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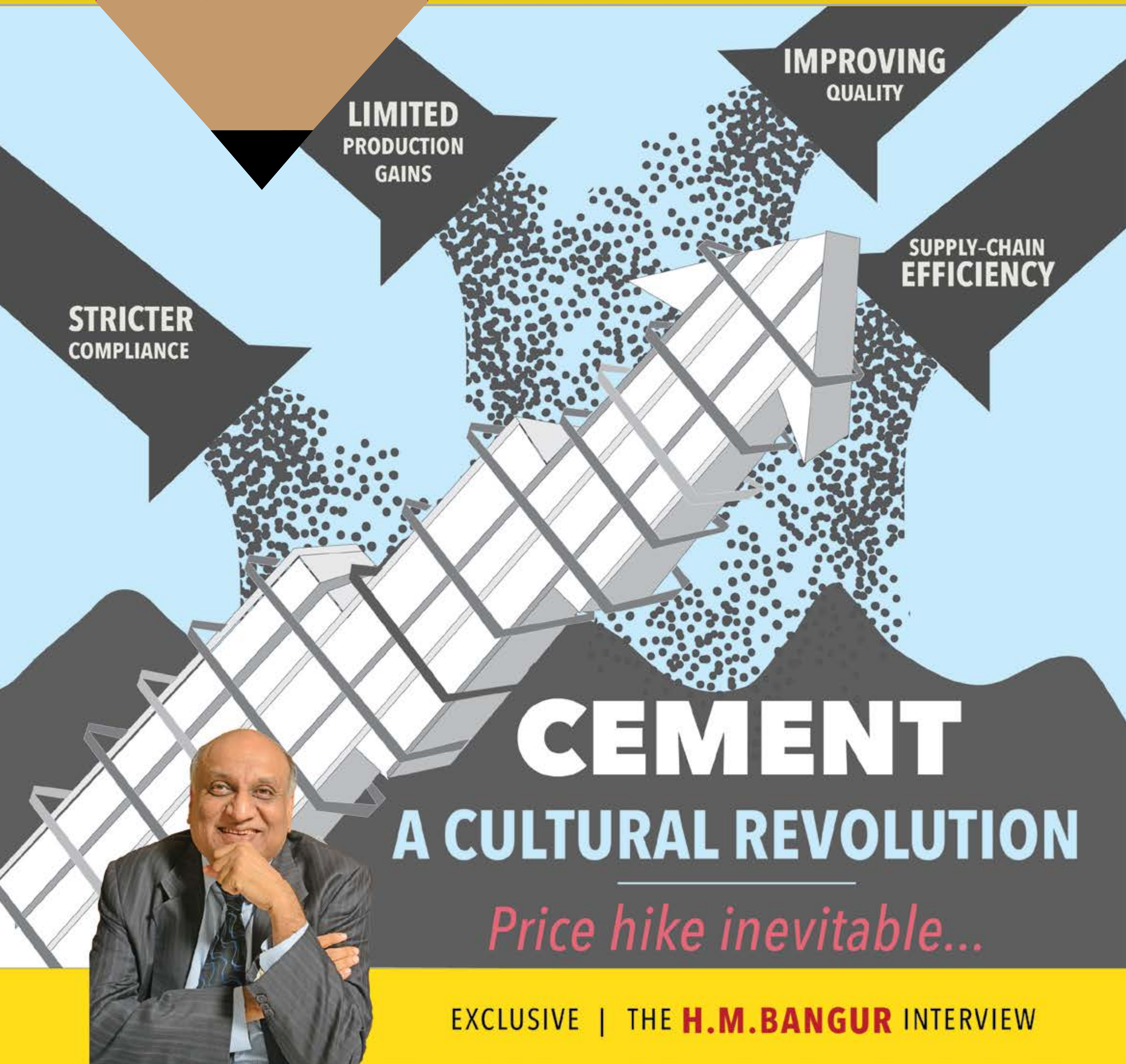

CEMENT
A CULTURAL REVOLUTION

Price hike inevitable...

EXCLUSIVE | THE **H.M.BANGUR** INTERVIEW

PhillipCapital

GROUND VIEW Vol 6. Issue 2. 1 - 28 FEB 2019

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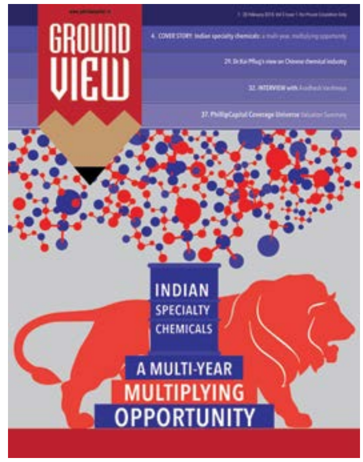

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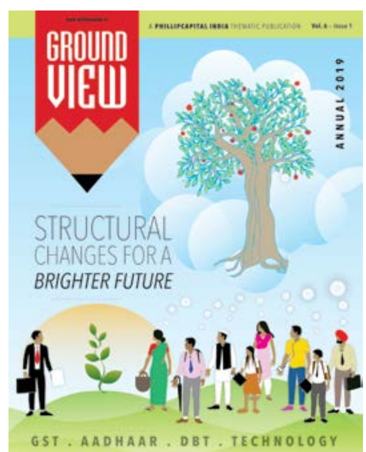

1st January 2019 Issue 1

Letter from the MD

The Indian cement industry is undergoing tremendous structural changes. Our analyst Vaibhav Agarwal toured the country to understand why price hikes weren't happening. His takeaway was that regulation-driven changes and search for inherent efficiencies would lead to an almost automatic rise in cement prices, albeit slowly. Tightening regulation is changing industry dynamics. Search for production efficiencies has increased capital spends and the industry is constantly searching for better alternates to reduce operating costs. In its quest for efficiency, it has turned its scanner to its supply-chain.

The industry is also using branding to not only drive premiumisation, but also to gain market share. In addition, it is focusing on customer-service excellence, quality consciousness, internal connect of employees, and a better informed ground force that is in sync with the company's broader objectives. The sector's near term challenges are aligning the differing needs of each manufacturer and rolling out supply-chain improvements.

This issue features an extensive interview also conducted by Vaibhav Agarwal with industry stalwart Mr Hari Mohan Bangur, Managing Director & Promoter of Shree Cement in which he talks about the cement sector, Shree's focus on price realisations, and the change in its operating strategy.

In addition, it features a low-down on the upcoming General Elections by our editor Roshan Sony. This story includes the impact of the burgeoning tensions with Pakistan, interesting takeaways from recent pre-poll surveys at the national level, and some state-wise facts.

Best wishes

Vineet Bhatnagar

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CEMENT

A CULTURAL REVOLUTION

Price hike inevitable...

The time for cement prices to start improving directionally has come. The sector is undergoing a cultural revolution. The searchlight for efficiency and price improvement should firmly settle on supply-chain efficiency as production level improvements yield limited results. Tackling rising compliance costs will come into sharper focus.

Slow and steady price hikes likely; *regulation-driven changes and search for inherent efficiencies will lead to an almost automatic rise in cement prices*

After travelling exhaustively across all regions of India – north, east, central, south, and west and touring Delhi, Rajasthan, Gujarat, Madhya Pradesh, Uttar Pradesh, West Bengal, Tamil Nadu, Andhra Pradesh, Telangana, Chhattisgarh, Karnataka, and Maharashtra, analyst Vaibhav Agarwal believes that the time for cement prices to start improving directionally has come. The key intention of this extensive journey was to understand cement-pricing nuances and fathom why prices were not recovering despite healthy demand. This was a great opportunity to observe cultural changes in the sector in terms of the operating business environment.

It will not be correct to look at short-term price movements to gauge the direction of cement prices – over the long-term they will be on an uptrend. The search for efficiency in the industry has become very intense and few companies have already recognised that it is not just production efficiency, but also supply-chain efficiency that matters. In fact, supply-chain leakages prove to be a major dampener for cement prices. Also, all efficiencies do not translate to cost savings; many of them are structurally required due to compliance factors such as environmental norms, social responsibilities, and adherence to the broader regulatory framework in each area of operations. Many of these efficiencies will also ensure smooth continuous operations and minimum breakdowns, thereby reducing repairs, maintenance, and spare-parts costs. These efficiencies will push cement prices up directionally in the medium to longer term. ***Rising cement prices are no more a matter of choice, but indeed a 'need' for all.***

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STRICTER COMPLIANCE

Tightening regulation is **changing industry dynamics**

It is generally well accepted that cement pricing and its direction are a function of demand-supply and production obedience. But beyond this, a few critical factors determine pricing. These include efficient management of the supply-chain and the distribution channel, alignment in the business philosophy of all individuals within an organisation, and importantly, that individual cement manufacturers accommodate each other's needs – that vary by business models and market conditions. The operational business environment has changed dramatically in terms of tighter compliance prerequisites at every level – right from limestone quarrying to production and then distribution – which makes better cement prices the need of the hour for ALL manufacturers.

Here are some notable examples of tightening structural regulations

Overloading in many states is a thing of the past

Historically, most regions in India ignored loading norms and remained relaxed with truck loads. This *'advantage'* for the sector is largely over, as norms are strictly enforced in most parts of the country. This implies an increase in the costs of operations.

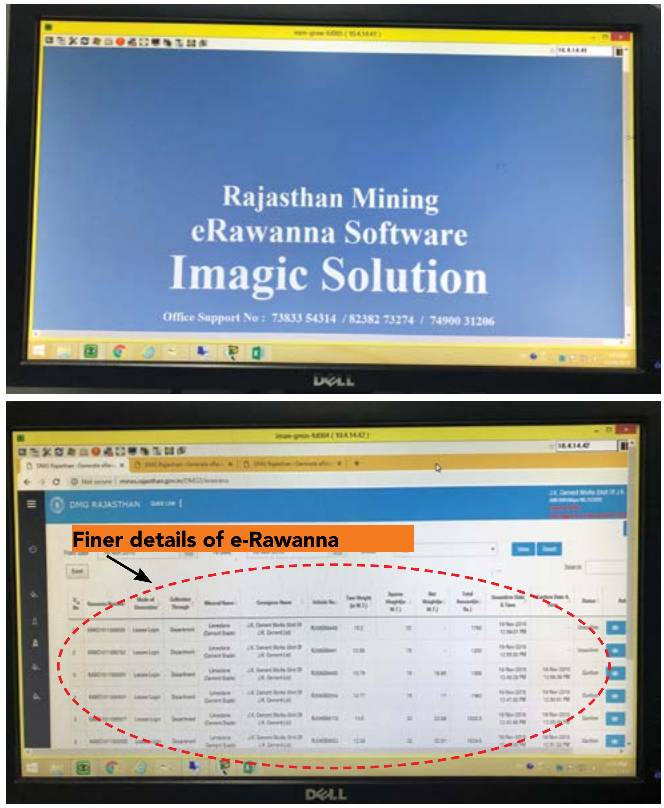
Relaxation of axle-load norms are only partially implemented

In July 2018, the government announced initiatives to increase axle-load norms, which would enable trucks to carry more loads. This is a mild breather for the sector – about 3-7% of freight costs. However, these initiatives have not yet been fully implemented across all states, and procedural delays with local state governments and road transport authorities are bottlenecks. Eventually, all states will comply.

NEW AXLE-LOAD NORMS

- Mid 2018, the government upped the maximum load carrying capacity of heavy vehicles by 10-15%.
- Scrapped mandatory annual renewal of fitness certificates for freight carriers.
- Gross vehicle weight of two-axle trucks (two wheels in the front axle and four wheels in the rear) was increased to 18.5 tonnes from 16.2 earlier; for three-axle trucks: 28.5 tonnes from 25; for five-axle trucks: to 43.5 tonnes from 37.

Overloading is over in most regions in India. This truck, which left the ***erst-while Binani Cement*** plant on the day of the takeover by UltraTech Cement, is very efficiently loaded.



Online portal of the Rajasthan State Government where the operations team logs in to generate the e-Rawanna for trucks being loaded at limestone mines.

Royalties are now prepaid – just like prepaid mobile recharges!

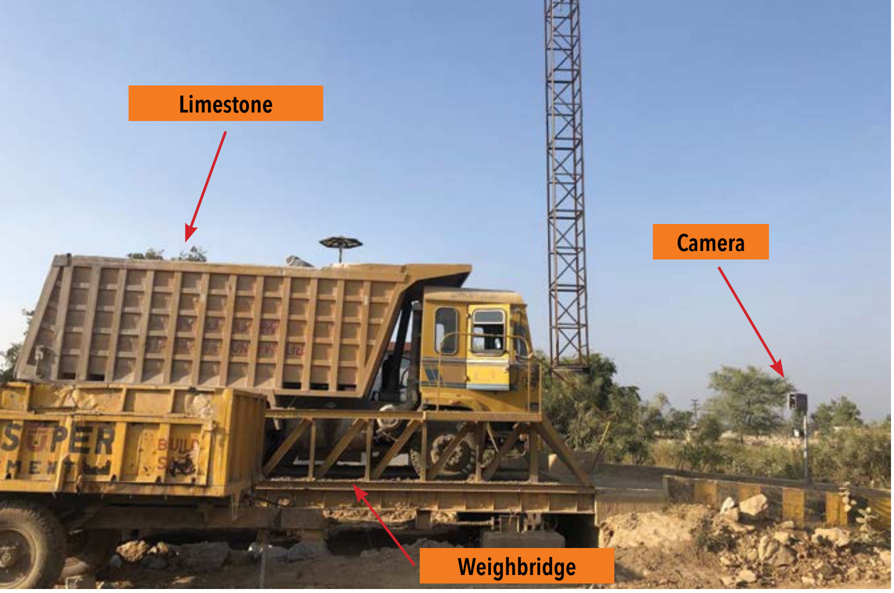
In many states, the governments have implemented stringent norms for revenue collection. Royalty for mined limestone was earlier paid after mining and usage at cement plants. But many state governments have now implemented a pre-paid royalty payment system. Under this, if cement manufacturers have recharged or deposited say a royalty of Rs 100 with the government, they will be allowed to evacuate limestone equivalent to Rs 100 worth of royalty from the mines. These manufacturers have to keep depositing money in advance with state governments to continue their mining operations.

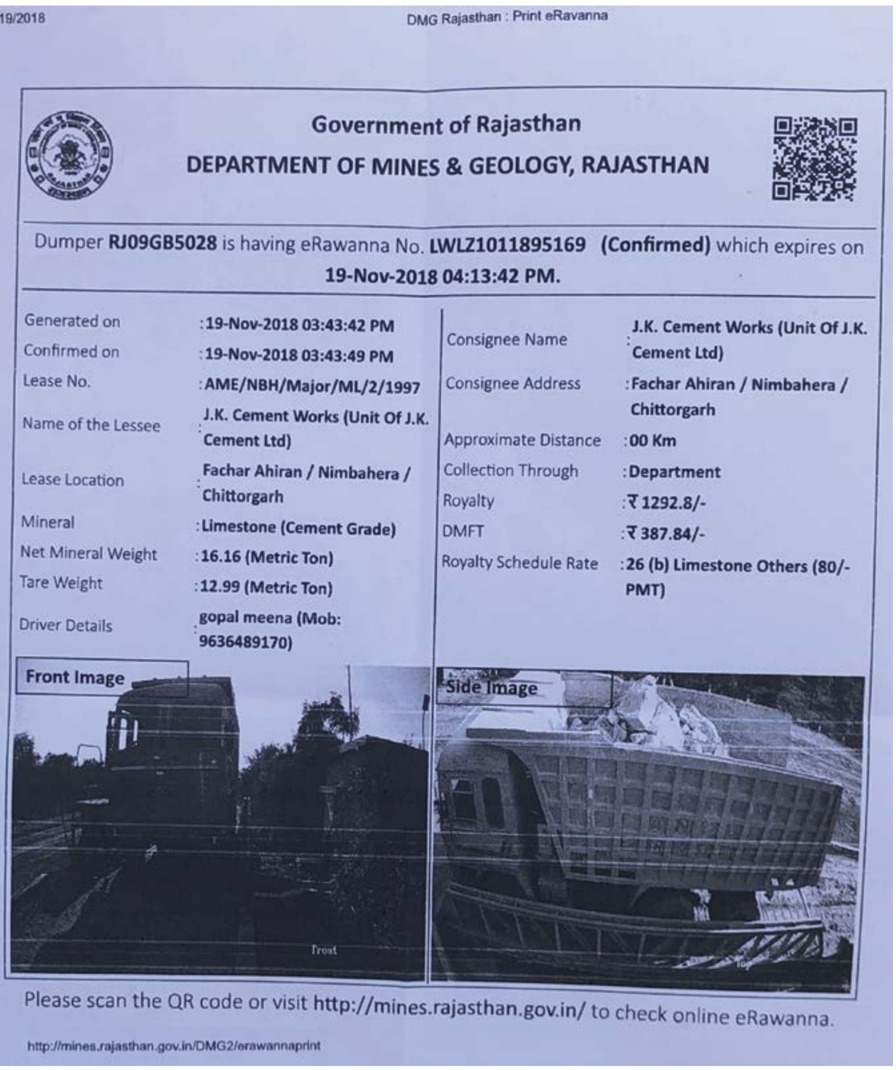
It is a small change, but it increases daily working capital requirements of cement manufacturers. This move is expected to eventually reduce fraud and cases of intentional non-payment of statutory dues to regulators. In the past, there were a few such cases, which were eventually referred to the NCLT for takeover and revival. Each state has a different terminology and procedure for the permission to move from the mine. For example, in Rajasthan, this permission is called e-Rawanna (in Hindi rawanna means setting off).

Trucks are being monitored real-time and online

In places where hi-tech systems are being implemented final challan or permission to proceed is provided only when these trucks are compliant and found fit to proceed. Trucks are being monitored real time in all functions of operations including raw material movement, inward movement of fuel, and outbound movement of finished material. Monitoring tools (cameras) and barometers (weighbridges) are being installed at all necessary checkpoints. All vehicles are now mandated to pass through such check points for readings and documentation before the challans that allow them to proceed are generated. Designated state agencies approve pictures and readings at such sites. That's not all, the government has made it mandatory for pictures and readings to be incorporated on challans. This will act as a verification tool for all regulatory authorities all along the vehicle's route.

For vehicles carrying inbound cargo to factories (such as raw materials and fuel), there is an inward check at the company's receiving gate through similar means (camera, weigh bridge), which is matched with the original readings at the time of loading. Regulatory authorities in several states have risen to the need for a fully compliant, error-free transport mechanism – and these are all steps to achieve these goals.





19/2018 DMG Rajasthan : Print eRavanna

Government of Rajasthan
DEPARTMENT OF MINES & GEOLOGY, RAJASTHAN

Dumper **RJ09GB5028** is having eRawanna No. **LWLZ1011895169 (Confirmed)** which expires on **19-Nov-2018 04:13:42 PM.**

Generated on	:19-Nov-2018 03:43:42 PM	Consignee Name	:J.K. Cement Works (Unit Of J.K. Cement Ltd)
Confirmed on	:19-Nov-2018 03:43:49 PM		
Lease No.	:AME/NBH/Major/ML/2/1997	Consignee Address	:Fachar Ahiran / Nimbahera / Chittorgarh
Name of the Lessee	:J.K. Cement Works (Unit Of J.K. Cement Ltd)	Approximate Distance	:00 Km
Lease Location	:Fachar Ahiran / Nimbahera / Chittorgarh	Collection Through	:Department
		Royalty	:₹ 1292.8/-
Mineral	:Limestone (Cement Grade)	DMFT	:₹ 387.84/-
Net Mineral Weight	:16.16 (Metric Ton)	Royalty Schedule Rate	:26 (b) Limestone Others (80/-PMT)
Tare Weight	:12.99 (Metric Ton)		
Driver Details	:gopal meena (Mob: 9636489170)		

Front Image

Side Image

Please scan the QR code or visit http://mines.rajasthan.gov.in/ to check online eRawanna.

http://mines.rajasthan.gov.in/DMG2/erawannaprint

A newly installed camera at the exit gate of a limestone mine. Next to the camera is a weigh bridge. The e-Rawanna copy confirms the front and side image of the dumper and also captures the load of the truck. The copy details the time of generation, time of confirmation, and time of expiry – which implies that if the dumper does not reach the unloading location by a certain time, the e-Rawanna becomes invalid. The purpose of this is to ensure better transparency in mining operations, bring better transparency in vehicle turnaround times and plug loopholes of overloading at mines. In many villages adjoining cement plants, damage to roads by overloaded limestone trucks is a common complaint to local authorities and such initiatives will help address them. The e-Rawanna also has all basic details such as name and number of the driver, gross and net weight of the truck, and royalty details, which help authorities en-route to verify details. It also forces truck operators to remain more compliant.

