IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

ELECTRICAL MACHINERY

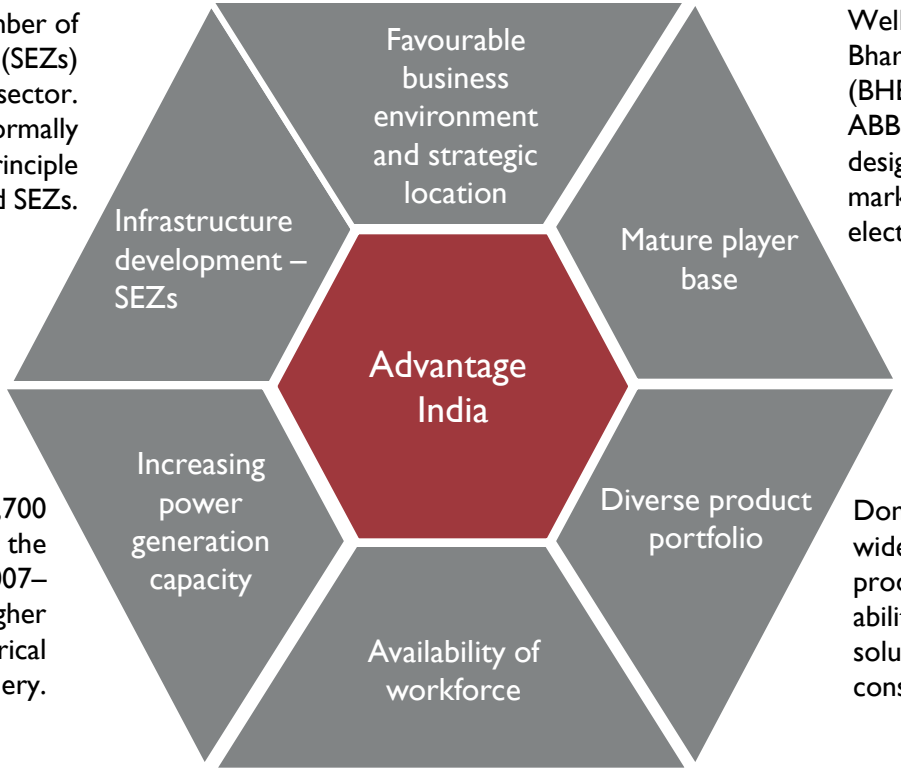
April 2010

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

Contents

Advantage India

India has a high number of Special Economic Zones (SEZs) in the engineering sector. There are 23 formally approved, nine in-principle approved, and 16 notified SEZs.



Well-established players such as Bharat Heavy Electricals Ltd, (BHEL), Crompton Greaves and ABB (India) Ltd, are engaged in designing, manufacturing and marketing high-technology electrical products and services.

A capacity addition of 78,700 MW has been proposed for the Eleventh Five Year Plan (2007–2012), translating to a higher demand for electrical machinery.

Domestic manufacturers have a wide range of capabilities and product offerings, with an ability to provide end-to-end solutions catering to large consumers.

India is home to one of the largest technical workforce in the world, employing about 2.6 million people directly, which accounts for 29 per cent of the total workforce engaged in the organised sector.

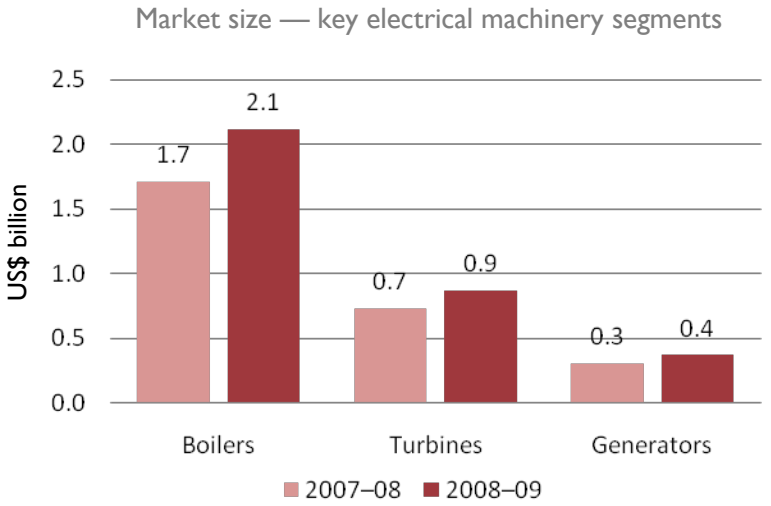
Sources: Department of Heavy Industries, GoI, Annual Report 2008–09; "Employment in Organised Industry: Engineering Sector contributes the most," Engineering Export Promotion Council website, www.eepc.org, accessed January 6, 2010

