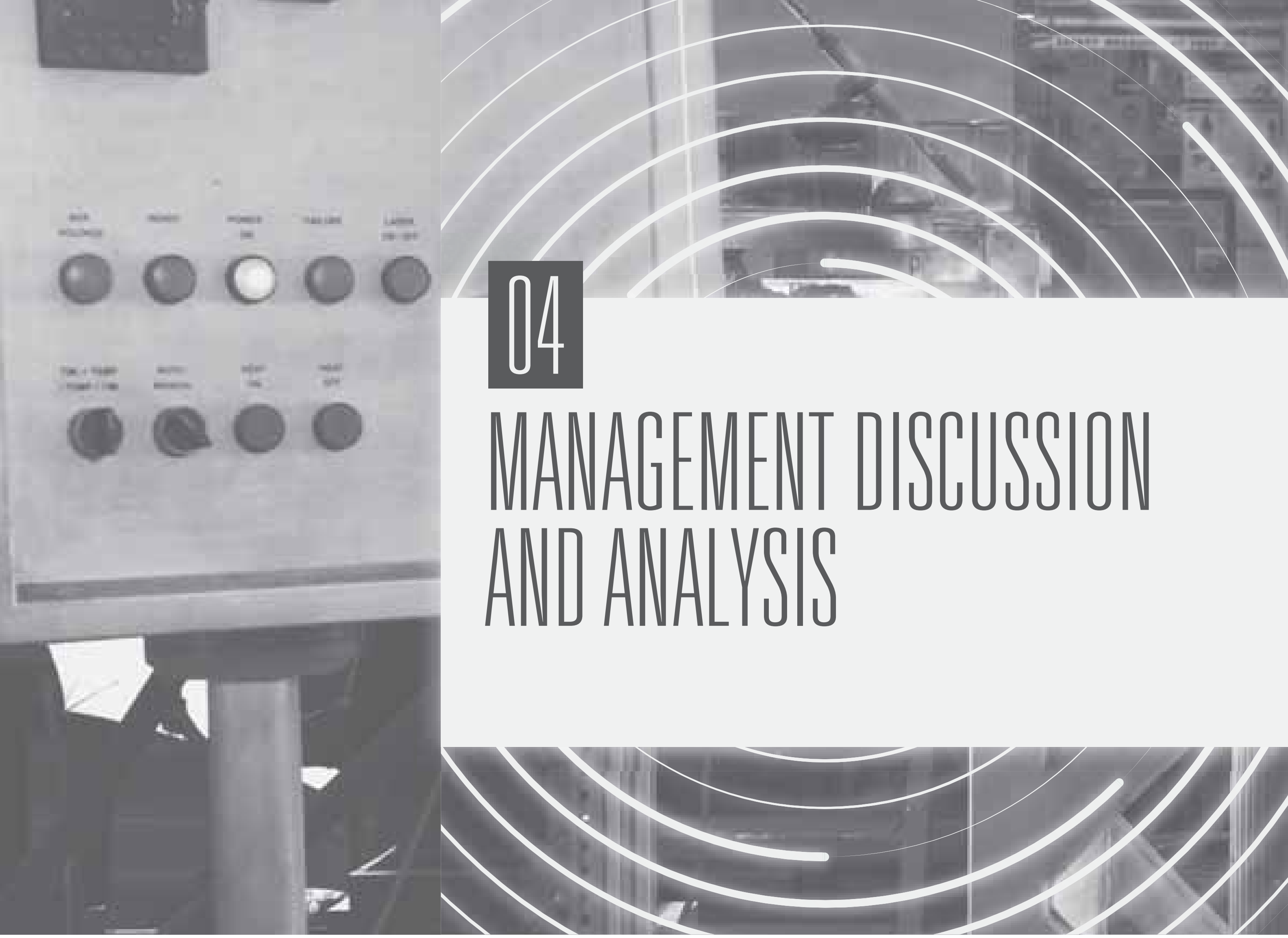

04

MANAGEMENT DISCUSSION AND ANALYSIS

Crompton Greaves Limited ('CG' or 'the Company') is a global enterprise providing products, platforms and end-to-end solutions to electrical utilities and industries for the management and application of efficient and sustainable electrical energy.

Up to 30 September 2015, CG's businesses were divided into two broad areas of work: those that were B2B and catered to business segments and those that were B2C which focused on consumer needs. With effect from 1 October 2015, or the Appointed Date, CG completed the demerger of its B2C Consumer Products business into a separate company, namely Crompton Greaves Consumer Electricals Limited (CGCEL). The Scheme of Arrangement and the date of demerger was approved by the Hon'ble High Court, Bombay in its order of 20 November 2015. According to the Scheme, each shareholder of CG has been allotted one equity share of CGCEL for each share of CG held as on 16 March 2016, or the Record Date. Effective from 13 May 2016, the shares of CGCEL have been listed on the BSE and the NSE.

The B2B segment covers three businesses. These are:

- Power transmission and distribution equipment and system solutions (or Power BU), covering a wide span of differentiated products and services from ultra-high voltage (UHV), high voltage (HV), medium voltage (MV) and low voltage (LV).
- The Industrial Business Unit (Industrial BU) consisting of rotating machines (motors and alternators) across a wide spectrum of power

Rs.1 crore is Rs.10 million. FY2016 stands for fiscal year 2015–16, i.e. from 1 April 2015 to 31 March 2016. Analogously, FY2015 and other fiscal years.

and ratings, automated AC, DC and variable frequency drives and control systems as well as traction electronics and machines, signalling and coach products and integrated solutions for railway transportation.

- Automation solutions (Automation BU) for efficient electrical distribution.

Customers of the B2B segments comprise major utilities and industries across the globe —in generation, transmission, distribution, renewables, oil and gas, cement, metals and mining and the transportation sector.

CG's offerings are built around its strategic Business Units (BUs): Power, Industrial and Automation. Each BU is responsible for revenue growth, profitability and capital efficiency through strategic levers and business activities. These involve, among others, geographical expansion of markets and the manufacturing footprint, design, technology, supply chain, manufacturing, sales support, tendering and quotations, contract management, installation, testing and commissioning for the products.

Before describing each of the BUs and their facilities, it is important to explain some of the key changes that have occurred in FY2016 which have bearing on how the financial results are reported in this chapter, in the Directors' Report and in the stand-alone and consolidated audited accounts.