Trucks loaded with fuel and travelling long distances also have similar rules

This is especially true if unloading takes place in a state that is fairly compliant or in a state that is moving towards better compliance. It is not just about the truck-load factor, but also about the way the fuel is loaded. For fuels such as pet coke and coal, due to pressure from regulatory authorities, cement companies have mandated transporters to ensure efficient storage mechanisms (such as proper covers) to comply with environment norms; fuel trucks normally have a tendency to release particles. More so, these norms also act as checks against pilferage.

A truck loaded with petroleum coke at the 'material arrival' gate of a cement plant. It proceeds for weight check and an 'image capture' at the weigh bridge. The bar code is scanned to complete the verification before the truck is allowed to proceed towards the plant to unload petroleum coke. The whole process is a one-man job; except the driver, practically no one else is needed.

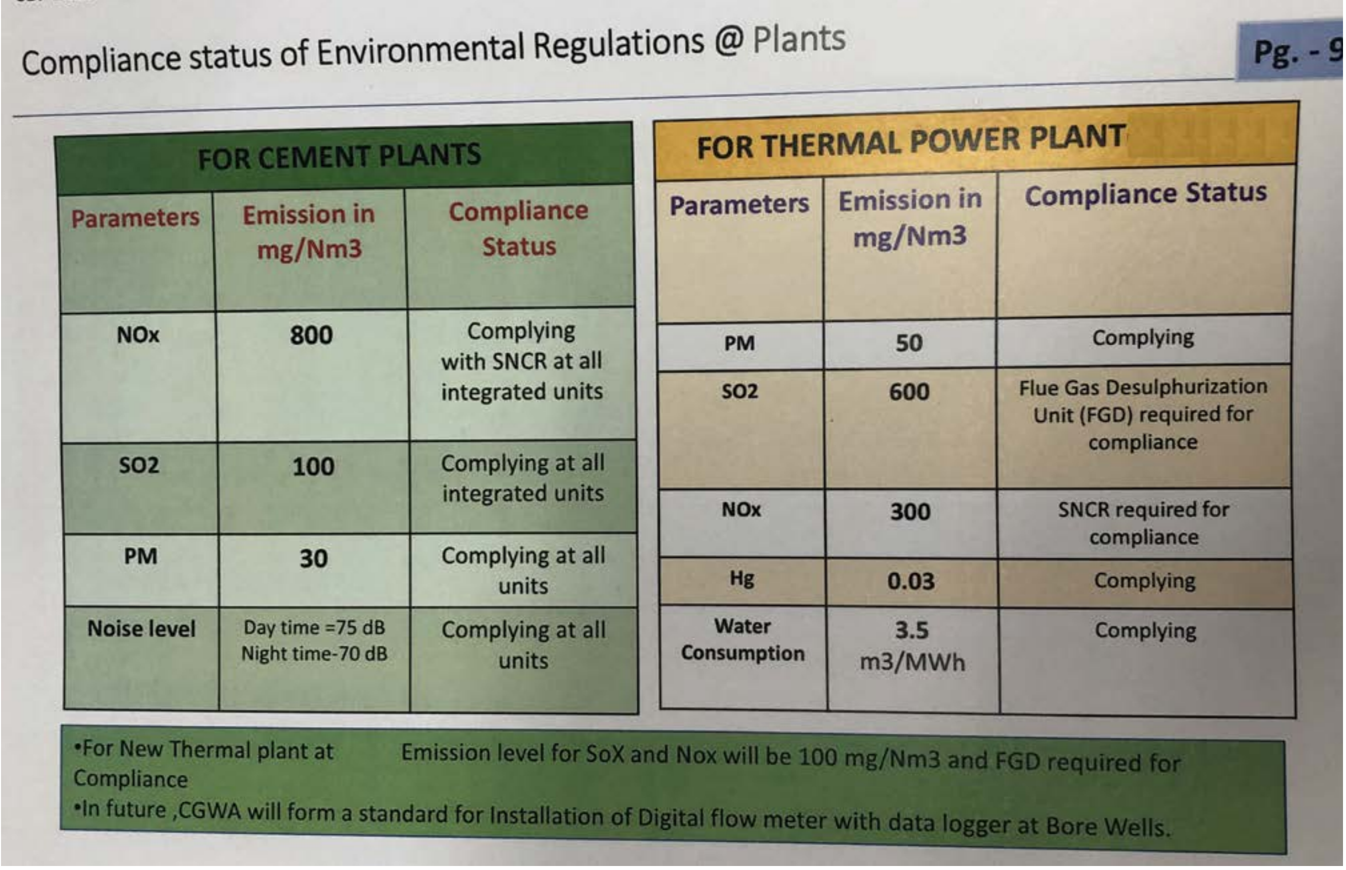
Weighbridge alongside an inter-state toll naka to check for breach of loading norms in suspicious vehicles

A display at a toll checkpoint informs drivers about penalties for overloading in Hindi, one of the regional languages of Rajasthan and a widely understood language in India.

A live screen at the gate of the plant provides real-time emission readings of the plant and environment impact.

Toll checkpoints are becoming stringent about regulations, and automated (even inter-state)

Many toll checkpoints were seen developing infrastructure to check overloading. Even inter-state ones have initiated the process of installing weighbridges to check suspicious vehicles. Drivers are being educated about the severe penalties. Human intervention at most of these points has reduced drastically; they are now almost automated.



Compliance status of Environmental Regulations @ Plants

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FOR CEMENT PLANTS

Parameters	Emission in mg/Nm3	Compliance Status
NOx	800	Complying with SNCR at all integrated units
SO2	100	Complying at all integrated units
PM	30	Complying at all units
Noise level	Day time =75 dB Night time-70 dB	Complying at all units

FOR THERMAL POWER PLANT

Parameters	Emission in mg/Nm3	Compliance Status
PM	50	Complying
SO2	600	Flue Gas Desulphurization Unit (FGD) required for compliance
NOx	300	SNCR required for compliance
Hg	0.03	Complying
Water Consumption	3.5 m3/MWh	Complying

•For New Thermal plant at Emission level for SoX and Nox will be 100 mg/Nm3 and FGD required for Compliance

•In future ,CGWA will form a standard for Installation of Digital flow meter with data logger at Bore Wells.

Self-assessment status of a cement manufacturer across all sites for adherence to revised environmental norms.

SNCR unit set up to comply with NOx norms. The notice details precautions around the sensitive SNCR site.

Environmental emissions are monitored real-time

Almost all cement factories across the country have been asked to compulsorily submit environmental emissions, real time, to regulatory authorities. Penalties for deviations can be severe and may trigger shutdown notices.

SOx and NOx (sulphur oxides and nitrogen oxides) compliance have added to the operating costs of cement companies – more so NOx. To control these emissions, cement companies have been incurring additional capital costs to install Selective Non-Catalystic Reduction (SNCR units). Higher NOx emissions leads to acidic rains and the

A grinding mill for coal used in the cement plant's captive-power generation.

regulatory authorities have made it mandatory for cement manufacturers to keep emission levels below 800mg/Nm3 (milligrams per cubic metre). For this, they have to install SNCR units and spray ammonia at the pre-heater. In addition to the capital cost, the process incurs an additional recurring cost of Rs 15-30/tonne of clinker, depending on the age of the plant and status of its regular maintenance (upgraded, not upgraded).

Besides SOx and NOx, the government has also established new norms for other environmental hazards such as particulate matter (PM) and noise levels. To avoid non-compliance notices, plant heads across the industry have been working over the last 1-2 years for ensuring that all plants are fully compliant to these norms.

Grinding cost for fuel has increased after the ban on using pet coke in power plants

In November 2017, to protect the environment, pet coke was disallowed in power plants. Since then, cement companies' cost of grinding has increased as they have to use coal (coal needs to be more finely grinded) for their captive power plants. In addition, the cost of coal is generally higher than pet coke in terms of calorific value.

Search for production efficiencies has increased capital spends

Both recurring costs and fixed cost of operations have increased in a quest for better efficiencies. Here are a few examples:

- Cement companies are using newer technology coolers such as IKN Pendulum Cooler for improving fuel efficiency and increasing waste-heat power generation.
- Fly ash driers are being installed more prominently. It helps cement manufacturers to use pond ash (or wet ash) more resourcefully because of a quicker and efficient drying process – reducing wastage and increasing productivity.

IKN Cooler and fly ash drier at a cement plant

There is an intense search for better alternates to reduce operating costs

Cement companies are not just looking for efficiency improvements, but also better alternates that reduce operating cost. Few notable focus areas:

Increasing component of alternate fuels and resources (AFR) gaining importance

At a new cement plant, the Total Substitution Rate (TSR) of fuel with AFR can be as high as 12%; for older factories (15+ years), the TSR range is 2-8%. Notably, few low-calorific-value AFRs have a negative carry cost – this implies that cement companies are actually paid to use that AFR.

Few common AFRs that are currently used

Name of alternate fuel	Indicative calorific value (kcal/unit)	Remarks
Liquid waste MIX (LWM)	2,565	
Hazardous LWM (LCV)	0	Used because of negative cost
Tyre fibre mass	5,935	
Solid hazardous waste	2,650	
Agro waste	3,378	
Contaminated plastic waste	4,925	
Plastic waste	5,149	
FMCG waste	0	Used because of negative cost
Plastic and resin waste	0	Used because of negative cost
Refuse-derived fuel (RDF)	5,857	

Reducing manpower costs in all areas of operations

Manufacturers are focussing on automation and are committed to reduce manpower intervention to improve efficiencies and reduce cost in all areas of operations, including mining, manufacturing, logistics, and packing.

- **Mining:** Human intervention has been reduced with automated operations, which make loading and unloading a single person job (besides the driver, practically no one else is needed).
- **Manufacturing:** Today, most cement plants are so automated that virtually the entire manufacturing process is seamless – right from raw material to the final product. With virtually no operational breakdowns, 15-20 people can run the 'pure operations' part of a cement plant. Additionally, the industry is attempting to fully automate all operations – from raw-material procurement, processing it, and even lab testing. Many plant laboratories are robotic presently, reducing the need for this traditionally fully human-oriented activity.

A newly installed robot at the laboratory of a cement plant reduces human intervention and improves quality standards with more stringent monitoring of quality at each stage of operation.

- **Packing:** Packing used to be a human-intensive area – from loading the bag to the packer, MRP printing, and sorting. With technology, it has become virtually a one-person job. Earlier, packing plants would need a person to load bags to the packer, a couple of people along the conveyor belt to ensure smooth movement of bags and for MRP printing, and then quite a few people to load bags from the conveyor belt into waiting trucks or railway wagons. Today, with technology, a person just loads an empty bag on to the packing machine and after that no human intervention is necessary until it is actually unloaded at its destination.

- **Outbound logistics operations:** This was amongst the most human-intensive operation – an area that still needs better calibration. Select cement manufacturers have realised the need for technology for improving this area and are investing money heavily to ensure minimal human intervention so that systems become error free. Here is how technology is helping cement manufacturers to achieve this goal:

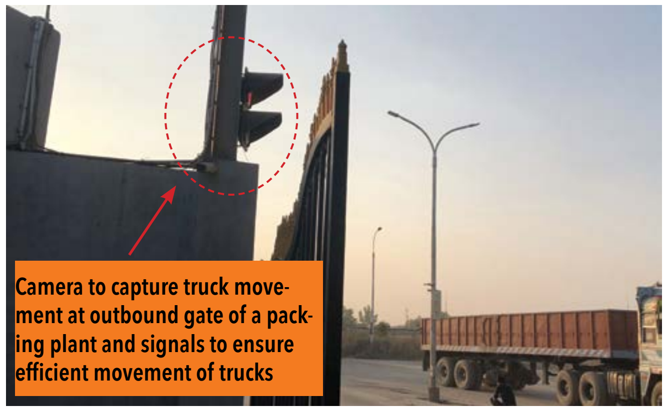
Automated weight readings at a packing plant

Control unit and automated printer to print MRP and production / desptach details (like truck no, lot no., date of despatch etc.)

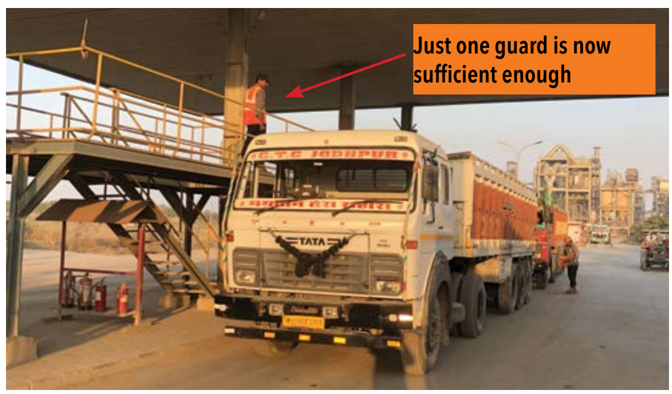
Cement bags being auto loaded on a truck by a loading machine

Packing has become virtually a one-person job. Automated operations include weight check, price printing, and loading onto the truck or railway wagon.

1. Automated entry and exit gate for trucks at a cement factory's packing plant. Barring a security guard, no one else was present. Cameras capture the truck's image from all ends to ensure that rules are followed (earlier many security personnel were needed for this). This particular plant operates at 90% utilisation, so flow of trucks is regular – but due to automation, the entry and exit gate is not crowded.

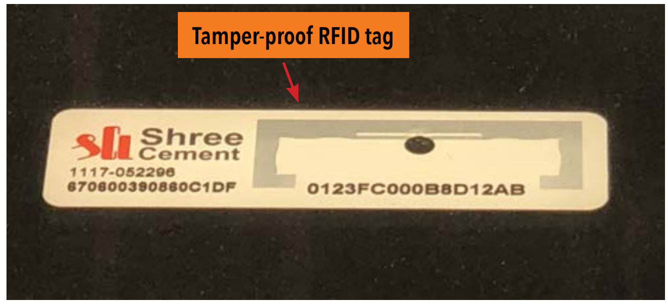


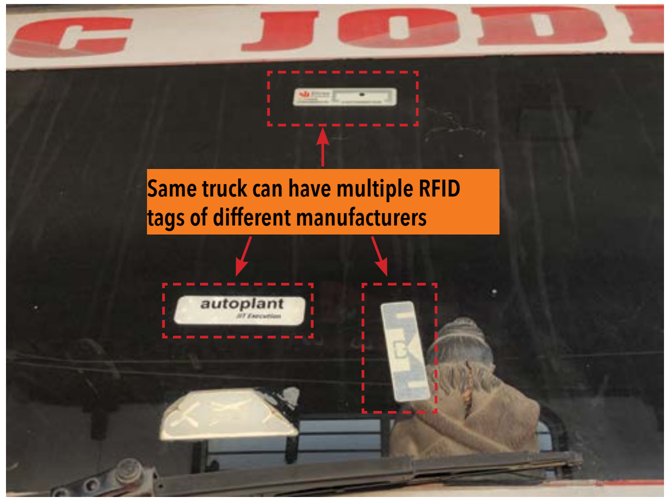
Camera to capture truck movement at outbound gate of a packing plant and signals to ensure efficient movement of trucks



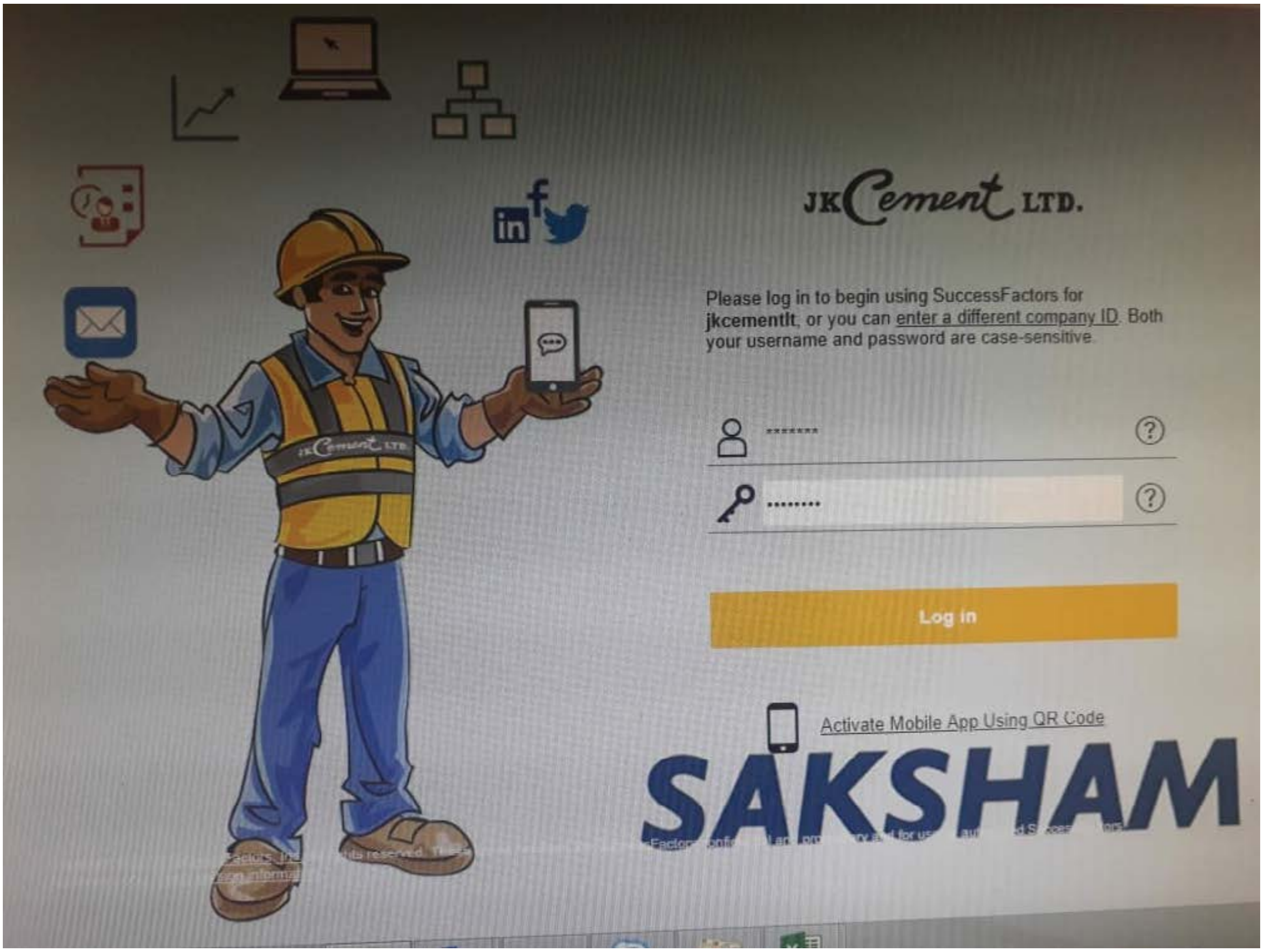
Just one guard is now sufficient enough

2. A display at the truck yard of a cement plant displays the truck number, grade of cement, quantity, and loader number (the sequence number in the packing plant). Earlier, trucks had to queue up and would be manually given slips that told them their path forward, which created a big logistics logjam and dramatically added to inefficiencies both quantitatively and qualitatively. Quantitatively: chaos and higher lead times for trucks. Qualitatively: drivers were very frustrated due to unclear job responsibility and direction allocation. With electronic displays, only one announcer is needed at the site along with a couple of security guards. The announcer reads the display at regular intervals to double check that drivers are aware about their destination (some drivers cannot read). Lead times and chaos at packing sites and truck yards have significantly reduced; as a result, drivers have become more efficient – they are not only happier about better clarity, they can also utilise their wait time to take rest.





