

## Cement: Sector Report

**Contact:**

**Madan Sabnavis**  
 Chief Economist  
 madan.sabnavis@careratings.com  
 +91-22- 6837 4433

**Author:**

**Ashish K Nainan**  
 Research Analyst  
 Ashish.nainan@careratings.com  
 +91-22-6837 4347

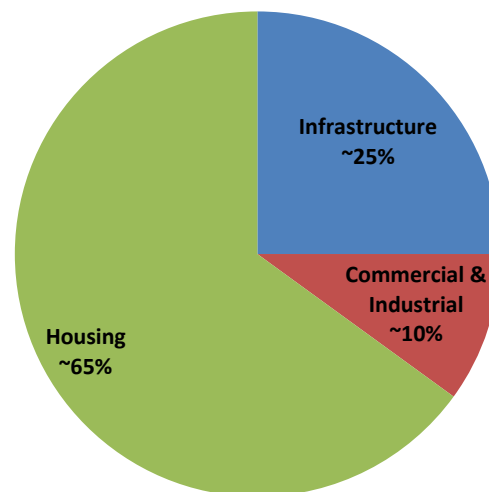
**Mradul Mishra (Media Contact)**  
 mradul.mishra@careratings.com  
 +91-22-6837 4424

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**Overview**

- India is the second largest cement producer after China with installed production capacity of ~480 million tonnes per annum (MTPA) as of FY19. But it continues to have the lowest per capita consumption at ~210 kg vs world average of ~575 kg.
- In terms of market share and competition in the sector, the top 5 companies accounted for ~48% of the market by installed capacity and ~47% in terms of production in FY19.

**Graph 1: Demand Segments**



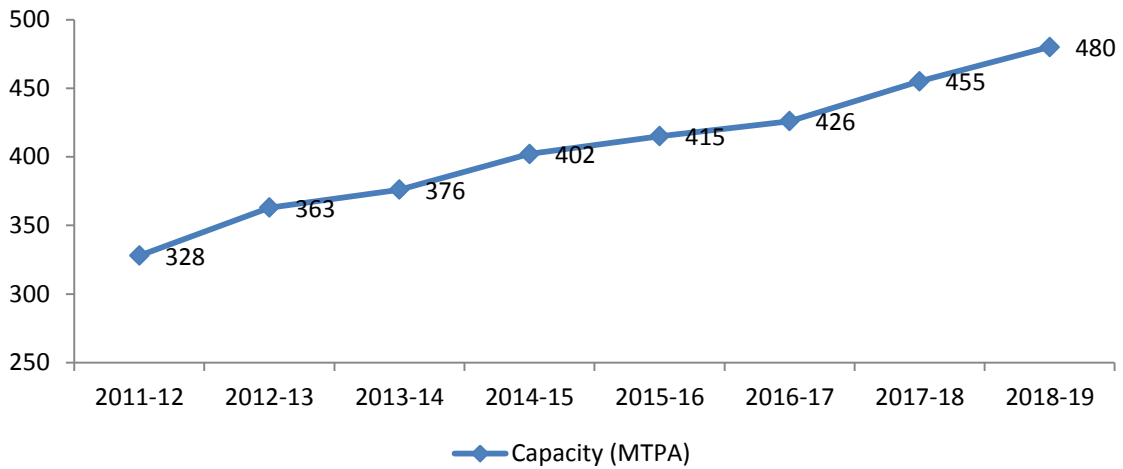
Source: Compiled Industry Data

**Outlook for FY20:**

- We expect cement production to remain steady with total output expected to grow by 5-7% during FY20.
- Prices are expected to remain stable.
  - o Retail segment demand would be the key to further strengthening of cement prices.
- Increased government spending and incentives to housing especially in the affordable segment (both rural and urban) should lead to steady growth rates for the sector from FY20 onwards.
  - o Roads, Urban Infrastructure and Commercial realty too would continue to be key demand drivers for cement.
- Among regions, Southern and Eastern segments would continue to be major regional demand drivers followed by Western region.