IND AS, CONTINUING AND DISCONTINUED OPERATIONS

On 16 February 2015, the Government of India, in consultation with the National Advisory Committee on Accounting Standards (NACAS) notified the Companies (Indian Accounting Standards) Rules, 2015. This is called the Indian Accounting Standard, or Ind AS. In most parts, Ind AS is akin to the International Financial Reporting Standards (or IFRS). CG voluntarily opted for adoption of the Ind AS with effect from 1 April 2015.

Hence, the statements of assets and liabilities as at 31 March 2016 and at 31 March 2015 and the financial results for the year ended 31 March 2016, both on stand-alone and consolidated basis, have been prepared in accordance with Ind AS. Consequent to adopting Ind AS, CG has restated its financial statements as at 1 April 2014 — that being the transition date and the opening balance sheet — and has also restated financial statements of FY2015, which were audited by Statutory Auditors. The consolidated financial statements of CG and its subsidiaries have been prepared in accordance with Ind AS 110 (Consolidated Financial Statements) and Ind AS 28 (Investments in Associates and Joint Ventures).

In opting for Ind AS, one has to meet the classification scheme prescribed by Ind AS

CG voluntarily opted for adoption of the IND AS with effect from 1 April 2015 and thereafter. Hence the financial statements (both on stand-alone and consolidated basis) have been prepared accordingly in this Annual Report.

CHART A
NET REVENUES OF THE THREE MAIN BUSINESSES

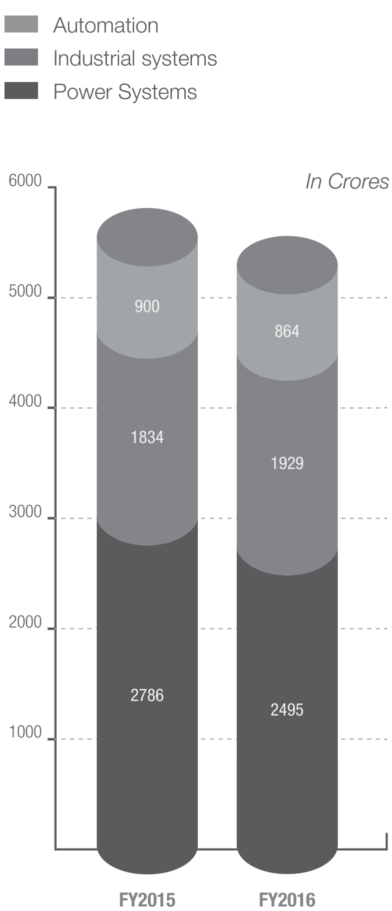

Chart A plots the change in net revenues of the three main businesses.

- CG's Power Systems' net revenue reduced by 10.5% to Rs.2,495 crore.
- Net revenue from Industrial Systems increased by 5.2% to Rs.1,929 crore.
- Net revenue from Automation fell by 4% to Rs.864 crore.

105 (for Non-current Assests held for Sale and Discontinued Operations), which requires companies to classify and separately disclose the financials of (i) continuing businesses and (ii) those held for sale or discontinued operations. During FY2016, discontinued operations or businesses held for sale were as follows:

1. The erstwhile Consumer Products business and its financial results are upto the period ended as on 30 September 2015. Moreover, as mentioned earlier, financial results of CG exclude those of the Consumer Products business for the period commencing on or after 1 October 2015, from which date any business with the Consumer Products, or Crompton Greaves Consumer Electricals Limited (CGCEL), is treated as a third party transaction.

2. The Company had also entered into a Distribution Franchise Agreement (DFA) with the Maharashtra State Electricity Distribution Company Limited (MSEDCL) from 1 June 2011 for the distribution of electricity in the Jalgaon Circle Area, and was managing this business since November 2011. However, due to certain unresolved disputes with MSEDCL, the DFA stood terminated with effect from 12 August 2015. However, CG is confident of arriving at an amicable settlement with MSEDCL on all pending issues under the DFA. The financial impact of the cessation of franchisee services and the dispute will be known after a final decision of the PDRB. Consequently, this is also treated as discontinued operations.

3. During FY2016, CG sold it's Power Systems business in Canada to PT Holdings Corporation in a structured deal for an enterprise value of Canadian $20 million. The operation of the entity has been transferred to PT Holdings Corporation with effect from 17 November 2015. This business, therefore, has also been treated as discontinued operations.

4. Finally, during FY2016, CG entered into binding transactions agreement with First Reserve for sale of its transmission and distribution (T&D) businesses at Indonesia, Hungary, Ireland, France, North America and Belgium at an enterprise value of €115 million. First Reserve is a leading global private equity and infrastructure investor exclusively focused on energy. Moreover, the Company closed down its systems business at Brazil and is in the process of winding up its systems business at North America and the United Kingdom. According to Ind AS 105, these are all treated as held for sale or as discontinued operations.

The consolidated financial results of CG reflect these changes for FY2016 and FY2015. These are given in **Tables 1, 2 and 3**.

The continuing businesses of CG as reported in the consolidated financials comprise:

a) The CG Power business.
b) The CG Industrial Systems business in India.
c) The Automation business, i.e. ZIV consolidated, Automation Solutions (ASOL) USA (earlier QEI Inc.), ASOL UK and ASOL Ireland.
d) The Industrial Systems businesses abroad, namely Rotating Machines (Hungary) and Drives & Automation in Sweden.

This sets the stage for our discussions on operations and consolidated financials in the sections below.

FACILITIES OF THE CONTINUING BUSINESSES

POWER BU

CG's Power BU offers an extensive portfolio of manufactured equipment ranging from high voltage transmission products to those needed for distribution, as well as integrated solutions for network management. Its operations can be classified into two divisions:

1. **Products** comprising Power Transformers, EHV Switchgears, MV Switchgears and Distribution Transformers. Facilities of the continuing businesses are at Kanjur Marg (Mumbai, Maharashtra), Malanpur and Mandideep (Madhya Pradesh), Nashik and Aurangabad (Maharashtra).
2. **Systems and Solutions** which provide turnkey solutions and services for design, manufacture, supply, construction, installation, testing, commissioning and servicing of large scale on-shore and off-shore, conventional and renewable energy projects. The continuing business in India operates out of Gurgaon (Haryana).

