By 2020, the electronics market in India is expected to increase with a CAGR of 24.4 per cent to USD400 billion from USD69.6 billion in 2012.

By 2020, the LED market in India is expected to expand to USD35 billion from USD0.1 billion in 2012.

By 2018, the number of DTH subscribers in India is expected to rise to 200 million from 60.7 million in 2013*.

Notes: DTH - Direct-to-Home (satellite television broadcasting); CAGR - Compound Annual Growth Rate, LED - Light Emitting Diode, *As on September 2013

Source: Department of Electronics & Information Technology; KPMG, TRAI

For updated information, please visit www.ibef.org
Rising demand and availability of talent to boost growth in the semiconductor design market

By 2020, the semiconductor design market in India is expected to increase with a CAGR of 25.3 per cent to USD60 billion from USD9.9 billion in 2012

World’s third-largest TV market

By 2017, the television industry in India is expected to expand to USD17.7 billion from USD7.7 billion in 2012

Rising teledensity in the country is leading to higher demand for telecom equipment

By 2020, demand for telecom equipment in India is expected to rise to USD34 billion from USD13.9 billion in 2012–13*

Source: Department of Electronics & Information Technology; Indian Semiconductor Association; KPMG; Aranca Research
Notes: CAGR – Compound Annual Growth Rate, *- Estimate

For updated information, please visit www.ibef.org
Growing demand

- Demand from households is set to accelerate given rising disposable incomes, changing lifestyles, and easier access to credit
- Government and corporate spending will also contribute to growth in demand

Attractive opportunities

- The electronics market is expected to expand at a CAGR of 24.4 per cent during 2012–20
- Intended reduction in government’s import bill is likely to boost domestic electronics manufacturers

Higher investments

- Sector has attracted strong investments in the form of M&As and other FDI inflows
- Companies are set to augment investments in production, distribution and R&D in the next few years
- Demand for competitive technology accelerated more investments from big companies

Policy support

- 100 per cent FDI allowed in the electronics hardware manufacturing sector under the automatic route
- Duty relaxation and schemes such as EPCG, EHTP and SEZs to provide tax sops; duty exemption for equipment required for setting up semiconductor plants
- National Policy on Electronics (2012) and setting up of National Electronics Mission

Source: Corporate Catalyst India; 2020E – Estimate for calendar year 2020 by Department of Information Technology; Aranca Research
Notes: FDI – Foreign Direct Investment; FY – Indian Financial Year (April–March); USD – US dollar, EPCG – Export Promotion Capital Goods Scheme; EHTP – Electronic Hardware Technology Park; SEZ – Special Economic Zone; CAGR – Compound Annual Growth Rate, E - Estimated
THE INDIAN ELECTRONICS SECTOR IS SPLIT INTO SIX PRODUCT SEGMENTS

**Electronics**

- **Consumer electronics**
  - Mobile phones
  - TVs
  - Music systems

- **Industrial electronics**
  - UPS systems
  - SCADA
  - PLC
  - AC drive systems

- **Computers**
  - Notebooks
  - Desktops
  - Servers

- **Communication and broadcasting equipment**
  - Direct-To-Home (DTH)
  - Set Top Box (STB)

- **Strategic electronics**
  - Radars
  - Satellite based communication
  - Internal security system
  - Disaster management system

- **Electronic components**
  - Semiconductor devices
  - Cathode ray tubes
  - Capacitors
  - Picture tubes

**Source:** Department of Information Technology (2010–11 Annual Report); Corporate Catalyst India; Aranca Research

**Notes:** SCADA – Supervisory Control and Data Acquisition; PLC – Programmable Logic Controller

**MARCH 2015**

For updated information, please visit [www.ibef.org](http://www.ibef.org)
1965 to early 1980s

- Introductory stage
  - Closed market
  - Development in transistor radios, black and white TVs, calculators etc

1984-1990

- Golden period
  - Continuous and rapid industry growth
  - Developments in colour TVs
  - Advent of computers and telephone exchanges in 1985, followed by digital exchanges in 1988

1991-2005

- Liberalisation era
  - Sharp decline in custom tariffs
  - Signing of WTO-FTA agreement in 1997, wherein India committed to complete elimination of all custom duties on IT

Late 2000s

- Growth era
  - Increasing investments by foreign players in India
  - Increasing penetration of high-end electronics products such as High Definition TVs (HDTVs), LCDs, LEDs, and tablet
  - Approval of National Policy on Electronics (2012) and setting up of National Electronics Mission
  - Mandatory digitisation of cable TVs by 2014
  - Public-Private partnership for Electronic System and Design and Manufacturing (ESDM) ecosystem in aerospace and defence, 2014

Source: India Electronics and Semiconductors Association, Corporate Catalyst India; Aranca Research

For updated information, please visit www.ibef.org
Total production of electronics hardware goods in India is estimated to reach at USD32.7 billion in FY13* and USD104 billion by 2020.