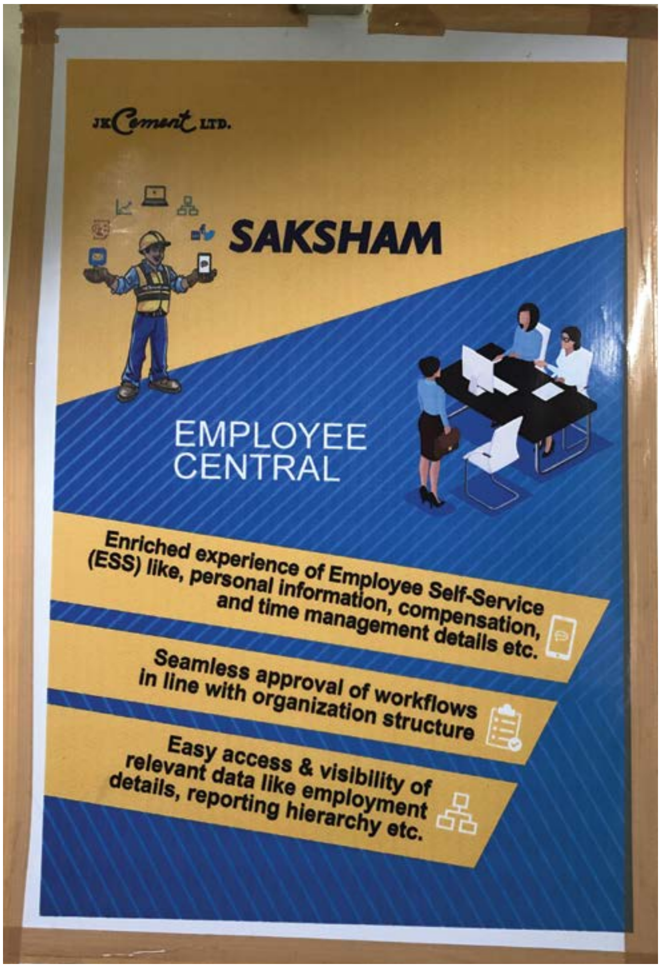
3. Automatic tag readers are installed at cement factories where modern practices are being followed. Trucks are installed with digital tag ID's that are automatically scanned at entry gates for smooth entry and exit and all logs are digitally recorded. With camera and GPS systems installed in many trucks by select cement manufacturers, practices such as that of overloading are virtually eliminated. Also, a truck need not to be attached to only one cement manufacturer. A logistics operator can provide services to multiple cement manufacturers, so in most cases the same truck will have multiple RFID tags ids installed as seen in the picture.



Building human efficiencies at cement plants

Proactive cement manufacturers are working on boosting employee morale at the plant level to encourage employees to stay more energetic and come up with better ideas that can help cost improvements. Cement manufacturers have deputed Chief Information Technology officers even at plant levels. Their key responsibility is to develop a plant-level IT platform that is interactive, seamless, and transparent, and one that allows all plant employees to provide ideas and feedback that can help in new idea generation. This is believed to ultimately lead to better efficiency and cost improvements.

The CIO of a cement plant and a screenshot of an internal mobile app that he has built to enable employees to submit feedback, ideas, and to empower them. Such initiatives indicate the eagerness of cement makers to make all attempts to search for better internal efficiencies, as the market's price support remains dull.



Employee participation initiatives: Hoardings at a plant detail such initiatives and provide information about how they convert to actual numbers in terms of cost savings.

However, working with consistent efficiencies is not easy

Plant load factor is a critical parameter: Most expected plant efficiencies deliver desired results only at an optimum utilisation level – say 80%+. Anything below that generally disturbs the balance of costs and benefits. For e.g., the kind of AFR that can be used in kilns depends on the point it is in its running cycle. Usage also depends on parameters such as planned shutdown time of the kiln, its rotation speed, and ability of the AFR to be blended with other fuels being used.

AFRs are low-cost for now, but may not be a sustainable advantage forever

Most AFRs used by the cement industry currently have the advantage of being low cost, but this is not a sustainable advantage forever because of the rising demand for AFRs. Also, their usage comes with its own challenges – for e.g., plant maintenance has to be always up to date for AFR usage. Those plants that were not really focussed on proper maintenance will have to do so in order to use AFR; eventually the entire industry will have to use AFRs to maintain competitive advantages. Another example – the entire AFR procured cannot be pumped into kilns at one go; it has to be a fine blend of usage with other fuels. This means that vehicles loaded with AFRs need to wait at the plant for as long as even one day until they can be fully unloaded. Many of these AFRs are hazardous and can't be stored at plants because most don't have the requisite storage infrastructure. Therefore, for AFRs, cost of logistics on a per km basis is higher than for other fuels.

AFRs and kilns: A fine balance

- The kiln has to reach an optimum temperature of 1450-1500°C to produce clinker. When it is restarted after previous shutdown, AFRs cannot be used as they will not help to reach this desired temperature quickly. It will also be too costly to burn AFR to reach this temperature. So, for restarting a kiln, only traditional fuels such as coal or petroleum coke are used.
- Once the kiln reaches optimum temperature, AFRs can be blended with traditional fuels for cost efficiencies and <u>*more importantly for saving traditional fuels*</u>. For a quick stop and restart, AFRs are not a good alternate.
- Every stop-and-start of a kiln with traditional fuels will cost Rs 2-5mn with a minimum turnaround time of 2-3 days.
- Therefore, for a cement manufacturer to use AFR, the run cycle of the kiln has to be very clear.

Structural concerns: A tanker loaded with liquid hazardous waste at a cement plant. Most plants don't have appropriate storage mechanisms for such AFRs, so the only alternate is to directly connect the tanker to the fuel disposal system of the plant. This means that the tanker remains on standby for up to 20 hours – until it is fully unloaded. Factories that are a step ahead in developing infrastructure for AFR storage will be a step ahead of peers in the long run in terms of cost advantage.

Cost of handling raw materials has gone up significantly

With stricter regulations, it is not just the outbound freight for finished goods that is impacting cement companies, but also rising costs of handling essential raw materials such as limestone, coal, fuel, and pet coke. For cement plants with captive power plants (most do) the quantity of raw materials to be handled has also increased as the calorific value of coal is generally much inferior to pet coke's. An additional bottleneck is that not all cement plants have the necessary infrastructure for storing increased quantities of raw material. Until the storage is increased, these additional raw materials need to be accommodated through manual intervention implying additional recurring handling expenditure.

Cost of transporting/handling limestone (lifeline for any cement plant) has also risen, especially for factories that do not have a mine-to-plant conveyer belt. Because of strict monitoring of overloading, trucks (dumpers) have to make multiple trips from the mine to the plant. Plants that did not have enough dumpers have been pushed to purchase or lease more dumpers to ensure operations are not affected.

In search of better efficiency, some manufacturers are trying to even lessen manual interventions at limestone mines through capital investments in new-technology excavators. They are also using automated semi-robotic trucks to help ease the charging processes – the area of the mine that is selected for a blast (generally limestone is procured through this process) has to be charged with explosives through a series of processes such as digging holes, wiring and pouring explosives. This process is called 'charging'.

(a) A truck moves from the limestone mine to a factory only half loaded as it is very dense (heavy) and reaches loading norms quickly. Earlier, trucks used to load up fully. (b, c) Newer technology has led to the evolution of smaller but much more efficient excavators and automated mine-charging machines. These are much costlier than the traditional equipment.

Unorganised supply-side issues, especially in raw-material, add to problems

In many cases, supplies of basic raw materials to cement manufacturers are through unorganised operators. Even operations of organised suppliers are not always error free. For example, many invoices have GST-related issues such as GST registration number mismatch and manual input of numbers, which may not be uploaded on the centralised portal of GST. Cement companies cannot afford to have errors on their books, so these mismatches lead to increased work for plant-level employees at cement companies in the form of co-ordination with these vendors for the rectification process, which lead to higher working capital requirements due to rectification delays.

In a nutshell, plant operations are becoming more efficient, but the incremental scope of cost improvement through this may not be too material. Efficiency improvements are now made more to improve compliance, meet environment norms, for the wellbeing of employees and also to reduce recurring maintenance expenditure with lesser break downs. At present, north India has become largely compliant, while most of the south was already compliant. The east and west are catching up, while central India remains least compliant. Eventually, all cement manufacturers will have to fall in line.

(d,e) In central India, illegal mining sites continue to operate fearlessly

The shape of **future cement capex**

Capex growth is likely to halve. Will be on fast track, pushing efficiency and compliance

High capex CAGR of +7% over the past decade for the cement industry has already been a key concern. This is likely to halve over the next 3-4 years to just 3-4%. While a bulk of this capex will be going towards grinding and logistics (not capacity addition), most of it will incorporate the latest technology and full support systems of newer inventions such as waste heat recovery systems and ability to use alternate fuels with full supporting infrastructure to tackle such resources.

Most of the capex is on a fast track – the internal targets of project teams are much ahead of the official targets announced by manufacturers. This means that the compulsion for individual manufacturers to move towards better efficiencies in order to maintain their competitive edge is only going to increase, as those who don't will lag behind.

A capex site in India – the management says commissioning will be by the end of FY20, but the project teams have been given much earlier internal targets. This shows the aggression of these cement manufacturers. Banners display the target dates reminding project execution teams arriving at the sites every day of their deadlines. It is unlikely that ongoing capex of the industry will be delayed; at least official targets will be met.

A clinker silo being built at a fully operational cement plant running at almost full utilisations. There have been no official announcements by this company about building additional clinker silos. This is a proactive measure to adjust to market fluctuations. The clinker-production cycle is more rigid, which makes it costly to adopt changes – so such steps become more relevant and necessary.

This capex is not likely to generate too much incremental savings, though few companies may gain marginally as they address structural operational bottlenecks. Overall, the sector will have to heave the burden of higher and consistent compliance. In fact, even now, a lot of ancillary capex initiated by the sector is to ensure that it remains more complaint than before.

Investments in ancillary capex such as logistics management will be the need of the hour

Given that the average size of kilns now being set-up is nearly twice what it was earlier – at 7,000 tonnes per day vs. an average of 3,500 tonnes per day earlier, the sector will feel a natural need to invest heavily in building more clinker and cement silos. It may also feel the need to have more packers, given that most of the demand for cement in India continues to be in the form of bagged cement. As demand for cement remains seasonal, absence of such capex will mean a natural pressure on the sector to push volumes during off seasons, as the infrastructure currently present at all sites may not be sufficient to hold the inventories at plants and absorb market demand fluctuations.

As it is costly to stop and restart kilns, the sector will feel the need, soon, to naturally adjust to market demand fluctuations. This means that the sector's capex spends will rise substantially – not by choice, but by force. Investments in developing better infrastructure for railway and port connectivity (mainly for coastal plants) will be an added capex burden. Road travel beyond a particular lead distance becomes unfeasible, so for individual manufacturers who want to target 'long lead' markets, such investments are a necessity. A lot of this capex has already begun – select manufacturers have quietly started investing in such initiatives.

Soon the sector will be compelled to search beyond production efficiencies

Nearly 40%+ of the sector's cost is for distribution and marketing. Players who move first to optimise this, not just production efficiencies, will be long-term winners. Not many have focussed on improving supply-chain management and addressing its inefficiencies yet. With limited scope for improvement in margins through production-level efficiency and a largely compliance-oriented capex, manufacturers will turn to the supply-chain for relieving stressed operating margins – a sort of automatic push in this direction. This should result in a more sustainable and balanced operating margin structure for the sector in the long run.

Malpractices in the supply-chain and distribution network abound and need to be addressed

Here are some improvements that have already been rolled out to plug supply-chain inefficiencies: Transparent and strict loading norms and distribution practices and stringent implementation of structural regulations such as GST and E-way bill. However, many legacy (unethical) practices still exist in the supply-chain and distributor network (such as 'back and forward loading' or material pilferage), which allow moneymaking opportunities for almost everybody in the chain, but lead to undercutting of cement prices.

Players who plug these leakages first will have an early mover advantage. In a recent media article Mr Shailendra Chouksey, Whole-time Director at JK Lakshmi Cement was quoted as saying: "On our wide distribution network handling volumes, around 8 lakh (800,000) tonnes/month pilferage, and back/forward loading are some of the key operational challenges that we face. We believe that gaining better visibility into our vast network of multiple plants and about 10,000 destinations will help us control pilferage, optimize capacity, and eventually help us deliver a superior customer experience."

Back-loading and forward-loading pilferages

The differential between the distribution chain's actual spends and real cash flows become its incremental earnings. These earnings becomes the cushion for the network to offer incremental discounts, buffer their ability to negotiate on volumes, and make better counter offers to customers – but they ultimately damage cement prices. Here are a few examples of how this happens:

- **Case 1 (back loading):** Material is sold on CIF (cost + insurance + freight) basis to a destination via a stock-transfer mechanism through a depot. However, it is directly despatched to the customer instead. The customer is charged for both primary and secondary freights in this case (secondary freight includes charges from the depot to the customer, primary is from the plant to the depot). Here the secondary freight charges become the incremental earnings for the entire distribution chain.
- **Case 2 (back loading):** Material is billed for long lead distances, but sold at shorter lead distances. In this, the freight charged and actual freight are materially different – and the difference becomes the earnings for the entire distribution chain.
- **Case 3 (forward loading):** This is vice-versa. The price of cement in State A is Rs 250 and State B it is Rs 350. The distribution chain will initially bill the material within State A and then re-route it to State B. While the chain will spend additional money (IGST payment, freight) but incremental gains from selling the material in State B are far higher.

In the market that it is practiced in, pilferage hits the efficacy and stability of pricing, which in turn makes cement prices volatile in the region. Cement is a fast-moving commodity, so it is easy for the supply-chain to indulge in these practices.

Ex-factory billing is also not fool proof, though still safer

Lately, many cement manufacturers have said that they will look at increasing *'ex-factory'* billing to ensure better realisations and stable pricing. This type of billing can be good if manufacturers adopt standard price for all their despatches. However, what really happens is that the distribution chain negotiates the price based on the customer's profile, location, and terms of credit (if applicable) and all manufacturers tend to provide different ex-factory prices based on these qualitative parameters. Therefore, even if billings are done ex-factory, it is not yet a foolproof mechanism to address pilferage, though it is safer.

Moving non-trade cement to trade – rare, but very damaging to prices

Cement sales are classified as either trade sales or non-trade sales. In almost all cases, the first-stage distribution partner is responsible for both types of sales. Non-trade (bulk, institutional) prices are usually lower than trade (retail) prices. Theoretically, trade sales should go to retail buyers and non-trade to institutional, but many small builders and RMX players are generally supplied through the trade channel too. The price gap between trade and non-trade (which is ideally Rs 15-25/bag but sometimes rises to Rs 50-60/bag) is very crucial for stability of cement prices.

Trade sales

- Customers are generally retail – individuals, small builders, RMX players.
- Material flows from the factory to the distributor – then from the distributor to retail counters or directly to customers.
- Credit risk is less as turnaround time to realise payment from customers ranges from immediate to less than a month.
- Prices of cement are higher than in non-trade; trade sales are always more beneficial to a company and the distribution channel.
- Preference of any cement manufacturer is to push more trade sales than non-trade.

Non-trade sales

- Customers are mainly large contractors, real-estate developers, or government agencies.
- Chain of flow for sales is not very different from trade sales. The bigger difference is that the channel is more flat – except the first leg of distribution partner, the lower ends of the supply-chain are not generally not involved.
- In most cases in these types of sales, the distribution channel will underwrite the risk of their customers. In some cases the company may bear some of the credit risk. The supply exposure of a cement company to each distributor is a function of the working capital investment made by the distributor with the company (such as a security deposit). The offtake allowed is usually a function of such deposits (say 1x-2x, as per the terms of the agreement).
- In non-trade sales, the credit cycle is much higher than trade – 1-3 months. If a customer delays payment, the capital of the distributor is blocked, and the company may not increase its supplies to such a distributor as its credit-risk increases. In tight liquidity conditions, such distributors face outstanding payments and rising risk of default.

Recently a third type of sales concept has emerged to facilitate better supply-chain, especially in the distribution of non-trade (bulk) segment.

Key accounts or exclusive accounts sales

- Key accounts or exclusive accounts usually belong to large corporates or builders with good credit rating and a largely on-time payment record.
- For such accounts, cement manufacturers do not mind taking the credit risk by supplying directly, even as they continue to pay the network partners basic commissions for handling, loading, and unloading.

All cement manufacturers have separate bags for packing trade and non-trade cement. Non-trade cement usually carries the tag "Not for Resale" while on trade cement bags generally nothing specific is mentioned.

In tough market conditions, the challenge for the supply-chain is to keep up liquidity levels, so that future orders are not delayed. For this, the supply-chain tends to divert some non-trade supply to trade since the former is at a discount. In this sequence of events, the customer will get the non-trade cement in the trade segment at a discounted price. This gives the network an opportunity to discount cement prices in trade (up to the extent of the prevailing gap between trade and non-trade cement prices). This improves the supply-chain's liquidity flow – not surprisingly, the trade network welcomes cement at a discount. However, this practice damages prevailing trade prices. **Trade sales is the lifeline for cash flow in the sector and this practice upsets the balance.**

In unfavourable market conditions when the liquidity is tight and the price gap between trade and non-trade increases, diverting non-trade cement to the trade segment also increases. This happens because the supply-chain has to ensure that liquidity crisis eases and the order flow continues. Diverting material leads to quicker payments, which helps solve its liquidity crisis, at least temporarily. Recently, most of the demand delta has come from infrastructure demand. With rising orders from bulk (non-trade) of late, the risk of these malpractices have increased, as the general liquidity conditions are not too favourable.

All manufacturers said they have adopted a *'zero-tolerance policy'* for such divergence and no non-trade cement can move to the trade segment; if anyone is caught, they say, stern action is taken – such as dismissing the sales officer in charge and cancelling the dealership. While this may not be entirely true, this malpractice has become rare now, if not fully absent.

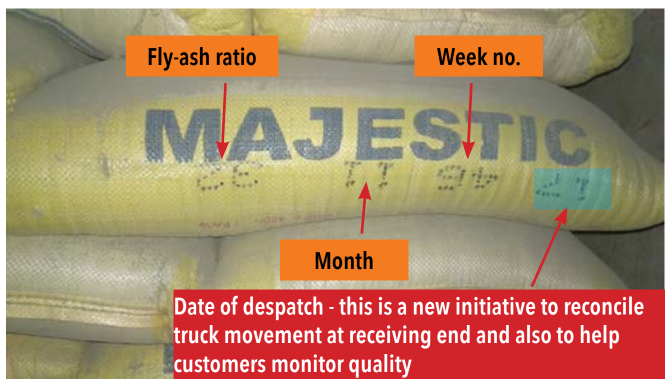
One solution that some cement manufacturers are working towards is doing away with non-trade supplies and only keeping trade supplies – i.e., supplying both through trade. These are largely internal targets or aims for now, but are not unachievable. If this happens, the sector will be *reborn* as far as supply-chain dynamics go. That supply-chain malpractices are now seriously hurting manufacturers badly is evident from JK Lakshmi Cement's management commentary in a recent media article. The sector is cleaning up the system to achieve stable cement prices, which will also improve the earnings potential of cement manufacturers. The delta is huge – even a Rs 10/bag sustainable improvement in prices (which is just the minimum potential) will lead to an additional EBITDA/tonne of over Rs 140 (adjusted for taxes).

Addressing issues is costly – individual strategies differ

The industry is going for innovation to address supply-chain issues

Recently, few manufacturers started intermittently printing truck numbers on cement bags so that they are reconcilable and traceable at destinations. Few others have started printing district codes on bags and some are printing more precise production data on the bags. Printing additional data on a cement bag costs 7-8 paisa per alphabet, so for a four digit truck number, the cost is a quarter of rupee. Extremely cost-conscious producers have opted for GPS in their captive trucks to ensure real-time movement can be tracked. For hired trucks, manufacturers are making it compulsory for transporters to install GPS tracking and are ready to pay monthly charges for this. Some are even funding the initial capital costs!

Nevertheless, outsmarting *the great Indian jugaad tendency* is a big ask. An example – as the transport truck starts moving, a small scooter will follow it. After a certain distance, the truck's driver will remove the GPS chip and hand it to the scooter driver who will ride until the official destination (scooters and trucks travel at similar speeds). On record, it



Cement bags printed with truck numbers and detailed production time-lines. This enhances traceability.

would appear that the truck has travelled the official distance but in reality, the material is being back loaded.

With practices becoming stricter, the cost of malpractices will increase and breaches will become more and more rare as they become unsustainable. For now, none of the mechanisms adopted by manufacturers are 100% fool proof, but they are definitely streamlining supply-chain practices which will lead to sustainable betterment of the sector's long-term dynamics. In general, the *big brother is watching* message has permeated – the distribution chain is aware that many of the malpractices are traceable, so directionally there is tendency towards minimisation of such practices.