INDUSTRIAL SYSTEMS BU

The Industrial Systems BU provides equipment and services to convert electrical energy for industrial applications. It has four verticals:

1. **Products** comprising high voltage (HV) motors ranging up to 25 MW; low voltage (LV) motors ranging up to 1.5 MW; fractional horse power (FHP) motors; direct current (DC) motors; AC generators up to 70 MVA range

01 RESULTS OF THE ERSTWHILE CONSUMER PRODUCTS BUSINESS

RS. CRORE

PARTICULARS	QUARTER ENDED	SIX MONTHS ENDED	YEAR ENDED
	31 MARCH 2015	30 SEPTEMBER 2015	31 MARCH 2015
Net Sales / Income from operations	905.26	1775.24	3232.65
Profit before tax	111.29	180.68	394.26
Net profit after tax	75.02	120.73	267.55

02 RESULTS OF THE DISTRIBUTION FRANCHISE BUSINESS, JALGAON

RS. CRORE

PARTICULARS	QUARTER ENDED	SIX MONTHS ENDED	YEAR ENDED
	31 MARCH 2015	30 SEPTEMBER 2015	31 MARCH 2015
Net Sales / Income from operations	89.34	160.53	412.08
Loss before tax	(21.54)	(27.14)	(25.79)
Loss after tax	(21.54)	(27.17)	(25.37)

03 RESULTS OF SOLD OR TO BE DISCONTINUED INTERNATIONAL T&D BUSINESS

RS. CRORE

PARTICULARS	QUARTER ENDED			YEAR ENDED	
	31 MARCH 2016	31 DECEMBER 2015	31 MARCH 2015	31 MARCH 2016	31 MARCH 2015
Net Sales / Income from operations	1143.19	880.61	1247.06	4105.45	4901.08
Loss before tax	(156.98)	(223.10)	(442.55)	(496.56)	(550.27)
Loss after tax	(223.79)	(209.57)	(468.85)	(564.57)	(587.28)

and AC drives up to 3 MW; traction machines for railway transportation; and stamping products. It has facilities at Tapioszele (Hungary), Mandideep and Pithampur (Madhya Pradesh), Ahmednagar (Maharashtra) and Colvale and Kundaim (Goa).

2. **Drives and Industrial Automation,** which involves AC and DC drives, variable frequency drives. It has facilities at Helsingborg (Sweden) as well as at Mandideep and Pithampur (Madhya Pradesh).

3. **Railways**, which includes solutions based on insulated gate bi-polar transistor (IGBT) technology, traction electronics and traction machines for railway transportation and signalling, with facilities at Mandideep and Pithampur (Madhya Pradesh).

4. **Services** for all the above products including the condition monitoring and training modules for maintenance.

AUTOMATION BU

Automation manufactures specialised equipment to manage and control the flow of electricity in transmission and distribution grids. It also provides client-specific digitised automation solutions for power utilities, rapid transport services and other related activities. It has facilities in Zaimudio, Madrid and Barcelona (Spain), Grenoble (France), Niteroi (Brazil), Dublin (Ireland), Springfield (New Jersey, USA) and Bengaluru (Karnataka, India).

BUSINESS PERFORMANCE, FY2016

CG: Consolidated Financial Highlights, FY2016

- The unexecuted order book (UEOB) as on 31 March 2016 stood at Rs.4,167 crore, which was flat compared to the previous year.
- Net sales and income from operations was Rs.5,272 crore. This was 4.2% less than the comparable corresponding figure of the previous year — after adjusting for the discontinued and discontinuing business.
- CG's earnings before interest, depreciation, taxes, and amortisation (EBIDTA), including 'other expenses' but without 'other income', was Rs.367 crore in FY2016. In comparable terms, this was 27.9% less than in FY2015. Including 'other income', decreased by 21.9% to Rs.453 crore.
- Profits before interest and taxes (PBIT) from ordinary activities reduced by 41.1% to Rs.198 crore.
- Profit before taxes (PBT) including 'other income' but without exchange gain / loss and exceptional items was Rs.141 crore in FY2016, versus Rs.253 crore in the previous year. Including these, PBT for FY2016 was Rs.87 crore, compared to Rs.356 crore in FY2015.
- Profit after taxes (PAT) from continuing operations, including share of profit (or loss) in associates and minority interests was Rs.75 crore, versus Rs.368 crore in the previous year.
- PAT from discontinued operations was (Rs.471 crore) in FY2016, compared to (Rs.345 crore) in FY2015.

CG retained its leadership position in Power Transformer and Reactors in 800 kV class with Power Grid

CG retained leadership position in 800kV class with PGCIL by securing orders for 10,303 MVA, representing a market share of 25% by MVA and 24% by value.

- Overall PAT — for continuing and discontinued operations taken together — was (Rs.396 crore) in FY2016, versus Rs.23 crore in the previous year.
- Earnings per share (EPS), basic, was (Rs.6.31) in FY2016 versus Rs.0.37 in the earlier year.

POWER SYSTEMS

Power Systems (or 'CG Power') is the Company's largest BU and focuses on power transmission, distribution, power solutions, setting up of integrated on-shore and off-shore power systems and associated services businesses. It manufactures a wide range of power and distribution transformers, extra high voltage (EHV) and medium voltage (MV) circuit breakers, switchgears, EHV instrument transformers, lightning arrestors, isolators and vacuum interrupters. In addition, it offers turnkey solutions for transmission and distribution (T&D) through sub-station projects, engineering, procurement and construction (EPC) as well as other end-to-end contracts involving the entire value chain — solutions, design, products, procurement, construction, erection and servicing. A detailed list of CG Power's products, solutions and services as well as its associated facilities is given at the end of this Annual Report.

CG POWER: CONSOLIDATED FINANCIAL PERFORMANCE

The consolidated performance of CG Power is given in **Table 4.**

The unexecuted order book (UEOB) reduced by 1.8% to Rs.2,861 crore.

- Net sales of CG Power fell by 10.5% to Rs.2,495 crore.
- EBIDTA (including other income) fell by 44.8% — from Rs.458 crore in FY2015 to Rs.253 crore in FY2016.
- EBIT reduced by 53.3% to Rs.188 crore.
- The return on capital employed (ROCE) decreased by 13.1 percentage points to 10.0% in FY2016.