Contents

Market overview

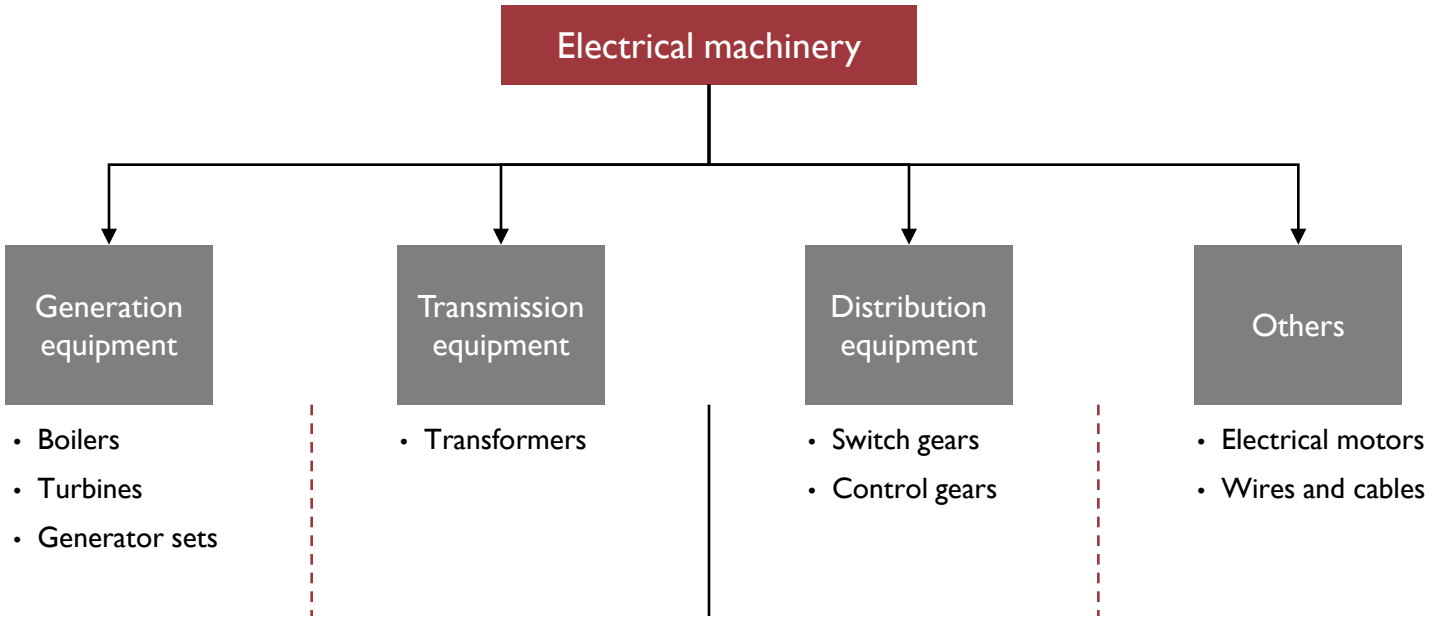
The Indian engineering sector comprises the heavy and light engineering segments. Electrical machinery forms a sub-segment of the heavy engineering segment. In India, this sector primarily caters to the power sector.

Machinery and equipment (other than transport equipment) registered a growth of 8.8 per cent between 2007–08 and 2008–09, based on the Index of Industrial Production (IIP), which accounts for highest growth among various engineering segments.



