004	Equity Share	19.75	12.4	12396838	10	12.4
2002	2003	Equity Share	19.75	12.4	12396838	10	12.4
2001	2002	Equity Share	19.75	12.12	12116838	10	12.12
2000	2001	Equity Share	19.75	12.12	12116838	10	12.12
1999	2000	Equity Share	19.75	12.12	12116838	10	12.12
1997	1999	Equity Share	19.75	12.12	12116838	10	12.12
1996	1997	Equity Share	19.75	12.12	12116838	10	12.12
1995	1996	Equity Share	19.75	9.69	9693470	10	9.69
1994	1995	Equity Share	19.75	9.23	9225060	10	9.23
1991	1994	Equity Share	9.75	7.23	7225100	10	7.23
1990	1991	Equity Share	9.75	5.25	5250000	10	5.25
1987	1990	Equity Share	9.75	5.25	5250000	10	5.25
1986	1987	Equity Share	9.75	5.25	5250000	10	5.25
1985	1986	Equity Share	9.75	4	4000000	10	4

Source : Dion Global Solutions Limited

Shareholding Pattern

CATEGORY OF SHAREHOLDER	NO. OF SHARE-HOLDERS	TOTAL NO. OF SHARES	TOTAL NO. OF SHARES HELD IN DEMATERIALIZED FORM	TOTAL SHAREHOLDING AS A % OF TOTAL NO. OF SHARES AS A % OF (A+B)	AS A % OF (A+B+C)	SHARES PLEDGED OR OTHERWISE ENCUMBERED NUMBER OF SHARES	AS A % OF TOTAL
(A) Shareholding of Promoter and Promoter Group							
(1) Indian							
Individuals / Hindu Undivided Family	8	2,765,149	2,764,491	18.66	18.66	-	-
Bodies Corporate	3	5,379,091	5,379,091	36.30	36.30	-	-
Sub Total	**11**	**8,144,240**	**8,143,582**	**54.95**	**54.95**	-	-
(2) Foreign							
Total shareholding of Promoter and Promoter Group (A)	**11**	**8,144,240**	**8,143,582**	**54.95**	**54.95**	-	-
(B) Public Shareholding							
(1) Institutions							
Mutual Funds / UTI	6	3,840	200	0.03	0.03	-	-
Financial Institutions / Banks	3	90	65	-	-	-	-
Central Government / State Government(s)	1	440	440	-	-	-	-
Venture Capital Funds	1	100	100	-	-	-	-
Insurance Companies	1	23,949	23,949	0.16	0.16	-	-
Sub Total	**12**	**28,419**	**24,754**	**0.19**	**0.19**	-	-
(2) Non-Institutions							
Bodies Corporate	225	876,660	863,761	5.92	5.92	-	-

Individuals		-	-	-	-	-	-
Individual shareholders holding nominal share capital up to Rs. 1 lakh	18,284	4,964,487	4,540,339	33.50	33.50	-	-
Individual shareholders holding nominal share capital in excess of Rs. 1 lakh	6	539,114	539,114	3.64	3.64	-	-
Any Others (Specify)	325	267,286	233,729	1.80	1.80	-	-
Non Resident Indians	322	254,540	220,983	1.72	1.72	-	-
Clearing Members	3	12,746	12,746	0.09	0.09	-	-
Sub Total	**18,840**	**6,647,547**	**6,176,943**	**44.85**	**44.85**	-	-
Total Public shareholding (B)	**18,852**	**6,675,966**	**6,201,697**	**45.05**	**45.05**	-	-
Total (A)+(B)	**18,863**	**14,820,206**	**14,345,279**	**100.00**	**100.00**	**-**	**-**
(C) Shares held by Custodians and against which Depository Receipts have been issued-m	**-**	**-**	**-**	**-**	**-**	**-**	**-**
(1) Promoter and Promoter Group		-	-	-	-	-	-
(2) Public		-	-	-	-	-	-
Sub Total		-	-	-	-	-	-
Total (A)+(B)+(C)	**18,863**	**14,820,206**	**14,345,279**	**-**	**100.00**	**-**	**-**

Amforge Industries Share Price Data vs. competitor companies as on 9-Mar-12

Company Name	Last Price	% Chg	52 wk High	52 wk Low	Market Cap (Rs. cr)
Bharat Forge	318.85	2.82	370.50	231.00	7,422.65
Electrosteel	23.60	1.07	35.15	15.80	771.14
Ahmednagar Forg	174.00	-2.27	194.80	78.25	639.45
Mahindra Forg	66.30	1.22	88.75	46.05	611.08
Jayaswal Neco	16.90	4.00	30.00	10.50	542.19
RamkrishnaForge	136.00	-4.23	144.90	78.20	246.82
Nelcast	28.10	1.08	36.00	15.63	244.47
Hinduja Foundri	61.00	-2.09	110.10	54.75	175.26
MM Forgings	92.25	-1.60	144.00	81.10	111.35
KIC Metaliks	145.20	0.00	350.00	142.70	103.08
Alicon Castallo	65.90	3.13	79.65	48.05	72.49
Sanghvi Forging	56.00	3.51	144.90	22.00	71.08
Tayo Rolls	66.50	-0.37	104.00	45.10	68.24
Kalyani Forge	170.00	0.00	213.45	128.00	61.85
Steelcast	156.00	0.16	185.00	74.20	61.78
Vybra Automet	34.80	0.43	39.55	14.08	38.05
Simplex Casting	62.00	1.72	106.80	47.50	37.10
Invest and Prec	60.05	-0.58	124.90	48.00	29.78
Magna Electro	64.95	4.67	89.00	41.15	29.76
LGB Forge	2.80	4.87	3.49	2.05	28.00
Uni Abex	140.00	2.94	199.45	109.55	27.65

Pradeep Metals	15.10	0.00	24.50	14.10	24.79
Gontermann	13.90	2.36	25.60	10.71	19.34
Akar Tools	34.70	-5.06	92.00	26.15	18.72
Hilton Metal	14.60	0.00	19.45	10.16	18.17
BCL Forgings	11.15	0.00	14.37	6.47	18.03
El Forge	8.25	-1.90	16.49	7.36	16.77
Rajkumar Forge	13.85	0.00	19.00	10.35	15.15
Jaipan Inds	15.75	7.88	24.90	11.10	9.61
Interfit Techno	10.50	0.00	13.21	5.19	8.74
Shree Metalloys	15.85	0.00	47.45	11.25	8.33
Bhagwati Auto	27.00	-4.93	50.00	26.30	7.78
Nitin Alloys	55.05	0.00	69.75	31.85	7.73
Techno Forge	18.44	4.95	20.75	9.29	7.58
Ganesh Forgings	4.05	-0.98	8.00	2.40	5.06
Carnation Inves	11.90	-4.80	19.20	10.28	4.11
Vishal Malleabl	16.15	0.00	31.50	15.00	4.07
Aditya Forge	8.51	0.00	17.09	5.88	3.67
Amforge	2.11	0.00	5.17	1.71	3.13

