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</tbody>
</table>
## EXECUTIVE SUMMARY

- **Second largest cement market**
  - Cement production capacity of around 455 million tonnes, as of 2017-18.
  - India’s cement production capacity is expected to reach 550 million tonnes by 2025.
  - India is the second largest cement producer in the world.

- **Dominated by private players**
  - Of the total capacity, 98 per cent lies with the private sector & the rest with public sector.
  - The top 20 companies accounting for around 70 per cent of the total production.

- **Higher share of large plants**
  - 210 large cement plants account for a cumulative installed capacity of over 410 million tonnes, while over 350 mini cement plants have an estimated production capacity of nearly 11.10 million tonnes.

- **Large concentration in south and west**
  - Of the total 210 large cement plants in India, 77 are situated in the states of Andhra Pradesh, Rajasthan & Tamil Nadu.

*Source: Business Standard, Ministry of External Affairs, DIPP*
ADVANTAGE INDIA
In the Union Budget 2018-19, there was a significant increase in the allocation for infrastructure projects, aimed at driving demand. The government's initiative to build 100 smart cities and boost affordable housing projects is expected to give a further stimulus to the cement demand. This demand is likely to boost up from the fourth quarter of 2017-18, positively impacted by the housing segment.

The North-East, which is witnessing a construction boom, offers attractive investment opportunities. The State Government of Chhattisgarh has auctioned one block of Limestone (Kesla II) in Raipur District, with estimated reserves of 215 million tonnes, earning a revenue of US$ 1.85 billion over the lease period.

The cement market is characterized by an oligopoly, where large players have partial pricing control. The threat of substitutes is low. Robust investments are being made by existing players to expand their capacity. FDI inflow in the cement and gypsum products industry reached US$ 5.25 billion between April 2000 and December 2017. JK Cement is planning to add up to 8 MTPA capacity by December 2022, increasing the total installed capacity to 18 MTPA for grey cements.

Source: Budget 2017-18, News Articles, Aranca Research, DIPP
MARKET OVERVIEW AND TRENDS
MARKET OVERVIEW

- India - world’s 2nd largest cement market, both in production and consumption.
- Supported by high level of activity going on in real estate and high government spending on smart cities and urban infrastructure.
- Cement production capacity of 455 MTPA as of 2017-18.

Top Cement Producers in 2017E (in MTPA)

- China: 2320.00
- India: 285.68
- USA: 86.30
- Vietnam: 85.40
- Turkey: 80.55
- Indonesia: 66.00
- Saudi Arabia: 63.00
- South Korea: 59.00
- Egypt: 58.00

Note: E - Estimate
Source: CARE Ratings, Cemnet, Office of the Economic Advisor, USGS Mineral Commodities Summary 2018, Turkey Cement Association
MARKET OVERVIEW

- Industry to grow at 5-6 per cent CAGR between FY17 – FY20.
- Capacity addition of around 32-36 million tonnes per annum (mtpa) during FY17-18.
- Cement consumption is expected to grow by 4.5 per cent in FY19 supported by pick-up in the housing segment and higher infrastructure spending^.

**Note:** ^As per CRISIL

**Source:** Media sources, Aranca Research, CRISIL, CARE Ratings
EXPORT AND IMPORT OF CEMENT

- India’s exports of cement, clinker and asbestos cement increased at CAGR of 10.37 per cent between FY12-FY18 to reach US$ 433.87 million. During the same period imports of cement, clinker and asbestos cement increased at a CAGR of 11.14 per cent to US$ 174.36 million in FY18.
- The country’s top export destinations for cement, clinker and asbestos cement in FY18 were Nepal, Sri Lanka, USA, Maldives and UK.
- The country’s top five import sources for cement, clinker and asbestos cement in FY18 were Pakistan, Bangladesh, Japan, Vietnam and Thailand.