A feature that becomes apparent when looking at the financial data presented in **Table 4** and **Table 3** is the cost that CG has had to bear on account of its overseas T&D business. As **Table 3** shows, aggregate

04 CONSOLIDATED FINANCIAL PERFORMANCE OF THE CG POWER BUSINESS

RS. CRORE

CG POWER	FY2015	FY2016	GROWTH
Unexecuted Order Book (UEOB)	2,912	2,861	(1.8%)
Net Sales	2,786	2,495	(10.5%)
EBIDTA (Including Other Income)	458	253	(44.8%)
EBIT	402	188	(53.3%)
Capital Employed	1,737	1,880	8.2%
Return on Capital Employed (ROCE)	23.1%	10.0%	(13.1) percentage points

Note: Figures have been re-grouped wherever necessary to make them comparable.

pre-tax loss of the international T&D business was Rs.550 crore in FY2015, which further decreased by 9.8% to Rs.497 crore in FY2016.

Though the consolidated T&D business has shown a decline in EBITDA and EBIT (see **Table 4**), these are still very much in the positive territory. The Company believes that, with adequate focus, this business can be turned around — not only on account of higher sustained orders from India and elsewhere, but also due to a more manageable scale of operations. As was touched upon in last year's *Management Discussion and Analysis,* the regions of long term sustained growth are India, China and the emerging nations of Asia and Africa. Demand for power in these countries is growing, and will continue to do so, at rates significantly higher than the developed world. Among large emerging nations, India has significant upside prospects for power generation, transmission and distribution. CG has sufficient T&D manufacturing capacity in India, as well as the necessary technical and commercial expertise to win large export orders.

CG POWER: KEY DEVELOPMENTS IN FY2016

The product lines for CG Power BU are: power transformers, switchgears and distribution transformers.

The Indian power transformer market is expected to grow by 9% driven by the Power Grid Corporation of India Limited (PGCIL), the National Thermal Power Corporation (NTPC) and some key State Electricity Boards. Apart from this, there are going to be transmission projects in the public-private partnership (PPP) model, which should also drive the demand for transformers and reactors. In addition, the dedicated freight corridors of Indian Railways will increase the demand for trackside transformers. In distribution, the Government of India has launched its *Ujwal DISCOM / Assurance Yojana* (UDAY) scheme, where the Central Government will, in two annual tranches, take over 75% of the debt of the over-leveraged, cash strapped DISCOMs in various states. This is expected to clean the books of many DISCOMs and State Electricity Boards which, in turn, ought to create the necessary headroom to generate substantial demand for distribution transformers.

Power Transformers (PT)

These are manufactured at CG's facilities at T3 (Mandideep, near Bhopal) and T1 (Kanjur Marg, Mumbai).
The T3 facility at Mandideep remains India's leading 765 kV manufacturing plant.

- It retained leadership position in 800 kV class with PGCIL by securing orders for 10,303 MVA, representing a market share of 25% by MVA and 24% by value.
- The unit bagged orders for 63 large locomotive transformers.
- Secured orders for two 225 MVA, 230 kV transformers from L&T for a project that PGCIL is executing in Bangladesh.
- Bagged export orders for a 130 MVA, 220 kV transformer from Chile, and another for 126 MVA, 200 kV from the USA.
- It designed and developed its first 220 kV Delta transformer (60 MVA, 220 / 23 kV) for Chile.
- It designed, developed and supplied the plant's largest generator transformer (396 MVA, 242 / 18 kV, 3Ø) to the USA.
- Designed and developed a new locomotive transformer (7.7775 MVA, 25 kV) for Indian Railways.

The T1 plant at Kanjur Marg (Mumbai) has also continued to perform well. During FY2016 it won several domestic and export orders:

- Direct orders from PGCIL in the 400 kV class, comprising (i) five units of 500 MVA interconnecting transformers, or ICTs; (ii) one 200 MVA ICT; (iii) three 125 MVAr reactors; and (iv) two 80 MVAr reactors.
- Orders for 400 kV reactors from major EPC contractors.
- Order from Shyama Power for a 400 kV sub-station in northeast India, as well as four 105 MVA single phase transformers and a 63 MVAr reactor.
- Order from KEC for two 315 MVA ICTs and another two 200 MVA ICTs.
- Repeat order from the Telengana State Transmission Corporation for three 315 MVA ICTs.
- Secured first order for coupling transformers from L&T for its Statcom project.
- Order from KEC for 21 / 30 MVA railway transformers.
- Substantial growth in export orders from Malaysia. Secured the largest power transformer export order till date for 1050 MVA, 500 kV auto transformers from Tenaga Nacional Berhad (TNB), Malaysia.
- Received first export orders from: (i) Abu Dhabi for an alumina plant, through Bechtel, and (ii) L&T, Sharjah, for a 400 kV power project in Malawi, Africa.
- Successfully short circuit tested: (i) a 250 MVA, 400 kV generator transformer at KEMA, Netherland for an NTPC project, and (ii) a 50 MVA, 66 kV transformer for the Delhi Metro Rail Corporation.
- Manufactured three 500 MVA transformers for PGCIL its prestigious Kunta solar power project in Andhra Pradesh and delivered these in four months.
- Developed a cost effective design series for 400 kV shunt reactors.

Switchgears

CG has full-fledged EHV and MV switchgear plants in India, some of which command significant leadership position in the country. FY2016 witnessed several successes, some of which are mentioned below.

- The division is a leader in ring main unit (RMUs) and outdoor vacuum circuit breakers (VCBs) with market shares of 48% and 31% respectively. It also has a market share of 19% across all ranges of VCBs.
- Secured first orders from:
  (i) ANDE, Paraguay, for supplying 36 kV indoor VCB panels;
  (ii) Indonesia for a newly developed, mid-mounted 24 kV indoor VCB panel;
  (iii) Vietnam for 24 kV RMUs;
  (iv) West Bengal State Electricity Distribution Company Limited for 36 kV indoor VCB panels;
  (v) Goa Electricity Department for 12 kV VCB panels with numerical protection relays incorporating the IEC 61850 protocol;
  (vi) Northern Power Distribution Company of Telengana Limited for numerical protection relays.
- Secured repeat orders for various types of RMUs and VCBs from L&T, Torrent Power, Divi's Laboratories and various state electricity distribution companies.
- Successfully type tested:
  (i) 12 kV, 25 kA, 800 / 1250 ampere indoor VCB;
  (ii) 12 kV outdoor VCB;
  (iii) 12 kV CG Novitas panel.
- Maintained leadership position in Indian market for vacuum interrupters and vacuum contactors with over 40% market share.