Corporate Governance

During the year 2010-2011, the composition of the Board of Directors was such that it complied with the requirements of Independent and Non-Executive Directors. The Board is composed of the following members:

Name of Directors	Category
Shri Puneet Makar	Promoter & Executive Chairman & Managing Director
Shri Yogiraj Makar	Promoter & Non-Executive Director
Shri. Fali P. Mama	Non-Independent & Non-Executive Director
Shri. Sunil Aggarwal	Independent & Non-Executive Director
Shri. B.L. Gupta	Independent & Non-Executive Director
Shri. Rakesh Khanna	Independent & Non-Executive. Director

Market share & Marketing Strategy

Amforge was engaged in the design, manufacture, and sale of die forging products in India and abroad. Besides India, the company also offered its products in the United States, United Kingdom, Germany, Spain, and Canada. The company product range included crankshafts, stub axles, connecting rods, steering knuckles, hinges and bridge forks. The product range in which Amforge dealt is depicted in the table below:

Amforge Product Profile - 500 gms to 6 kgs

- **Two wheeler Crank shafts**
- **Under Brackets**
- **Connecting rods**
- **Transmission Gears**
- **U.J. Forks**
- **Steering knuckle**
- **Links**
- **Bevel Gears**
- **Levers**
- **Yokes**
- **Shafts**
- **Hubs**
- **Shifter Forks**
- **Spindles**
- **Door Hinges**

The company had many high-profile customers in the automobile industry in India and abroad and served the engineering sector, automobile manufacturers, machine tool manufacturers, defense sector, earthmoving equipment manufacturers, and oil and gas installations sector.

Clientele of the company

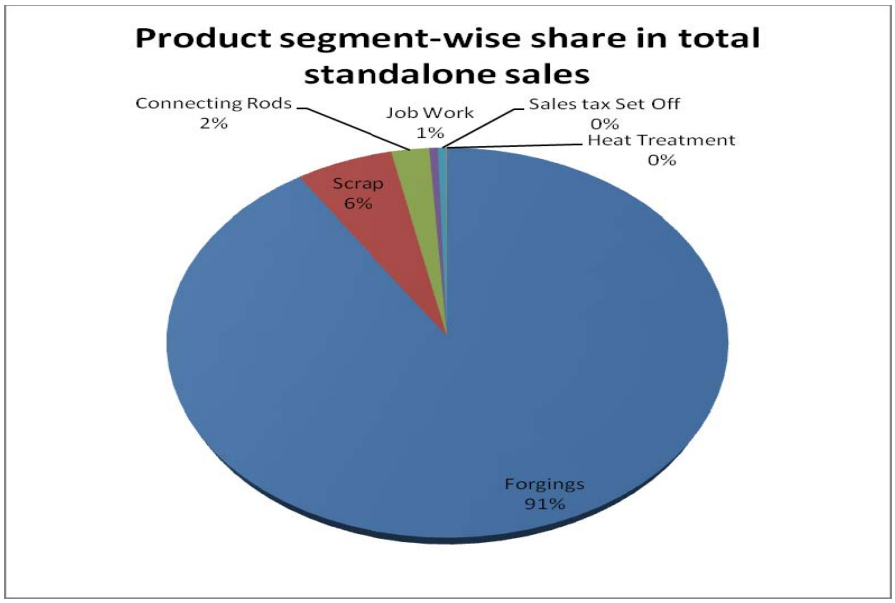
Domestic Customers (OEM)

- **Tata motors**
- **Force Motors**
- **Honda Motorcycles and Scooters India P. Ltd.**
- **Kinetic Engg Ltd**
- **Yamaha Motors, Surajpur**
- **Domestic Customers**
- **Amtek Auto Ltd, (Maruti Suzuki)**
- **Behr India Ltd (Behr Germany, Cummins, Tata Motors)**
- **Fortuna Engg Ltd (Tata Motors)**
- **Friends Engg Ltd (Tata Motors)**
- **Fairfield Atlas Ltd (Tata Motors)**
- **ILJin Automotive Pvt. Limited, (Hyundai)**
- **Jiteen Engineering (Tata Motors)**
- **Mahakam Auto Ancillaries Pvt. Ltd (Tata Motors, John Deere)**
- **Roop Automotives Ltd (Toyota)**
- **Sipcer India Ltd (Dana,Nissan)**
- **Shrinivas Engg (Tata Motors)**
- **Shri Ganesh Engg. (Bajaj Auto Ltd)**
- **ZF Steering India Ltd (Tata Motors)**

Overseas Customers

- **MULTIMATIC / EU-MATIC (UK and Canada)**
- **Lister Peter . (U.K)**

Its sales turnover in 2005 was around Rs 210 crore with a break-up as depicted in the figure below:



With the impact of the global recession on the automobile industry, the company's revenues slid down continuously leading to closure of the plant in 2008 and ultimately a lock-out in May 2009, due to workers unrest

Research & Development

The company's plant at Chinchwad in Pune is a comprehensive forge shop with presses and hammers together with all balancing equipment. This unit serves the complete range of small segment forgings to major OEMs with preferred vendor status at all major OEMs. Quality Accreditations like ISO/TS 16949:2002 and ISO 9001:2000 are in place, and the unit has also received TS 14001.

Amforge Industries Limited has a skilled workforce of 279 Achievers and a modern Press shop, Hammer shop and CNC Machine Shop

With manufacturing stopped for the last two years as of now, there is no reporting available on research and development

Lessons Learned / Critical Success Factors that did not work

Right product mix is essential

Given Amforge was working with large suppliers with strong negotiation power in an industry with low margins, it was essential to have a product mix, which could have helped maintain the margins. It could have been obtained by the following:

- having innovative products or by significantly reducing the cost structure. It would have required targeted R&D efforts or access to cutting edge technologies and an increase speed to market through acquisitions. Cost efficiency could also be obtained by investments in production efficiency and aggressive sourcing of high cost components. The raw material costs for Amforge increased from 50% to 60% of revenue since the sale of Chakan division.
- consolidating segments with high entry barrier would have helped unlock the benefits of scale at product segment level. This required development of key engineering capabilities and OEM relationships strong enough to reduce the threat that automakers might switch.

Need to build a competitive advantage

It was essential that Amforge develops a competitive advantage as compared to its competitor. It could have been achieved by right R&D investments, focus on obtaining cost efficiencies and by having strong relationships with the OEM's

Reduce waste

One of reasons indicated by Amforge is old/obsolete inventory because of changes in customer requirements. It seems to have increased from 0.3% of revenue in 2003-2004 to 3.3% of revenue in 2006-2007. This is very high for an industry with low margins and infrequent changes in customer requirements.