**Cement Exports from India**

<table>
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<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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</thead>
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<td>228.13</td>
<td>312.26</td>
<td>378.31</td>
<td>335.62</td>
<td>374.87</td>
<td>433.87</td>
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**Cement Imports to India**

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>92.52</td>
<td>110.32</td>
<td>88.34</td>
<td>91.93</td>
<td>104.19</td>
<td>139.81</td>
<td>174.36</td>
</tr>
</tbody>
</table>

**Note:** Including Cement, Clinker and Asbestos Cement  
**Source:** DGCIS
INSTALLED CAPACITY AND KEY MARKETS IN EACH OF THE GEOGRAPHIC REGIONS

**Notes:** mtpa - Million Tonnes Per Annum, E - Estimates

**Source:** Indian Minerals Year Book by Indian Bureau of Mines, TechSci Research

- **South** (Tamil Nadu, Andhra Pradesh, Karnataka) 132.7 MTPA
- **East** (West Bengal, Chhattisgarh, Odisha, Jharkhand) 49.4 MTPA
- **North** (Rajasthan, Punjab, Haryana) 85.6 MTPA
- **Central** (Uttar Pradesh, Madhya Pradesh) 52.8 MTPA
- **West** (Gujarat, Maharashtra) 57.6 MTPA
### RECENT TRENDS AND STRATEGIES

| **Increasing presence of cement players** | - Presence of small & mid-size cement players across regions is increasing, which helps to diminish market concentration of industry leaders  
- A large number of foreign players have also entered the market owing to the profit margins, constant demand & right valuation. |
| **Tie – up with overseas** | - India has joined hands with Switzerland to reduce energy consumption & develop newer methods in the country for more efficient cement production, which would help India meet its rising demand for cement in the infrastructure sector. |
| **Housing for All** | - Under Union Budget 2018-19, allocation for affordable housing has been doubled to US$ 123.57 million.  
- Housing sector accounts for nearly 67 per cent of the total cement consumption in India. |
| **Adoption of cement instead of Bitumen and Ready Mix Concrete (RMC)** | - The Government of India has decided to adopt cement instead of bitumen for the construction of all new road projects on the grounds that cement is more durable & cheaper to maintain than bitumen in the long run.  
- Companies are trying to develop a niche market for RMC (Ready Mix Concrete). |
| **Mergers & Acquisitions** | - In September 2017, the National Company Law Tribunal (NCLT) approved the amalgamation of Trinetra Cement Ltd. and Trishul Concrete Products Ltd. with The India Cements Ltd.  
- As of April 2018, UltraTech Cement has raised its bid for acquisition of Binani Cement to Rs 7,990 crore (US$ 1.24 billion). |

**Source:** Union Budget 2016 – 17, Union Budget 2017-18, Emkay Global Financial Services, News Articles
SUCCESSFUL USE OF ALTERNATE FUELS IN CEMENT PRODUCTION

| Company/Plant                  | Strategy                                                        | Benefits                                              |
|-------------------------------|****************************************************************|-------------------------------------------------------|
| Madras Cement's Alathiyur plant | Module Use bioenergy through burning of coffee husk & cashew nut shells | Annual cost savings of US$ 1.7 million                |
| India Cements Ltd's Dalavoi plant | Use Low Sulphur Heavy Stock (LSHS) sludge as alternate fuel     | Annual savings of US$ 6,500 approx                    |
| UltraTech's Gujarat Cement Works | Use tyre chips & rubber dust as alternate fuel                  | Reduction of about 30,000 tonnes of carbon emissions annually |
| Lafarge's Arasmeta plant       | Substitute 10 per cent of coal used in kilns with rice husk     | Higher energy savings and lower carbon emissions      |

Source: CMA
Porter’s Five Force Framework Analysis

**Bargaining Power of Suppliers**

- **Moderate** – Cement players have to depend on the railways for carriage outward & local coal companies for fuel, although diversification of freight options & fuel sources is diminishing the suppliers’ power

**Threat of Substitutes**

- **Low** – Although there are partial substitutes such as asphalt, glass, steel, wood, etc.; practically cement has no direct substitutes

**Competitive Rivalry**

- **Low** – The Indian cement market is oligopolistic in nature, characterised by tacit collusion, where large players partially control supply for better price discipline

**Threat of New Entrants**

- **Low** – Huge capital investments required present substantial barriers to entry & achieving economies of scale

**Bargaining Power of Buyers**

- **Low** – Substantial market concentration among large players ensures low bargaining power of buyers

**Source:** Aranca Research
GROWTH DRIVERS
AND OPPORTUNITIES
GROWTH DRIVERS AND OPPORTUNITIES

- Forms the major portion of cement demand at around 67 per cent
- Real estate market to increase at 11.6 per cent CAGR in 2011-20.
- Government initiatives like Housing for all to push demand in the sector.