Sources: Department of Heavy Industries, GoI, Annual Report 2008–09; "Quick Estimates of Index of Industrial Production and Use-based Index (Base 1993-94=100) for the month of October, 2009," Ministry of Statistics and Programme Implementation website, www.mospi.nic.in, accessed January 5, 2010

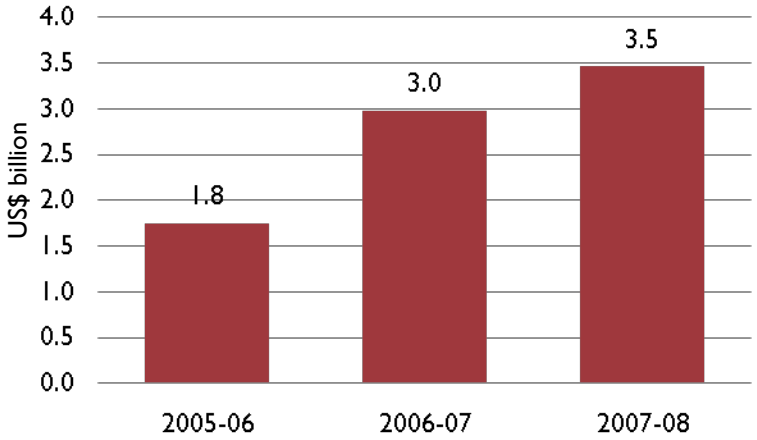
Market segments



Exports

- Electrical machinery exports from India grew by 16.1 per cent between 2006–07 and 2007–08.
- Electric power equipment and parts constituted the largest share of exports in 2007–08, valued at US$ 2.4 billion (INR 114.1 billion) and accounting for 68.7 per cent of total electrical machinery exports.

Exports of electrical machinery



Source: "Export Statistics," Engineering Export Promotion Council website, www.eepcindia.org, accessed January 27, 2010

Domestic demand … (1/2)

Boilers	• Production of boilers stood at US$ 2.1 billion (INR 101.5 billion) in 2008–09, growing at 23.4 per cent over 2007–08. • India is a net importer of boilers, with imports growing at a faster rate than exports between 2007–08 and 2008–09. • Domestic players have the capacity to manufacture indigenous boilers with super critical parameters up to 1,000 MW unit size. • Bharat Heavy Electricals Limited (BHEL) is the largest manufacturer of boilers in the country accounting for two-thirds of the market share.
Turbines and generator sets	• In 2008–09, production of turbines and generators was valued at US$ 874 million (INR 41,930 million) and US$ 370 million (INR 17,780 million), growing at 19.2 per cent and 20.6 per cent, respectively, over 2007–08. • Established capacity for manufacture of various kinds of turbines such as steam, hydro and industrial turbines is more than 10,000 MW per annum. • The AC Generator industry in India is adequately catering to the alternative power requirements of various sectors, with manufacturers in India capable of manufacturing AC Generators ranging from as low as 0.5 KVA to as high as 25,000 KVA, with specified voltage ratings. • India is a net importer of turbines and a net exporter of generators, with domestic demand for turbines exceeding domestic supply.

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

Domestic demand … (2/2)

Transformers	• Transformer production in 2008–09 stood at 72 million KVA, with India being a net importer of transformers. • The major users of transformers include the State Electricity Boards, Power Grid Corporation of India Ltd, and other industries. • Energy efficient amorphous core transformers with low losses and low noise levels and special transformers used for the purpose of welding, traction and electrical furnaces, etc., are also manufactured in India to meet the growing domestic demand.
Switchgear and control gear	• The switchgear segment can be categorised into two main categories, low tension (LT) switchgears and high tension (HT) switchgears. • HT switchgears are comparatively more technology intensive, with multinationals operating in this domain having better access to latest technology. • Production of switchgears and control gears stood at 17.8 million units in 2008–09. • Players in the Indian switchgear industry manufacture the entire range of circuit breakers, from bulk oil, minimum oil, air blast and vacuum to sulphur hexafluoride as per standard specifications for voltages ranging from 240 V to 800 KV.

Source: Department of Heavy Industries, GoI, Annual Report 2008–09

Growth drivers … (1/2)

The Indian electrical machinery sector primarily caters to the power sector and is expected to be on a sustained growth path as a result of the government's focus on capacity augmentation in the power sector and thrust on construction industries.

Power sector

- The National Electricity Policy (NEP) stipulates 'power for all' and annual per capita consumption of electricity to rise to 1,000 units by 2012.