Demerger of Chakan Division

Chakan Division was running at full production capacity at the time of demerger. It was contributing close to 80% of the total revenue for the firm. The reason for demerger was lack of financial resources to expand the capacity. The firm sold its key performance unit, while sale of other divisions to finance the expansion of Chakan unit could have been lucrative.

Challenges

Amforge faced the same challenges as everybody else in the forgings industry including the following:

- Recession in user industries, particularly automobile
- High bargaining power of OEMs - constant pressure to reduce prices
- Rising cost of inputs - particularly, steel and electrical power
- Demand for new products - especially from foreign OEMs - not matched by economic order quantities
- Threat of substitutes: use of light-weight synthetic material forging (aluminum/ plastic based) in newer light weight car models.
- Threat from pollution control norms - prospect of closure of units

- Economy trends in export markets coupled with stiff competition from other exporting nations
- Highly capital intensive; high working capital requirements with steel suppliers extending no credit while OEM customers demanding the same.
- The company also had high cost of production at its Bhandup plant on account of heavy wage bill and Government taxes applicable within the metropolitan city of Mumbai, coupled with obsolete technology and equipment and had to finally close it down

Future plans

No details of the company's future plans are available. However, the Annual Report 2010-11 does mention that the company is exploring new areas of business activities in terms of the Memorandum of Association of the company.

Case Study - Best & Crompton

Corporate Profile of Best & Crompton

Industry Name	Process Engineering
Year Of Incorporation	1879
Regd. Office:	
Address	28, Industrial Estate (North), Ambattur,
District	Chennai (Madras)
State	Tamil Nadu
Pin Code	600098
Tel. No.	044-45514600 044-45514777
Fax No.	044-45514609
Email: info@bestcrompton.com	**Internet:** http://www.bestcrompton.com
Auditors	CNGSN & Associates
Company Logo	Best & Crompton future technologies,TODAY

Background

Best & Co. was founded in 1879 as a partnership firm in Madras by Andrew Vans Dunlop Best and the company was incorporated as a Private Company in 1911.

The name of the company was changed to Best & Co. Pvt. Ltd., w.e.f. 1st May, 1975 with the consequential change in the name to Best & Co. Ltd.

In April, 1974, the Company acquired a substantial interest in the Crompton Engineering Co. (Madras) Ltd., with whom it had been associated as promoters and shareholders since its inception. Best & Co. Pvt. Ltd., were also Managing Agents of the Cromption Engineering Co. (Madras) Ltd. upto 31st December, 1969. Pursuant to an order dated 15th April, 1975 of the Madras High

Court; the Crompton Engineering Co.(Madras) Ltd., was amalgamated with the Company and the name of the company was changed to Best & Crompton Engineering Ltd., w.e.f. 27th June, 1975.

The subsidiaries of the company are Krest Development & Leasing Ltd., Beacon Weir Ltd., Best & Crompton (Jersey) Ltd., Kone Elevator India Ltd., Air Control and Chemical Engineering Company Ltd., Beacon Tileman Ltd., & Beacon Neyrpic Ltd. During 1982, the company contracted with (GEE Alsthom for the manufacture of automotive castings and S.G. iron and with Siemex for firefighting equipment. In 1984, the company concluded a technical collaboration agreement with Sheepbridge of U.K. to improve the profitability of the foundry operations.

During 1985, the company entered into a collaboration with Tileman of U.K. in the field of highly specialised Civil Construction. Krest Development & Leasing Ltd. ceased to be a subsidiary of the Company w.e.f. 1993.

Best & Crompton Engineering (BCEL) was under Texmaco-Polysindo Group, having its operations in Electrical Contracting and manufacturing of pumps, Casting and other allied electrical items. Its works is situated in Chennai and in Bangalore.

It was taken over by the UB Group in 1989. In April, 1998, the Madras high court discharged the company from various proceedings pending before the court and restored back the management to the new promoter, Texmaco-Polysindo Group, with constitute the board comprising of S Venkitaramanan, chairman and the directors M Arunachalam, S K Mahajan and B Viswanathan. The Polysindo group's major stake is held through a holding company in Hong Kong belonging to the promoter family.

BCEL manufactures a wide variety of engineering goods such as industrial, agricultural and special-purpose pumps, starter motors, alternators and regulators for heavy-duty commercial vehicles and passenger and service lifts. It also manufactures process carbons, ferrous, non-ferrous and special alloy steel castings, valve actuators, generators, battery charging gadgets and electrical power transmission accessories. It is also into the manufacture of fuse gear and shoot-blower panels, surge protection and potential transformer cubicles for generators, carbon brushes and assault bridges for Defence.

The company made a reference to the financial/investment institutions for rehabilitation in Jul.'94, since it started declining from 1991. In Sep.'95, it was referred to the BIFR by the banks and financial institutions for the approval of their rehabilitation package. But the reference was disposed by the BIFR in Jan.'96 on the basis of non-finalisation of accounts and audit for the period Apr.'94 to Sep.'95. Since its net worth remains positive, it is not classified as a sick company. Its source of funds mainly come from disposal of the non-business assets of the company along with disinvestment in certain subsidiaries / associate companies.

The company again informed BIFR on the applicability of the provisions of the Sick Industrial Companies Act, 1985 and on implementation of a revival scheme under the supervision of the Hon'ble High Court of Madras.

During the year 1999-2000, due to the introduction of the Voluntary Retirement Scheme there was a reduction in employee cost by 17% and the company achieved an operating profit of 613.07 lakhs. The revival proposal envisaged by the company is still being pursued.

Source:

1. http://www.bestcrompton.com
2. http://www.indiainfoline.com/Markets/Company/Background/Company-Profile/Best-and-Crompton-Engineering-Ltd/500046

Chronological history

1879

Founded in 1879 as a partnership firm in Madras by Andrew Vans Dunlop Best

1911

Incorporated as a Private Company

1975

Change in the name to Best & Co. Ltd.

Crompton Engineering Co.(Madras) Ltd., was amalgamated with the Company and the name of the company was changed to Best & Crompton Engineering Ltd

1982

The company contracted with (GEE Alsthom for the manufacture of automotive castings and S.G. iron and with Siemex for firefighting equipment.

1984

The company concluded a technical collaboration agreement with Sheepbridge of U.K. to improve the profitability of the foundry operations.

1985

During 1985, the company entered into a collaboration with Tileman of U.K. in the field of highly specialised Civil Construction.

1989

The company was taken over by the Mallya group.