Production expanded at a CAGR of 9.2 per cent during FY08–13*

High production is majorly contributed by accelerating demand for advanced TVs, Mobile phones, Computers and defence related electronic equipments during FY08 to FY13

Value of electronics hardware production in India (USD billion)
C&B EQUIPMENT AND CONSUMER ELECTRONICS HAVE THE HIGHEST SHARE IN PRODUCTION

* According to government estimates, communication and broadcasting equipment constituted 31 per cent (the highest share) of total production of electronic goods in India in FY13; consumer electronics had the next highest share of 23 per cent.

* Not surprisingly, computers are a key component of total electronics output in India (14 per cent in FY13*); the segment’s share is likely to go up over this decade, given greater policy focus on encouraging computer hardware manufacturing.

* Industrial electronics contributed 12 per cent of the total output of electronics goods industry in FY13. Industrial electronics is expected to growth at a considerable pace with the new plans and schemes by govt.

Source: Department of Information Technology (2012–13 Annual Report); Aranca Research
Notes: C&B – Communication and Broadcasting; * – Estimates
C&B EQUIPMENT HAS BEEN THE KEY DRIVER OF THE ELECTRONICS SECTOR IN INDIA … (1/2)

* Production (by value) of C&B equipment in India is expected to expand at a CAGR of 17.5 per cent over FY08–13 (production in the segment is likely to reach USD10.1 billion in FY13 from USD8.5 billion in FY12)

* Growth in the segment is expected to far outpace the overall growth of electronics goods production in the country (CAGR of 9.2 per cent over the same period); given C&B equipment’s large share in the electronics sector, it emerged as the key growth driver for the overall sector

Comparison in production trends of C&B equipment and the overall electronics hardware sector in India (USD billion)

Source: Department of Information Technology (2012–13 Annual Report); Aranca Research
Notes: C&B – Communication and Broadcasting; FY13* – Estimates, CAGR**: 9.2%
C&B EQUIPMENT HAS BEEN THE KEY DRIVER OF THE ELECTRONICS SECTOR IN INDIA … (2/2)

* Production value of all other segments in the electronics sector (other than C&B equipment) grew at a rate of 12.7 per cent over FY07-12

* With growth in C&B equipment far outpacing those in other segments, the former’s share in total electronics production has doubled over FY07–12 to 28.3 per cent and is estimated to reach 31 per cent in FY13*

---

Source: Department of Information Technology (2012–13 Annual Report); Aranca Research
Notes: C&B – Communication and Broadcasting; FY13* – Estimates
Electronic exports from India is expected to reach USD 8.3 billion in FY13*, over FY07–12, exports from the sector (CAGR: 27.9 per cent)

Yet again, as in total production, growth in exports was led by C&B equipment; electronic components was the other key sub-segment

Technological improvements and competitively cost effectiveness are main drivers for demand of Indian electronics products abroad

**Electronics exports from India (USD billion)**

<table>
<thead>
<tr>
<th></th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>2.8</td>
<td>3.3</td>
<td>6.8</td>
<td>5.5</td>
<td>8.9</td>
<td>8.9</td>
<td>8.3</td>
</tr>
</tbody>
</table>

Source: Department of Information Technology (2012–13 Annual Report); Electronics and Computer Software Export Promotion Council; Aranca Research
Notes: C&B – Communication and Broadcasting; FY13* – Estimates
Exports of C&B equipment and Strategic Electronics together account for around 80 per cent of total electronics exports in FY12.

Exports of C&B equipment increased at a CAGR of 132.3 per cent during FY08–12 (highest among all segments), followed by Strategic Electronics at a CAGR of 26.3 per cent during the same period.

**Shares in electronics exports from India (FY12)**

- C & B equipment: 42.7%
- Strategic Electronics: 36.4%
- Industrial Electronics: 13.1%
- Computers: 4.9%
- Consumer Electronics: 2.9%

**Source:** Department of Information Technology (2011–12 Annual Report); Aranca Research

**Note:** C&B – Communication and Broadcasting
### KEY PLAYERS IN THE ELECTRONICS SECTOR … (1/2)

<table>
<thead>
<tr>
<th>Company</th>
<th>Business description</th>
</tr>
</thead>
</table>
| <br>turned Electric <br>BHARAT ELECTRONICS  <br>のももずきの <br>名前の <br>意味は<br> | • Established to meet specialised needs of Indian defence services  
• Focuses on contract manufacturing, design and manufacturing services, software development and quality assurance, has got plans to venture into solar energy                                                                 |
| VIDEOCON  | • Third largest consumer durables manufacturer in India after LG and Samsung, holds one fourth of the consumer durables market in India  
• Manufactures and markets TVs, DVD players, microwave ovens, refrigerators, washing machines, ACs and power backup solutions                                                                 |
| LG  | • Second largest leader in consumer durables after Samsung  
• Manufactures TVs, audio-visual solutions, computers, mobile phones, refrigerators, washing machines, microwave ovens, vacuum cleaners and AC's                                                                 |
| SAMSUNG  | • Largest player in the consumer durables market, provides employment to around 8000 people  
• Manufactures TVs, home theatre systems, DVD players, mobile phones, digital cameras and camcorders, refrigerators, ACs, washing machines, microwave ovens and computers, leads smart phone segment                                                                 |
| HCL  | • Leading IT hardware and software provider, extensive global offshore infrastructure and offices in 31 countries  
• Manufactures and markets PCs, PC servers, storage solutions, display products and other electronic products                                                                 |