Installed Capacity and utilization

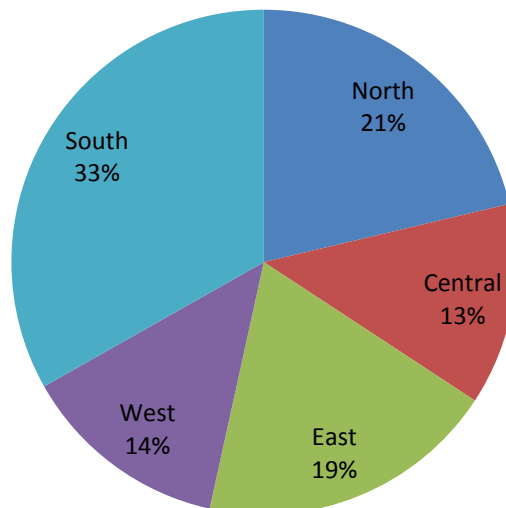
Graph 2: Installed Capacity Trend



Source: Compiled Industry Data & Various Company Data

- Cumulative installed capacity grew by ~46% in 7 years (FY12-FY19). Annual capacity addition peaked in FY13 (35MTPA) and continued to witness steady addition in FY15 (~26MTPA) and FY18 (29MTPA). In FY19, over 25MTPA of new capacity was added.
- Capacity addition during 2012-19 has been at a moderate 5.6% CAGR. During this period, the total installed capacity grew from ~328 MTPA in FY12 to ~480 MTPA in FY19.
- Capacity addition has been in line with the 5.6% production growth during 2012-19. The capacity utilization rate has stabilized at ~70% in FY19 after having clocked a low of ~65% in FY16 & FY17.

Graph 3: Regional Capacity Mix in FY19



Source: Compiled Industry Data

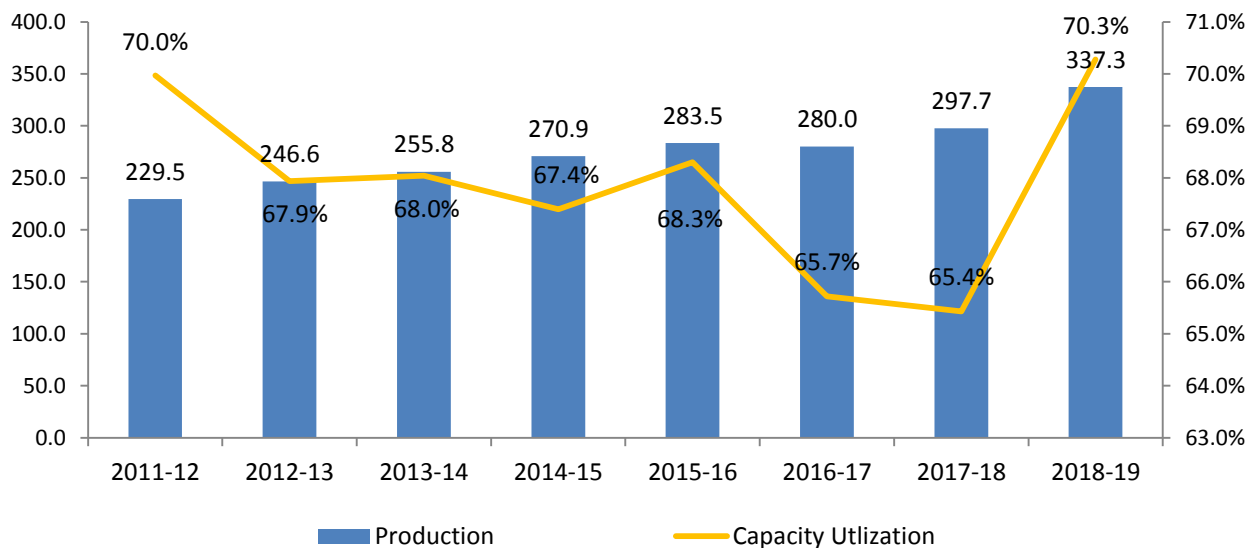
- The growth in production volume during FY18 & FY19 has been higher than CAGR (5.6%) for the 2012-19 period, clocking 6.3% & 13.3% in FY18 and FY19 respectively. This was mainly on the back of increased demand for cement from infrastructure ad low-cost/rural/affordable housing segment.