Allied building materials sectors are not yet fully organised – a key indirect challenge

The cement sector is largely organised, but allied building materials sectors such as sand, stones, and bricks still operate in unorganised formats in many states. Though these sectors are moving towards being organised, the progress is slow. In many cases, cement shares distributors and channels with these sectors. As products of these unorganised sectors are billed in cash in many instances, a window of opportunity opens for the channel to increase its margins, which ultimately hurts cement prices.

An example: Selling of official bills – an established mechanism for the channel to make money

- Many consumers purchase building materials in cash and do not take bills from retail stores, which leads to an inventory build-up in the books of the retailer.
- A real-estate developer or government contractor will purchase such bills from retailers for as low as Rs 2 per bag, while showing the purchase cost in their at about Rs 300 per bag (or whatever the prevailing cement price is). This way, contractors/real-estate developers submit bloated bills to government agencies or show subdued margins officially and make a case to customers for higher rates. The channel earns Rs 2 per bag for doing nothing other than selling the invoice. It becomes a win-win situation for both – contractor / the real-estate developer and the channel.
- These incremental earnings add to the channel's cushion to discount cement prices and the vicious cycle begins.

Allied building material supplies such as bricks, sand, and stones continue to operate in largely unorganised formats in many states.

Differentiated channel incentive structure is another key reason for malpractice

A key reason why the channel veers towards unethical trade practices is thin margins. Except the ones in south and west India, cement channels are not incentivised for increasing prices. In the south and west, the channel genuinely attempts to take care of pricing because in these regions incentives are ad-valorem, not fixed commissions per bag. This is the reason cement prices rarely cross Rs 300 per bag in north India, while they routinely touch Rs 350-400 per bag in the south. The channel's earnings potential in the south and west improves if prices are better.

If this structure is standardised across regions, most malpractices will automatically stop as the channel's earnings from the cement business itself would be decent enough, leading to lower motivation towards unethical procedures. From the ground it appears that few manufacturers recognise this and are working towards a more *'inclusive'* and a standardised approach for the channel across regions.

However, recently, cement prices in the south and west were also low. How?

- Huge inter-state transfer movements from few excess-capacity southern states to other adjoining states because price gap was too lucrative.
- Cement manufacturers in excess capacity states attempted to increase volumes by supplying to other neighbouring states and capitalise on volumes.

Why did the channel accept these volumes from other states if it would hurt their business interests and incentives?

- At times, the volume push from large-capacity states can be so phenomenal that the channel's absolute incentives are almost the same – whether it chooses to go along with volumes or prices.
- The channel and number of players in south India are much larger than any other region, so following basic business ethics for cement manufacturers is more important.
- Many trusted or exclusive channel partners were disappointed by the volume push from large-capacity states, but *'natural forces'* that come from such a volume push made them accept lower prices.
- Large capacity regions will always face such risk, but the important point is that the long-term sustainability of cement prices in regions with a more trusted channel is higher than in a region in which the channel does not care about pricing.

Bandwidths of manufacturers differ – this matters when incentivising end-users

It is not just the supply-chain, but also about incentivising end-users such as architects, masons, and consumers.

Though infrastructure has contributed significantly to the revival of cement demand, individual house builders (IHB) remains a key demand segment that can give the sector its earnings delta as price premiums here differ substantially. Cement brand needs to have good recall by architects, masons, and consumers. For this, companies organise local melas (fairs) and award functions to appreciate the efforts of architects, masons, and to reward end-users. Many manufacturers also run incentive schemes where they insert coupons or tags in cement bags, which consumers can then exchange for some rewards such as recreational activities or gifts.

All manufacturers have different methods and terms of incentivising end-users and channel partners. Pan-India majors and large multi-regional leaders generally stand out.

Here is an example of such methods – The sales heads of a region or district visit the house of the *Sarpanchs* (heads) of villages and give them a small token of goodwill – such as a pressure cooker or a mobile phone. They stay to have a cup of tea and a casual chat at their houses. While these heads will not usually directly discuss cement consumption at the *Sarpanchs'* village, to reciprocate their goodwill gesture, *Sarpanchs* spread the word in their villages about that particular cement brand and push people to buy it while building houses. For the cement company, the cost of such 'gestures' is negligible, but for the *Sarpanchs* it is a matter of pride that a local region or district head visited their house, gave gifts, and more importantly, interacted with them socially. In such initiatives, pan-India majors have a different bandwidth because of their more *'intense'* spread across states, higher number of sales officers, and more network points. The financial strength of a company will matter, as such initiatives ultimately depend on the budget.

Local melas and award functions organised by cement companies

Branding: Myths and realities

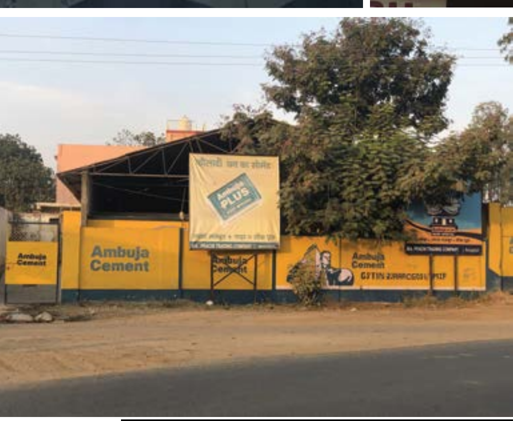
Of late, management commentaries have been intense about initiatives for innovative products, new product launches, and newer brands, and most have maintained that their new brands are premium ones. However, all new brand launches are not equally successful. Branding in cement is not just for garnering price premium, though it is an important objective when the product is really superior. There are a number of misconceptions when it comes to understanding cement branding.

'Premium' and 'Super-premium' brands abound, but not all brands are created equal

A decade back there were far less premium brands and products. Then, very few players took the initiative of launching premium brands and improving price realisations. Of the ones who did, few were successful and few were only partly successful. However, over this decade, the *'premium'* space became occupied by these early movers.

This does not mean that there is no space for premium brands today, but launching them is even more difficult now. It requires extra management bandwidth, strong budgetary support (press, media, and advertisements), strong channel support for pushing users to adopt a newer brand, and a strong balance sheet to absorb the initial heavy expenses. If any of these variables is absent, it can lead to lack of success. This is visible on the ground – many products launched over the past few years and positioned as 'premium' may not necessarily be so.

Hoardings and banners of recently launched premium products by various cement manufacturers.



Some are likely to be 'me-too' products and not really 'differentiated' products. Even when the blending ratio of additives differs, they are generally bunged under the umbrella term 'premium'.

Cement manufacturers who launch a premium brand with zero compromise on price premiums, better product quality, and superior customer service, are likely to see more success. New premium brands see slow absorption, so manufacturers should expect some lag before these prove lucrative on the P&L; if they try to hurry the process, they risk diluting their brand.

Myth: new brand is only about premiums. Reality: It can be about gaining market share

Whenever a cement manufacturer talks about launching new brands there is general belief that these initiatives are with a view to garner additional price premiums. However, new brand launches are not necessarily in the premium brand segment, but are also in lower categories. These launches are about gaining market share, not just brand premiums.

Shree Cement enters South India – a much awaited entry by the cement major.

Recent mid-tier brand launches in Tamil Nadu by various southern majors is a classic example

Tamil Nadu has been a *natural victim* of Andhra Pradesh producers pushing volumes in this region at lower price. Manufacturers in TN have recently come up with a strategy to launch new brands that are at par with the prices of products offered by AP producers, which should dis-incentivise the latter from entering TN markets. Once this happens and pricing improves in all south states, these brands will be withdrawn – the point is, *not all new launches are premium launches.*

Lafarge Cement exited India a few years ago. But the channel continues to advertise in its name due to its very strong brand recall; it worries that it won't be able to attract customers otherwise.

New brands mean new marketing channels and costs; not all will sustain

Generally, every new cement brand launched has its own separate parallel marketing channel. However, the scale of operations of a new brand is usually not enough to compensate for cost overheads of its launch, promotions, and channels. All earlier brand launches (that took place over the last decade) happened when the market had space and a vacuum for them; that's why they could scale up volumes and manage cost overheads. This is not necessarily true now, so a balanced approach between new brand launches, costs, and revenues is essential to ensure that new brands are not earnings dilutive.

Quality: Customers are becoming more conscious

Brand premium = better quality = higher costs – a key challenge

Cement is believed to be a pure generic commodity, but it has quality parameters and certified standards. If the cement produced is of inferior quality, it is difficult to differentiate and garner brand premiums. While few manufacturers keep their product *'just up to the mark'* to ensure they meet certified standards, others focus on bettering quality and differentiating their products.

Quality has come into sharper focus as cement manufacturers move towards establishing brand premiums. However, better quality entails higher costs – a disadvantage over lower-quality but lower-cost producers. Costs may increase because of finer grinding needs (premium products generally mean finer particles), increased raw material cost (clinker component has to be increased to ensure strength), and better packing quality (tamper-proof, laminated, etc.). Usually, the price premium more than offsets these higher costs – which is incentivising players to move up the brand curve.

Cement packing is gaining importance and leading to significant increase in costs

Cement can be packed in different types of bags, but the most common and generally used bag format includes:

- High-Density Polyethylene (HDP: Type 1 – c.Rs 9 per bag).
- Laminated Polypropylene (LPP: Type 2 – c.Rs 12.5 per bag).
- Biaxially Oriented Polypropylene Bags (BOPP: Type 3 – c.Rs 16.5 per bag).
- Paper Bags – (Type 4 – c.Rs 21.5 per bag).

For premium and super-premium brands, it has become important for the sector to ensure that packing is now in more efficient and in leak-proof bags. Maintaining quality of cement after packing has been industry's biggest challenge since cement is a perishable commodity and gets spoiled easily once exposed to air and moisture. Hooking cement bags with spearheads or sharp objects was the most common reason for leakages and caused quality deterioration as it allows moisture to enter bags. Customers have started demanding that the bags should not be hooked by anyone in the supply-chain, or else they will reject delivery.

The industry needed to establish firm positioning in premium category for premium products, providing better packaging, and live up to customer expectations. For this, packing costs had to increase as the industry switched to better quality and more durable packing bags for such products. However, the selection also depends on the type of market in which the product is sold as each market has different needs and characteristics. Premium brands are now generally packed in BOPP and paper bags. In retail (trade channel) most products seem to be moving towards premiumisation, so increased cost of packing is here to stay for the industry at large.

For CIF sales especially, disallowing the usage of hooks increases labour-handling costs as bags have to be manually

Customer-service excellence is gaining importance

Players who are focussed on brand premiums have begun to realise the importance of working *'with'* customers – which means being hyper aware of their varying needs. Customers are proactively checking basic quality parameters nowadays, including:

- **Date of packing:** Cement should ideally be used within six weeks of manufacturing or it begins to lose its strength.
- **Colour:** Right colour is light grey. This quality check has become extremely vital for many large institutional customers. The colour says a lot about quality of ingredients used in manufacturing.
- **Smoothness:** Coarse textures when rubbed indicate adulteration.
- **Grade of cement:** Should be displayed prominently on the bag.

Some more detailed and technical quality checks include:

- **Float test:** Cement is put into water – it must float before it sinks.
- **Smell test:** Muddy or earthy smell indicates excess unwanted materials such as clay.
- Bags should be *free of lumps.*
- **Cube test:** A cube of cement is made and immersed in water; its hardness is checked in 24 hours.
- **Strength:** Checked by immersing blocks of specific sizes in water for seven days or longer. The strength of the blocks are then tested by putting weight on them – they should not develop cracks.

Beyond this, few institutional buyers also randomly check for the *'warmth'* of the cement to ensure that it is freshly produced (cement that is immediately out from a grinding unit is generally warm and if it is packed immediately and delivered promptly, it will be *mildly warm*).

Reputed (real-estate) builders with pre-cast factories said that they would not compromise on the quality of the product and have zero tolerance for any quality deviation. They said they don't mind paying additional premiums for good quality: and will not reorder from a manufacturer if its quality was found deficient. Not all real-estate companies think like this of course, but this feedback indicates that quality of product matters – even to institutional buyers.

loaded and unloaded. Normal handling costs per bag paid for labour range from Rs 6-10 per bag – from loading to unloading. Cement that comes by rail has to unloaded at railway yards or platforms, loaded on to trucks, and unloaded at dealer or customer destinations. Cement that comes by road generally comes in large trailers, so it has to be unloaded and loaded into smaller trucks to enter towns and cities, and also unloaded at dealer or customer sites. When bags have guidelines of 'no hooks', in rail or road transport, the cost of handling increases by Rs 2-3 per bag.

Irrespective of the size and scale of operations, most manufacturers have moved to better-quality bags boldly announcing that they should not be hooked. In addition to best before dates, to provide better customer service, few manufacturers have begun adding other cautionary remarks such as ***"Cement to be tested before use if more than 3 months old"***. This highlights the quality consciousness of the cement producers in the eyes of the customers and helps to gain their confidence.

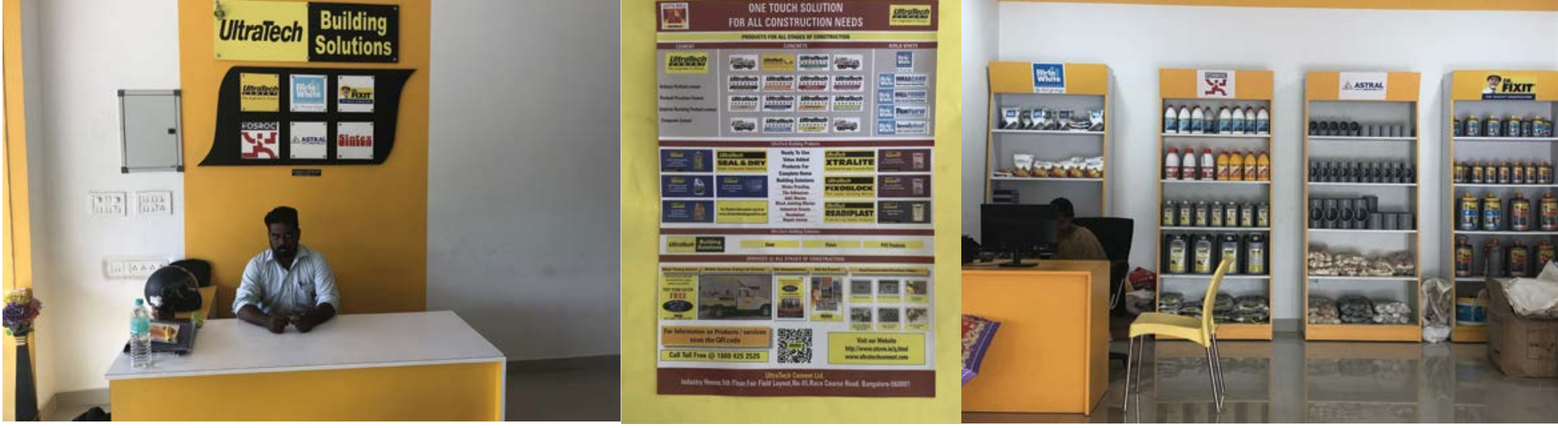
The automation bug has not just bitten the cement industry but also its consumers. This pre-cast site at a real-estate project has bar code scanning – it will list details of the pre-cast such as manufacturing date, quality of concrete used, the lot in which it was manufactured, etc. This way, any flaw in product quality can be traced back to the particular batch of raw materials used and its manufacturer.

A large listed and reputed real-estate builder's in-house pre-cast factory. This builder remains focussed on quality for cement purchases and gives orders only to select manufacturers.

Quality consciousness in retail gaining prominence because of new sales techniques

For retail sales, pan-India majors have started setting up exclusive *'one-roof'* shops that cater to all the needs of an individual house builder. Others have deployed dedicated 'service vans' manned by experts that visit sites to understand customers' needs, provide suggestions, and even help them in execution.

These upcoming trends will ultimately mean that the retail customer becomes more knowledgeable about quality, choice, and construction methodologies. It is possible that over 5-10 years, these customers would be very quality conscious and maintaining the highest standard would be a key challenge for cement manufacturers. All this implies higher costs – both production and sales.



A newly opened shop of UltraTech Building Solutions (widely called ***UBS***) at the outskirts of Chennai. UBS is an attempt by the cement major to provide 'full service' to an individual home builder.

A service van of Sanghi Cement known as ***'Shakti Rath'*** demonstrates and educates customers on various functional parameters of using cement. It also lists quality parameters in Gujarati, the state language where Sanghi operates.

Organisation culture and employee connect gains prominence

From here, qualitative initiatives will count more than quantitative ones. GV's interaction with cement manufacturers across the spectrum – pan-India majors, multi-region players, regional leaders, and single unit player – revealed that they would get the winning edge if they focus on a broader range of factors, not just efficiency initiatives.

Internal connect of employees at every level is very important

Very few manufacturers showcased a strong overall internal connect. Plant visits showed that officer-level inter-plant interaction was not up to the mark. For a cement manufacturer that has plants spread out across regions, this interaction becomes imperative because such a player usually 'adjusts' sales and production to optimise gains. Plant-level officers usually <u>*only*</u> focus on their plant, and do not have a broader company-wide perspective. So if the management believes it can up its earnings by asking its 'x' plant to cut volumes so that 'y' plant can cater to a particular market, and if there is poor inter-plant communication or company-wide communication, it is quite likely that these plants will be unwilling to compromise. Due to miscommunication or lack of communications, they may also believe that their remunerations and incentives may be affected. In sales too, if the sales heads of a particular state or region are asked to cut their volumes or supplies, it is possible that without clear and frequent internal communication, it will not be easy to convince them. Interaction levels of employees within the same organisations remain limited or even absent in many cases. However, a few manufacturers are already trying to improve this.

Educating the on-the-ground force is necessary

A large portion of the on-the-ground force does not really understand or even care to understand the implications of their actions on the financial performance of the company – they usually pursue individual agendas and this is a serious concern. Though these employees do not decide prices or volume targets, it is important that they understand the implications of their actions for the company.

For example, sales officers of company usually focus more on their volume targets, but do not give too much importance to the price at which they sell the company's cement. This is usually because they tend to focus on their individual targets (set by the company) without having a clear idea about how price affects the company's margins. Also, the *sales forces' feedback about pricing to the regional marketing headquarters depends on the targets that they are given*. They find it easier to sell large quantities of cement at slightly lower than prevailing market rates, even if they can push the same volume at prevailing market rates. They tend to give feedback about pricing being lower to their superiors to justify their sales push. This skewed feedback about pricing is hen passed on to the decision-making authorities, which ultimately dilutes the pricing morale of the management. To rectify this some companies are asking local sales people to make presentations to the regional head about what the implications of the movement in cement prices or increase or decrease in tax rates on EBITDA/tonne. Such initiatives help develop more awareness among employees, their thinking capabilities, and make them react more proactively to unfavourable operational or market conditions.

In plants that are not yet optimised, the operations team don't tend to focus on improving efficiency but rather tend to blame external factors because they are not clearly appraised of organisation-level goals. Some cement manufacturers are moving forward in this area, and engaging their on-the-ground task force to understand the outcome of their actions on the company's financial performance.

Top management and organisational goals must align with individual goals

Many employees seemed unaware of the marquee goals of their top managements, which the investor community is very aware of – this disconnect is worrisome. If employees remain less aware of broad management goals – such as efficiency, volume push, and realisation improvement – the natural progression is that the actions of such employees will not align with the company's broader goals. The culture of cement manufacturers who have rolled out employee connect initiatives is visibly different from the ones that have opacity.

Feedback mechanisms are still uncommon

Only few cement manufacturers have adapted practices such as *'360 degree feedback'* and many sub-ordinates and junior or mid-level employees are frustrated because their voice is not heard. As the sector is undergoing a sea change in terms of operational environment, it remains extremely important for cement manufacturers to adopt such practices. Higher motivation levels were clearly visible in employees of organisations that had already adopted such practices.

Awards and accolades on display in offices of few channel partners and senior officers - a traditional methodology to motivate the supply-chain and the channel.

Challenges and **the road ahead...**

Immediate challenges – aligning differing needs; rolling out supply-chain improvements

Broadly, everyone wants better profit margins. However, **the needs of each individual cement manufacturer differ.** Individual players are now deciding the price of their product based on their production costs and volumes; earlier, they decided based on only price and volumes – i.e., most were not too concerned about cost of production as pricing was lucrative. For some, marginal cost is determining the price at which they want to sell. Some have started looking at absolute profit-earning capabilities – so they are not margin-conscious, but cash-flow conscious and remain happy earning a decent absolute EBITDA / cash flow by selling higher volumes.