Source: Company websites; Dataquest; Corporate Catalyst India; Aranca Research  
Notes: DVD – Digital Video Disc; AC – Air Conditioner; TV – Television; PC – Personal Computer
## KEY PLAYERS IN THE ELECTRONICS SECTOR … (2/2)

<table>
<thead>
<tr>
<th>Company</th>
<th>Business description</th>
</tr>
</thead>
</table>
| moserbaer    | • World's second-largest company in the optical storage media segment  
• Supplies products to a number of branded players such as Sony, Verbatim, TDK, Maxell, Imation and Samsung,  
• Also has a presence in the photovoltaic and is the largest home entertainment company                                        |
| FLEXTRONICS  | • Offers high-value, high-margin design services for mobile phones and telecom/networking software  
• Manufactures TV tuners, set top boxes, energy meters, networking cards, drug delivery devices, diagnostic equipment                                                                                     |
| Centum       | • Offers state-of-the-art solutions for Frequency Control Products (FCP), Electronic Manufacturing Service (EMS) and Hybrid Micro Circuits (HMC), also has presence in Defence & Aerospace, Space industry |
| JABIL        | • Acquired Celetronix, one of the largest electronic equipment manufacturers in India, in 2006  
• Offers printed circuit boards, enclosure integration, and distribution and repair services with in-region design services support                                                                 |
| SAMTEL       | • Largest Indian integrated manufacturer of a wide range of display devices such as TV picture tubes, CRT guns, heaters and cathodes, and deflection yokes  
• Operates a facility in Germany to manufacture high-tech, high-resolution CRTs for demanding applications such as aircraft avionics and medical monitors |
NOTABLE TRENDS IN THE ELECTRONICS SECTOR … (1/2)

Consumer electronics

- Increased presence of organised retail and affordability due to technological advancement
- Expansion into new segments such as HDTVs, tablets and smart phones
- Colour TV is the largest contributor, with total production of about 13 million units in 2012, and the export value of USD262 million in the same period

Industrial electronics

- Application of state-of-the-art systems such as SCADA, PLC and AC drive systems across various sections of the industry
- Expertise in conceptualising such systems and their erection and commissioning
- Acquisition of export orders through international competitive bidding. Total exports stood at around USD1.2 billion in FY12

Computers

- One of the fastest-growing IT systems and hardware market in Asia Pacific
- Notebooks segment is estimated to have recorded a growth rate of 16 per cent in FY13*; tablet ownership increased from 8 per cent in 2010 to 12 per cent in 2011
- Total exports were USD448 million in FY12
- Expansion of server market into smaller cities, and small and medium businesses

Source: Department of Information Technology (2012–13 Annual Report); Corporate Catalyst India; Accenture EHT Research; Aranca Research,
Note: FY13* - Estimates
India’s defence sector is poised for substantial growth; the country is expected to be one of the top five markets for defence equipment by 2015. India defence industry has grown at an average rate of 13.4 per cent per year during 2007-12

- Economic growth and low costs are likely to provide impetus to aerospace market
- Nuclear power to play a large role in India’s energy security needs

Semiconductors lead segmental growth, with exports at USD3.3 billion in FY12

- High growth in key determinants for electronic components, namely consumer electronics, telecom, defence and IT verticals

Increasing telephone penetration due to falling tariffs in the world’s second most populous country, with exports at USD3.9 billion in FY12

- Growing broadband subscriber base
- DTH subscription grew to 60.7 million in September 2013 from 25 million in 2010, and is expected to reach 200 million by 2018

Source: Department of Information Technology (2012–13 Annual Report); Corporate Catalyst India; Aranca Research, TRAI
Notes: C&B – Communication and Broadcasting; DTH – Direct-to-Home (Satellite Television Broadcasting)
**ELECTRONICS**

## Porters’ Five Forces Analysis

### Competitive Rivalry
- Competitive rivalry is quite high in this sector, as players use innovation and product differentiation to beat peers.
- Each player adopts different strategies to capture market share; for example, one player innovates while another diversifies, thus intensifying the rivalry in the sector.

### Threat of New Entrants
- Threat is low due to capital-intensive nature of the industry.
- Evolving technology, brand loyalty block entry.

### Substitute Products
- Threat is low because there is no substitute for electronics.
- Threat is present within the industry due to product innovation by peers.

### Bargaining Power of Suppliers
- Low bargaining power of suppliers, as product differentiation is less.
- Low switching costs for customers.