- Southern region led with highest installed capacity of 33% of All-India capacity, followed by North, East, West and Central. Rajasthan, Karnataka, Telangana, Madhya Pradesh and Maharashtra are among the states with highest proven limestone mines which is the basic raw material required for manufacturing cement.
- Rajasthan, Karnataka, MP, Tamil Nadu, Andhra Pradesh and Telangana are among the leading states in terms of installed capacity.
- Telangana, Andhra Pradesh, Odisha, Rajasthan, West Bengal and Uttar Pradesh are among the key states expected to witness the next-phase of tentative capacity addition of around ~120 MTPA over the next decade.
- In terms of market share, there are 5 major players with more than 20 MTPA of installed capacity. The share of top 5 players in total installed capacity has grown from 41% in FY14 to over 48% in FY19. Mid and Large sized companies (>10MTPA installed capacity) account for 78% of the total installed capacity in FY19. There are 17 players who have over 10 MTPA of installed capacity across India. This number has increased substantially from just 5 players in 2007.

**Production**

Cement production grew by 13.3% to 337.3 million tonne (MMT) in FY19 compared with 6.3% growth in FY18. This has been the fastest growth in cement production recorded in one single year over the last decade. Production grew at a CAGR of 5.6% from 230 MT in FY12 to 337.3 MT in FY19.

**Graph 4: Production and Capacity Utilization in Cement Industry**



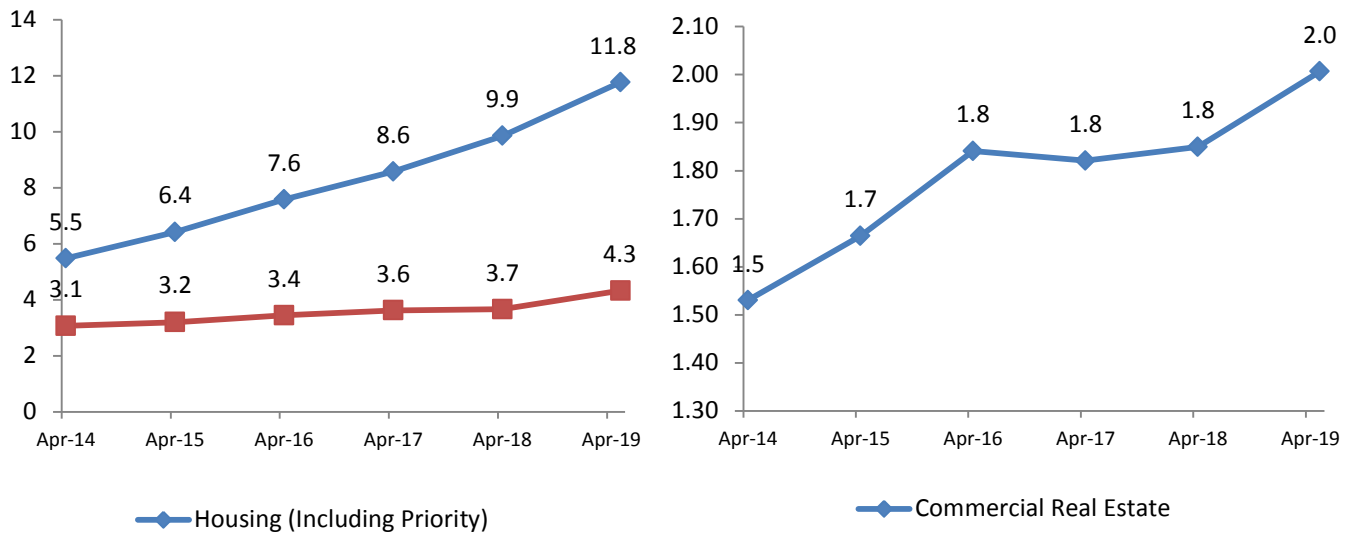
Source: Exchange Filings, Core Industries Data- OEA

- Demand for cement bottomed out during the first half of the decade as the major consumption segments like residential housing and industrial capital expenditure stabilised in terms of incremental demand for cement. Other segments like commercial real estate, infrastructure and affordable & low-cost housing took over this incremental cement demand post 2015.

The industry did witness de-growth in production in FY17 on the back of demonetization followed by implementation of RERA. But post second-half of FY18. The industry has turned-around with steady demand from affordable and rural housing and; Government’s infrastructure push.