Distribution Transformers (DT)

The DT product line is located at T2 at Malanpur, near Gwalior. In FY2016, it secured several domestic orders for EPC projects, solar power projects including evacuation and from companies operating in the metals and mining sectors. It also secured export orders from NGM Company Limited in Kenya and for a major solar power project in the Philippines. It introduced two new products:

(i) an inverter duty 12 pulse transformer of 3.2 MVA with foil winding, and
(ii) a four-inverter feed 4.25 MVA transformer, also with foil winding.

It also successfully tested three products:

(i) a 31.5 MVA 132 kV transformer for the AC Long Duration (ACLD) test;
(ii) 10 MVA 33 kV transformer for the chopped impulse test,
(iii) inverter duty solar power plant transformers, which have high business potential.

Engineering Projects Division (EPD)

EPD's offerings include:

- Turnkey AIS substations of 220 kV, 400 kV and 765 kV.
- Turnkey GIS substations from 66 kV to 400 kV.
- Pure installation and commissioning of projects.

Over the last three years, EPD has made losses on account of issues with site completion leading to costs overruns. Most of these have been due to external factors beyond the Company's control. As mentioned in last year's *Management Discussion and Analysis,* the EPD or power systems business in India brings with it several external risks, especially land acquisition for sub-station construction, while are entirely outside the control of CG. Given these constraints, CG's present focus is on completing the projects at hand and not taking up any new contracts.

INDUSTRIAL SYSTEMS

CG's Industrial Systems manufactures the following types of products:

- High voltage (HV) motors.
- Low voltage (LV) motors.
- Fractional horse power (FHP) motors.
- Direct current (DC) motors.
- AC and DC drives.
- AC generators (LV and HV).
- Variable frequency drives and solutions based on insulated gate bi-polar transistor (IGBT) technology; soft starters and shaft power monitors; and rotary heat exchangers with switch reluctance motors for saving energy.
- Traction electronics and traction machines for railway transportation.
- Railway signalling equipment.
- Stampings.

Table 5 gives the financial performance of the Industrial Systems BU over the last two years.

- Industrial Systems has been the star performer for FY2016 — almost like the situation pre-2012 when EBIT growth used to be faster than EBITDA growth which would exceed sales growth.
- Net sales grew by 5.2% to Rs.1,929 crore.
- EBITDA grew even faster — at 15.9% to Rs.212 crore.
- EBIT increased faster still — by 25.9% to Rs.139 crore.
- ROCE grew by 3.3 percentage points to 14.7%.

Given below are some of the achievements of the Industrial Systems BU for FY2016.

- For motors:
  - Global contract signed with Lafarge, the cement major, for MV Motors. Bagged orders for 11 such motors for exports to Lafarge plants in Philippines, Bangladesh, Uganda and Vietnam.

05 CONSOLIDATED FINANCIAL PERFORMANCE OF THE CG INDUSTRIAL SYSTEMS BUSINESS

			RS. CRORE
CG INDUSTRIAL	FY2015	FY2016	GROWTH
UEOB	661	682	3.3%
Net Sales	1,834	1,929	5.2%
EBIDTA (Including OI)	183	212	15.9%
EBIT	110	139	25.9%
Capital Employed	966	945	(2.2%)
ROCE	11.4%	14.7%	3.3 percentage points


CG's state -of-the-art Drives Assembly Lines in Mandideep cater to varied Indian industries

- Secured the largest rating order for India for 3.7 MW, 18-pole, 11 kV motors for use as circulating water (CW) pumps from Kirloskar Brothers Limited for LANCO's thermal power project at Ennore, Tamil Nadu.
- Won another large rating order for a 5.25 MW, 16-pole, 11 kV CW pump, to replace a Chinese motor, for Vedanta's Talwandi Saboo power plant in Punjab.
- Secured a large order from Wilo Mather & Platt Pumps for 36 MV motors for water projects under the Narmada Valley Development Authority, Madhya Pradesh.
- Bagged a single large order for 36 MV motors and 120 IEC standard LV motors from Jindal Machinery, Raipur.
- Received range approval from the Petroleum and Explosives Safety Organisation (PESO) for flame proof MV motors in the 132 kW to 1050 kW range. CG is the only motor manufacturer in India to get this certification.
- Inaugurated the second LT motor manufacturing facility at Goa and achieved the highest production volume of 30,000 motors per month.
- The rotating machine facility at Tapioszele, Hungary, produced for a Russian client two large synchronous HPP generator — a first in the 2200 mm frame size of 11.3 MW, 24-pole, 6.6 kV, 60 Hz, each weighing 93.5 metric tons. It also produced 12 motors (pump drives) for the Rosatom nuclear power plants of 1250 mm frame size, 5 MW, 6-pole, 10 kV, with double cage rotor motors.

- For drives, alternators, traction machines for railways and combined offerings:
  - The drives business successfully commissioned a large test bed project at Al-Fanar Jubail, Saudi Arabia to test motors up to 18 MW, 13.8 kV.
  - Successfully executed two sets of IGBT power converters based on a prototype by the Research Design and Standards Organisation (RDSO) of Indian Railways, which now qualifies CG to participate in large quantity tenders for such equipment.
  - After successfully executing three-phase traction motors, the Diesel Locomotive Works (DLW), Varanasi, awarded an order for 128 such units. Similarly, successfully executing a development order of traction

06 CONSOLIDATED FINANCIAL PERFORMANCE OF THE CG AUTOMATION BUSINESS

			RS. CRORE
CG AUTOMATION	FY2015	FY2016	GROWTH
UEOB	540	624	15.6%
Net Sales	900	864	(4.0%)
EBIDTA (Including OI)	97	88	(9.5%)
EBIT	7	(6)	(183.4%)
Capital Employed	1,416	1,246	(12.0%)
ROCE	0.5%	(0.5%)	(1.0) percentage points

alternators (TA) led to DLW giving orders for 25 units.