- Strong focus of government
- 100 smart cities planned
- Projects like Dedicated Freight Corridors and ports under development.
- Metro rail projects already underway in most major cities.

- Development of 500 cities with population of more than 100,000 under new Urban Development Mission

Percentage share of cement demand in FY18

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Development</td>
<td>15%</td>
</tr>
<tr>
<td>Public Infrastructure</td>
<td>20%</td>
</tr>
<tr>
<td>Housing and real estate</td>
<td>65%</td>
</tr>
</tbody>
</table>

Source: Ministry of External Affairs (Investment and Technology Promotion Division), AT Kearney, CARE Ratings
INVESTMENT SCENARIO
INVESTMENT SCENARIO

- **Emami Cement**, a renowned brand of Emami Group, announced expansion plans with an investment of about US$ 74.7 million in 2016.
  - The company is aiming to increase its production capacity to 6 MTPA by 2018-19 and market share to 10 per cent by 2019.
  - The company plans to increase its capacity from existing 2.4 MT to 15-20 MT by 2021, with an investment of US$ 1.27 billion.

- **Shree Cement**
  - The company has undertaken two greenfield projects in West Bengal and Odisha to increase its presence in eastern India. These projects will attract an investment of US$ 78 million and will be commissioned by late 2018.

- **Ambuja Cement**
  - Lafarge Holcim, the parent company of Ambuja Cement, is planning to merge Ambuja Cement with ACC cement. The merger is expected to be completed in the next six months. (by FY18)
  - In June 2017, Odisha Government gave its nod to Ambuja Cements for setting up a cement grinding unit of 1.5 million tonnes per annum at a cost of US$ 66.43 million.
  - As of March 2018, the company is going to invest Rs 1,391 crore (US$ 214.86 million) for setting up a 1.7 MTPA greenfield clinker plant in Rajasthan which is expected to be operational by second half of 2020.

- **Ultratech Cement**
  - Ultratech plans to build a new plant with capacity of 3.5 MTPA* at Dhar in Madhya Pradesh with an investment of US$ 400 million. The plant is expected to start commercial production by 2019.
  - The company is planning to build a US$ 287 million plant in Rajasthan. The plant will have a capacity of 3.5 million tonnes per annum and is expected to commence operations by June 2020.
  - The company has received approval for a US$ 9.04 million opencast limestone mine project in Gujarat. The project has a capacity of 2.07 MTPA* of limestone which will be used to support a proposed cement plant in Bhavnagar district.

*Note: *MTPA – Million Tonnes Per Annum
Source: Aranca Research, News Articles
## INVESTMENT SCENARIO

<table>
<thead>
<tr>
<th>Company</th>
<th>Details</th>
</tr>
</thead>
</table>
| ACC             | - The subsidiary of Holcim, has plans for a US$ 500 million capacity expansion in India  
                 - ACC will upgrade and expand its Jamul unit in Chattisgarh & its grinding unit in Jharkhand. This will increase ACC’s capacity to 38 mtpa from 30 mtpa in a phased manner by 2016 & 55 mtpa in 2020 |
| Heidelberg Cement | - Heidelberg Cement, a Germany-based cement manufacturer has commissioned Phase-I of its Jhansi grinding unit  
                 - The company has undertaken an investment worth US$ 259.4 million for expanding its capacity to 2.9 MT  
                 - Heidelberg aims to ramp up the operational capacity to 6 MT at its Damoh plant in Madhya Pradesh, striving to add an additional 9 MT by 2017 |
| Dalmia Cement   | - Dalmia Bharat is planning to expand its capabilities in East India. The company already has a 14 per cent market share in the region, as of FY17.  
                 - It is the preferred bidder for one block of Limestone (Kesla II) in Raipur, with reserves of 215 million tonnes. The deal is expected to generate cumulative revenues worth US$ 1.76 billion for the state government. |
| JK Cement       | - JK Cement is planning to invest Rs 1,500 crore (US$ 231.7 million) over the next 3 to 4 years (from September 2017) to increase its production capacity at its Mangrol plant from 10.5 MTPA to 14 MTPA.  
                 - The company is aiming to further increase its production capacity to reach 18 MTPA by 2022. |
| Amrit Cement    | - Amrit Cement India Ltd (ACIL) has announced the launch of Amrit Cement in the North-Eastern market  
                 - The company plans to achieve a production level of 5 million tonnes per annum by FY16, through capacity expansion in North-Eastern Bihar and Nepal |