Choosing the right direction is beginning supply-chain improvements at the earliest. Efficient feedback mechanisms and all-round development of employees will always add to the success of such initiatives. Manufacturers who have already initiated efforts in these directions will always have the early mover advantage vs. peers. The need for the improving cost of production has risen but to make a material difference and significantly gear these up huge capital investments will be necessary and not all players are prepared. While some have already maximised production efficiencies, others will soon reach optimum. Eventually all manufacturers will realise that the scope of incremental benefits from production efficiencies are limited vs. supply-chain efficiencies. Companies with high production efficiency have already started looking at supply-chain efficiencies; others will follow. Production efficiencies are not necessarily being done for cost improvement. In fact, in many cases the cost of operations may actually increase. The goal is much broader – for the sector to become socially more responsible, reduce maintenance expenditure, more environment-friendly, and more compliant.

The road ahead – slow and steady recovery in cement prices

Of late, stakeholders were worried that if the philosophies of manufacturers were not aligned due to increased individualistic thinking, pricing would suffer. Management commentaries also reflected some amount of misalignment. But GV's extensive tour across several states of the country revealed that most of this *'noise'* has settled. Discussions with participants across the value chain showed that almost everyone desires an improvement in earnings – through better volumes, prices, or efficiencies. As the scope of incremental efficiency improvements, especially production efficiency, remains limited, ***the time has come for the sector to look at volume and price alignment.***

As many in the industry have continued to push volumes, natural forces of demand-supply are pre-dominant driving forces in determining cement prices, so it will not be easy for cement price to jump up sharply in the short term. *However, in the long run, searching for supply-chain efficiencies will prove quite effective.* Prices will recover as supply-chain loopholes are plugged. For players who do this sooner, there will be an almost automatic improvement in realisations. As the search for supply-chain efficiency intensifies, market prices will improve for everyone. It would be fair to say that cement prices would be directionally on an uptrend, but recovery may be slow and steady.

A few of the industry personnel and channel partners along the way

Shree Cement's manufacturing facility at Ras, Rajasthan. This is world's largest single location site with eight adjoining clinker lines. The green power generation here is the largest in any cement factory in India, as it has the world's largest Waste Heat Recovery Plant (75MW) in cement industry (excluding China).

In a two-hour interview, Mr. Hari Mohan Bangur, representing the third-generation of the Bangur group, and currently the Managing Director of Shree Cement, talked about a variety of topics related to his company and the industry.

About HM Bangur

Mr. Bangur is a Chemical Engineering merit-list graduate from IIT, Mumbai, 1975 batch. He has been in charge of Shree Cement from 1st August 2002 during which time the company's market cap has grown to Rs 583bn (based on Shree Cement stock price as on 27th February 2019) from Rs 1.56bn and sales have increased to over Rs 100bn from Rs 4.5bn. Today, Shree is among the top-five cement manufacturers in India with an annual production capacity of 38 million tonnes. It also ranks among the top-100 companies in India in terms of market capitalization. Mr. Bangur was chosen as the EY Entrepreneur of the Year in 2016 and was named Entrepreneur of the Year in 2017 by the Forbes India magazine. He is currently the President of Rajasthan Foundation Kolkata Chapter, ex-President of the Bharat Chamber of Commerce & Industry, and Executive Member of FICCI. He was the President of The Cement Manufacturers' Association (CMA) from 2007 to 2009.

Besides excellence in business, Mr. Bangur's passions include managing and overseeing the philanthropic activities of the group, particularly in the field of education, charitable hospitals, and social welfare trusts. He is involved in helping senior citizens of Kolkata by contributing substantially towards old-age home and by setting up *'Pronam'*, an NGO that provides a 24-hour helpline for Kolkata's elderly.

The Bangur family

HM Bangur took over Shree Cement's reins from his father Mr. Benu Gopal Bangur. BG Bangur currently serves as the Chairman of the company and is ranked 22nd on the Forbes list of India's Richest People with a net worth of US$ 5.4bn. HM Bangur's son, Prashant Bangur, joined Shree Cement in 2004 and presently serves as the Joint Managing Director of the company. He has been a strong support to his father and has played an instrumental role in technical innovations, contributing substantially to the company's growth. Under their combined leadership, Shree's annual capacity has increased by more than fourteen times from 2004. Its Waste Heat Recovery System is the largest by any manufacturer in any country in cement industry (excluding China). Their leadership has also led to Shree Cement being declared 'Sustainability Champion' in cement industry by the World Sustainability Forum in September 2011.

Prashant Bangur has followed his father's footsteps on business federations and in terms of social and philanthropic activities. He is a senior member of various reputed commerce and educational institutions including National Management Committee of Cement Manufacturers' Association, Indian Chamber of Commerce, Kolkata and Bharat Chamber of Commerce & Industry, Indian School of Business, and TERI University.

Mr. Benu Gopal Bangur, Chairman of Shree Cement Ltd. He is father of HM Bangur and was Shree Cement's Managing Director until 31st July 2002. HM Bangur was the Joint Managing Director then. BG Bangur is the Chairman of the Board since the time he has handed over the reins of the company to his son.

HM Bangur and Prashant Bangur (Standing). Prashant Bangur is HM Bangur's son. He joined Shree Cement on 22nd June 2004. He is currently the Joint Managing Director and a strong support to his father.

Q. From widely read newspapers, your past interviews, and web resources we understand that you took a tough call for Shree Cement in 2002, when you decided not to sell off the company to Europeans. We also gathered that you had already prepared for celebrations, but then decided to call off the deal. What inspired you to do this, what was in your mind then – was it only your sixth sense, as you say, or something more?

"I relied more on their judgment rather than mine. When you are in management, sometimes you are distracted by short-term problems."

A. Definitely, sixth sense comes because of some knowledge. We were losing money and interest cost was roughly 10% of turnover. If interest cost is 10-11% of turnover it means very soon the company will be finished. The cement industry was never very profitable, and the absolute profitability per tonne was continuously falling. At that time, I thought, a foreigner coming to India for the first time who doesn't know India (but has done detailed homework) is ready to give me so much money – it means he has seen much more value than me.

French people are generally more conservative than others, and despite this mind-set, they were still willing to give me so much money. This implied that they had seen deep value. So I relied more on their judgment rather than mine. When you are in management, sometimes you are distracted by short-term problems. This gave me a new angle – I thought let me try for one more year because if my decision went sideways, instead of x amount of money, 'x-10%' would always be available. I thought, I am taking a risk of 10% – let me try for one more year. Things started getting better almost immediately – we turned the corner.

Q. You believe that business is not about taking risks, but about de-risking the business model – and we have seen the phenomenal results of this approach at Shree Cement. Do you continue to believe that substantial scope of de-risking for the industry still exists? Or do you think the industry is mature enough and that de-risking opportunities are relatively limited?

A. The biggest risk in business and when you are weak is when you convert your short-term liquidity, or liquid assets into fixed assets. At this time, you are the weakest. At what speed should fixed assets be created, and at what cost of liability – that is the key, as ultimately asset is equal to liability. Generally, people would only like to see one side of the balance sheet – the asset side – but an equal liability is also being created. Does our company have enough momentum to take the liability or not? That has to be judged.

In chess, you normally lose the game when you try to become more

"In chess, you normally lose the game when you try to become more aggressive than your position warrants. It's the same in business."

aggressive than your position warrants. It's the same in business. If you take more risk than your position warrants, sometimes you succeed because of a favourable wind, and sometimes you fail. I like to take into account some headwinds and proceed accordingly.

Q. But, do you believe there are further de-risking opportunities available for the cement industry at large, if not for Shree Cement in particular?

A. De-risking in any business is not about cutting costs. For de-risking, the first thing is to have financial strength in place to tackle contingencies – so you ask yourself – how much do I have to grow, and what kind of financial strength do I want to have in conjunction with this growth – because any problem in business will be generally short term. If the market is very bad, three or four companies will cut down production – and the market improves. It is a matter of 2-3 years of pain, after that, good times will always come. No industry will ever die. Our benchmarking should now be against international standards – how does our quality compare with international quality? Right now, Indian quality is not as good as the accepted international quality.

"De-risking in any business is not about cutting costs."

Apart from this, it is energy costs – here, we are better than the world average. In terms of logistics costs, a lot of work has to be done; also in terms of the way we are delivering cement. Most of the cement is being used for concretization, but still more than 90% is bagged – which is totally different from what happens in the rest of the world.

Q. We have seen that your sixth sense has done wonders for Shree Cement. What does your sixth sense say about the future of the cement industry, not just for the short to medium term, but also for the long term?

A. Short term is say 1-2 years. In this timeframe, there is excess capacity, and I don't see very robust potential. Profitability will remain at about Rs 800-1000 EBITDA/tonne for good companies.

In the long term, we don't have enough limestone reserves. The way we are growing, the production that we would need will be difficult with present limestone reserves. Production would need to double in 10 years' time, assuming the normal growth rate of the cement industry. Roughly 600mn tonnes production or a little more, would be required 10 years from now. This will be difficult, as new greenfield plants are not coming up at the speed that is required.

In the even longer term – after 10 years – the industry is likely to be very healthy. Because of the industry's low cost structure, imports do not happen. Also, as logistics costs are too much, we are insulated from outside forces. The long-term potential of the cement industry is very good.

The point is intermediate medium term - depending on the country's growth and its infrastructure growth among other factors, short-term pain may stay for three years. Long-term good vibes may remain for seven years. Overall, the industry should do well.

Q. We read that you give a lot of credit to innovations at Shree Cement, such as petroleum coke usage, which helped you remain nearly 40% more advantageous on fuel costs vs. peers for nearly five years and which also helped Shree's turnaround strategy. To try such innovative ideas at a very nascent stage, and especially when the company is in deep financial stress, needs a lot of courage. What was the X-factor that gave you this courage of trying innovation and pushing your team to work for new ideas?

A. At that time, it was not a difficult call, because we knew for sure that if the experiment fails, we will die in 6 months, but if we don't do the experiment, we will surely die in a year. Instead of sure death after one year, we chose the possibility of a long life rather than death after six months. It was a desperate situation but our risk-taking was well rewarded. At that time, Reliance also supported us, because it was in the process of creating a new market. Overall, the price of fuel (of petroleum coke) was nearly 40% less than the price of normal fuel – so it was worth taking that risk. Risk reward ratio was well rewarded.

"It was not a difficult call, because we knew for sure that if the experiment fails, we will die in 6 months."

Q. We all know about your achievements, but please tells us more about some of the other key challenges you faced in your journey in transforming Shree Cement as India's most valuable cement company.

"We always wanted to do better than the previous year and better than our own earlier performance."

A. I will not say whether we are the most valuable or not, but we never wanted to be number one or two – because the outside world was never a parameter for us. We always wanted to do better than the previous year and better than our own earlier performance. In this process, we first started with the idea that our cost should be minimum. In the process, the quality was just above what was then required by Indian standards.

Then we realized that as we are growing, we have to improve quality – because with low quality things will not work. We started continuously improving our quality, and that journey is still on-going. Now our quality is far better than it was in the past. Earlier, we believed that there is a shortage in the market and that more production will work – so we pursued that policy. Now our policy is to have better quality, and this will always be at some cost – we are ok with that.

Q. Any specific challenges that you recollect during this journey?

A. No, the challenge has to be created. First, you fix

"The challenge has to be created – Profitability is the by-product, but doing correct and innovative things is more preferable."

a target. Instead of say 10 productivity of the kiln (tonnes per cubic meter or kiln volume) which is the world's best, we were at 9.5. We wanted to challenge ourselves to get this to 10.5. If the normal was 6, we would set a target of 7 or 7.5 for ourselves. As soon as we reached near our set target, we would set a higher one.

The biggest advantage of this is that in a commodity industry, there are no challenges for commercial and technical people – they do the same thing, day in and day out. Giving them a new challenge everyday keeps work interesting; everybody is highly motivated to achieve something. Profitability is the by-product, but doing correct and innovative things is more preferable.

Q. Is there anyone whom you admire as your role model?

A. Mr. Narotam Sekhsaria of Gujarat Ambuja is the father of the modern cement industry. He transformed the industry in many ways. Earlier, it was a distribution set up, no marketing. He was the first person who started advertising and who thought and taught us that marketing is also important, brand building is important, and he got results almost immediately. He was highly innovative and was in expansion mode. Earlier, all licenses were processed by the central government and they gave the license to Shree Cement, Raymond Cement, and Gujarat Ambuja Cement – all three on the same day and in the same meeting. We started our journey together.

Mr. Narotam Sekhsaria is my role model and Mr. DN Tiwari and Mr. Mahendra Singhi are two people whom I recall as my constant support.

Gujarat Ambuja and Shree had different trajectories. Raymond Cement could not fly long – the plant was set up, but then it had to be sold. Since those three licenses were received on the same day, it gives me great pleasure to compare Shree Cement with Ambuja Cements (erstwhile Gujarat Ambuja Cement) – we always thought that they are far ahead. So yes, Mr. Narotam Sekhsaria is my role model.

Q. Who was your constant support and with whom would you like to share the credit for Shree Cement's success as you transformed the company?

A. Shree Cement fundamentally had two chief executives who were with us for a long time. The company was set up by Mr. DN Tiwari, who was from JK. He was the initial person who taught us the value of setting up the plant at the lowest possible cost and technological excellence. He did a lot for the company and then he retired. When we wanted to set up our second unit at Beawar, about 10 years after he retired, I called on him. But he said "leave me" (laughs). I insisted though, because I thought that he was the best person available. I told him that he would only have to set up the factory, and we will get someone else to run it. Being a project man, he agreed and he did a wonderful job – both times – in his first phase with the company and also when he agreed to put up the second unit.

The second person who was there for us for about 18-20 years was Mr. Mahendra Singhi – he gave the company many new dimensions. Naturally, with time, everybody has their own priorities – but he left us on a very good note.

Q. Shree Cement's capacity is expected to be nearly 16x its 2002 capacity in less than 20 years. You have continued your spree of capacity additions even in the toughest demand scenarios. Is there something beyond your conviction about India's cement demand growth that made you believe in your actions?

A. Fifteen years ago, we faced a debacle – when we had over-borrowed and had to see that how we are saved. An unnatural risk was taken and the

"It was a natural speed for us, not an aggressive one."

headwinds then made the risks more severe. After this, we thought that it is not worthwhile taking risks. We increased capacity without being aggressive and without taking loans and till today whatever money is generated, we put it back and our capacities are largely created through internal accruals. So our capacity addition is not aggressive in the financial sense. However it looks aggressive to outsiders because of good growth and because we were putting up capacity at a low price as we were obviously cutting costs somewhere. As a result, our plants were compromised somewhat – but this proved to be wonderful for us.

Once the plant was up and started making profits, we invested more money and upgraded our plants and made them up to date. In this scenario, our capital cost was low and our stores cost was a little higher, because we would change whatever was second grade immediately. This situation continues even today for us – our capital cost is low but our stores cost is little higher because we continuously upgrade spare parts. Basically, it was a natural speed for us, not an aggressive one – others may perceive it as aggressive. ***I have never been and would never like to be aggressive.***

Q. But, your capacity growth has been very different from the industry's capacity addition. Even some of the largest cement players have not seen capacity growth such as yours. Your thoughts please?

A. Our model was a little different. We have set up 8 kilns at Ras – most are similar in terms of capacity and same model. When people were asking for 3mn tonne capacity we were putting 1.5mn tonnes. After sometime, when there was enough clinker capacity at Ras, we then chose to increase our capacity marginally for the last couple of kilns. We make the same purchases, the same machines, and same models so that everything, including spare parts were common, and so that the learning from one kiln can be transferred to other.

Q. Was the limestone mine at Ras also one of your biggest competitive advantages, as it is supposed to be amongst the largest mines, not just in India but worldwide?

A. Of course, raw material is one reason. However, when we took over the mine, the quantum of limestone was not yet explored. We explored it, and found that it can support us for 40-50 years and we kept adding capacity accordingly. Now Ras cannot take more capacity.

Q. Ten years from today how do you see Shree Cement and what are the changes you will like to bring in the company?

A. Shree Cement is a highly professionally managed company with a lot of power given to various people. The real problem in the industry or any factory is that there is a mismatch of knowledge and power. Those who are knowledgeable normally don 't have power and those who have power are not as knowledgeable as they ought to be. In our company at the top management level, the important thing is to first get more and more knowledge about the market, about technology, and about the industry. This then helps to identify, understand, and solve the problems at various levels. Only board-room activism is not enough.

"Real problem in the industry or any factory is that there is a mismatch of knowledge and power. Only board-room activism is not enough."

The most important thing – from now to even ten years later– is to become more knowledgeable at the top level; the second is to bridge the gap – that is, to empower functional heads and heads of the department. They need to have total ownership of their own department – and with that much power, they have to work. External checking has to be reduced.

These are the changes I will like to see in the next 10 years and this is what we want to do. Our growth policy will continue. Shree Cement will grow naturally, without taking on much debt. We may take small debt at times, but basically growing without taking debt is our number one priority. The second policy is that ***Shree Cement will always remain only in cement business.*** We wouldn't like to go into any other business. If the promoter family wants to do so, which seems unlikely, we would float another company. Shree Cement will not have a subsidiary for another business; it will always remain focused only on cement.

Q. Do you plan to expand your international coverage after the acquisition of Union Cement?

A. Our experience is good, but it is too early. We have acquired Union Cement only seven months ago. We would wait and see how things move along for 3-5 years and only then would we decide if this is giving us good return on equity and whether we are able to give enough back to Shree Cement's shareholders. Nearly seven months have gone by – we think that for another 12 months, the profit generated will be ploughed back and only then would we start getting dividend from the asset. We will study our experience at that point and then take a call on the future.

For the first one or two years, all acquisitions needs extra money and capital expenditure. As you want to run the plant, the philosophy of the previous owner may not be necessarily the same. For the first one year or two years, the cash flows will be invested back in the company and the money will then start flowing to Shree Cement shareholders as we see.

Q. Can we expect Shree Cement to enter into allied business segments such as Ready-Mix Concrete and other related building materials and do you see an opportunity for your company here in future?

A. Ready-mix concrete is a possibility. But we review such business calls every three years or so. Last time, we took a conscious call that we are not going into this business. It is too retail a business, and we would not be in it – we are supplying cement to ready-mix makers.

Q. But could it be a future possibility at some time?

A. Future possibility cannot be said yes or no. It is not in our focus currently, so for at least 2-3 years we are not going into it.

Q. What about other building materials?

A. We had gone for Autoclaved Aerated Blocks (AAC). It seems to be the future, but our past experience has not been very good. The unit is now making a small profit against a loss earlier. We are not going to get into another business, as I said.

Q. We have seen a structural shift in Shree Cement's management commentary – a healthier alignment of volume strategy towards better pricing. How do you plan to do this, and do you see it as easy? What are the challenges that you expect to overcome as you begin this journey?

> *"Course correction is never easy because for that you need some extra energy."*

A. Course correction is never easy because for that you need some extra energy. Therefore, we are going very gradually. We are sure about the direction – that our realisation will gradually increase compared to peers. Market forces apart, our realisation will increase per quarter by 1-2% because small shifts will take place.

We also plan to introduce a premium brand in north and east India. For the south, it is still too early. It is hardly a couple of months. So we would taste the market before we do anything. These are the directions we are working on. Challenges, well of course it will not be easy – *running on the same track is easy, but for changing tracks, you have to spend some extra energy.*

Q. It's a wide belief that Shree Cement doesn't believe in branding, but we feel that you have also started pushing your energies in this direction. Is this true? Can we expect Shree Cement to focus more on brand consciousness and new and

Ground View checks reveal that Shree Cement has launched a premium brand – "Roofon" in February 2019 in North India. The tag line of the product is "Concrete Master" and its price premium is nearly Rs 25/bag.

First truck of Roofon being despatched from Shree Cement's north plant to Shree Salasar Balaji Temple, Salasar, Rajasthan on 6th February 2019. Following Hinduism practices, it is a usual tradition in cement industry to offer the first production lot to deity before beginning commercial production.

innovative product launches going forward?

A. Yes, of course, but the effect will be visible only after some time. We are going through the exercise – we are preparing ourselves. Before one builds a building, the foundation needs a lot of work. We have started it – and results should be visible may be after a year or 10-12 months. Lot of work is being done. You will appreciate it little later.