- Bagged a large Indian Railways order for 27 new, energy efficient IGBT Power Converters from the Chittaranjan Locomotive Works (CLW).
- The drives and automation business in Sweden launched its 'Flow Drive' water management solution and the VS10 / 30 micro drive of the 0.3 kW to 7.5 kW range. It also bagged major orders from Yara Marine and E.ON Energy, one of the largest electricity and gas suppliers in the UK.
- The drives and automation business in India and Sweden acquired 39 new customers and 19 new approvals. Some of the new customers were: Kone, Gamesa, Faively Transport, Nord ITC, Sandvik, Puzzolona, Anupam Cranes and Hercules Crane.
- Won 'combo orders' involving various types of motors, drives and alternators from several major customers in India.
- Sold over 44,500 fractional horsepower motors to producers of fuel dispensers throughout India and elsewhere.

AUTOMATION

The product lines of the automation business are:

a) SAS or the Substation Automation and Telecommunication Systems.

b) DAS or the Distributed Automation Solutions.

c) Transit automation and supervisory control for electric, transportation and water utilities, located in the US.

Table 6 gives the results of the automation business for FY2016.

During the year, ZIV received some significant orders from Spanish utilities such as Ibedrola and Gas Natural Fenosa (GNF) as well as a prestigious order to deliver 45,000 units of three-phase G1 smart meters for Linky in France. Consequently, the unexecuted order book increased by 15.6% in FY2016.

However, despite a growth in orders, the operating performance of CG's automation business has been below par. As **Table 6** shows:

- Net sales reduced by 4% to Rs.864 crore;
- EBITDA, including other income, dropped by 9.5% to Rs.88 crore; and
- EBIT turned negative, at (Rs.6) crore.

Given such financial performance, the Board of Directors of CG has recently initiated a process for identifying outside investors for its automation business, especially that run by ZIV. At the time of writing this chapter, there has been no resolution to this issue. If and when it occurs, CG will let shareholders and the outside world know through an appropriate notification to the SEBI, the BSE and the NSE.

HUMAN RESOURCES (HR)

In FY2016, HR focused on top level leadership transitions while successfully managing people issues arising out of demerger of the consumer business as well as the sale and closure of power business entities in Canada and Brazil. The strategy has been to promote internal talent to the vacant leadership positions.

We rolled out several initiatives on improving employee engagement to boost overall business performance. We started the practice of unit gradation to drive unit level operational and financial performance and strengthened our Performance Management Process (branded as **PRIDE** which stands for **P**ersonal **R**esponsibility in **D**elivering **E**xcellence) to align rewards with performance.

We significantly improved the quality, content and timeliness of goal-setting, performance reviews, coaching and feedback process. We also digitised the employee handbook, thus providing our employees with a one-stop access to CG's policies. While doing so, we revisited several policies to align them with the market practices. To strengthen the capability of our people managers and enhance employee engagement, we launched LEAP (which stands for **L**earn-**E**ngage-**A**ccelerate-**P**erform) in partnership with Great Places to Work at our Nashik, Bhopal and Ahmednagar plants.

We continued to strengthen the HR Centres of Excellences to improve functional capability and significantly enhance delivery capability of HR processes to enable business performance through Global HR Shared Services. Our learning and development systems focused on people development leading to superior performance at work. We launched CG Leadership Effective Effectiveness Program (CG LEP) to deepen the leadership capability within the Company. To improve personal effectiveness, we launched 7 Habits across all our markets and a special course on personal effectiveness to impart critical competencies to our managers. We also established mechanisms to reinforce and ensure implementation of learning at the workplace and revitalized our frontline supervisor development programme to provide the on-the-job training to drive operational excellence.

Industrial relations at all plants and establishments in India remained generally cordial throughout FY2016 except for a strike at our Nashik plant in the period May–August 2015. Despite this, we succeeded in ensuring 80% production during the strike period.

The Crompton Greaves Production System (CGPS) has been a significant driver in contributing towards continuous productivity improvement in CG since its inception. Work measurement and practicing the best operational excellence practices are the bedrock of CGPS with the principle of PDCA (**P**lan-**D**o-**C**heck-**A**ct) being at the core. In FY2016, we recalibrated our CGPS parameters at several plants — such as Switchgear Aurangabad and M7 Bhopal — to drive productivity. The year also saw the new Large Rotating Machine Unit at Goa being covered by CGPS. The re-calibration of CGPS norms has led to encouraging results.

CG rolled out detailed talent reviews across various levels in the organisation, starting from the top. Managers were required to assess their talent pipeline, analyse succession depth for all critical positions, identify successors and their readiness levels to take on the new position. Development planning was an important element of the process. 200 employees were so reviewed and the process was completed online this year. The online platform will ensure continuity of the process, making it possible to track year-on-year progress.

Our Global Leadership Development Programme (GLDP) was selected for the 'Best Leadership Development Practices of Asia Seminar and Awards 2015' in the category: 'Best Practice in Developing Top Leaders'.

ENVIRONMENT, HEALTH AND SAFETY (EHS)

CG is committed to minimise the adverse impact on the environment, health and safety at workplace, by protecting and enhancing the well being of our employees, visitors and partners. The Company's EHS management system, programmes and policies were enhanced in FY2016. All CG manufacturing units in Asia, EMEA and the Americas have maintained their ISO14001 and OSHAS18001 certifications.

Senior management's strong EHS commitment was reflected in updating CG's Corporate EHS Policy and introducing EHS Cardinal Rules. These new standards and expectations were communicated to all relevant employees through webinars. Moreover, bi-monthly regional EHS network conference calls were used for EHS knowledge sharing, best practices and lesson learnt across businesses and regions.

Individual leaders took up one mandatory EHS goal in their annual appraisal system and all units set their annual targets towards meeting the EHS KPIs. An individual unit's EHS performance against set target was analysed by the use of an online Monthly EHS Balanced Scorecard.

Corporate EHS audit processes were revamped — focusing more on actual EHS implementation and performance, rather than documentation. Corrective actions arising out of such audits and various EHS events were captured and tracked for closure in an online Event Reporting System (ERS) portal, which now acts as an EHS one-stop shop. Over 3,500 corrective actions were reported and tracked in ERS, of which 79% were closed on-time with required evidences as attachments.

CORPORATE SOCIAL RESPONSIBILITY (CSR)

CG's work on CSR is appended with the Directors' Report.

FINANCIAL PERFORMANCE

This section begins with CG' stand-alone results, after which it moves on to the financial performance of the overseas entity before, finally, the consolidated financials for the Company. As mentioned earlier in this chapter, the results have to be looked at in terms of Ind AS and the concept of continuing businesses and to be sold or discontinued operations.