*Source: Aranca Research, News Articles*
## POLICIES AND INITIATIVES

### Union Budget 2018-19

- The Union Budget has allocated US$ 92.22 billion for infrastructure development in 2018-19 as compared to US$ 76.31 billion in 2017-18 (RE). Government’s infrastructure push combined with housing for all, Smart Cities Mission and Swachh Bharat Abhiyan is going to boost cement demand in the country.

### Affordable Housing Fund

- In Budget 2018-19, Government of India announced setting up of an Affordable Housing Fund of Rs 25,000 crore (US$ 3.86 billion) under the National Housing Bank (NHB) which will be utilised for easing credit to homebuyers. The move is expected to boost the demand of cement from the housing segment.

### Pradhan Mantri Awaas Yojana - Gramin scheme

- An outlay of Rs 33,000 crore (US$ 5.097 billion) has been proposed for building 4.9 million houses under Pradhan Mantri Awas Yojana – Gramin in Union Budget 2018-19.

### Auction of one block of Limestone (Kesla II)

- The State Government of Chattisgarh has auctioned one block of Limestone (Kesla II) in Raipur District having estimated reserves of 215 million tonnes valued at Rs 10,367 crore (US$ 1.62 billion), and would earn a cumulative revenue of Rs 11,894 crore (US$ 1.85 billion) to State Government over the lease period.

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*Note: RE – Revised Estimate
Source: Aranca Research. News Articles*
CASE STUDIES
ULTRATECH CEMENT

- Ultratech is the largest cement player in India and fifth largest globally.
- It is India’s largest exporter of cement meeting demands in countries across the Indian Ocean, Africa, Europe & Middle East.
- Its operations span across India, UAE, Bahrain, Bangladesh and Sri Lanka.
- It has 18 integrated plants, 1 white cement plant, 1 clinkerisation plant, 2 WallCare putty plants, 25 grinding units, 7 bulk terminals & 101 Ready Mix Concrete (RMC) plants.
- Projects: Mumbai Metro, Bangalore Metro Rail, Kolkata Metro Rail, Monorail, Coastal Gujarat Power.
- During FY18, the company reported EBITDA of US$ 1,044.07 million.

Financial Performance (US$ million)*

Note: *Exchange Rates are average for the financial year, provided on page 29
Source: Annual Report, Aranca Research, Moneycontrol
ULTRATECH CEMENT: MILESTONES

- **2004**: Acquisition of L&T’s Cement Business: UltraTech Cement Ltd
- **2006**: Narmada Cement Company Limited amalgamated with UltraTech
- **2010**: Samruddhi Cement Limited amalgamated with UltraTech Cement Limited
- **2013**: Buys Jaypee Cement’s Gujarat unit
- **2016**: Completed acquisition of Jaiprakash Associates’ cement plants and grinding units
- **2017**: Greenfield & Brownfield expansion. Capacity: 67.7 mtpa (including 3 mtpa overseas)

*Source: Aranca Research, Annual Report*
Ambuja Cements Ltd (ACL) is one of the leading cement manufacturing companies in India.

The company, initially called Gujarat Ambuja Cements Ltd, was founded by Narotam Sekhsaria in 1983.