1994-95

The company was referred to the BIFR by the banks and financial institutions for the approval of their rehabilitation package

1996

The proposal was disposed by the BIFR in Jan.'96 on the basis of non-finalisation of accounts and audit for the period Apr.'94 to Sep.'95. Since its net worth remained positive, it was not classified as a sick company

1997

Polysindo of Indonesia announced that it would buy out the entire 30 per cent stake currently held in the company by Vijay Mallya, and 21 per cent stake from financial institutions, to have controlling stake in the ailing company.

Polysindo promised to bring in over Rs 100 crore into the company's finances in less than 60 days of assuming effective management control.

2002

The company decided to establish industries at Madurai and Sivaganga in Tamil Nadu to make tractors, steel alloys and forgings with an investment of Rs 2200 crores.

2006

NRI C Sivasankaran of Sterling Infotech group picked up 14.95% stake in B & C

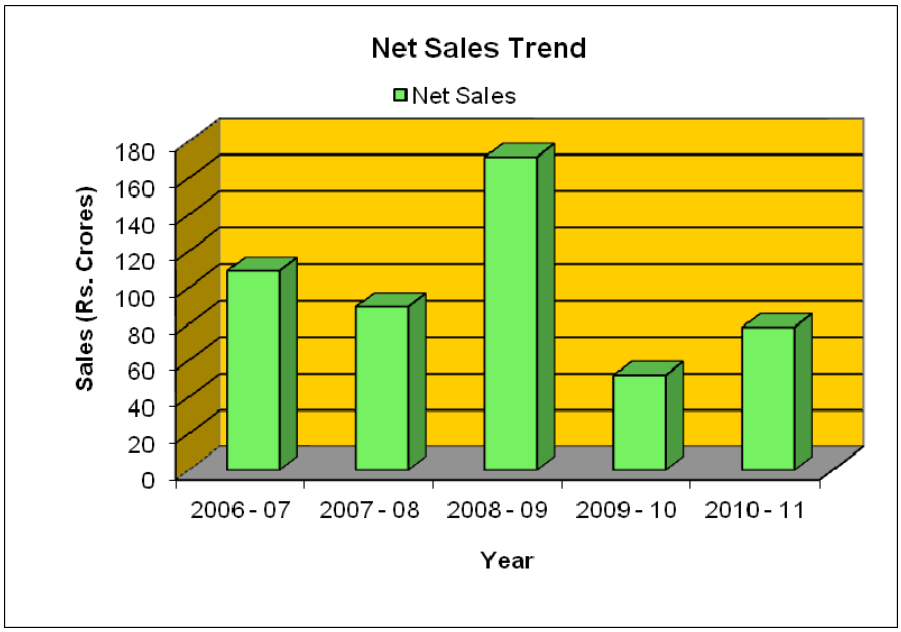
2007

The company planned to enter new lines of business in India as part of the game plan of its main promoter, Polysindo group to curtail its loss-making operations in India. It decided to get into the areas of real estate - setting up IT and garments SEZ, a garment factory etc.

Key Performance Indicators

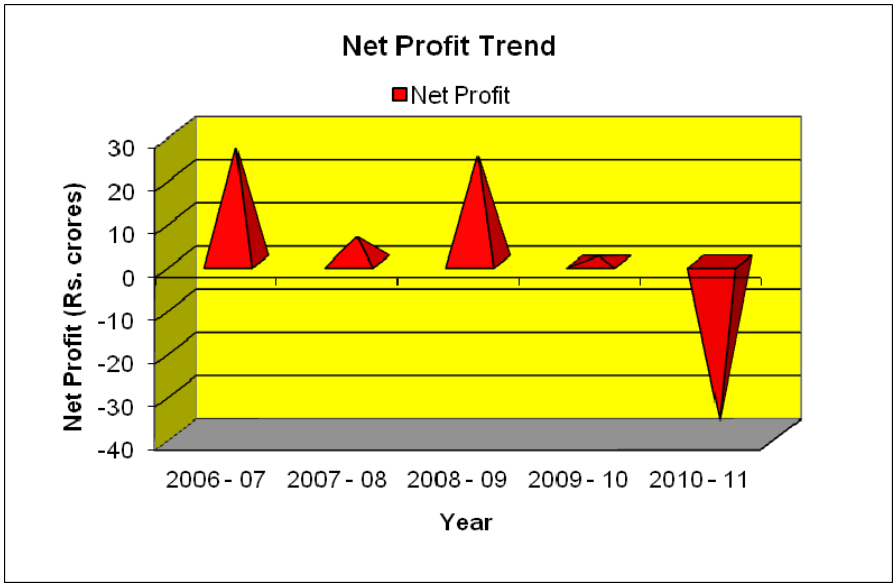
Erratic growth in turnover over the past five years with decline in 2010-11

	Rs. in Crores
Year	**Net Sales**
2006 - 07	109.09
2007 - 08	89.54
2008 - 09	171.45
2009 - 10	52.01
2010 - 11	78.27



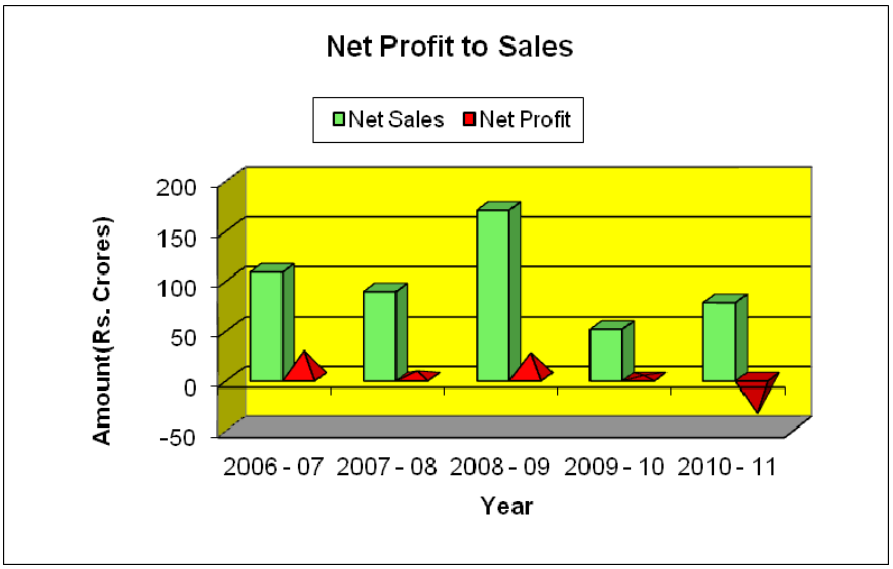
Erratic profitability over the past five years

	Rs. in Crores
Year	**Net Profit**
2006 - 07	26.41
2007 - 08	5.83
2008 - 09	24.46
2009 - 10	1.23
2010 - 11	-36.53



Declining proportion of net profit to sales

	Rs. in Crores	
Year	Net Sales	Net Profit
2006 - 07	109.09	26.41
2007 - 08	89.54	5.83
2008 - 09	171.45	24.46
2009 - 10	52.01	1.23
2010 - 11	78.27	-36.53