CG: STAND-ALONE FINANCIAL PERFORMANCE

The stand-alone results of CG for the year ended 31 March 2016 and 2015 are given in **Table 7**. **Table 8** shows the key ratios (profitability, assets efficiency and leverage ratios) of the entity for FY2016 and FY2015.

- Gross sales, or revenue from operations decreased by 5.1% to Rs.4,291 crore in FY2016. Net sales and services reduced by 6.4% to Rs.3,960 crore.
- Operating EBIDTA decreased by 14.4% to Rs.227 crore.
- Because of a significant reduction in finance costs, operating PBT increased by 26.9% to Rs.221 crore.
- Net profit from continuing operations fell from Rs.345 crore in FY2015 to (Rs.1,188 crore) in FY2016.

CG: CONSOLIDATED FINANCIAL PERFORMANCE

Table 9 gives the consolidated performance of CG, while **Table 10** gives the key ratios.

- Net sales and services: In rupees, it reduced by 4.2% to Rs.5,272 crore in FY2016. In US$, it fell by 10.5% to US$806 million.
- Operating EBIDTA decreased by 27.9% to Rs.367 crore; and by 32.7% to US$56 million.
- PBT including other income, but before exceptional items and exchange gains or loss, reduced by 44.1% to Rs.141 crore in

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07 STAND-ALONE PERFORMANCE OF CG

RS. CRORE		
YEAR ENDED 31 MARCH	FY2015	FY2016
Revenue from operations	**4,524**	**4,291**
Less: excise duty	294	331
Net sales and services	**4,230**	**3,960**
Cost of materials consumed	3,118	2,863
Employee benefits expense	371	372
Other expenses	475	498
EBIDTA excluding OI	**266**	**227**
Other income (OI)	65	81
EBIDTA Including OI	**331**	**308**
Finance costs	(21)	(102)
Depreciation and amortisation	113	108
PBT excluding OI	**174**	**221**
PBT Including OI	**239**	**302**
Exchange Gain / (Loss)	**(47)**	**57**
Exceptional items net of income / (loss)	**150**	**(1509)**
Profit before tax	**342**	**(1150)**
Less: Tax expenses	-	-
Current tax	41	98
Deferred tax	(44)	(60)
Net Profit / (loss) for the year from continuing operations	**345**	**(1188)**
Profit from discontinued operations before tax	371	157
Tax expense on discontinued operations	127	61
Net profit from discontinued operations after tax	**244**	**96**
Net profit / (loss) for the period / year	589	(1092)
Balance Carried Forward To The Balance Sheet	589	(1092)
Earnings Per Share Before Extraordinary Item (Basic And Diluted) (In Rs.)	**9.4**	**(17.4)**
Earnings Per Share After Extraordinary Item (Basic And Diluted) (In Rs.) (Face Value Of Equity Share of Rs.2 each)	**9.4**	**(17.4)**

08 STAND-ALONE PERFORMANCE OF CG — KEY RATIOS

YEAR ENDED 31 MARCH	FY2015	FY2016
Profitability Ratios		
EBIDTA excluding OI / Net Sales from continuing operations	6.3%	5.7%
EBIDTA including OI / Net Sales from continuing operations	7.8%	7.8%
PBT / Net Sales from continuing operations	8.1%	(29.0%)
RONW on total operations	12.8%	(26.5%)
ROCE (at year-end capital employed) on continuing operations	4.1%	4.3%
Cash ROCE from continuing operations	6.2%	6.6%
EPS on the basis of total profits from continuing operations (In ₹ Per Share)	5.51	(18.96)
EPS on the basis of total profits (In ₹ Per Share)	9.40	(17.42)
Cash EPS from continuing operations (In ₹ Per Share)	6.60	(18.19)
Leverage Ratios		
Total Debt To Equity	0.0	0.0
Interest Coverage Ratio	NA*	NA*
Assets Efficiency Ratios		
Net Sales To Gross WC (Times)	1.0	0.9
Net Sales To Net WC (Times)	1.5	1.7

Note*: With credits, the interest payout was negative both in FY2015 and FY2016 (see Table above). Thus the interest coverage-ratio has no meaning.

09 CONSOLIDATED FINANCIAL PERFORMANCE OF CG

	FY2015		FY2016	
	RS. CRORE	US$ MILLION	RS. CRORE	US$ MILLION
Gross sales and services	5,800	949	5,605	857
Less: excise duty	295	48	333	51
Net Sales and Services	**5,505**	**901**	**5,272**	**806**
Cost of raw materials and components consumed and construction material	3,706	606	3,554	544
Employee Benefits	669	109	655	100
Other Expenses	621	102	696	106
EBIDTA excluding OI	**509**	**84**	**367**	**56**
Other Income (OI)	71	12	86	13
EBIDTA Including OI	**580**	**96**	**453**	**69**
Finance Costs	82	14	56	9
Depreciation and Amortisation	245	40	256	39
PBT excluding OI	**182**	**30**	**55**	**8**
PBT Including OI (Before Exceptional Item)	**253**	**42**	**141**	**21**
Exchange gain / (loss)	(47)	(8)	57	9
Exceptional Item	150	24	(111)	(17)
PBT after Exceptional item	**356**	**58**	**87**	**13**
Less: Tax Expenses				
Current Tax	42	7	100	15
Deferred Tax	(52)	(9)	(86)	(13)
PAT	**366**	**60**	**73**	**11**
Minority Interest	1	0	1	0
Share of Profit /(Loss) of Associates	1	0	1	0
PAT after minority interest and share of associate companies	**368**	**60**	**75**	**11**
Profit / (loss) from discontinued operations before tax	**(182)**	**(30)**	**(343)**	**(52)**
Tax expense on discontinued operations	163	26	128	20
Net profit / (loss) from discontinued operations after tax	**(345)**	**(56)**	**(471)**	**(72)**
Net profit / (loss) for the period / year	**23**	**4**	**(396)**	**(61)**
Average exchange rate for US$1		**61.1097**		**65.4117**

FY2016; and decreased by 47.7% to US$21 million.

- PAT (after exceptional items, exchange gains or losses and prior period items, but before minority interests and share of associated companies) reduced by 80.1% to Rs.73 crore, or US$11 million.

RISK MANAGEMENT

CG continues to deploy a well articulated risk management framework. This is based upon a three-tiered approach encompassing (i) enterprise risks (ii) process risks and (iii) compliance risks.