Pick-up in construction activity in the housing sector can be gauged from total credit outstanding (refer Graph 5) to housing sector which has grown at CAGR 16.5% between FY15 & FY19. Credit outstanding for commercial real estate has grown at a modest CAGR 6% during the same period. Priority lending to housing (affordable segment) saw a major uptick in FY19 at 18%.

**Graph 5 Deployment of Bank Credit (in ₹ lakh cr. Outstanding as of end-of period)**



Source: RBI

**Demand Drivers:**

The broad demand driving segments of cement within construction are housing (~65%), infrastructure (~25%) and commercial & industrial capital expenditure (~10%).

**A. Housing:** The housing segment is further divided into three sub segment.

- **Low-cost housing or affordable housing** in urban areas has picked up pace in-terms of construction and completion post launch of Pradhan Mantri Awas Yojana (Urban) in 2015. The Government has sanctioned over 8.1 million houses under the scheme and construction has started on over 4.7 million houses. The total investment expected under the scheme is ₹ 4.83 lakh cr by 2022. The segment now contributes 10-12% of the total demand for cement in the country.
- **Urban Housing Real Estate Development** includes both residential flats and individual houses in urban areas. The overall demand from this segment is ~25%. Individual housing segment demand is vital for manufacturers in terms of realization or price per tonne.
- **Rural Housing:** The segment has been a major growth driver with the overall share of around ~28%. This can be attributed to completion of over 15.4 million rural households over the last 5 years by the Government of India under the Pradhan Mantri Gramin Awas Yojana. An additional 19.5 million households are proposed to be completed over the next 3 year, in order to achieve the ambitious “Housing for All” targets. Houses completed under the scheme have also benefited by Government providing support through other schemes like Saubhagya” Power For All” and Ujjwala “Cooking Gas Connections” thus improving the overall living condition in rural areas.

**B. Infrastructure:** Governments thrust on development of urban infrastructure, roads and highways, ports etc. and enhanced spending on construction and completion of some key projects during 2018-19 was a major growth driver for cement sector. Projects under various Government initiatives like Sagarmala (Port-Led development), Bharatmala

(Highway Development), PM Gram Sadak Yojana (Providing 100% last mile connectivity) witnessed robust activity between 2015-2019.

The infrastructure segment constitutes ~25% of the overall demand of cement in the country. The segment supported the demand for cement in the years when real estate activity was down. Post FY17, the dual shock of demonetization followed by implementation of RERA led to sudden fall in construction activity and demand for real estate.

**Table 1: Budget Outlay of Cement Driving Development Segments**

(in ₹ cr)	2017-18	2018-19	2019-20
<b>Housing Schemes</b>	8,591	6,505	6,853
<b>Metro Projects</b>	13,978	15,000	19,152
<b>AMRUT &amp; Smart Cities</b>	9,462	12,569	13,750
<b>Roads, Highway and Transport</b>	50,752	68,563	72,058

*Source: Union Budget, Actuals in case of 2017-18, Revised for 2018-19 and Outlay for 2019-20*

**C. Commercial & Industrial Capex:** The segment has remained stagnant in terms of demand share at ~10% of the total demand for cement in the country. Activity in the commercial real estate segment though has been strong on the back of demand for good quality office spaces in major cities especially Bengaluru, Mumbai, Hyderabad, where office spaces have been witnessing healthy investments and absorption rates backed by steady rental yield growth. Total leasable commercial real estate has touched 600 million square feet at the end of FY19.

Activity in the industrial segment has been subdued and other segments like warehousing, logistics etc have remained stable in the past 5 years.