### Bargaining Power of Customers
- High as buyers possess considerable product information these days, which helps in comparison.
- Availability of similar options.

---

**Source:** Aranca Research
Companies increasingly spending on R&D and stepping up innovation
- Customers frequently change to new-generation products due to low switching costs; thus, companies with newer technologies gain significant market share
- With HD TVs entering the market, TVs working on CRT (Cathode Ray Tube) lost their market share

Most companies are now diversifying into other profitable segments; for example, Samsung is focussing heavily on mobile phone manufacturing, while earlier it focussed more on consumer electronics
- Videocon is also foraying into other segments such as TV Network and mobile phone manufacturing

Most electronics companies, especially consumer electronics, are shifting towards popular ad campaigns to boost their sales
- Most companies in India are embracing aggressive social strategies (e.g., by going online) to target young audience and build brand loyalty among them

Most companies are forming strategic alliances and JVs for mutual benefits
- LG and Sun Microsystems are jointly developing Java platforms to enable LG phones and TVs
- LG and Siemens have collaborated to develop standard solutions for air conditioners

Manufacturing technologies are exchanged with other countries for better knowledge of innovations
- Being competitive on global platform is key to sustainability and growth for the sector
Growing demand

- Higher real disposable incomes, easy consumer credit
- Falling prices, increasing penetration
- Growing consumer and industrial base

Policy support

- Setting up of EHTPs, SEZs, favourable FDI climate
- Increasing liberalisation, tariff relaxation
- National Policy on Electronics and National Electronics Mission

Innovation

- Expanding production and distribution facilities in India
- Increased R&D activity
- Providing support to global projects from India

Increasing investments

- Inflow of FDI in sector
- Increasing domestic investment
- Expansion by existing big companies in the sector

Source: Aranca Research

Notes: EHTP – Electronic Hardware Technology Park; SEZ – Special Economic Zone; FDI – Foreign Direct Investment; R&D – Research and Development
KEY GROWTH DRIVERS ARE RISING INCOMES, CREDIT AVAILABILITY AND GOVERNMENT SPENDING

- Increase in discretionary income and credit availability has boosted demand for consumer durables

- The government is one of the biggest consumers of the sector and leads the corporate spend on electronics; this is not surprising given that electronics facilitates e-governance, developmental schemes and initiatives launched by the government

- Strong demand and favourable investment climate in the sector are attracting investments in R&D as well as manufacturing

- Increasing demand for defence equipments has boosted the production of electronics goods up to a considerable level

Rising per capita income in India (USD)

Source: IMF; Aranca Research
Note: F - Forecast
POLICY SUPPORT AIDING GROWTH IN THE SECTOR … (1/2)

**Encouragement to FDI, SEZs**
- 100 per cent FDI is permitted in the electronics hardware manufacturing sector under the automatic route
- 100 per cent income tax exemption to SEZ units on export profits for five years, 50 per cent for the next five years
- Government planning to setup dedicated clusters to promote manufacturing of electronic products

**Customs duty relaxation**
- IT/Electronics sector is the first in India to be allowed complete customs exemption on certain items used for manufacturing electronic goods, in Budget 2014–15; the government increased custom duty on imported electrical goods to boost local manufacturers
- No customs duty on 217 tariff lines covered under the Information Technology Agreement (ITA-1) of the WTO
- Peak rate for basic customs duty is 10 per cent

**Reduced central excise**
- Mean rate of excise duty (CENVAT) is 8 per cent
- Microprocessors, hard disc drives, CD ROM drives, DVD drives/DVD writers, flash memory sticks, and combo-drives are exempt from excise duty payment and SAD
- Components and accessories of mobile handsets are exempt from excise duty and SAD

*Source: Department of Commerce, Government of India; Department of Electronics and Information Technology; Aranca Research
Notes: FDI – Foreign Direct Investment; SAD – Special Additional Duty of Customs*
EPCG, EHTP schemes

- EPCG allows import of electronic capital goods without paying any customs duty
- EHTP provides benefits, such as duty waivers and tax incentives, to companies which replace certain imports with local manufacturing

Intellectual Property Rights

- Intellectual Property Rights (IPR) are a key determinant of progress in R&D and innovation in the electronics sector
- GOI has amended relevant IPR-related acts (like the Copyright Act, Trademark Act, New Designs Act) from time to time to help spruce up innovation and new technologies in the sector

MSIPS

- The Union Cabinet gave its green signal to the Modified Special Incentive Package Scheme (MSIPS) under which the central government will be offering up to USD1.7 billion in benefits to the electronics sector in the upcoming five years

Source: Department of Commerce, Government of India; Department of Information Technology (2010–11 Annual Report); Aranca Research
Notes: EPCG – Export Promotion Capital Goods Scheme; EHTP – Electronic Hardware Technology Park Scheme; IPR – Intellectual Property Rights; GOI – Government of India
## NATIONAL ELECTRONICS POLICY 2012 – KEY OBJECTIVES … (1/2)