> *"Before one builds a building, the foundation needs a lot of work."*

Q. What about innovative products?

A. Innovative product means a premium brand. One that is much better naturally than the current product.

Q. Amongst all cement manufacturers, we believe that Shree Cement is probably one of the few that has no succession issues. What would your advice to your son Prashant Bangur be, as you see him taking charge of Shree Cement from you in times to come?

A. Everybody has to make their own wealth. No generation can pass on wealth to the next generation – every generation has to work hard and find their own success formulas. Old formulas will not work for long, that's for sure. So he has to evolve, he has to have his own captains. *Hard work and smart work are the constants that I would like to pass on to him.* Rest everything is upto him.

Q. Very few among the young generation realize the importance of family values. In the course of our interactions with Mr. Prashant Bangur, we feel that he has phenomenally absorbed these values and culture from you and that they will remain the foundation for Shree Cement's future success. Do you agree, and do you believe that this is a qualitative factor that gives you more confidence in your son as Shree Cement's future boss?

A. No. He is much better than me in many aspects, because he has been brought up in the present atmosphere – he understands it better than me.

> *"New generations will have new success formulas. Copying any senior is the surest way to failure."*

Therefore, inculcating my values is not a formula for success; that was a formula for success for my generation (laughs). New generations will have new success formulas. Copying any senior is the surest way to failure. Having my value systems is the last thing I would want for Prashant.

Q. What are the qualities of Mr. Prashant Bangur that you admire personally?

A. Hard work and smart work. *But more than that, respecting all people, including colleagues*. The minute you insult someone, you lose your own prestige and respect. Whenever you rebuke anyone or whenever you try to demean anyone, you lose your respect. He knows this. I am not saying one should never get angry, but your anger should not demean anyone. This one attribute will hold you in good stead in the long term and Prashant knows this well.

Q. Shree Cement is one of the rare cement companies that does not use ESOPs for talent retention. As such, what is your success mantra for talent retention and how do you motivate your team to work harder and come up for innovative ideas (we all believe that Shree is synonymous with innovation and efficiency in the cement industry)?

A. ESOPs are one way to retain people. But I feel that giving opportunities to work is the biggest gift and challenge you can provide. All people like to have their capabilities challenged – if we give them enough challenges, then there is enough motivation. Money, at a certain level everybody gives; ESOPs are nothing but a form of money. But apart from money, the challenges and opportunities to grow professionally that you provide makes a difference. Our past record show that in the last 10 years, hardly 10% of our people above a certain rank have left. Our stability is high and that is all because of new challenges that our team takes upon itself. Ours is an open field – anybody can come and work and even if he they don't work, they can survive. However, they won't get respect.

Q. If you were to change three things about the cement industry what would they be in the order of priority?

A. I would like the government to work more on

"Prashant is much better than me in many aspects."

infrastructure development. Fiscal incentives to the industry do not mean anything. Expanding the market, which subsequent governments have continuously done, is very positive, and with time, this will speed up. India needs lot of infrastructure growth. No other changes are needed I think. I am quite happy with the way the government is working and the industry is working.

Q. So internally, you don't think any changes are needed in the industry?

A. Internally, the only challenge that exists and which is permanent is that everybody wants to grow – and this will always be the challenge in any industry. That growth can come only at somebody else's cost. The total market share is 100 – and everybody will try to take more for themselves. The Indian industry is doing fine. We have to now see how the international industry works and we have to be at par with them or better. Having said that, our industry, even presently, is above international standards as it is new. So no other changes are required.

Q. Any policy changes you feel are required?

A. The government can be clearer about allotting mines or the process of getting mines. Right now, mines are auctioned without the government purchasing land. If this changes, i.e., the government purchases land before auctions, not only will it get a lot more value, but also things will move faster for the industry – everything will be smooth. That way, the industry can start working on their project from day 1, all environmental clearances can also be faster, and a lot of time will be saved. This will help Indian money to be used in a better way. Right now even after investing, before the money comes into play it is 3-4 years. This can be made faster.

Q. What's your take on the interim union budget 2019? Do you believe that it will help the cement industry in the medium to long term; help it to sustain demand recovery? Do you think the government has taken enough steps to revive the real-estate sector and will this help cement demand recover?

A. The real-estate sector is a very small factor for the cement industry. It is only in few big cities that the real-estate sector has a big play. Otherwise, for us, 90% of house building comes from towns and cities such as Bareily and Mathura where real-estate players are not present. Living in cities such as Mumbai and Kolkata we tend to think that the only way to own or build a house is through real-estate developers. But in reality, individual house builders with their surplus money are the driving force. The organized housing sector is a little weak presently (it is facing a cash crunch) because it grew too fast. So factors that were giving them unnatural growth earlier are giving them pain. This sector had benefitted three years ago.

Q. Any other specific observation on the budget?

A. We don't know how the government will generate enough money for infrastructure projects. As I see it, in the budget, capital formation has increased only by about 5%, which is a little lower or almost equal to inflation. There is no extra space for capital formation. Distributing money to the public means public spending, which is good and needed, but capital formation is also essential. However, I am not an expert – the best brains within the government are working on this, and they must have done whatever is best for India.

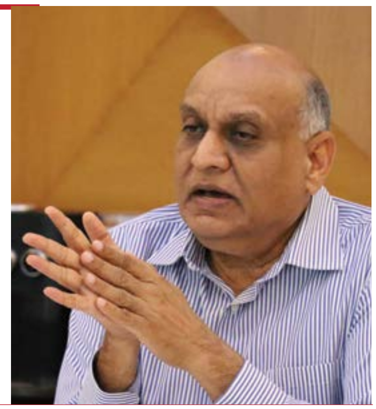
Q. Do you believe that an adverse general election result can be detrimental to the cement industry and halt the demand recovery that the industry has seen over the last few months? Do you see demand coming off before general elections?

A. These are very short term issues. We are looking at 10 years or beyond – say 30 years. In that case, six months here and there does not matter. They (events) are immaterial.

Q. Agreed, but from an investor perspective, how would you look at election results?

A. India will grow because everybody wants to improve their lifestyle. Here in India our people are very hard working throughout the week – from morning 8 am to evening 8 pm. The Indian story is one of 7% growth, irrespective of the government. So there is nothing *'adverse'* – whichever government comes.

"We must not challenge the collective wisdom of Indian people."



Q. What if it is a coalition government?

A. Coalitions are also good. We must not challenge the collective wisdom of Indian people. If this wisdom is in favour of a coalition, then it must be good. I always believe in democracy. *Our democratic forces are strong.*

Q. A million dollar question that everyone wants to ask – What is your understanding as to why cement prices continue to remain subdued in many regions despite a very robust demand growth?

A. Demand growth is one thing, but it has to harmonise with capacity utilisation. Demand growth is usually calculated over the last year, but if you have enough additional capacity, then the additional demand growth does not mean much. Our capacity utilisation has not yet touched 75%. Until the industry reaches 75-80%, price increases will be difficult.

Q. In terms of clinker capacity utilization, you are already working at nearly 80%, if that is correct?

A. Yes. Right now we are facing some shortage of clinker. Coming from the bottom side of the price, it takes extra time for the price to increase. When you are coming from the upper side with the same demand growth, good times will continue for six more months. In the present scenario, for prices to fall will be more difficult and when they are down, rising will be difficult. Maybe in this summer or 4-6 months we could see some price increases as we are already seeing some clinker shortage. It will re-correct itself.

Q. What would your top advice to the competition be?

A. Competition must compete and it should be there. But everybody has a different mindset and is at different stages. Everybody must do what is best for themself. We are in a different phase – we want to improve quality. Somebody might want to improve volume. Others want to change something or start innovation – everybody has their own needs. Some are facing cash crunches and they want money quickly. So how can we advise anybody? Everybody in the industry is a high-class professional and they are running their companies in the best possible way.

Q. You are a role model not just only for the Indian cement industry but also for global cement majors. They all say that they have learned a lot from Shree Cement. Is there anything that Shree Cement or you have also learned from competition and peers?

A. We are learning a lot from the not so well known and comparatively weak Union Cement, which we have bought. A different culture provides a learning experience. We are learning how things can work with lesser people, more responsibility given to people, and less bureaucracy in internal systems.

"India has to learn better management size from its competitors."

In India we have too much of bureaucracy. The ratio of working active people on the floor to non-active working people in the office is skewed – non working people in the office can be reduced. India has to learn better management size from its competitors. Technically, we may be better, but we can adapt in terms of a smaller management size. Also, 'how to fix responsibilities' is something that we can learn.

Q. Would you like to convey any advice to your investors?

A. We are doing our best. In a commodity industry, nobody knows that will happen tomorrow, but we will work with the same philosophy that has been ours for the last 15 years. New challenges will keep coming – the only thing that I can say with certainty is that we will always work with the same level of motivation.

Q. Do you believe in making friends within your industry or with competition? If yes, who are your best friends in the industry?

A. Making friends with your competition is automatic when you attend meetings with them. It is not that those friendships are based on business relationships. You meet people, basically nice people. Also, people migrate within the industry or from other industries which you know. So for many people naturally *acquaintance* is there. Friendship is a very strong emotion; there isn't a specific friend as such, but there are many good acquaintances.

Q. Which are the cement companies that you admire other than Shree Cement?

A. Ramco Cement in south India is doing very well. We respect their innovativeness and professionalism quite a lot. And you cannot ignore UltraTech Cement – it is the biggest and it is the torchbearer of the Indian cement industry. It has roughly a 100mn tonne capacity right now, so it sets the pace. So, for size and a futuristic plan – I would say UltraTech Cement and for innovation and working – I would go with Ramco Cement.

"I admire Ramco Cement for innovation and working and UltraTech Cement for size and a futuristic plan."

Q. If there was one sector in which you would like to invest beyond cement as an angel investor or as a new business venture, which sector would that be and why?

A. I think the Indian consumer will have lot of buying power and FMCG is one sector that I would put my money in – but as an investor and not a promoter. If you get the same return from a high-grade FMCG company, why run a company when you can get it as an investor (laughs).

Q. What is your advice to the youth of the nation?

A. Ah – youth of the nation! (Takes a deep breath) One adverse incident and they get nervous very fast. Difficulties and danger will always be there, but one must never lose heart. Everybody will advise this generation to work hard and they are intelligent. However, very few of them have seen truly bad times, so they should not lose heart when difficulties arise but think about how adversity is going to change them (positively) after three years. If they are able to see this, they will find that adversity is nothing. Failures don't matter. The youth does not understand this. They have to take a little longer view and more important – their friends, parents, and guides should give them enough encouragement and positive feedback.

Q. If you were to distribute a score of 100 among following qualitative parameters for anyone to taste success, not just in business but in any field of life, how would you split up the 100? Hard work, smart work, conviction, sticking to family values and the cultural ecosystem, empowering others, and gut feel and sixth sense.

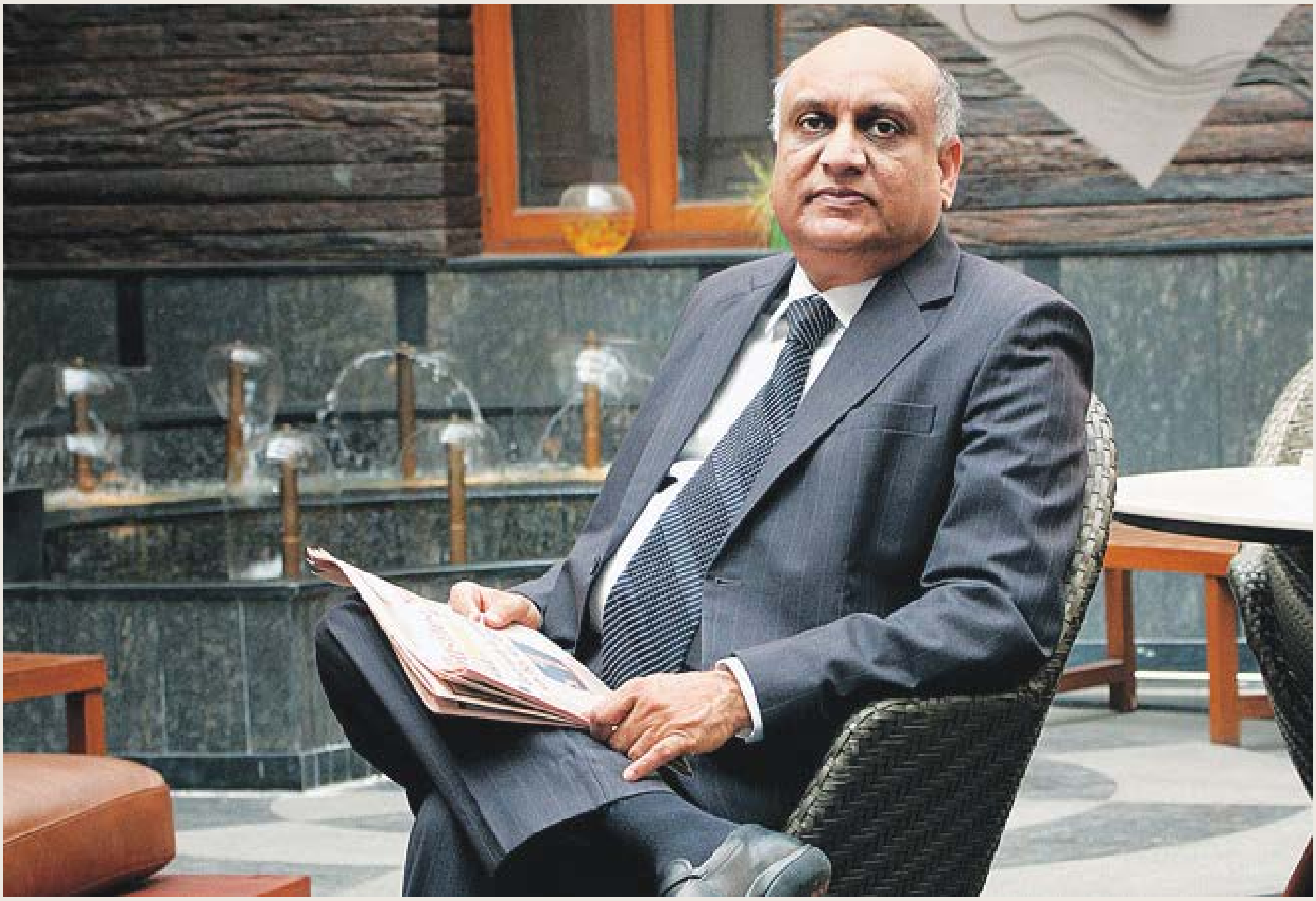
- Empowering others is number one and smart work is number two – but they go together because only with smart work you can empower others. Also, empowering others has to be done very smartly – choosing smart people.

- Other things are secondary. Sixth sense is the last thing because it is luck. You cannot rely on luck – sometimes it works and sometimes it doesn't.

"Empowering others is number one and smart work is number two."

- Family values and cultural values are always to be seen in a different way. All our families migrated from Rajasthan. So should we take that value when they took a risk and they migrated? This may be one set of family values. How do you interpret family values and cultural values is up to you.

- Getting a legacy is good but the old keys will not work because the locks are new. So you have to have your own new set of keys, which family values will not give. Hard work is always important, but working smart is more important.



Q. What can we expect HM Bangur to be doing on weekends and how do you like to spend your time if you are not at work?
A. If I am not at work then I have to enjoy! I believe everything has to be done only for two purposes. Any action, any activity should be either for pleasure or for profit. There is no third reason to act (chuckles). So if I am not working for profit, I am working for pleasure.

Q. Do you believe in God and also destiny?
A. I will answer but my answer is going to be a little long. First, you have to understand that you have to do ***atmakripa*** – which is betterment of self – be determined for yourself and by yourself. The second is ***gurukripa*** – which is for the guide or philosopher or anybody senior to you – this could be your parents or people in the industry who want to help you. Third is ***granthkripa***, which is your books and other things such as your knowledge. If these three are there with you, God's blessings are not optional – he has to help you. So you won't have luck if you don't have these three aspects with you. But if you have these things, the fourth is automatic. God has no choice but to help you.

Q. What are your favourite hobbies and passions?
A. I play card games, mainly Bridge, and I play some volleyball. I also do some cooking.

Q. I know that you used to take the Common Admission Test (CAT) exams every year. Do you still continue this, and what was the reason you did this?
A. I used to, but I stopped about five years ago. The reason I did it was that in management, you never know whether you have performed your best or not. Competitive challenges such as French Open, Wimbledon, which happens at regular intervals, will tell you who is number one. In business, you live on past glories – so how do you check where you stand? I thought if I can get about 85-90 percentile, then I am good.

HM Bangur's average CAT score was 93-94 percentile to which we must add another 5 percentile for his experience making his total score as 98 percentile!

Q. What has been your average score in CAT?
A. My average score was 93-94 percentile. Yes, this is a good score, but then I used to add 5 percentile for my experience because the experience also counts after all. So you can take my total score as 98 percentile! (smiles mischievously).

Q. How much time do you normally spend on your cell phone in a day and how much digital media do you consume in a day?
A. I don't know exactly – but may be just Whatsapp which I use for maybe one hour a day. That's all on the mobile.

Q. Are you a fan of digital media?
A. Not as such.

Q. Do you personally also get actively involved in the Corporate Social Responsibility initiatives of Shree Cement?
A. Yes and no. I get personally involved at the time of choosing the activity and starting the activity, but then it is left to the professionals. I just take the first step forward – which project to work on, how to work on it, what to do – and once that is set, it is on auto mode.

Q. Your favourite food?
A. Dal Roti.

Q. Your favourite movie and actor?
A. I don't see too many movies. However, I do like stories – so whichever movie has a good story, I will like that movie. No favourite movie or actor as such.

Q. Do you like listening to music?
I don't listen to music.

Q. Your favourite TV shows?
A. I don't see much TV too. I prefer spending time reading books. I am more of a book reader.

Q. Your favourite book?
A. Mainly management books. There are so many authors, so naming one favourite wouldn't be right.

Q. Your favourite news channel?
A. I dont watch many news channels either. I feel that being updated continuously is a lot of waste of time because whatever you are updated with now, within a few hours it is stale. Being updated once in a day at morning 6:30 AM by reading the newspaper is good enough.

Q. Which newspapers do you read on a regular basis?
A. Indian Express, Business Standard, and Times of India.

Q. Your favourite holiday destination and whether it will be in India or abroad?
A. I prefer holidays abroad and prefer holidaying in Europe.

Q. Your favourite colour?
A. Normally I prefer blue 80% of the times. Red is our corporate colour though.

Q. Last but not the least, you are a Legend and an inspiration for everyone including your competitors, other industries and youth of nation. When can we expect you to come up with your biography? It will be a pleasure to read it.
A. It sounds good. I have not yet thought about it but will definitely think over it. Maybe, by 2025 I will come up with a biography of Shree Cement if not my personal biography.

GEOPOLITICAL TENSIONS change everything

By Roshan Sony

"Politics is the art of the possible, the attainable – the art of the next best" – Otto von Bismarck

India heads for General Elections in April-May 2019 in the wake of the recent attack on Indian soldiers at Pulwama. India's attacks on terrorist bases in Pakistan and that country's retaliation has stoked considerable patriotic sentiment. Pre-poll statistics collected in January may very well turn on their head. It seems like people are more likely to vote for a strong leadership now, one that is not afraid to take tough decisions. Based on the recent powerful response from India's armed forces and the government, Modi's popularity is likely to surge. The Congress may still make significant gains in select states and some regional parties will stay strong helping them with post poll tie-ups. Most pre-poll surveys continue to predict a hung parliament.

Modi's popularity will rise

A Times Group online poll conducted in February (200,000 respondents) predicted that a Modi-led NDA government was the most-likely outcome of the 2019 India General Elections (or Lok Sabha Polls). Mr Narendra Modi was quite popular in the survey, with almost 84% respondents saying they would prefer him as Prime Minister if polls were to happen right away. Mr Rahul Gandhi came a distant second at about 8%. Two thirds of the respondents rated the track

Some interesting takeaways from the Times Group online poll:

- The survey marked GST as one of the Modi government's biggest success – this is important because the implementation of the GST and its collection statistics were widely criticised by the media and the opposition.
- The survey pegged other major achievements of the NDA government as facilities for the poor (34%), Swachh Bharat (19%), and surgical strikes (18%). The last factor is also important because India's response to Jaish-e-Mohammed's suicide bombing attack in Pulwama where 40 Indian soldiers lost their life is being keenly monitored, not just by the world but by Indian voters. On 26th February, the Indian Air Force struck terror Jaish camps and launch pads across the LoC by dropping 1,000 kg bombs. This is said to be the first cross-border air strike carried out by India in nearly five decades. This will go a long way in consolidating the view that Modi is a stalwart.
- Another interesting finding of the Times Group survey was that the 'failure to build the Ram temple' was considered one of the biggest let-downs from the government. Like the vote on the GST, this finding is also significant because political analysts were united in their opinion that BJP's' overt Hindutva agenda had put off voters – however, going by this finding, this may not necessarily be true.

record of the incumbent government as good. However, on the ground Modi's BJP faces a stronger Congress, bolstered by its recent wins in Rajasthan, Chhattisgarh, and Madhya Pradesh and tough fights in states such as Karnataka, Maharashtra and Assam.