#### Cost drivers:

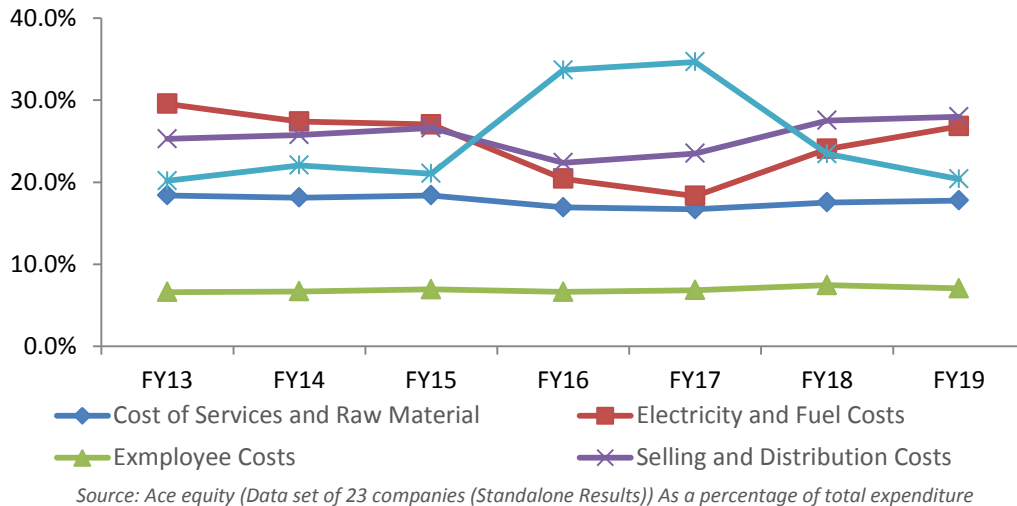
Power (Electricity & fuel cost) and freight & forwarding are the major cost components of the cement industry. Power and transport/freight costs together account for 50-52% of the total cost of production for the sector. Approximately, 0.12-0.14 tons of coal (excluding coal consumption in captive power plant) is required for the production of one tonne of cement. The standard power requirement to produce one tonne of cement varies between 80-110 units. In order to save themselves from regular supply cuts, cement companies have shifted to captive power generation which requires coal. Even though this makes them vulnerable to price volatility and supply shocks, the consistent supply of power is ensured. Due to limited availability and inferior quality of coal, Indian cement Industry is dependent on high calorific value coal, imported from Indonesia, Australia and some African countries.

Thus, dependence on coal and petcoke for fuel and feedstock requirements make cement industry vulnerable to international supply shocks, currency fluctuation and price volatility. Graph 4 gives the cost structure of the industry based on data sample of 23 companies during 2013-19.

**Power & Fuel:** Manufacturing cement is power intensive with over 25% of the expenditure being incurred on power and fuel costs. Companies need to procure coal & petcoke to fulfill the fuel requirement of captive power plants and feedstock for production. In cases where the cement manufacturers don't have captive power plants, they have to enter power-purchase agreements (PPA) or procure power from short term power markets.

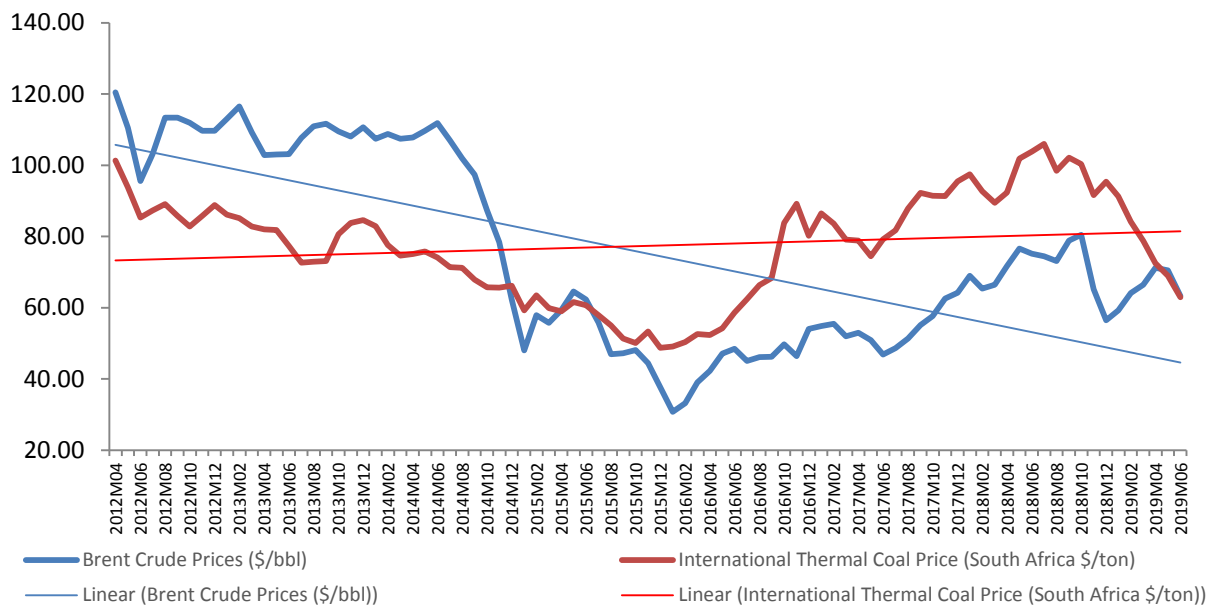
- Coal is used as a fuel in the process of cement manufacturing for power plants. Imported coal is also used as feedstock for producing clinker which is a key raw material for production of cement.
- Petcoke which is a derivative of crude oil is used as feedstock as well as fuel in the cement industry. Petcoke is a preferred feedstock over coal and other fuel type for its higher calorific value but is highly polluting. Its supply and prices are closely linked with the global crude oil refining activity.