Financials

Best & Crompton FY2011 Financials

STANDALONE FINANCIAL PERFORMANCE OF THE LAST 5 YEARS – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	78.27	52.01	171.45	89.54	109.09
Operating Profit	-9.67	-6.50	42.68	6.58	30.26
PBT (after extra-ordinary items)	-37.32	2.09	43.25	9.21	28.65
Reported Net Profit	-36.53	1.23	24.46	5.83	26.41

FINANCIAL PERFORMANCE (CONSOLIDATED) – in Rs. crore

	FY 2011	FY 2010	FY 2009	FY 2008	FY 2007
Total Income	87.99	241.10	247.99	190.07	244.68
Operating Profit	-19.28	-8.28	46.52	3.91	38.82
PBT (after extra-ordinary items)	-57.72	-15.03	38.72	3.77	39.81
Reported Net Profit	-54.86	-19.13	17.37	-2.33	34.29

Source: http://www.moneycontrol.com/financials/bestcromptonengineering/profit-loss/BCE#BCE

Capital Structure

Period		Instrument	Authorized Capital	Issued Capital	- P A I D U P -		
From	To		(Rs. cr)	(Rs. cr)	Shares (nos)	Face Value	Capital (Rs. cr.)
2010	2011	Equity Share	150	123.84	123840515	10	123.84
2009	2010	Equity Share	123.84	123.84	123840500	10	123.84
2008	2009	Equity Share	123.84	123.84	123840500	10	123.84
2007	2008	Equity Share	123.84	123.84	123840500	10	123.84
2006	2007	Equity Share	123.84	123.84	123840500	10	123.84
2005	2006	Equity Share	105.5	105.33	105326358	10	105.33
2004	2005	Equity Share	105.5	105.33	105326358	10	105.33
2003	2004	Equity Share	105.5	105.33	105326358	10	105.33
2002	2003	Equity Share	105.5	105.33	105326358	10	105.33
2001	2002	Equity Share	105.5	105.33	105326358	10	105.33
2000	2001	Equity Share	105.5	105.33	105326358	10	105.33
1999	2000	Equity Share	105.5	105.33	105326358	10	105.33
1997	1999	Equity Share	110	105.33	105326358	10	105.33
1995	1997	Equity Share	44.88	25.75	25750158	10	25.75
1993	1995	Equity Share	44.88	25.75	25750158	10	25.75
1992	1993	Equity Share	9.88	7.56	7560035	10	7.56
1991	1992	Equity Share	9.88	7.56	7560035	10	7.56
1989	1990	Equity Share	9.88	7.56	7560035	10	7.56
1986	1989	Equity Share	9.88	4.73	4725662	10	4.73
1982	1986	Equity Share	3.88	3.6	3600504	10	3.6
1981	1982	Equity Share	3.88	2.25	2250315	10	2.25
1975	1981	Equity Share	3.88	1.5	1500210	10	1.5
1973	1974	Equity Share	0.6	0.6	60000	100	0.6

Source : http://www.moneycontrol.com/company-facts/bestcromptonengineering/shareholding-pattern/BCE#BCE

Shareholding Pattern

CATEGORY OF SHAREHOLDER	NO. OF SHARE-HOLDERS	TOTAL NO. OF SHARES	TOTAL NO. OF SHARES HELD IN DEMATERIALIZED FORM	TOTAL SHAREHOLDING AS A % OF TOTAL NO. OF SHARES AS A % OF (A+B)	AS A % OF (A+B+C)	SHARES PLEDGED OR OTHERWISE ENCUMBERED NUMBER OF SHARES	AS A % OF TOTAL NO. OF SHARES
(A) Shareholding of Promoter and Promoter Group							
(1) Indian							
(2) Foreign							
Bodies Corporate	2	80,344,086	767,886	64.88	64.88	-	-
Sub Total	**2**	**80,344,086**	**767,886**	**64.88**	**64.88**	-	-
Total shareholding of Promoter and Promoter Group (A)	**2**	**80,344,086**	**767,886**	**64.88**	**64.88**	-	-
(B) Public Shareholding							
(1) Institutions							
Mutual Funds / UTI	4	24,910	-	0.02	0.02	-	-
Financial Institutions / Banks	10	9,206	6,506	0.01	0.01	-	-
Insurance Companies	4	520,194	516,294	0.42	0.42	-	-
Sub Total	**18**	**554,310**	**522,800**	**0.45**	**0.45**	-	-
(2) Non-Institutions							
Bodies Corporate	279	34,760,786	19,265,239	28.07	28.07	-	-
Individuals		-	-	-	-	-	-

Individual shareholders holding nominal share capital up to Rs. 1 lakh	16,635	6,556,737	5,277,766	5.29	5.29	-	-
Individual shareholders holding nominal share capital in excess of Rs. 1 lakh	73	1,551,086	1,349,558	1.25	1.25	-	-
Any Others (Specify)	45	73,510	73,510	0.06	0.06	-	-
Any Other	45	73,510	73,510	0.06	0.06	-	-
Sub Total	**17,032**	**42,942,119**	**25,966,073**	**34.68**	**34.68**	-	-
Total Public shareholding (B)	**17,050**	**43,496,429**	**26,488,873**	**35.12**	**35.12**	-	-
Total (A)+(B)	**17,052**	**123,840,515**	**27,256,759**	**100.00**	**100.00**	**-**	**-**
(C) Shares held by Custodians and against which Depository Receipts have been issued-m	**-**	**-**	**-**	**-**	**-**	**-**	**-**
(1) Promoter and Promoter Group		-	-	-	-	-	-
(2) Public		-	-	-	-	-	-
Sub Total		-	-	-	-	-	-
Total (A)+(B)+(C)	**17,052**	**123,840,515**	**27,256,759**	**-**	**100.00**	**-**	**-**

Best & Crompton Share Price Data vs. competitor companies as on 9-Mar-12

Company Name	Last Price	% Chg	52 wk High	52 wk Low	Market Cap (Rs. cr)
Siemens	787.55	-0.35	951.00	627.05	26,799.92
ABB	845.85	2.58	915.00	541.10	17,924.27
Crompton Greave	138.60	3.78	297.00	107.15	8,891.07
Havells India	559.95	2.61	571.30	313.00	6,986.77
Techno Electric	213.60	-1.52	280.00	175.00	1,219.47
Honda Siel	400.80	1.28	463.40	261.85	406.53
HBL Power	16.05	-2.43	23.40	12.20	406.07
Bharat Bijlee	644.25	-0.01	1,183.35	511.00	364.10
Numeric Powe	254.55	-1.68	308.25	152.00	257.24
Emco	32.65	0.93	71.50	27.40	212.67
Elpro Int	336.00	-3.17	503.00	270.55	154.95
Kirl Electric	30.25	1.00	57.60	25.50	152.83
Easun Reyrl	66.85	-1.69	96.00	47.20	139.07
Birla Power Sol	0.63	3.28	1.45	0.50	134.52
Best and Crompt	10.40	-4.59	15.83	6.80	128.79
Modison Metals	37.50	2.60	49.95	24.40	121.69
Jyoti	58.80	0.43	104.50	44.35	100.72
Igarashi Motors	46.90	0.21	70.00	31.00	95.65
WS Industries	31.15	4.88	31.90	12.00	65.85
De Nora India	122.35	-0.97	134.70	70.00	64.95