- To fulfill the objectives of the NEP, a capacity addition of 78,700 MW has been proposed for the Eleventh Plan. This capacity addition is expected to provide a growth of 9.5 per cent to the power sector.

- Target capacity addition through hydro sources is 15,627 MW, thermal sources is 59,693 MW and nuclear sources is 3,380 MW.

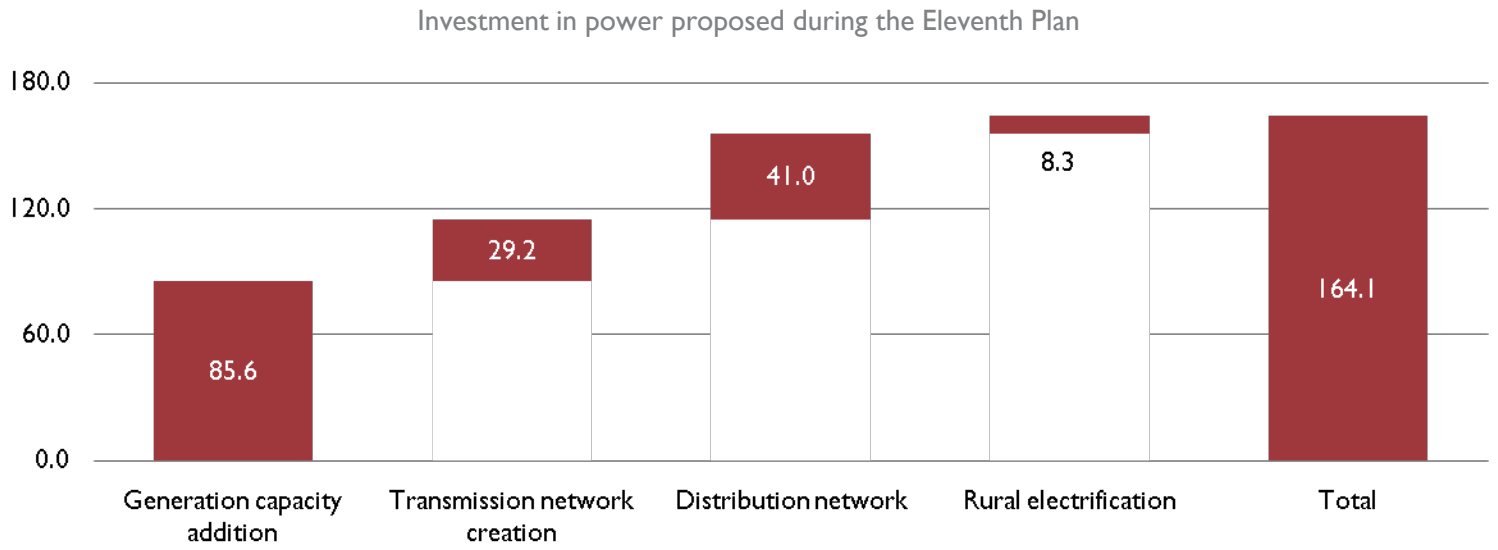
- The government is undertaking various reforms and development measures such as Accelerated Power Development Reforms Programme (APDRP), Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), etc., to strengthen the power network to achieve stipulated targets.

Source: Ministry of Power, GoI, Annual Report 2008–09

Growth drivers … (2/2)

Power sector

- Significant investment in capacity addition across segments is planned to achieve the target of 'power for all' by 2012. Total investment envisaged is US$ 164.1 billion (INR 7,879 billion) by 2012.



Source: "Working Group on Power for Eleventh Plan," Central Electricity Authority website, www.cea.nic.in, accessed January 27, 2010

Key trends

Technology upgradation	• Industry players are upgrading transmission to the next higher voltage system of 765 KV and gearing up to supply transformers and related equipment of this class.
Increasing R&D expenditure	• Indian manufacturers are becoming more competitive with respect to product designs, manufacturing and testing facilities. • Investments in R&D in the electrical machinery industry are amongst the largest in the corporate sector in India.
Diversifying product portfolio	• Increasing competitiveness in the industry and changing consumer demands have led to newer versions of products being launched in the market. • Players are entering into strategic alliances and tie-ups with technology suppliers to upgrade their capabilities.