<table>
<thead>
<tr>
<th>Key Objective</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Favourable business conditions</strong></td>
<td>To create an ecosystem for a globally competitive electronic system design &amp; manufacturing sector and to achieve a turnover of about USD400 billion by 2020, including investments of about USD100 billion, as well as to provide employment to around 28 million people at various levels.</td>
</tr>
<tr>
<td><strong>Focus on new technologies</strong></td>
<td>To build on the emerging chip design and embedded software industry for achieving global leadership in Very Large Scale Integration (VLSI), chip design, and other frontier technical areas, and to achieve a turnover of USD55 billion by 2020, also focus on handling e-waste in an environment friendly policies.</td>
</tr>
<tr>
<td><strong>Promote exports</strong></td>
<td>To increase export in the electronic system design &amp; manufacturing sector from USD5.5 billion to USD80 billion by 2020.</td>
</tr>
<tr>
<td><strong>Improving supply chain</strong></td>
<td>To build a strong supply chain of raw materials, parts, and electronic components for raising the indigenous availability of these inputs from the current 20–25 per cent to over 60 per cent by 2020.</td>
</tr>
<tr>
<td><strong>Building competencies</strong></td>
<td>To develop core competencies in strategic and core infrastructure sectors such as telecommunications, automotive, avionics, industrial, medical, solar, information and broadcasting, and railways.</td>
</tr>
<tr>
<td><strong>Electronic Manufacturing Clusters (EMCs)</strong></td>
<td>Provide incentives for setting up of 200 Electronic Manufacturing Clusters (EMCs) - setting up of greenfield EMCs and up gradation of brownfield EMCs.</td>
</tr>
</tbody>
</table>

Source: Department of Information Technology; Aranca Research
Incentives provided by government to attract investors

* To provide subsidy of up to USD10 million per 100 acres of project in electronics manufacturing clusters
* Reimbursement of excise duties for capital equipment in non-SEZ units
* No central taxes and duties for 10 years in high-tech facilities such as semiconductor fabricating units
* Preferential market access to domestically manufactured electronic products
* Various export incentives such as 2–5 per cent of duty credit on exports of different products
* Create a completely secure cyber ecosystem in the country
* Implementation of e-waste (Management and Handling) Rules, 2011
* Moreover, the government proposed an Electronics Development Fund worth USD2 billion to promote innovation, R&D, product commercialisation, and nano–electronics

Source: Department of Information Technology; Aranca Research
THE ELECTRONICS SECTOR IN INDIA HAS ATTRACTED STRONG FDI INFLOWS

* Cumulative FDI inflows into the electronics, including computer hardware and software, has increased at a CAGR of 9.5 per cent from USD9.0 billion to USD14.2 billion over March 2009 to March 2014

* Demand growth, supply advantages, and policy support have been instrumental in attracting FDI

Cumulative FDI inflows to the electronics sector (USD billion) (FY14)

<table>
<thead>
<tr>
<th>Year</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.8</td>
<td>0.8</td>
<td>1.1</td>
<td>1.2</td>
<td>1.2</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Cumulative FDI inflows to electronics sector (combined)** (USD billion) (FY14)

<table>
<thead>
<tr>
<th>Year</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.0</td>
<td>10.7</td>
<td>11.6</td>
<td>12.4</td>
<td>12.9</td>
<td>14.2</td>
</tr>
</tbody>
</table>

Source: Department of Industrial Policy and Promotion; Aranca Research
Notes: FDI – Foreign Direct Investment; ** – Includes computer software & hardware sector inflows, All figures are from April 2000
Of the M&A deals in the sector since 2010, Crompton Greave’s acquisition of ZIV Group was the highest in terms of value*

Notes: M&A – Mergers and Acquisitions
* Out of the deals whose transaction amount was available

<table>
<thead>
<tr>
<th>Acquirer</th>
<th>Target</th>
<th>Deal date</th>
<th>Deal value (USD million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shemaroo Entertainment Ltd</td>
<td>Vistaas Digital Media Ltd</td>
<td>30th October 2010</td>
<td>5.1</td>
</tr>
<tr>
<td>Emerson Electric Co</td>
<td>Fisher Sanmar Ltd</td>
<td>31st March 2011</td>
<td>135.0</td>
</tr>
<tr>
<td>Schneider Elec India Pvt Ltd</td>
<td>Smartlink Network Systems</td>
<td>13th May 2011</td>
<td>113.0</td>
</tr>
<tr>
<td>Mitsubishi Electric Corp</td>
<td>Messung Group</td>
<td>23rd Jan 2012</td>
<td>NA</td>
</tr>
<tr>
<td>Crompton Greaves Ltd</td>
<td>ZIV Group</td>
<td>27th July 2012</td>
<td>192.0</td>
</tr>
<tr>
<td>Toshiba Mitsubishi-Electric</td>
<td>AEG Power Solutions India</td>
<td>28th April 2014</td>
<td>12.4</td>
</tr>
<tr>
<td>MSR Telecom Pvt Ltd</td>
<td>Bloom Mobiles Pvt Ltd</td>
<td>19th May 2014</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: Thomson One Banker; Grant Thornton; CMIE Business Beacon; Aranca Research
Note: NA is Not Available
ELECTRONICS