Corporate Governance

The Board of Directors of Best & Crompton Engg Limited includes the following members:

Mr. S. V. Venkatesan - Chairman

Non - Executive Director

Mr. S.V. Venkatesan is a gold medalist in Commerce from Madras University. His career with State Bank of India, the largest commercial Bank in India, spanned for 24 years. He was associated with the committee appointed by the Bank to aid in the formulation of Corporate credit policies. In 1986, Mr. S. V. Venkatesan joined the Essar Group as the Financial Controller and is now on the Board of various Group companies. He spearheads the financial function for the entire Group and has been largely responsible for the resource mobilization through Capital Markets and Institutions to fund the large capital intensive projects of the Group. He was also responsible for drafting and implementing the financial policies for FOREX Management.

Mr. N. Srinivasan

Non - Executive Director

Mr. Srinivasan is a Commerce Graduate and a Chartered Accountant since 1955. He was the Senior Partner of well known auditing firm, Fraser & Ross and Deloitte Haskins & Sells. He has been the past Chairman of the Southern India Regional Council and a Central Council Member of the Institute of Chartered Accountants of India. He is the past president of Madras Chamber of Commerce & Industry, Indo American Chamber of Commerce, Deputy President of Assocham, Delhi and President of Madras Management Association.

Mr. A. Annamalai

Non - Executive Director

Mr. A. Annamalai is an entrepreneur and financier, having promoted companies, as well as managing a score of companies in diversified business fields across many countries, particularly in Hong Kong and Dubai. He has experience in diverse fields like manufacturing, software, trading, business, stock broking and education. He is the Vice Chairman and Managing Director of Vishnuraam Textiles Limited, Trichy.

Mr. K. Prakash

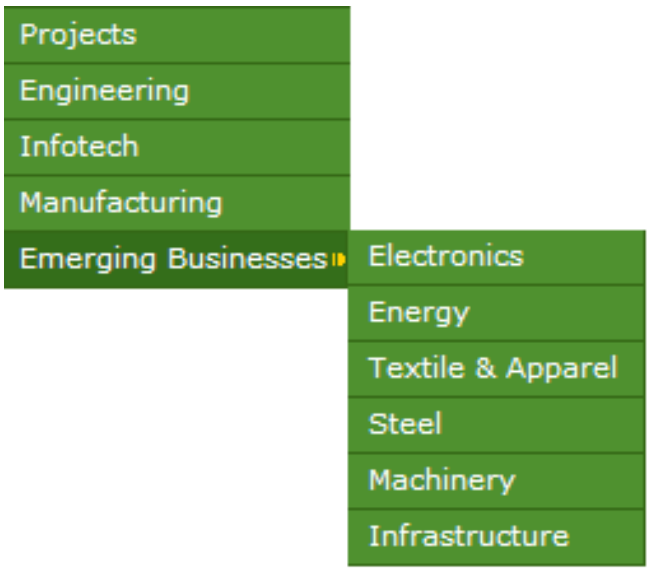
Whole Time Director

Mr. K. Prakash is a Chartered Accountant with 30 years of experience in various companies in India & Abroad. His experience spread over core industries including Banking, Information Technology, Textiles

& Garments. He has worked with Union Bank of India, Kothari Group, Thakral Kogar Group, Singapore, Mascon Global Limited and Fabindia.

Market share & Marketing Strategy

Best & Crompton operates in the following businesses:



Its product range includes the following:

THE PROJECTS BUSINESS

1. TRANSMISSION LINES

Best & Crompton have executed 33300 ckt km of transmission lines both in India and abroad. The Construction of high Voltage transmission lines are important part of the activities of Best & Crompton and this company entered the field of Transmission Lines in 1945 in technical Collaboration with Canadian Bridge Company.

Today the company is fully equipped to survey, plan, engineer and execute extra high voltage transmission lines projects. Its erection crew has long experience in dealing with specific local terrain, soil and climatic conditions. The company employs the latest and most sophisticated erection equipment and know-how.

The Design Department has expert capabilities in designing towers with surge and bundled Conductors and foundations of ordinary and special types, for any required voltage. Virtually every major power project has used the Company's expertise.

2. HIGH VOLTAGE SUBSTATIONS

Best & Crompton is a pioneer in the field of High Voltage Substations in India and abroad. Best & Crompton has built-up specialisation in turnkey contracts, including Switchyard Civil works, control room building etc.

Best & Crompton's expertise extends right from the stage of feasibility studies through conceptual design, detail engineering, supply of equipments/materials & construction, to testing & commissioning, with dedicated and accredited personnel.

3. RAILWAY ELECTRIFICATION

Best & Crompton having entered the field of Railway Electrification in the year 1959 are now leaders in the field in India, offering services on a turnkey basis.

Best & Crompton have a team of qualified Electrical, Civil and Mechanical Engineers who use State of the art CAD technology and design foundations, intricate profile, erection details including layout plan / structure / erection drawings. Qualified and competent erection groups capable of planning and completing erection work within tight commissioning schedules take care of installation and commissioning. They are also specialised in the scientific development of all-aluminium and bimetalic connectors and bronze fittings.

THE ENGINEERING BUSINESS

1. ENGINEERING CONSULTANCY

Best & Crompton, with sixty years of experience in the priority areas of industrial development set up its high-tech consultancy unit- Esquire Engineers and Consultants now a wholly owned subsidiary of the Group.

EEC offers consultancy services in the areas of:

- Power and Energy
- Distribution Plan Study
- Industrial and Chemical Projects
- Civil and Structural Engineering
- Environmental Engineering

- Fire Protection Engineering
- Project Management

With functional divisions, supported by System Engineering and Computer Services Group, EEC can provide comprehensive services from concept to commissioning, and also need-based solutions. Engineering packages, developed in-house, are also available.

Power has emerged as a market leader in consultancy services for Power Projects, Power Distribution Planning Studies, 100% EOU Projects, Chemical Projects, Agro based & Food Processing Industry

2. ENGINEERING DESIGN

Best & Crompton Engg. Ltd. has a state-of-the-art design division "Esquire Engineering Solutions Limited" providing advanced total engineering solutions in Reverse Engineering to its growing corporate customers in India and abroad. In early 1992, when most of the Indian industries were predominantly using drafting board for their design activities, EESL was using high end CAD/CAM workstation from Silicon Graphics Inc, USA.