**Graph 6 Cost Break-up (2012-19)**



In FY18 & FY19, when coal prices breached the \$ 100 mark, the industry faced margin contraction on account of escalated power and fuel costs. Both coal and crude oil prices remained at multi-year highs in during FY18 & FY19 which in turn led to unfavorable impact on the profit margins of cement manufacturers.

**Graph 6: Global Crude oil and Thermal Coal Price Trend (2012-2019)**

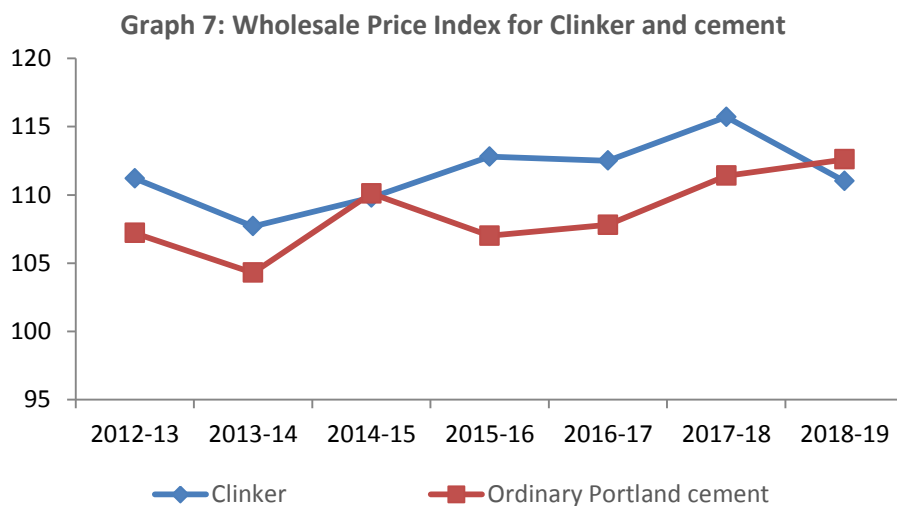


Broadly, the coal prices have mostly remained in a “stable to positive” linear trend with prices remaining within \$ 100 per tonne with an exception of few quarters. At the peak \$100-110 per tonne coal price, the cement industry reported ~200-300 bps contraction in operating margins.

Petcoke prices though had spiked to record levels during the second half of 2017, has since come down by almost 20-25%. A mix of reasons including supply constraints and increased crude-oil prices led to this price hike of petcoke. In order to mitigate this risk, cement producers are trying to use renewable energy and waste heat recovery system. Some manufacturers have already implemented the same in order to cut down on power and fuel costs.

**Selling and distribution:** Cement’s transport intensive nature is driven by its inherent requirement to move raw materials and finished goods. Raw materials include clinker, gypsum, coal, slag etc. Transportation of finished goods is done by roadways and railways. Roadways (trucks and mixers) are used to transport cement to demand centers within 250-300 km radius. Railways are a preferred mode for long distance transportation (>300km) of raw materials and finished goods. Selling and distribution costs have remained over 25% in the last few years on the back of increased diesel prices and unavailability of railway wagons for long-distance transportation. The reason for increase in transportation costs can also be attributed to increase in the lead distance, increase in the rail freight and increase in the volumes transported.

**Key raw material:** Clinker which is a key raw material for production of cement is produced by clinkerization of limestone and gypsum. Clinker prices have remained range-bound in the past 7 years. Producers with captive mines are unlikely to witness major shocks in terms of clinker prices. But for manufacturers who don’t have captive limestone mines, the cost of procuring limestone and other raw material for producing clinker and additional transportation costs would lead to increased costs.