Employment is likely to very well be the Achilles heel of the government – it has been cited as the biggest poll issue by many media houses and is possibly one of the greatest challenges for the incumbent government. A CMIE report showed 11mn job losses in 2018 – the government has claimed that jobs are not lacking but data on jobs has been lacking.

Congress on the front foot

After being hit badly in the 2014 elections, the Congress recently made a strong comeback in state assembly elections in Madhya Pradesh, Rajasthan, and Chhattisgarh – effectively capturing a large chunk of the Hindi belt. However, opinion surveys for LS polls do not show a clear lead for the Congress in these states. Nevertheless, buoyed by these wins, the Congress is campaigning for elections on the front foot, confident of winning many more seats than it did in 2014.

Mahagathbandhan restricted to a few regions

Mamta Banerjee's Mahagathbandhan rally was well attended, but for now it seems like the key allies that have officially stayed with what was previously known as the Third Front are the SP-BSP combine, TDP, and AAP.

What do the pre-poll surveys say?

Most pre-poll surveys are predicting a hung parliament with the NDA securing an average 241 seats, UPA about 157, and other parties about 145. For the BJP government, the SP-BSP alliance for UP, hailed as one of the biggest recent developments in national politics, could prove troublesome.

At the national level

Date published	Polling agency	NDA	UPA	Others
Feb 2019	VDP Associates	242	148	153
Jan 2019	Times Now-VMR	252	147	144
Jan 2019	Deccan Herald	160-175	180-200	160-180
Jan 2019	ABP News -Cvoter	233	167	143
Jan 2019	India Today -Karvy	237	166	140
Jan 2019	VDP Associates	225	167	150

State-wise indicators

- Key 'turning point' states for both NDA and UPA: Assam, Chhattisgarh, Goa, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan.
- Parties in Andhra Pradesh, Telangana, Uttar Pradesh, and West Bengal are likely to have tremendous bargaining power, especially in post-poll alliances.
- Simultaneous state and LS elections will take place in the following states: Sikkim, Arunachal Pradesh, Odisha, Telangana, and Andhra Pradesh. Haryana and Maharashtra will see state assembly polls in Sep-Oct 2019, while Jharkhand will hold elections at the end of 2019. Early 2020 will see polls in J&K and Delhi.

At the state level

NDA leading	UPA leading	Close finish	Regional parties leading
Arunachal Pradesh	Jharkhand (with JMM)	Assam	Andhra Pradesh
Bihar	Kerala	Chhattisgarh	Jammu & Kashmir
Gujarat	Punjab	Goa	Telangana
Haryana	Tamil Nadu	Karnataka	Uttar Pradesh
Himachal Pradesh		Madhya Pradesh	West Bengal
Odisha		Maharashtra	
Uttarakhand		Rajasthan	
Delhi			

Vote share – this time the magic number seems to be about 30%, lower than last time

It is believed that if any party or alliance crosses 30% national vote share in the 2019 elections, it would hold significant sway. Here is how the latest vote predictions look.

Opinion poll results

Date published	Polling agency	NDA	UPA	Others
Jan 2019	Times Now-VMR	242	148	153
Jan 2019	Republic TV - Cvoter	160-175	180-200	160-180
Jan 2019	India Today -Karvy	237	166	140

Possible Black Swan events

- A major defeat for Trinamool Congress in West Bengal and gains for the BJP.
- Huge defeat for BJP in UP. Most surveys are predicting an average 24 seats for the BJP in UP.
- An all-out war between India and Pakistan in which case elections would be postponed.
- NDA winning a clear majority.

✓ **Number of potential voters: 875mn**

✓ **Total number of Lok Sabha Seats: 543 + 2**

✓ **Number of polling stations: 1mn**

✓ **People deployed in elections: 10mn**

✓ **Number of parties that participated in 2014 polls: 464**

✓ **Number of candidates fielded in 2014 polls: 8,251**

✓ **2014 seats share: BJP 282, Congress 44**

THE LOK SABHA ELECTION DECK		
NDA	**UPA**	**Third Front Mahagathbandhan??**
BJP	**CONGRESS**	**TRINAMOOL**
• Led by the BJP, the NDA was formed in 1998 and has 13 constituent parties. It came to power in the 2014 polls with almost 31% vote share. • The BJP has governments in 10 states: Arunachal Pradesh, Assam, Odisha, Haryana, Himachal Pradesh, Jharkhand, Manipur, Tripura, Uttarakhand, and Uttar Pradesh. In Goa and Maharashtra, it shares power as senior coalition partners (BJP Chief Ministers) with other NDA partners. • It shares power as junior coalition partner in the following states: Bihar, Meghalaya, Nagaland, Sikkim, Tamil Nadu and Mizoram	• Congress-led UPA was formed in 2004 to form a government as no party won a majority. • At that time, it had the support of the Left Front, BSP, and SP. • The UPA has governments in 5 states and in 1 union territory: Madhya Pradesh, Chhattisgarh, Rajasthan, Karnataka, Punjab, and Puducherry.	• The Mahagathbandhan is led by Trinamool (Mamta Banerjee), the fourth largest party in the Lok Sabha. It was a part of NDA from 1999 to 2001, UPA from 2009 to 2012, and has been a part of the Third Front since 2012. Trinamool's Mamta Banerjee is the leading face of the 'Mahagathbandhan' loosely translated as the grand alliance.

BIGGEST ALLIANCE PARTNERS		
AIADMK (TN)	**NCP**	**SP-BSP**
Former AIADMK supremo Jayalalitha and Modi shared a warm relationship. The AIADMK had withdrawn support to the NDA government in 1999, leading to its collapse. The BJP-AIADMK alliance for TN for 2019 was recently announced at 5-27 seats. BJP said it would support AIADMK in by-elections as well.	Led by Sharad Pawar, The Nationalist Congress Party and INC are said to be close to finalising seat-sharing for the polls. While NCP partnered with Congress in the 2014 LS polls, it had parted ways soon after. With the BJP-Sena alliance in place, it will have a tough time consolidating votes in Maharashtra.	For now it seems like the BSP and SP are a part of the Mahagathbandhan, an equation that may change according to the outcome of the election
SHIV SENA (MAHARASHTRA)	**RJD**	**TDP**
Led by Uddhav Thakre, Shiv Sena is BJP's biggest alliance partner. The party shares a similar ideology with BJP and its alliance in Maharashtra has endured, but not without its share of differences. Recently, the two parties finally announced an alliance after months of 'will they wont they'.	In the 2014 general elections, RJD had contested 28 seats. For now, the RJD-Congress alliance is said to be uneasy because of seat-sharing spats. Latest reports indicate it is close to some agreement. RJD was with the UPA 2004 to 2015. It returned in 2018.	Led by N. Chandrababu Naidu, the party left the NDA alliance in 2018 over Andhra Pradesh not being given special status and subsequently joined the Third Front.
LOK JANSHAKTI PARTY (BIHAR)	**DMK, MDMK**	**AAP**
Has been with NDA since 2014. Said to have considerable influence among Dalits in Bihar.	The Congress party has an alliance with MK Stalin's DMK; INC will contest 10 seats in TN. Vaiko's MDMK is in seat-sharing talks with DMK.	Arvind Kejriwal's AAP seems to be a part of the Third Front for now.

SHIROMANI AKALI DAL (PUNJAB)	**RASHTRIYA LOK SAMTA PARTY**
Troubled by the sacrilege controversy. Lost 15 seats in the 2017 Punjab state elections.	Fresh alliance formed in December 2018. Was earlier a part of the NDA.
JANATA DAL UNITED (BIHAR)	**JANATA DAL (SECULAR)**
In 2013, the Nitish Kumar-led JDU broke its 17-year alliance with the BJP in Bihar to protest Modi's elevation. After this, the JDU teamed up with various parties before coming back to the BJP in 2017.	Led by Deve Gowda and his son HD Kumarswamy, it used to be a part of the NDA in 2006-07. It joined the UPA in 2018 when it formed the first coalition government in Karnataka state with the INC.
PATTALI MAKKAL KATCHI (TN)	**INDIAN UNION MUSLIM LEAGUE**
The PMK is the largest caste-based party in Tamil Nadu with a strong support base among Vanniyars.	Kerala-based party. One of UPA's oldest allies.
APNA DAL (SONELAL)	**RASHTRIYA LOK DAL**
The party is feared to defect to the UPA if the BJP does not meet its demands.	Is said to have influence in western Uttar Pradesh.
THOSE WHO LEFT	**JHARKHAND MUKTI MORCHA**
Since 2014, some 11 parties have quit NDA, most prominently TDP and the Asom Gana Parishad (over the Citizenship Bill row)	Hemant Soren's JMM was with the NDA up to 2013. It joined UPA again in 2018. JMM is said to have put past differences aside and aligned with the RJD and the Jharkhand Vikas Morcha (Prajatantrik) for the LS and assembly polls.

LEADERS WHO ATTENDED THE MAHAGTHBANDHAN PILOT RALLY

HD Deve Gowda (JDS)
Chandrababu Naidu (TDP)
Arvind Kejriwal (AAP)
Samajwadi Party
Dravida Munnetra Kazhagam
Bahujan Samaj Party
Jammu and Kashmir National Conference
Nationalist Congress Party
Rashtriya Janata Dal
Rashtriya Lok Dal
Jharkhand Mukti Morcha
Loktantrik Janata Dal
All India United Democratic Front
Notable leaders from the BJP present at a Mahagathbandhan rally: Arun Shourie, Yashwant Sinha, Shatrugan Sinha

BIGGEST NON-ALIGNED PARTIES – could play a pivotal role in a hung parliament

Odisha, Andhra Pradesh, and Telangana together have 63 MPs in the Lok Sabha. Currently, the three parties that are strong in those states are:

- Biju Janata Dal (BJD) – Odisha
- YSR Congress – Andhra Pradesh
- Telangana Rashtra Samiti - Telangana

A look at some of the biggest states

UTTAR PRADESH (80 SEATS)

The SP-BSP combine is a major challenge – could win clear majority

Date published	Polling agency	NDA	UPA	SP	BSP
Jan-19	Spick Media	25	2	51	
Jan-19	Times Now-VMR	27	2	51	
Jan-19	ABP News - Cvoter	25	4	51	
Jan-19	India Today	18	4	58	
Jan-19	Republic TV – Cvoter	25	4	51	

- While most surveys show the BJP losing significantly to the SP-BSP combine, none predict major gains for the Congress. Mayawati (president of the Bahujan Samaj Party) and Akhilesh Yadav (president of the Samajwadi Party) alliance will contest 76 seats. Pre-poll surveys predict an average 52 seats for the BSP-SP alliance. The alliance, which has decided not to fight in Amethi and Rae Bareli, represented by Rahul Gandhi and Sonia Gandhi.
- The BJP won big in UP in 2014 with a gain of 61 seats to touch a total tally of 71. Since then, opinion polls predict that its popularity has fallen dramatically, largely due to falling approval for Yogi Adityanath. In the Lok Sabha by-election held in January 2018, BJP had lost both Alwar and Ajmer seats to the Congress. Pre poll surveys predict an average 24 seats for BJP in UP.
- Priyanka Gandhi's official entry into politics has led to a flurry of activity in the UP 'war rooms' of political parties. While her entry is undoubtedly worrisome for the incumbent BJP, many political commentators believe that it is more likely to swing votes away from the SP-BSP combine and could actually work in BJP's favour.

MAHARASHTRA (48 SEATS)

Close finish for NDA and UPA (Key players: BJP, Shiv Sena, NCP, Congress)

Date published	Polling agency	NPA	SHS	UPA
Jan 2019	ABP News - Cvoter	20		28
Jan 2019	VDP Associates	23	2	23
Jan 2019	India TV - CNX	22	8	18
Jan 2019	Times Now – VMR	43		5

- In early 2019, it seemed like Shiv Sena would actually break away from the BJP. However, since then, the two parties have finally formed an alliance for the Lok Sabha Polls. BJP will contest 25 seats while Sena will contest 23.
- While the Sena-BJP alliance has endured again, it has never been easy. The regional party has criticised the BJP at every turn, and recently it even supported the opposition's demand for a joint parliamentary probe into the Rafale deal.
- Sena received its demand of contesting the same number of seats in the assembly polls that will be held later this year. BJP had reservations about such an arrangement because Sena's seat wins in the 2014 assembly polls were less than half of BJP's.
- The Congress-NCP alliance is said to be in its final lap for working out seat-sharing.

WEST BENGAL (42 SEATS)

BJP a tough contender, but Trinamool leads in pre-poll surveys

Date published	Polling agency	NDA	UPA	AITC	CPIM
Jan 2019	Spick Media	8	4	30	0
Jan 2019	Republic Tv - Cvoter	3	11	31	4
Jan 2019	Times Now – VMR	9	1	32	0

- In recent rural polls, TMC dominated, but BJP shot to second place in by-polls. In fact, in almost every by-poll since 2016, the BJP has performed better than the Congress and the Left Front.
- Media reports indicate that BJP is becoming fairly well entrenched at the grass-root level – but that recent losses in state-assembly elections have damaged the cadre's morale to an extent.
- West Bengal has traditionally been a Left-leaning state. Mamta Banerjee founded the party All India Trinamool Congress (AITC or TMC) in 1998 after separating from the Indian National Congress. In 2011, Banerjee won a landslide victory for the TMC-Congress alliance dislodging the 34-year-old Communist Party of India (Marxist) from West Bengal. However, the legacy of the left continues in WB and AITC. In fact, AITC is called the 'new Left' by the media due to its policy and its style of agitations (Singur, Nandigram).
- Up to 2012, Banerjee has had alliances with both the NDA and the Congress – but since then, she has been the leader of the Third Front. Some of Banerjee's cabinet ministers were accused of money laundering in the Sardha Group financial scandal, and she was criticised for not doing enough against her own ministers after the scam came to light. The CBI also recently arrested film producer Shrikant Mohta in the Rose Valley Scam Case. The media has reported that Mohta is close to Mamta Banerjee. He was also in the news for allegedly encroaching land that belonged to the Calcutta Port Trust and building a studio there.
- Despite recent scandals, Banerjee is believed to be still quite popular with the masses with schemes such as rice at Rs 2 per kg and free bicycles for school children. She is also said to have the support from the minority community. The two major religions in West Bengal are Hinduism (71%) and Islam (27%). Of late, West Bengal has seen increasingly assertive religious processions – first the Ramnavmi processions led by RSS-BJP that led to communal violence and then unprecedented Hanuman Jayanti processions that were announced by both Trinamool and the BJP.

MADHYA PRADESH (29 SEATS)

Surveys predict BJP lead – but recent loss to weigh heavily (Key players: NDA, UPA, SP-BS)

Date published	Polling agency	NDA	UPA
Jan 2019	Spick Media	14	15
Jan 2019	ABP News -Cvoter	23	6
Jan 2019	India TV - CNX	18	11
Jan 2019	Times Now – VMR	23	5

- BSP and SP recently announced a pre-poll alliance for Madhya Pradesh. The SP-BSP alliance is likely to dent both Congress and BJP's vote share.
- After 15 years, the BJP lost power in the state to the Congress in the November 2018 assembly elections when it lost 56 seats (secured 109; vote share 41%), while the Congress gained 56 (secured 114; vote share 41%). Congress formed the government with support from SP, BSP, and others.
- The number of seats that the BJP secures in 2019 LS polls hinges largely on how popular Modi is in MP.

TAMIL NADU – 39 SEATS + 1 (PUDUCHERRY)

AIADMK faces anti-incumbency – Modi magic untested in TN; DMK (UPA) leads

Date published	Polling agency	UPA	AMMK	AIADMK	DMK	PMK
Jan 2019	Spick Media	24	9	4		
Jan 2019	Times Now-VMR	35		4		
Jan 2019	IndiaTV-CNX	3	4	10	21	1

- DMK Chief Karunanidhi's son Stalin has been handling party affairs over the last five years. In this period, there was an internal power struggle between Satlin and his brother Alagiri. However, senior DMK leaders have backed Stalin. He also has the support of scam-tainted Kanimozhi, his step-sister, and DMK committee members.
- A Raja, another politician accused in the 2G scam, is also a prominent member of the DMK. Vaiko, a firebrand DMK politician and LTTE supporter who went on to form MDMK after not seeing eye-to-eye with Karunanidhi and Stalin, has also buried his differences with the party.
- Jayalalitha's death is believed to have helped Stalin's rise to power; Karunanidhi also passed away last year.
- The Congress and DMK alliance has the advantage of being forged a while ago and is leading in pre-poll surveys.
- The BJP sealed its alliance with AIADMK and other parties including PMK and agreed to contest 5 seats. The AIADMK has not had an easy year after Jayalalitha's death in December 2016. It has split three times since then and its changing strength in the Tamil Nadu Assembly has brought into question its government's legitimacy more than once (18 AIADMK MLAs were disqualified and elections are due to be held to fill their seats).
- Amma Makkal Munnetra Kazhagam (AMMK) was formed in 2018 by ex-AIADMK member Dinakaran after he was expelled from the party in 2017.

BIHAR – 40 SEATS

NDA seems to be leading for now (Key players: NDA (BJP, JDU, LJP), UPA (Congress + RJD)

Date published	Polling agency	NDA	UPA
Jan 2019	Spick Media	24	16
Jan 2019	ABP News - Cvoter	35	5
Jan 2019	Times Now-VMR	30	10

- Opinion polls are heavily in favour of NDA currently – until mid-2018, these were reflecting quite a bit of anti-incumbency.
- The JDU is back with the NDA; it had left just ahead of the 2014 LS elections and had brief alliances with the RJD and Congress for assembly polls in 2015.
- The RJD-led opposition alliance also includes the Congress. With RJD supremo Laloo Prasad Yadav in jail, his son Tejashwi Yadav is the face of the RJD and is said to have handled alliances deftly.
- The Congress-RJD alliance is believed to be close to a seat-sharing agreement after a bumpy journey. Tejashwi Yadav's January meeting with SP chief Akhilesh Yadav and BSP supremo Mayawati is not said to have sat well with the Congress. Conversely, RJD is not comfortable with Congress' alleged demands to contest about 10-12 seats in the elections, considering that it won only two in 2014.
- In Bihar, caste equations play an important role in how people vote. In this year's elections, while these equations seem fairly evenly balanced among NDA and UPA, Most Backward Classes (about 24% of the state's population) are likely to play a pivotal role.
- Liquor prohibition, imposed three years ago by Nitish Kumar, is also likely to play a key role in how people vote.

KARNATAKA – 28 SEATS

A tough fight; JDS-Congress alliance uneasy (Key players: BJP, Congress, JDS)

Date published	Polling agency	NDA	UPA
Jan 2019	Spick Media	13	15
Jan 2019	Republic Tv - Cvoter	14	14
Jan 2019	Times Now – VMR	14	14

- Media reports indicate that for the 2019 elections, JDS' Kumaraswamy is believed to have demanded 12 of the 28 seats; this demand, seen in the light of JDS' 2-seat win in the 2014 Lok Sabha elections, has been deemed unreasonable by the Congress. BJP had won 17 seats in the 2014 LS, Congress 9.
- Some reports even indicate that JDS and Congress might go in for a 'friendly fight'.
- In the May 2018 assembly elections in the state, the BJP could not form the government despite winning 104 seats becoming the single largest party with a vote share of 36%. The Congress won 80 seats with a vote share of 38% and JDS won 38 with an 18% vote share. Even as JDS finished third, its chief HD Kumaraswamy (the third son of former prime minister HD Deve Gowda) was crowned Chief Minister when Congress declared it would unconditionally support JD(S) to form the next Karnataka government. The Congress move was hailed as strategic by political commentators – it would stop the BJP from staking claim to form the government while not appearing to make a grab for power for itself.
- The BJP had denounced the ascension of HD Kumarswamy as 'unholy'. However, commentators were quick to point out that the BJP had employed a similar strategy in Meghalaya where it brought together its allies to form a government when the party itself had won only two seats. BJP also did something similar in Goa, beating the Congress in terms of cobbling together an alliance faster to form the government.