Markets

For more than a decade, EESL has catered to the engineering requirements of hundreds of customers in the following segments:

- Automotive
- Aerospace
- Defence
- Industrial products

EESL contributions to industrial sector has brought repeated customers in diversified areas of:

- Civil Structural
- Energy
- Environment
- Mechanical
- Process
- Piping
- Project Management
- Testing & Commissioning

THE INFOTECH BUSINESS

BEACON SOFTWARE SYSTEMS LTD (Beaconsoft) has been promoted by Crombes Holding, India and Factory Systems Pte Ltd, Singapore. Beaconsoft is situated at Chennai, South India. Their IT training success relies in creating “Employable youths”. They conduct course streams, which have high Job Requirements in the Industry.

THE MANUFACTURING BUSINESS

1. PUMPS

The manufacture of Centrifugal Pumps is an important activity of Best & Crompton. The company has achieved pioneer status in this area through adaptation and assimilation of three well known Pump Technologies. Pumps are manufactured in two factories at Chennai and Bangalore.

BEACON WEIR LIMITED is a joint venture company between Best& Crompton Engg. Ltd., Chennai, and Weir Pumps Ltd., U.K. This Company was established in 1982 for manufacturing Centrifugal Pumps of the highest quality.

The Weir group founded in 1871, is one of the largest pump manufacturing Companies in the world today. They are also a world leader in Valves, Desalination, Liquid Gas Handling and Turbo Drilling Technology.

With the 100 years of Weir's experience and four decades of Best & Compton's experience in Pumps, Beacon Weir now manufactures a new range of rugged, efficient and invincible pumps.

Beacon Weir has its Head Office and manufacturing facilities in Chennai with Regional Offices in Delhi, Mumbai and Kolkata. An extensive dealer network across the Country supports the activities of the Regional Offices in reaching out to its customers.

The pumps manufactured by Beacon Weir, service the various Sectors of Water, Energy, Urban Development, Environment Infrastructure, Navy, Engineering, Fertilizer, Sewage, etc. Beacon Weir has also assimilated the technology of Ochsner/Austria, for manufacturing Chemical and Process Pumps.

Today Beacon Weir is recognized as a reputed and dependable manufacturer of quality Pumps in the Indian Industry. Beacon Weir has also been awarded the ISO 9001 Certification by Lloyd's Register Quality Assurance, Chennai.

2. CASTING

Iron and steel castings in SG, Grey & Alloy iron and special steels for Pumps, Valves and Automobile components in corrosion resistant and heat resistant steels and irons including Nickel, Chromium and Molybdenum alloy steels

Madras Foundry

Madras Foundry was started in 1959 to supply (iron & alloy-iron) castings to meet captive requirements of the Best & Crompton Group.

Madras Foundry has a manufacturing capacity of 350 tonnes per month and can handle castings weighing upto 3 tonnes.

3. ELECTRICAL MACHINE

- Train lighting alternators
- Compressor motors
- Generators for military tanks
- Winding units for elevators
- General Electrical rotating machines.

4. POWERLINE ACCESSORS

- Power connectors for ratings up to 400 KV/3000 Amps
- Transmission line accessories
- Vibration dampers and spacers

- Overhead electrification fittings,
- Regulation equipment

5. **PLUGS & SOCKETS**

Metal-clad industrial and flame-proof plugs and sockets Interlocked fuse switches for ratings up to 125 Amps/440 V

Information on the **EMERGING BUSINESSES** is not available.

Research & Development

As per the Annual Report 2008-09; "There is no material development to report relating to conservation of Energy, Research & Development and Technology Absorption"

However, one can gather some of the following facts about the company's use of R&D and innovation:

Best & Crompton has a team of qualified Electrical, Civil and Mechanical Engineers who use State of the art CAD technology and design foundations, intricate profile, erection details including layout plan / structure / erection drawings. Qualified and competent erection groups capable of planning and completing erection work within tight commissioning schedules take care of installation and commissioning. They are also specialised in the scientific development of all-aluminium and bimetalic connectors and bronze fittings.

Best & Crompton Engg. Ltd. has a state-of-the-art design division "Esquire Engineering Solutions Limited" providing advanced total engineering solutions in Reverse Engineering to its growing corporate customers in India and abroad. In early 1992, when most of the Indian industries were predominantly using drafting board for their design activities, EESL was using high end CAD/CAM workstation from Silicon Graphics Inc, USA.

The company has achieved pioneer status in the area of manufacturing pumps through adaptation and assimilation of three well known Pump Technologies. Pumps are manufactured in two factories at Chennai and Bangalore.

Lessons learned - Critical Success factors that didn't work

Use of obsolete technology

The company reached the stage of sickness in 1994 given that it was using obsolete technology and in order for it to spruce up its product lines, automation was necessary but it did not have the required

funding. Polysindo was brought in especially to pump in funds into the company and update its technology.

Corporate culture

The corporate culture of the company made its assimilation into the UB group difficult and prolonged its rehabilitation period eventually leading to the company being recommended for rehabilitation to BIFR again

Labour problems

A direct result of automation is redundancy of labour. Working out a VRS package that was acceptable to Best & Crompton's employees was a long drawn-out process resulting in lock-outs at the factories

Labour unions' non-acceptance of the settlement offered by Beacon Weir and other subsidiaries of Best & Crompton further prolonged the rehabilitation of the company. The labour unions were recalcitrant and negotiated hard with the Polysindo group for production incentives, past wages etc. going on strike and even leading to threats of pull-out by Polysindo (which would have meant liquidation of the company).

Challenges

The company has been facing / has faced the following challenges after the on boarding of Polysindo and during the period of revival:

- Increase in raw material costs impacted all units including the pump manufacturing unit
- Recession in the automotive sector
- Foundry operations impacted by intermittent power cuts imposed by TNEB
- Global recession impacted the apparels unit
- The apparels units is also facing liquidity crunch
- Rationalization of manpower

Opportunities & Future plans

- In case as expected, Polysindo provides funding and technology to Best and Crompton along with buy-back arrangements for its products, the company should be able to recover from its present state and rebound back given its inherent strengths in the manufacturing and pumps businesses.

- Best & Crompton Engineering Limited plans to develop a large IT park on about two million sq. ft. at Ambattur in North Chennai making use of its industrial land in the estate there. This park is still at the planning stage. Ambattur already has a number of IT and BPO players and more IT infrastructure is being built there.