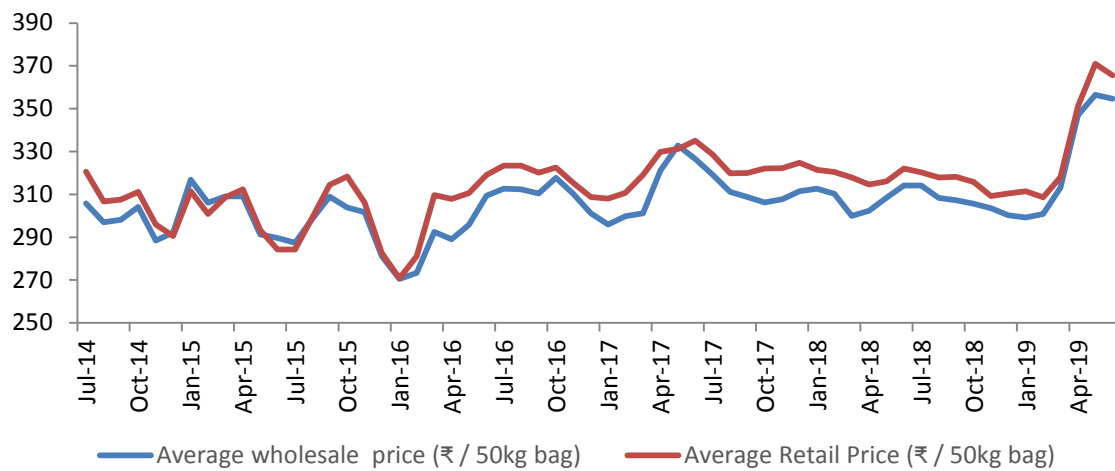
Source: Office of the Economic Advisor

**Pricing Scenario:**

- Cement prices have remained range bound even though demand has increased considerably over the last 5 years. During 2012-13, cement prices had risen as a result of increase in the cost of production. There was a rise in logistics cost due to an increase in rail freight and diesel price which was transmitted to buyers.

- Growth in cement prices declined in 2013-14 on account of low demand conditions seen by a fall in construction activity, prolonged monsoon, drop in government spending and an increase in the interest rates.
- In 2014-15, the prices rose on account of a supply crunch due to the closing of major plants in Himachal Pradesh and Rajasthan.
- In 2015-16, Cement demand remained low on account of delay in government spending and a muted demand from private housing.
- Starting second half of FY17, post demonetization, retail demand started gaining traction. Affordable housing and Government-led spending on infrastructure supported the demand for cement. Major infrastructure schemes like Bharatmala, Sagarmala etc too gained traction, which led to further improvement in demand from institutional buyers of cement.
- The prices remained stable during FY18 as the demand was primarily from institutional buyers and retail sales were stable.

**Graph 8: Wholesale and Retail Price of Cement (All-India)**



Source: CMIE

- In FY19, demand was strong in the Southern States especially Kerala and Tamil Nadu. These states were affected by natural disasters which led to large-scale reconstruction in Q3 and Q4 of FY19. Demand from retail segment led to an increase in prices of cement across these markets especially in the last financial quarter of FY19.
- In other regions especially northern and central, cement producers chose to partly pass-on increased costs of input materials like limestone, coke and coal, to consumers. A 2-5% increase in 50 kg bag has been reported across these regions.

**Financial Performance:**

**Revenue growth:** Revenue of the 23 companies analyzed here has grown at 10.9% CAGR over the last five years. Revenue growth in FY16 was the fastest at 18% followed by 13.4% growth in FY19. Increase in input costs was only passed on to consumers in few regions. Tepid demand in Western and Central region led to partial pass-on of costs to consumers. Southern region recorded healthy growth in cement prices especially in the last quarter of FY19.