RECENT INVESTMENTS BY KEY PLAYERS

2010

• May 10: LG earmarks around USD85.0 million for upgrading Indian plants
• Sep 10: Haier invests to open 75 new retail stores (called Experience Centres) in India in 2010
• Nov 10: Samsung inaugurates USD75.0 million manufacturing facility in Chennai

2011

• Jan 11: SunEdison allocates USD100.0 million for installation of 30MW solar capacity in 2011
• Feb 11: Whirlpool announces USD25.0 million investment in FY11
• Apr 11: Hitachi allocates USD400.0 million to set up R&D centre in Bangalore
• Jun 11: BHEL and BEL consortium allocates USD416.7 million to set up a solar photovoltaic modules production unit

2012

• May 05: LG Electronics launches latest series of Cinema 3D Smart TVs with marketing spend of USD20.8 million
• Jan 17: Samsung to raise its investments to USD41.4 billion for consolidation in its position in mobile chips and flat screens
• Videocon plans to invest around USD12.5 million in Research and Development during FY13
• Oct 31: Sony to invest USD100 million in expansion and marketing

2013–14

• Mar 13: Reliance and Videocon are in talks to invest USD5.2 billion to set up a chip manufacturing plant
• Jul 13: Panasonic plans to invest USD250 million over the next three years to launch a range of smart phones in India
• Sep 13: Mitsubishi Electric plans to invest about USD55 million in India by 2016 for setting up manufacturing elevators and making air conditioning equipment
• Apr 14: Toshiba Mitsubishi Electric acquired complete share capital of AEG Power Solutions

Source: India Electronic News; Assorted News articles; Aranca Research
Note: R&D – Research and Development

MARCH 2015

For updated information, please visit www.ibef.org
WEST: Maharashtra and Gujarat host manufacturing units for BEL, Videocon and LG

NORTH: Delhi and Uttarakhand are the main hubs for electronics manufacturing in North India

EAST: West Bengal hosts manufacturing units for Videocon and Philips

SOUTH: Tamil Nadu and Andhra Pradesh are hubs for electronics manufacturing in South India

Source: Aranca Research
Notes: All figures as of 2011–12, BEL - Bharat Electronics Limited

For updated information, please visit www.ibef.org
**Growing customer base:** Market for electronics is expected to expand at a CAGR of 24.4 per cent during 2012–20. The demand for electronics hardware in India is projected to increase from an estimated USD69.6 billion in 2012 to USD125 billion by 2014 and USD400 billion by 2020.

**Incentives and concessions under schemes:** Export Oriented Unit (EOU) Scheme, Electronics Hardware Technology Park (EHTP) Scheme, Software Technology Park (STP) Scheme and EOU/EHTP/STP Schemes

**Targeted reduction in import bill:** Domestic electronic production accounts for around 45.0 per cent of the total market demand. Therefore, in order to reduce the import bill, the government plans to boost the domestic manufacturing capabilities and is considering a proposal to give preference to Indian electronic products in its purchases.

**Increasing penetration in the consumer durables segment:** Consumer durables market in India is characterised by low penetration in various product segments, viz. 1.0 per cent in microwaves, 3.0 per cent in ACs, 16.0 per cent in washing machines, 18.0 per cent in refrigerators, etc. Higher disposable incomes are leading to realisation of penetration potential in various product segments, especially in rural areas.

**Policy and investment support:** To compliment the targeted reduction in import bill, the government has proposed a minimum investment of USD555.0 million for semiconductor manufacturing plants and USD222.0 million for ecosystem units. This is considered a major step toward attracting foreign companies to set up manufacturing facilities in India. In Budget 2014, a 10 per cent exemption was made on customs duty on parts used in the manufacture of small electronic products.

*Source: Department of Information Technology; FY10, FY11 Annual Reports; A Report by Corporate Catalyst India (CCI) on ‘Electronics Industry in India’; Dataquest India; Aranca Research*
Households with TVs in India

- 277 million televisions#
- 145 million cable TV homes#
- 831 channels with 184 pay channels#

DTH subscribers (million units)

CAGR: 26.9%

- 60.7 million in 2013*
- 200 million by 2018

The government announced the digitisation of cable television in India in four phases, which would be completed by the end of 2014.

Digitisation will lead to complete switchover from analogue cable to Digital Addressable Systems in a phased manner.

The number of DTH subscribers in India is expected to increase from 60.7 million in 2013* to 200 million by 2018.