Ambuja Cements is the 2nd largest cement manufacturer in India, with nearly 10 per cent of the market share of total installed capacity.


Note: *Exchange Rates are average for the calendar year, provided on page 29
Source: Aranca Research, Annual Report, Moneycontrol
AMBUJA CEMENT: MILESTONES

- **2010**: Started cement plant at Nalagarh, Himachal Pradesh & Dadri, Uttar Pradesh with a capacity of 1.5 million tonnes.
- **2011**: Acquired 85 per cent stake in Nepal-based Dang Cement.
- **2012**: Expansion of Sankrail Grinding Unit, thereby increasing the capacity from 1.5 mtpa to 2.4 mtpa.
- **2013**: Acquiring Holderind Investments Ltd, Mauritius (Holcim), These transactions will result in Ambuja holding 50.01 per cent stake in ACC.
- **2015**: Ambuja Cement becomes the leading water positive cement company in India with 4.03 times water positive factor.
- **2017**: Achieved seventh rank in construction material category of Dow Jones Sustainability Index 2017.

**Source**: Aranca Research, Annual Report
KEY INDUSTRY ORGANISATIONS
## INDUSTRY ORGANISATIONS

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<thead>
<tr>
<th>Organisation</th>
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<th>Fax Numbers</th>
<th>E-mails</th>
<th>Website</th>
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</thead>
</table>
| Cement Manufacturers’ Association (CMA) | CMA Tower, A-2E, Sector 24 NOIDA – 201 301  
Uttar Pradesh, India  
Phone: 91-120-2411955, 2411957, 2411958  
Fax: 91-120-2411956  
E-mail: cmans@vsnl.com  
Website: www.cmaindia.org/index.html | Phone: 91-120-2411955, 2411957, 2411958  
Fax: 91-120-2411956 | Phone: 91-120-2411955, 2411957, 2411958  
Fax: 91-120-2411956 | cmans@vsnl.com  
Website: www.cmaindia.org/index.html |
| Indian Concrete Institute             | Ocean Crest 79, Third Main Road, Gandhi Nagar, Adyar, Chennai – 600 020  
Phone: 91-44-24912602  
Fax: 91-44-24455148  
E-mail: ici3@vsnl.in, ici4@airtelmail.in, vj6314@gmail.com  
Website: www.indianconcreteinstitute.org | Phone: 91-44-24912602  
Fax: 91-44-24455148 | 91-44-24912602  
Fax: 91-44-24455148 | ici3@vsnl.in, ici4@airtelmail.in, vj6314@gmail.com  
Website: www.indianconcreteinstitute.org |
| National Council for Cement and Building Materials | 34th Milestone, Delhi-Mathura Road, Ballabgarh – 121 004 Haryana, India  
Phone: 91-129-2242051/52/53/54/55/56; 4192222  
Fax: 91-129-2242100; 2246175  
E-mail: nccb@vsnl.com; info@ncbindia.com | Phone: 91-129-2242051/52/53/54/55/56; 4192222  
Fax: 91-129-2242100; 2246175 | 91-129-2242051/52/53/54/55/56; 4192222  
Fax: 91-129-2242100; 2246175 | nccb@vsnl.com; info@ncbindia.com |
USEFUL INFORMATION
GLOSSARY

- CMA: Cement Manufacturers’ Association
- GDP: Gross Domestic Product
- GoI: Government of India
- INR: Indian Rupee
- MTPA: Million Tonnes Per Annum
- NE India: North-East India
- FY: Indian Financial Year (April to March)
- (FY10 implies April 2009 to March 2010)
- US$: US Dollar
- Wherever applicable, numbers have been rounded off to the nearest whole number
## Exchange Rates

### Exchange Rates (Fiscal Year)

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<th>INR Equivalent of one US$</th>
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<tr>
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<td>2016–17</td>
<td>67.09</td>
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<td>2017–18</td>
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### Exchange Rates (Calendar Year)

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<tbody>
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<td>67.21</td>
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<td>2017</td>
<td>65.12</td>
</tr>
</tbody>
</table>

**Source:** Reserve Bank of India, Average for the year
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