Graph 2: Financial Performance

(in ₹ cr)	FY14	FY15	FY16	FY17	FY18	FY19
Net Sales	37,945	41,934	49,484	52,026	55,961	63,486
Expenditure	32,199	35,166	41,626	43,436	46,455	53,547
Operating Profit (incl. OI)	6,672	8,132	8,756	9,684	10,593	10,872
OPM %	18%	19%	18%	19%	19%	17%
Interest	1,267	1,674	1,762	1,796	2,390	2,590
Interest Coverage (times)	5.3	4.9	5.0	5.4	4.4	4.2
Profit after tax	2,424	3,170	3,380	3,794	3,439	3,399
NPM %	6%	8%	7%	7%	6%	5%

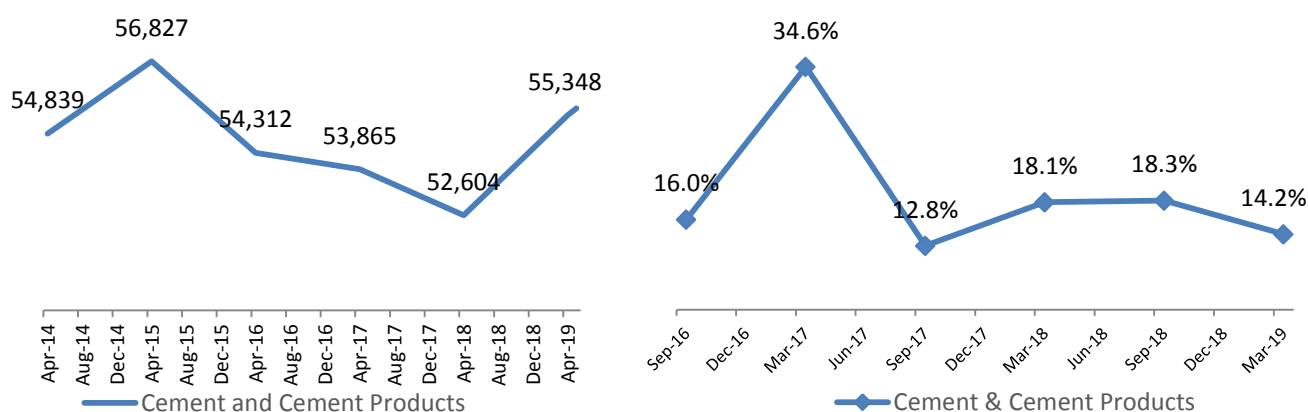
Source: Ace equity (Data set of 23 companies (Standalone Results))

**Operating Profit:** Operating profit margin of the companies analyzed here has cumulatively remained in the range of 17-19%. FY19 recorded 200 bps reductions in operating profit margins to settle at 17% on account of increased fuel, power and logistics costs. Global crude oil and coal prices were at multi-year high which led to cost elevation and a resultant contraction in operating profit margins. Interest coverage declined from 5.3 in FY14 to 4.2 in FY19, on the back of moderation of operating margins and higher interest outgo.

**Consolidation and resolution of stressed assets in the sector:** The sector has witnessed consolidation with large cement manufacturers taking over regional heavyweights as well as competitive bidding for stressed assets which were being resolved under IBC.

- Outstanding credit to the sector stood at ₹ 55,348 crore and the stressed advances ratio was 14.2%. Stressed advances peaked in FY16. This was followed by consolidation in the sector where a number of large stressed assets were taken over by large players. Stressed assets in the sector have stabilized at 14.2% in FY19. This number is expected to go down further as more assets are resolved under the IBC over the coming months.

Graph 9 Outstanding Credit (in ₹ cr) and Stressed Advances Ratio to Cement Sector



Source: RBI

- Ultratech's takeover of Jaypee Cement was the largest deal with ~22 MTPA of capacity being taken over by former, making it one of the largest cement manufacturers globally. Jaypee Associates announced sale of its cement business in 2016, in order to reduce its debt burden. Earlier,

- Other major acquisitions in the sector were, Nirma's acquisition of 13 MTPA of Lafarge India assets, Birla Corporation acquiring 5.5MTPA Reliance Cement capacity.
- Companies are consolidating and expanding in order to improve market share in existing products and also to enter new product segments.
- Acquisition of existing cement assets is also proving to be a cost effective way for the existing players to expand into newer markets. It not only cuts costs, but eases the process of not having to set-up a new plant and arrange for approvals and rights, thus saving on valuable time.
- Insolvency and Bankruptcy Code led resolution of stressed assets too witnessed some large regional players being taken over. Binani Cement was among the largest asset which was successfully resolved and acquired by Ultratech Cement.