Source: Department of Information Technology; KPMG; Aranca Research, TRAI

Notes: * Data as on September 2013,
# Data as on December 2014
The digitisation of cable television has led to increased demand for set-top boxes, dish, cables, and other electronic component; this has resulted in many opportunities for local and foreign players to enter the market.

Digitisation will lead to increased broadband penetration in India and open up new avenues for companies offering value-added services such as online gaming, HD television Internet, music, and radio.

Source: Department of Information Technology; KPMG; Aranca Research
BHARAT ELECTRONICS (BEL): A PUBLIC SECTOR ICON … (1/2)

**Salient features**

- An Indian state-owned aerospace and defence company
- Established in 1954 under the Ministry of Defence to meet specialised electronic needs of the Indian defence services
- The company has a strong commitment to quality and innovation, with two dedicated central research laboratories
- During FY13, R&D expenditure was 8.8 per cent of total turnover
- The company has nine manufacturing units; each unit has its own Development and Engineering (D&E) division
- Joint Venture with General Electric Medical System and Multitone, UK

**Revenues (USD million)**

<table>
<thead>
<tr>
<th>Year</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values</td>
<td>859.6</td>
<td>1,009.0</td>
<td>998.4</td>
<td>1,092.7</td>
<td>1,200.2</td>
<td>1,177.6</td>
<td>1,155.0</td>
<td>1,081.0*</td>
</tr>
</tbody>
</table>

*Source: BEL website; Annual Reports; Business Standard; Aranca Research*

*Note: * - Fallen due to negative translation effect
### Key success factors

- Focus on innovation and R&D
- Key technological collaborations with leading European, American and Israeli companies
- Rising defence spending in India
- Governmental emphasis on indigenisation and reduction of import bill
- Diversification in the civilian and export market

### Financial highlights

- As of 1 April 2014, BEL’s order book was around USD3.8 billion
- During FY07–14, BEL’s revenue rose at a CAGR of 3.4 per cent (from USD859.6 million) to USD1.08 billion
- During the same period, BEL’s net profits increased at a CAGR of 11.4 per cent (from USD74.1 million) to USD157.8 million

Source: BEL website; Annual Reports; Aranca Research
Third largest consumer durables company in India and one of the largest Colour Picture Tube (CPT) manufacturers globally

17 manufacturing sites in India and plants in Mainland China, Poland, Italy and Mexico

Holds about one-fourth market share in the consumer durables market

Leads the market in colour TV, refrigerator, washing machine, and microwave oven segments

Acquired Colour Picture Tube (CPT) businesses from Thomson S.A through a wholly owned offshore subsidiary. The company has manufacturing facilities in Poland, Italy, Mexico and China along with support research and development facilities

Market share in consumer durables (FY12)

- Videocon: 26%
- Others: 74%

Source: Company website; ISM Capital; Aranca Research
Top line and bottom line trends (USD million)

During FY07–13, Videocon’s revenues increased at a CAGR of 9.6 per cent.

During the 18 months ended June 13, the company’s revenues reached USD3,343.26 million.

The group is a US$5 billion global conglomerate.

Notes: FY – Financial Year; CAGR – Compound Annual Growth Rate, During 2007–09, the financial year was October–September; however, from 2010, the financial year was changed to January–December. In 2013 the company changed its financial year end to June.

Source: Company website; ISM Capital; Aranca Research
Notes: * FY10 – Data for 15 months; 9MFY12 – Data for first 9 months of financial year 2012. FY13* Data for 18 months (Jan 2012 to June 2013).
Revenue base of over USD3343 million, with net loss of USD13.2 million for 18 months ended June 2013

Market capitalisation of USD929 million

Sales expanded at a CAGR of 9.6 per cent during FY07–13

Strong presence in the consumer electronics market

Primary focus on consumer electronics products

1985–95

Focus on R&D

Strong brand presence in Tier 2 and Tier 3 cities

Foray into telecom services and handset manufacturing

Foray into manufacturing compressors and motors and crude oil business

1995–05

Acquisitions Thomson, Philips, and Electrolux plants

Aggressive growth via acquisitions and entry in telecom, DTH, and mobile handset manufacturing

2005–12

Plans to set up a SEZ in Pune and Aurangabad in Maharashtra

Launched LCD TV bundled with DTH and Internet chip

Videocon DTH to float IPO by the end of 2014

Source: Videocon website; Aranca Research

Note: DTH – Direct to Home

For updated information, please visit www.ibef.org
Micromax started out as an IT software company in 2000

Micromax began manufacturing mobile phones in 2010; besides sourcing from China, and became one of the largest Indian domestic mobile handsets company operating in low cost feature phone segments by 2010

Micromax had a 9.7 per cent market share in Indian tablet market during Q2 2013 and is ranked second in smart phones market with 24.3 per cent share

With presence across 14 countries, the company manufactures mobile handsets, tablets, and LED televisions

During FY08–13, Micromax’s revenues increased at a CAGR of 84.4 per cent to USD577.8 million in FY13