Source: Department of Heavy Industries, GoI, Annual Report 2008–09

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

Key players … (1/2)

Company	Sales in 2008–09 US$ million (INR million)	Products
Bharat Heavy Electricals Ltd	5,840 (2,80,330)	Transformers, boilers
ABB (India) Ltd	1,452 (69,675)	Transformers, switchgear
Crompton Greaves Ltd	1,939 (93,058)	Motors and generators
Havells India Ltd	1,131 (54,288)	Wires and cables (insulated)
Exide Industries Ltd	907 (43,520)	Storage batteries
Sterlite Technologies Ltd	491 (23,563)	Jelly filled cables
H B L Power Systems Ltd	293 (14,054)	Nickel-cadmium accumulators
Kirloskar Electric Co Ltd	246 (11,797)	Motors and generators
Emco Ltd	227 (10,892)	Transformers
Paramount Communications Ltd	172 (8,252)	Jelly filled cables
Lloyd Electric & Engineering Ltd	155 (7,425)	Motors and generators

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

Key players … (2/2)

Company	Sales in 2008–09 US$ million (INR million)	Products
Bilpower Ltd	107 (5124)	Stampings and laminations
Transformers & Rectifiers (India) Ltd	101 (4863)	Transformers
Nicco Corpn Ltd	84 (4044)	Jelly filled cables
Vindhya Telelinks Ltd	64 (3063)	Jelly filled cables
Aksh Optifibre Ltd	57 (2751)	Wires and cables (insulated)
W S Industries (India) Ltd	54 (2570)	Electrical insulators
Uniflex Cables Ltd	34 (1627)	Cross linked polyethylene cables
Surana Telecom & Power Ltd	22 (1058)	Jelly filled cables
Alfa Transformers Ltd	7 (357)	Transformers
Elpro International Ltd	5 (250)	Voltage limiters
S & S Power Switchgear Ltd	5 (242)	Switching apparatus

Source: Prowess, January 28, 2010, Centre for Monitoring Indian Economy

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

Contents

Industry infrastructure — Special Economic Zones (SEZs)

Engineering SEZs — name of the developer	Location
M/s Essar Hazira SEZ	Hazira, Gujarat
N G Realty Private Ltd	Ahmedabad, Gujarat
E Complex Private Ltd	Amreli, Gujarat
Dishman Infrastructure Ltd	Ahmedabad, Gujarat
Ansal Properties and Infrastructure Ltd	Sonepat, Haryana
Raheja Haryana SEZ Developers Private Ltd	Gurgaon, Haryana
Ansal Kamdhenu Engineering SEZ Ltd	Sonepat, Haryana
Karnataka Industrial Areas Development Board	Shimoga, Karnataka
Maharashtra Industrial Development Corporation	Satara, Maharashtra
Township Developers India Private Ltd	Pune, Maharashtra
Vividha Infrastructure Private Ltd	Patiala, Punjab
New Chennai Township Private Ltd	Kanchipuram, Tamil Nadu
Perundurai Engineering SEZ by SIPCOT	Erode, Tamil Nadu
Uttar Pradesh State Industrial Development Corporation	Kanpur, Uttar Pradesh

Source: "Formal approvals granted in the Board of Approvals after coming into force of SEZ Rules as on 15 January 2009," SEZIndia website, www.sezindia.nic.in, accessed January 5, 2010

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

Contents

Investments

- The largest inbound deal announced was the 35 per cent acquisition of DB Power Electronics Pvt Ltd, India, by Chloride Group Plc., Britain, for US$ 20.8 million in July 2009.
- The largest outbound deal announced was the 5.4 per cent acquisition of Itamaraya TBK PT., Indonesia, by Tata Power Co, Ltd, India, for US$ 0.2 million in September 2009.
- The largest domestic deal announced was the 41 per cent acquisition of Avantha Power & Infrastructure Pvt Ltd, by Crompton Greaves Ltd, for US$ 44.8 million in March 2009.