- The company has also established a garment factory at Arakkonam near Chennai. It has aggressive plans for expansion of this business which already employs over a 1000 people and is into exporting sports wears, knits etc. to countries in North America, South America, Eastern Europe, Southeast Asia, Mid East and Western Europe. Its total annual sales volume is above US$100 Million

- It also has plans to setup a steel making facility in southern Tamil Nadu and is in the process of setting up a machine tool facility at Sriperambudur. It has signed a knowhow contract with STAI Prefabricate of Italy for making reinforced concrete products.

- Best & Crompton's (Beacon Weir) has an impressive line-up of customers include:

Reliance Industries	Tata Chemical, Methapur	BHEL, Project Division
Thyssenkrupp Industries	The Indure	Tata Chemicals, babrale
India Glycols Ltd.	Uttaranchal, Jal Nagar	ONGC
BPCL	IOCL	TWAD Board
Surat Municipality Corp.	Ahmedabad Municipal Corp.	Bombay Municipal Corp.
South Eastern Coal Fields	Northern Coal Fields	Mahavade Coal Fields
Neyveli Lignite Corp.	Durgapur Steel Plant	NTPC (All Over India)
CPCL, Chennai	Hindustan Zinc	VSPL, Vizag
ION Exchange	Gujarat Anjan Ltd.	G.W.SS.B, Delhi
G.W.SS.B, Gujarat	Delhi JAL Board	PW Dept., J & K
Shar Centre, Sriharikota	Dept. of Atomic Energy, Kalpakkam	L & T
Mysore Paper Mills	Badrachala Paper Mills	TNEB
Blue Star Ltd.	Voltas Ltd.	NALCO - Angul
Engineers India Ltd.	Relene Petro Chemicals	Indian Navy
Mazagon Dock, Ltd., Mumbai	G.R.S.E, Calcutta	Cummins
Cochin Shipyard	Goa Shipyard	Hindustan Shipyard, Vizag
Hi - Point Services	ABB Ltd.	NALCO - Damanjodi
SAIL - Durgapur, Rourkela, Bokaro & Bhilai		

With a solid reputation in pump manufacturing and a good customer base, this business should not face any major problems.

Best & Crompton's decision to get into new business areas in India is a part of its growth strategy of its main promoter group, Polysindo Indonesia that wants to curtail its losses by investing in different industries to spread risks.

Abbreviations

Abbreviation	Meaning
ANDA	Abbreviated New Drug Application
API	Active Pharmaceutical Ingredient
BoD	Board of Directors
CGL	Crompton Greaves Ltd.
CNS	Central Nervous System
C-R-A-M-S	Contract Research and Manufacturing Services
CRO	Clinical Research Operations
CRP	Collaborative Research Partnership
DDDSS	Drug Discovery and Development Services
DMF	Drug Master File
EBIDTA	Earnings Before Interest, Depreciation, Tax and Amortization (sometimes referred to as EBITDA with same meaning)
FY	Financial Year
HR	Human Resources
MOU	Memorandum of Understanding
OTC	Over The Counter
PAT	Profit After Tax
PBT	Profit Before Tax
R&D	Research & Development
SFE	Supercritical fluids extraction
SPIL	Sun Pharma Industries Limited
UKMHRA	United Kingdom Medicines and Healthcare products Regulatory Agency
USFDA	United States Food and Drug Administration

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Success stories of Drugs & Pharmaceuticals, Biotechnology and Process Engineering Industry

NSTMIS PROGRAMME
Department of Science & Technology
Government of India

QUESTIONNAIRE

Project carried out by

Group for Economic & Social Studies (GESS)

New Delhi

1. Company Name	
2. Year Established	
3. Website	
4. Registered Office Address	
5. Phone(s)	
6. Fax	
7. Corporate Office Address	
8. Phone(s)	
9. Fax	
10. Number of offices a. In India b. Overseas	
11. Name of Chairman / Managing Director	
12. Annual Turnover (in Rupees crores)	**FY 2006-07**
	FY 2007-08
	FY 2008-09
	FY 2009-10
	FY 2010-11
13. Annual net profit (in Rupees crores)	**FY 2006-07**
	FY 2007-08
	FY 2008-09
	FY 2009-10
	FY 2010-11
14. Profitability Percentage	**FY 2006-07**
	FY 2007-08
	FY 2008-09
	FY 2009-10
	FY 2010-11
15. Exports in last 5 years (value in Rupees crores)	**FY 2006-07**
	FY 2007-08

	FY 2008-09
	FY 2009-10
	FY 2010-11
16. Imports in last 5 years (value in Rupees crores)	**FY 2006-07**
	FY 2007-08
	FY 2008-09
	FY 2009-10
	FY 2010-11
17. Core area of operation	Pharmaceuticals Biotechnology Process Engineering
18. Organisation Structure	FUNCTIONAL PROJECTIZED MATRIX
19. Total no. of employees in	
20. Total no. of employees in R&D as on 31st March, 2011	
21. Strategic partnerships in	**Technology** YES NO
	Marketing YES NO
	Finance YES NO
	Exports YES NO
	Others YES NO
22. Foreign Collaboration / Joint-ventures	YES NO
23. Key drivers for joint ventures	Technology transfer

	Finance Marketing strength
24. Application of technology (both product & process)	Primarily Imported Primarily Indigenous Both
25. Expenditure in R&D as %age of turnover (in Rupees crores)	
26. Technological innovations based on in-house R&D introduced in the last 3 years	
27. Market Share in India	
28. Your market presence	Domestic regional Domestic Pan-India International Global
29. Product range	
30. Price segments you operate in	Entry level
	Mid-market
	Top of the market
31. 3 key competitors	
a. In India	
b. Overseas	
32. ISO/Quality Certifications	
33. Status of approval / National Accredition Board for Laboratories / GLP / Monitoring Authority	
34. Year-wise Major Achievements / Milestones during the last 5 years	

35. Rank your key strengths on a scale of 1 to 5 where 1 is the least and 5 is the highest : a. Management style b. Human Resources c. Technology d. Use of information technology e. In-House R&D f. Marketing network g. Innovation h. Others	
36. Primary Export Destinations	
37. Primary Originating countries for Imports	
38. Percentage of exports of total turnover in the last five years	
39. Status of registration with USFDA and other regulatory authorities of European countries	
40. Rank the following Critical Success Factors on a scale of 1 to 5 where 1 is the least and 5 is the highest: a. Management style b. Sound financial background c. Adoption of innovative technology d. Right strategic initiatives at the right time e. Employee engagement with the organisation	

41. Do you have a unique mantra for employee rewards or recognitions? What is it?	
42. Describe your journey from the time you started to the present day	
43. What do you view as your biggest challenges a. In the short term (within two years from now) b. In the long term (after two years from now)	
44. Describe the turning point for your company's growth	
45. What is the importance of R&D and innovation in your company's future plans on a scale of 1 to 5 where 1 is least and 5 is highest?	