Enterprise risk identification and mitigation initiatives are managed through an on-going action agenda between the corporate risk department and each of the businesses, as well as for the Company as a whole. The coverage extends to all key business exposures as well as to lost opportunities — both internal and external — that are identified in conjunction with the businesses. After getting a measure of each such enterprise risk, the corporate risk department tracks the mitigation actions.

Process risk management involves assurances by the Company's internal audit department regarding the effectiveness of business and financial controls and processes in all key activities across the various businesses.

Compliance risk management comprises a detailed mechanism of assurances with respect to adherence of all laws and regulations in every country, with a comprehensive reporting process that cascades upwards from the accountable business line executives

10 CONSOLIDATED FINANCIAL PERFORMANCE OF CG — KEY RATIOS

	FY2015	FY2016
Profitability Ratios		
EBIDTA excluding OI / Net sales from continuing operations	9.2%	7.0%
EBIDTA including OI / Net sales from continuing operations	10.5%	8.6%
PBT / Net sales from continuing operations	6.5%	1.7%
RONW on total operations	0.5%	(8.6%)
ROCE (terminal) of continuing operations	5.7%	3.9%
Cash ROCE (terminal) of continuing operations	9.9%	8.9%
Per Shares Ratios		
EPS on the basis of total profits from continuing operations (in ₹ Per share)	5.88	1.20
Total EPS on the basis of total profits from continuing and discontinued operations (in ₹ Per share)	0.37	(6.31)
Cash EPS from continuing operations (in ₹ Per share)	8.95	3.91
Leverage Ratios		
Total debt to equity	0.3	0.1
Interest coverage ratio of continuing operations	7.0	8.1
Assets Efficiency Ratios		
Net sales to gross working capital (times) of continuing operations	0.8	1.2
Net sales to net working capital (times) of continuing operations	2.5	3.6

to CG's fiduciary Risk and Audit Committee (RAC) and then on to the Board of Directors.

The outcomes of business review meetings conducted by management and internal audit regarding processes and their compliance, as well as observations of the RAC and the Board of Directors are continuously incorporated to capture new risks and update the existing ones.

All three dimensions of CG's Risk Management framework are reviewed annually for their relevance and modifications, as required. The businesses and internal audit make regular presentations to the RAC for detailed review. The risk management process, including its tracking and adherence, is substantially e-enabled for greater consistency and better reporting capabilities.

INTERNAL CONTROLS AND THEIR ADEQUACY

CG believes that a strong internal controls framework is an essential pre-requisite of growing its businesses. To that end, it has an effective and efficient internal control system to conduct the audit of various divisions, sales offices, corporate headquarters and overseas operations. The internal audit team focuses primarily on operational and systems audits that monitor compliance with defined authority delegation matrix of the Company.

Annual internal audit plan covers key areas of operations. This is vetted by Board-level RAC, which is updated every quarter — and occasionally between successive quarters — of the significant internal audit observations, compliance with statutes, risk management and control systems. The RAC assesses the adequacy and effectiveness of inputs given by internal auditor and suggests improvement for strengthening internal controls from time to time.

CG's internal controls have been designed to provide a reasonable assurance with regard to maintaining of proper internal controls, monitoring of operations, protecting assets from unauthorised use or losses, compliances with regulations for ensuring reliability of financial reporting. The Company uses SAP as its key data and analytics tool — which has over the years considerably enhanced the internal control mechanism.

As recommended by RAC, internal audit has developed and extended an internally coded Risk Control Framework (RCF) software across the Company. This helps in understanding the risk and control environment from the perspective of each unit — be it a division or a marketing/sales office. The RAC periodically reviews the findings of RCF and suggests improvements where needed.

OUTLOOK

As was touched upon in last year's *Management Discussion and Analysis*, over the last few years CG was suffering from the losses of some of its key international operations. Though many of these were historically purchased at attractive prices and had earned a healthy return over the first five to seven years since being acquired, these entities were buffeted by slowdown in demand, progressively creeping costs and, with the exception of some, poor profits that soon led to increasing losses which had to be made good by regular cash outflows from the parent Company. Hence, there was a need to cut the losses, sell these businesses at reasonable values and focus on CG's profitable core competencies — that of producing transformers and industrial systems out of profitable plants in India; and of selling these not just within India, a rapidly growing emerging market, but also to other parts of the world.

This has been done. As mentioned earlier in this chapter, CG has divested itself of the power transformer business in Canada; is in the process of doing so with its international transformer and systems business, which is being sold to First Reserve; has shut down uneconomic centres and production units; and is in the process of selling its power solutions business in the USA. Moreover, it has exited from the loss-making distribution franchise business at Jalgaon, Maharashtra.

In addition, CG has exited from consumer products, its erstwhile B2C business. To be sure, it was a profitable operation. But it sat uncertainly on the core B2B businesses of power transformers and industrial systems.

Moreover, by voluntarily adopting Ind AS a year earlier than mandated, the Company has created a leaner balance sheet and a more sustainable financial architecture for future growth.

We are now a leaner, more manageable and, most importantly, a more profitable enterprise, without the burden of deadweight losses of much of our internationally located businesses. If India grows at least at 7.6% in FY2017 — as it has in FY2016 — and if the demand for power equipment, rotating machines, drives and railway traction equipment increases at the expected rates, we should do better in FY2017 compared to FY2016. The Company is, therefore, cautiously optimistic of the near future.

K N NEELKANT
CEO and Managing Director
DIN (05122610)
Mumbai, 27 May 2016

CAUTIONARY STATEMENT

The management of Crompton Greaves has prepared and is responsible for the financial statements that appear in this report. These are in conformity with accounting principles generally accepted in India and, therefore, may include amounts based on informed judgements and estimates. The management also accepts responsibility for the preparation of other financial information that is included in this report. Statements in this Management Discussion and Analysis describing the Company's objectives, projections, estimates and expectations may be 'forward looking statements' within the meaning of applicable laws and regulations. Management has based these forward looking statements on its current expectations and projections about future events. Such statements involve known and unknown risks significant changes in political and economic environment in India or key markets abroad, tax laws, litigation, labour relations, exchange rate fluctuations, interest and other costs and may cause actual results to differ materially.

CG is now a leaner, more manageable and most importantly, a more profitable enterprise, without the burden of deadweight losses of much of CG's internationally located businesses.