M&A scenario — details		
Period: January 1, 2009–November 30, 2009		
Deal type	No of deals	Largest deal value (US$ million)
Inbound	7	20.8
Outbound	4	0.2
Domestic	10	44.8

Cumulative FDI inflows	
Period: April 2000–January 2010	
Sector	US$ million
Electrical equipment	2124.8
Percentage of total FDI inflows	2.0

Sources: "Transactions," Bloomberg, accessed 4 December 2009; "Fact Sheet On Foreign Direct Investment (FDI)," Department of Industrial Policy and Promotion website, www.dipp.nic.in, accessed January 7, 2010; Ernst & Young analysis

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

Contents

Policy and regulatory framework

- The Indian electrical machinery sector has been allowed 100 per cent foreign direct investment (FDI) through the automatic route is permitted in the Indian electrical machinery sector.

- Foreign technology agreements are also allowed under the automatic route for this sector with the following conditions:
  - The lump-sum fees should not exceed US$ 2 million.
  - Royalty should be levied at 5 per cent on domestic sales and 8 per cent on exports, net of taxes.
  - Royalty of up to 2 per cent on exports and 1 per cent for use of trade marks and brand name without any technology transfer.

- Some of the initiatives taken by the government to promote the engineering segment include
  - SEZ policy and industrial corridor development across centres of development.
  - Removal of tariff protection on capital goods.
  - Reduction of custom duties on a range of equipment.
  - Incentives for R&D activities.
  - Initiatives focussed on infrastructure development and construction and to increase power generation.

Source: "Investing in India," Department of Industrial Policy & Promotion website, www.dipp.gov.in, accessed January 8, 2010

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

Contents

Opportunities … (1/2)

Electrical machinery for nuclear power generation

- India is expected to become a major hub for manufacturing nuclear reactors and associated components, after the signing of nuclear agreements with different countries.

- State-owned Nuclear Power Corporation of India Ltd, has ambitious plans to set up nuclear reactors to add substantial capacity in the near future.

- The Government of India (GOI) proposes to add 3,380 MW of nuclear power capacity by 2012, as a part of the capacity addition programme in the Eleventh Five Year Plan.

- There is a great potential to manufacture heavy electrical equipment, which in turn will augment the demand for latest technology for nuclear power generation.

- This provides a huge opportunity for players to reorient their efforts to access the technology for higher capacity thermal units and nuclear reactors.

Sources: Department of Heavy Industries, GoI, Annual Report 2008–09

Opportunities … (2/2)

Electrical machinery for high-voltage technology

- Transmission and distribution capacity has not kept pace with power generation capacity in India, leading to constraints in power evacuation from generating stations.

- Hence, investment in transmission and distribution capacity is a focus area for the sector.

- Power transmission in India, which is currently carried out largely in the 220 KV and 400 KV range, is expected to move up to a higher range of 765 KV and HVDC in the coming years.

- The technology to handle such high voltages needs to be developed in India. This presents an opportunity for manufacturers with capability in high-voltage (HV) technology.

Sources: Department of Heavy Industries, GoI, Annual Report 2008–09

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

Contents

Industry associations

Engineering Export Promotion Council (EEPC)
'Vanijya Bhawan', 1st Floor
International Trade Facilitation Centre
1/1, Wood Street
Kolkata, West Bengal–700016
Phone: 91-33-22890651, 22890652
Fax: 91-33-22890654
E-mail: eepc@eepcindia.org

Note

Wherever applicable, numbers in the report have been rounded off to the nearest whole number.

Conversion rate used: US$ 1= INR 48

DISCLAIMER

India Brand Equity Foundation ("IBEF") engaged Ernst & Young Pvt Ltd to prepare this presentation and the same has been prepared by Ernst & Young in consultation with IBEF.

This presentation is for information purposes only. While due care has been taken during the compilation of this presentation to ensure that the information is accurate to the best of Ernst & Young and IBEF's knowledge and belief, the content is not to be construed in any manner whatsoever as a substitute for professional advice.

Ernst & Young and IBEF neither recommend nor endorse any specific products or services that may have been mentioned in this presentation and nor do they assume any liability or responsibility for the outcome of decisions taken as a result of any reliance placed on this presentation.

Neither Ernst & Young nor IBEF shall be liable for any direct or indirect damages that may arise due to any act or omission on the part of the user due to any reliance placed or guidance taken from any portion of this presentation.

IBEF
INDIA BRAND EQUITY FOUNDATION
www.ibef.org

ERNST & YOUNG
Quality In Everything We Do