The company’s share in the mobile handset market in India increased from 5 per cent in 2011 to 8.7 per cent in 2013

Micromax targets a revenue of USD1 billion in FY14

In November 2014, Micromax partnered with Cyanogen Inc to provide Cyanogen-based smartphones in India, under the brand name Yu

**Revenues (USD million)**

<table>
<thead>
<tr>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.1</td>
<td>72.8</td>
<td>333.7</td>
<td>504.0</td>
<td>412.6</td>
<td>577.8</td>
<td>1,184.7</td>
</tr>
</tbody>
</table>

Source: Micromax website; Memorandum; News articles; Aranca Research
Electronics Industries Association of India (ELCINA)
ELCINA House, 422 Okhla Industrial Estate,
New Delhi – 110 020, India
Phone: 91 11 26924597, 26928053
Fax: 91 11 26923440
E-mail: elcina@vsnl.com
Website: www.elcina.com/

Telecom Equipment Manufacturers Association (TEMA)
4th Floor, PHD House, Opp. Asian Village,
New Delhi – 110 016, India
Tel: 91 11 26859621
Fax: 91 11 26859620
E-mail: tema@del2.vsnl.net.in
Website: http://www.tfci.com/cni/tema.htm
Manufacturers Association for Information Technology (MAIT)
4th Floor, PHD House, Opp. Asian Games Village,
New Delhi 110 016, India
Tel: 91 11 26855487
Fax: 91 11 26851321
E-mail: contact@mait.com
Website: www.mait.com

Consumer Electronics and Appliances Manufacturers Association (CEAMA)
5th Floor, PHD House
4/2, Siri Institutional Area, August Kranti Marg
New Delhi-110 016
Telefax: 91- 11- 46070335, 46070336
e-mail: ceama@airtelmail.in
Website: www.ceama.in
GLOSSARY

* C&B: Communication and Broadcasting
* CAGR: Compound Annual Growth Rate
* Capex: Capital Expenditure
* CENVAT: Central Value Added Tax
* EHTP: Electronic Hardware Technology Park
* EPCG: Export Promotion Capital Goods Scheme
* FDI: Foreign Direct Investment
* FY: Indian Financial Year (April – March); for example FY10 means April 2009 – March 2010
* PLC: Programmable Logic Controller
* R&D: Research and Development
* SCADA: Supervisory Control and Data Acquisition
* USD: US Dollar
* Wherever applicable, numbers have been rounded off to the nearest whole number
<table>
<thead>
<tr>
<th>Year</th>
<th>INR equivalent of one USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004–05</td>
<td>44.81</td>
</tr>
<tr>
<td>2005–06</td>
<td>44.14</td>
</tr>
<tr>
<td>2006–07</td>
<td>45.14</td>
</tr>
<tr>
<td>2007–08</td>
<td>40.27</td>
</tr>
<tr>
<td>2008–09</td>
<td>46.14</td>
</tr>
<tr>
<td>2009–10</td>
<td>47.42</td>
</tr>
<tr>
<td>2010–11</td>
<td>45.62</td>
</tr>
<tr>
<td>2011–12</td>
<td>46.88</td>
</tr>
<tr>
<td>2012–13</td>
<td>54.31</td>
</tr>
<tr>
<td>2013–14</td>
<td>60.28</td>
</tr>
</tbody>
</table>

Exchange rates (Calendar Year)

<table>
<thead>
<tr>
<th>Year</th>
<th>INR equivalent of one USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>43.98</td>
</tr>
<tr>
<td>2006</td>
<td>45.18</td>
</tr>
<tr>
<td>2007</td>
<td>41.34</td>
</tr>
<tr>
<td>2008</td>
<td>43.62</td>
</tr>
<tr>
<td>2009</td>
<td>48.42</td>
</tr>
<tr>
<td>2010</td>
<td>45.72</td>
</tr>
<tr>
<td>2011</td>
<td>46.85</td>
</tr>
<tr>
<td>2012</td>
<td>53.46</td>
</tr>
<tr>
<td>2013</td>
<td>58.44</td>
</tr>
<tr>
<td>Q1 2014</td>
<td>61.58</td>
</tr>
<tr>
<td>Q2 2014</td>
<td>59.74</td>
</tr>
<tr>
<td>Q3 2014</td>
<td>60.53</td>
</tr>
</tbody>
</table>

Average for the year
India Brand Equity Foundation ("IBEF") engaged Aranca to prepare this presentation and the same has been prepared by Aranca in consultation with IBEF.

All rights reserved. All copyright in this presentation and related works is solely and exclusively owned by IBEF. The same may not be reproduced, wholly or in part in any material form (including photocopying or storing it in any medium by electronic means and whether or not transiently or incidentally to some other use of this presentation), modified or in any manner communicated to any third party except with the written approval of 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 Aranca and IBEF’s knowledge and belief, the content is not to be construed in any manner whatsoever as a substitute for professional advice.

Aranca 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 Aranca 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.