GUJARAT – 26 SEATS

NDA seems to be leading for now (Key players: BJP, Congress)

Date published	Polling agency	NDA	UPA
Jan 2019	Republic Tv - Cvoter	24	2
Jan 2019	Times Now – VMR	24	2

- This state is likely to be a prestige issue for the BJP in the general elections. Media reports say that the Congress is targeting at least 13 seat wins this time, buoyed by its recent wins in Madhya Pradesh, Rajasthan, and Chhattisgarh.
- In the December 2017 Gujarat assembly elections, while the BJP did win a majority, it was by slimmer margins than in the 2014 general polls. The BJP actually lost 16 assembly seats vs. the previous polls and the Congress and its allies won 20 more. However, the BJP's vote share actually increased by 1%.
- In the 2014 general elections, the Congress failed to win any Lok Sabha seats in Gujarat while the BJP had won all 26.
- Political observers point out that for the upcoming general elections, the fact that Gujaratis would be voting for a Gujarati PM could be a crucial element.

RAJASTHAN – 25 SEATS

Despite positive pre-poll surveys, odds are stacked against the BJP (Key players: NDA, UPA)

Date published	Polling agency	NDA	UPA
Jan 2019	India TV - CNX	15	10
Jan 2019	VDP Associates	12	13
Jan 2019	News Nation	16	9
Jan 2019	Times Now – VMR	17	8

- In the December 2018 elections, the Congress bagged 99 seats (+78 over the previous election) with a vote share of 39% and the BJP got 73 (-90) with a vote share of 39%. Mayawati's BSP won six seats (+3).
- Political pundits largely blamed BJP's losses on CM Vasundhara Raje's unpopularity, farmer distress, and dissatisfaction with employment generation by the state government. For the whole of 2018, the BJP had faced numerous issues in Rajasthan – these included farmer protests in the Shekhawati region, dissatisfaction about restrictions on cattle transport, and Gujjar unrest over reservation. Rajasthan's large business community was also believed to be unhappy about demonetisation and GST.
- In Rajasthan, the ruling party has generally retained the advantage in LS polls.
- Not taking any chances, CM Ashok Gehlot has already announced farm loan waivers of up to Rs 200,000 (Vasundhara Raje had announced Rs 50,000) and deputy CM Sachin Pilot has already launched the waiver scheme.

ANDHRA PRADESH – 25 SEATS

YSRPC seems to have a clear lead (Key players: YSRPC, TDP)

Note: In 2014, AP included Telangana. It had 42 seats of which TDP won 16, TRS won 11, and YSRCP won 9

Date published	Polling agency	YSR	TDP
Jan 2019	Spick Media	22	3
Jan 2019	Republic Tv - Cvoter	20	5
Jan 2019	Times Now-VMR	23	2

- YSR Congress Party is headed by Y S Jaganmohan Reddy, the son of former Andhra Pradesh chief minister YS Rajasekhara Reddy (popularly known as YSR). Both were formerly members of the Indian National Congress. After the sudden demise of YSR in 2009, son Jagan's Odarpu Yatra (condolence tour) across Andhra Pradesh did not sit well with the Congress. Things soured quickly between the two and Jagan quit.
- YSR party currently holds 4 seats in the Los Sabha and 2 in the Rajya Sabha. As a part of his pre-poll campaign Jagan Mohan Reddy went on a 3-month padyatra (walking journey) of Andhra Pradesh that ended early January. In this journey, he is said to have covered 3,000km and 134 constituencies – this is supposed to have influenced voters positively (his father had undertaken a similar exercise during his time).
- The Telugu Desam Party's leader N. Chandrababu Naidu quit the NDA over rifts about financial support and 'special status' for Andhra Pradesh. Chandrababu Naidu had formed a pre-poll alliance with the Congress for Telangana assembly polls in 2018 but it lost badly to K Chandrashekar Rao's TSR.
- The Congress is contesting solo in AP this time with a key poll promise being that it will special category status for the state.

Incidentally, assembly elections in Andhra Pradesh are due at the same time as general elections.

ODISHA – 21 SEATS

NDA seems to have an edge for now (Key players: NDA, BJD)

Date published	Polling agency	NDA	UPA	BJD
Jan 2019	ABP News - Cvoter	12	-	9
Jan 2019	Times Now-VMR	13	0	8

- Despite BJP's attacks on Naveen Patnaik's BJD, Patnaik and Modi are believed to share a warm personal equation. The BJD used to be a part of the NDA between 1998 and 2009. The alliance ended in the 2009 general elections when seat-sharing differences cropped up. BJD saw a huge victory then, winning 20 of the 21 seats. Naveen Patnaik has been chief minister of Odisha since 2004, winning four consecutive terms. As such, he is said to face tremendous anti-incumbency.
- Key poll issues are likely to be farmer distress (Congress' focus), corruption, and women's safety (the last two are BJP's focus areas).
- Odisha's agri-depended population is about 60% and its tribal population is about 23%. To combat anti-incumbency, in December 2018, Odisha's BJD government had announced a massive Rs 102bn scheme for direct benefit transfer to farmers and landless farm labourers.
- BJP has focused on women's safety and empowerment (fronting more women leaders) and corruption (targeting the Hockey World Cup and chit funds scandals). BJP also held a National Tribal Maha Adhiveshan programme in Odisha recently, which BJP tribal leaders from across the country attended.
- While opinion polls do not predict any seat win for the Congress, the party is said to be hopeful – there is quite a bit of buzz in the agri community about the party's promise to hike paddy MSP to Rs 2,600 per quintal from the current Rs 1,750.
- Odisha will hold assembly elections along with the general elections.

KERALA – 20 SEATS

Congress leads (Key players: UDF (Congress-led alliance), LDF (communist parties and others)

Date published	Polling agency	UDF	LDF	NDA
Jan 2019	Spick Media	13	5	2
Jan 2019	Republic Tv - Cvoter	16	4	-
Jan 2019	Times Now – VMR	16	3	1

- Media reports say the current Chief Minister of Kerala, Pinarayi Vijayan has lost popularity among certain sections of voters because he implemented the Supreme Court allowing women of all ages to enter the celibate god's hill shrine – Sabrimala. However, others have lauded him for upholding the law.
- There are reports that the Congress and communist parties have actually warmed up to each other based on their common goal of thwarting BJP's chances in the state. A state Congress leader, requesting anonymity is quoted by the media as saying – "LDF leaders understand that in order to defeat the BJP, the Congress has to come to power in Delhi with a strong number" while a communist leaders is quoted as saying "We will contest seats to win, but in some pockets, there will be mutual understanding. We have been saying both within and outside the coalition that the main enemy is the BJP and its fascism".
- In the 2014 general election, UDF won 12 seats, LDF 8, and BJP won just one. However, LDF won the 2016 assembly elections (+25 seats), with 43% vote share; UDF had 39% vote share (-25 seats).

TELANGANA – 17 SEATS

Strong lead for TRS – near clean sweep predicted

Date published	Polling agency	TRS	UPA	TDP	AIMIM
Jan 2019	Spick Media	17	0	0	0
Jan 2019	Republic Tv - Cvoter	16	-	-	1
Jan 2019	Times Now – VMR	10	5		

- K. Chandrashekar Rao's party swept up 88 seats in the December 2018 state elections, Congress took 21, and Akbaruddin Owaisi's AIMIM took 7. While Rao started his career with the Congress party, he soon shifted allegiance to TDP (NT Rama Rao's party) where he remained from 1983 to 2001. He formed the TRS party in 2001 to fight for a separate state for Telangana.
- TRS was a UPA alliance partner and in the 2004 state elections (then Andhra Pradesh), and won 26 state assembly seats and 5 Lok Sabha seats. Two years later, it withdrew its support over the issue of carving out a separate state. KCR subsequently triggered a by-election and lost.
- Telangana was formed in June 2014, in which general election year TRS did not align with either or NDA – it bagged 11 of the 17 Lok Sabha seats and 63 of the 119 assembly seats.

ASSAM – 14 SEATS

A traditionally capricious state – AGP's exit from the NDA could change equations (Key players: NDA, UPA, All India United Democratic Front)

Date published	Polling agency	NDA	UPA	AIUDF
Jan 2019	Republic Tv - Cvoter	6	7	1
Jan 2019	Times Now-VMR	8 (BJP)	3	3

- With the Asom Gan Parishad's exit from the BJP alliance, its performance in this state remains to be seen.
- Assam was ruled by the Congress for several years. In a complete turnaround, the BJP came to power in 2014 – however, its alliance partner AGP recently quit after the BJP supported the Citizenship Amendment Bill.
- Other than the AGP, prominent regional parties include All India United Democratic Front (AIUDF) and Bodoland People's Front (BPF).
- The AGP is said to have kept its options open about possible tie-ups.

JHARKHAND – 14 SEATS

UPA stronger with JMM (Key players: NDA, UPA (with JMM), JVM)

<table>
<tr><th>Date published</th><th>Polling agency</th><th>NPA</th><th>UPA</th><th>JMM</th><th>JVM</th></tr>
<tr><td>Jan 2019</td><td>Republic Tv - Cvoter</td><td>5</td><td colspan="2">8</td><td>1</td></tr>
<tr><td>Jan 2019</td><td>VDP Associates</td><td>4</td><td>5</td><td>4</td><td>1</td></tr>
<tr><td>Jan 2019</td><td>Times Now – VMR</td><td>6</td><td colspan="2">8</td><td>?</td></tr>
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- The JMM party fought for a separate state for Jharkhand (from Bihar). Shibu Soren leads the JMM; he was found guilty in the murder of his private secretary Shashi Nath Jha in 1994. His son Hemant Soren was the CM of Jharkhand in 2013-2014.
- The Congress party forged an alliance with JMM in March 2018 itself for the RS and LS elections, after the former agreed to contest LS and state assembly polls under JMM's leadership.
- The Congress had broken relations with the JMM before the 2014 LS elections.
- Recently, the Jharkhand Assembly Speaker Dinesh Oraon (BJP) upheld that the six JVM MLAs joining BJP in February 2015 was not a defection but a merger. JVM president Babulal Marandi had asked for their disqualification for violating anti-defection law. Had Oraon not passed this judgement, the BJP government would have fallen short of a majority at the end of its five-year term.

PUNJAB - 13 SEATS

Clean sweep for the Congress party predicted (Key players: NDA (BJP + Shiromani Akali Dal), Congress)

Date published	Polling agency	NDA	UPA	AAP
Jan 2019	ABP News - Cvoter	1	12	-
Jan 2019	Times Now – VMR	0	12	1

- In the February 2017 state assembly elections, the INC won 77 seats (+31 vs. the previous elections) with a vote share of 39% and AAP won 20. The Shiromani Akali Dal (NDA partner) won just 15 seats (-41) with a vote share of 25% a huge swing of -9% over the last election.
- The Aam Aadmi Party has declared that it would fight the upcoming Lok Sabha elections in Delhi, Punjab, and Haryana on its own (there was speculation that it would tie up with the Congress party).
- In 2015, Shiromani Akali Dal was rocked by the 'sacrilege controversy' when police firing took place (2 dead) at Kotkapura and Behbal Kalan in Faridkot in 2015 on people protesting the desecration of the Sikh holy book The Guru Granth Sahib. Many believe that this led to SAD's downfall in 2017. Former CM Prakash Singh Badal maintains that he never ordered the firing.
- However, some commentators point out that the people blame SAD's lack of proper governance for the tremendous rise in drug addiction among Punjab's youth. A study by the Ministry of Social Justice & Empowerment and the United Nations International Drug Control Programme showed that drug abuse in Punjab is 3x higher than the national average and that c.40% of youth and c.48% of farmers and labourers are addicts.
- BJP has said that it will fight the 2019 Lok Sabha elections alongside SAD (BJP 3, SAD 10). However, SAD's leadership was not present when it started its campaign in Amritsar recently.
- The 1984 anti-Sikh riots are also a big talking point in Punjab elections – recently, Sajjan Kumar a Congress party politician was sentenced to life imprisonment for his role in the riots. Sikhs constitute about 58% of Punjab's population.
- Power tariffs are likely to be another key factor in this state. The Congress government has hiked tariffs thrice since coming to power in 2017.

Indian Economy – Trend Indicators

Monthly Economic Indicators

Growth Rates (%)	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19
IIP	7.1	7.4	7.1	4.6	4.8	3.8	7.0	6.5	4.7	4.5	8.4	0.5	2.4	-
PMI	54.7	52.4	52.1	51.0	51.6	51.2	53.1	52.3	51.7	52.2	53.1	54.0	53.2	-
Core sector	3.8	6.1	5.4	4.5	4.6	4.1	7.8	7.3	4.7	4.3	4.8	3.5	2.6	-
WPI	3.6	3.0	2.7	2.7	3.6	4.8	5.7	5.3	4.6	5.2	5.5	4.6	3.8	2.8
CPI	5.2	5.1	4.4	4.3	4.6	4.9	5.0	4.2	3.7	3.8	3.3	2.3	2.1	2.0
Money Supply	10.2	10.8	10.5	9.9	10.6	10.4	10.1	10.2	10.0	10.0	10.0	10.3	10.4	10.5
Deposit	3.2	4.3	5.3	6.1	8.1	7.5	7.4	7.7	8.0	7.8	8.4	8.8	8.8	9.3
Credit	9.8	10.4	10.4	10.5	12.1	12.4	12.4	12.2	12.7	12.6	14.0	14.6	14.7	14.0
Exports	12.4	9.1	4.5	-0.4	5.2	20.2	17.6	14.3	16.9	-2.2	17.9	0.8	0.4	3.7
Imports	21.1	26.1	10.4	7.9	4.6	14.9	21.3	28.8	25.4	10.5	17.6	4.3	-2.4	-2.4
Trade deficit (USD Bn)	41.1	64.6	25.8	31.2	3.6	5.6	28.1	57.4	49.4	48.9	22.2	10.4	-12.1	-12.1
Net FDI (USD Bn)	4.3	1.9	4.0	1.8	4.8	3.8	1.8	1.9	2.0	3.9	3.7	0.9	2.7	-
FII (USD Bn)	-0.4	3.5	-2.4	1.2	-3.0	-1.7	-4.2	4.6	-4.9	-2.1	-5.1	1.8	1.2	-
ECB (USD Bn)	1.3	0.5	3.1	5.1	3.9	1.3	2.7	2.2	4.8	1.7	1.4	2.1	3.8	-
Dollar-Rupee	63.9	63.6	64.4	65.0	65.7	67.6	67.8	68.7	69.6	72.3	73.6	71.8	70.7	70.7
FOREX Reserves (USD Bn)	409.4	417.8	420.6	424.4	420.4	412.8	406.1	404.2	400.1	400.5	392.1	393.7	393.4	398.2
NRI Deposits (USD Bn)	123.3	124.4	124.3	126.2	124.6	123.5	124.3	124.9	123.0	121.9	121.5	125.7	125.8	0.0

Quarterly Economic Indicators

Balance of Payment (USD Bn)	Q2FY17	Q3FY17	Q4FY17	Q1FY18	Q2FY18	Q3FY18	Q4FY18	Q1FY19	Q2FY19
Exports	68.8	77.4	73.1	76.1	77.5	82.2	83.4	83.4	83.4
Imports	102.0	107.1	115.1	108.5	121.6	123.8	129.1	133.4	133.4
Trade deficit	-33.3	-29.7	-41.9	-32.5	-44.0	-41.6	-45.8	-50.0	-50.0
Net Invisibles	25.3	26.3	27.0	25.5	30.3	28.6	29.8	30.9	30.9
CAD	-8.0	-3.5	-15.0	-7.0	-13.7	-13.1	-15.9	-19.1	-19.1
CAD (% of GDP)	1.4	0.6	2.5	1.1	2.0	1.9	2.4	2.9	2.9
Capital Account	6.1	10.4	26.9	16.9	22.5	25.0	5.4	16.3	16.3
BoP	-1.2	7.3	11.4	9.5	9.4	13.2	-11.3	-1.9	-1.9

GDP and its Components (YoY, %)	Q2FY17	Q3FY17	Q4FY17	Q1FY18	Q2FY18	Q3FY18	Q4FY18	Q1FY19	Q2FY19
Agriculture & allied activities	4.1	6.9	5.2	2.3	2.7	4.1	4.5	5.3	3.8
Industry	6.5	7.2	5.5	1.5	7.0	6.8	8.0	10.8	6.5
Mining & Quarrying	-1.3	1.9	6.4	-0.7	7.1	-0.1	2.7	0.1	-2.4
Manufacturing	7.7	8.2	5.3	1.2	6.9	8.1	9.1	13.5	7.4
Electricity, Gas & Water Supply	5.1	7.4	6.1	7.0	7.7	6.1	7.7	7.3	9.2
Services	7.4	6.4	5.7	7.8	6.6	7.6	8.2	7.5	7.5
Construction	4.3	3.4	-3.7	2.0	2.8	6.8	11.5	8.7	7.8
Trade, Hotel, Transport and Communications	7.7	8.3	6.5	11.1	9.3	9.0	6.8	6.7	6.8
Finance, Insurance, Real-Estate & Business Services	7.0	3.3	2.2	6.4	6.4	6.7	5.0	6.5	6.3
Community, Social & Personal Services	9.5	10.3	17.0	9.5	5.6	7.2	13.3	9.9	10.9
GDP at FC	6.8	6.7	5.6	5.6	6.2	6.7	7.6	8.0	6.9

Annual Economic Indicators and Forecasts

Indicators	Units	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19E
Real GDP/GVA growth	%	8.6	8.9	6.7	6	5.6	7.1	7.9	6.6	6.5-6.7	7.0
Agriculture	%	0.8	8.6	5	1.5	4.2	-0.2	0.7	4.9	2	3.8
Industry	%	10.2	8.3	6.7	5	4.5	6.5	10.2	7	4.9	7.4
Services	%	10	9.2	7.1	6.1	8.2	9.4	9.1	6.9	8.6	7.5
Real GDP	₹ Bn	45161	49185	52475	85992	90844	97190	104905	111854	119349	128088
Real GDP	US$ Bn	953	1079	1096	1694	1581	1589	1603	1667	1843	1830
Nominal GDP	₹ Bn	64778	77841	87360	99466	112366	124451	136820	151837	167173	188407
Nominal GDP	US$ Bn	1367	1707	1824	1828	1859	2035	2090	2264	2582	2692
WPI (Average)	%	3.8	9.6	8.7	7.4	6	2	-2.5	3.7	3	3.7
CPI (Average)		12.4	10.4	8.3	10.2	9.5	6.4	4.9	4.5	3.4	3.5
Money Supply	%	19.2	16.2	15.8	13.6	13.5	12	10.3	7.3	9.5	10.0
CRR	%	5.75	6	4.75	4	4	4	4	4	4	4.0
Repo rate	%	5	6.75	8.5	7.5	8	7.5	6.75	6.25	6	6.25
Reverse repo rate	%	3.5	5.75	7.5	6.5	7	6.5	5.75	5.75	5.75	6.00
Bank Deposit growth	%	17.2	15.9	13.5	14.2	14.6	12.1	9.7	11.2	8	9.0
Bank Credit growth	%	16.9	21.5	17	14.1	13.5	12.5	10.7	4.7	9	14.0
Centre Fiscal Deficit	₹ Bn	4140	3736	5160	5209	5245	5107	5328	5343	5684	6344
Centre Fiscal Deficit	% of GDP	6.4	4.8	5.7	5.2	4.6	4.1	3.9	3.5	3.4	3.4
State Fiscal Deficit	% of GDP	2.9	2.1	1.9	2	2.2	2.6	3.6	3	3.5	3.2
Consolidated Fiscal Deficit	% of GDP	9.3	6.9	7.6	6.9	7.1	6.6	7.5	6.5	6.9	6.6
Exports	US$ Bn	182.4	251.1	309.8	306.6	318.6	316.7	266.4	280.1	299.7	336.8
YoY Growth	%	-3.5	37.6	23.4	-1	3.9	-0.6	-15.9	5.2	7	9.0
Imports	US$ Bn	300.6	381.1	499.5	502.2	466.2	460.9	396.4	392.6	459.3	520.6
YoY Growth	%	-2.5	26.7	31.1	0.5	-7.2	-1.1	-14	-1	17	11.0
Trade Balance	US$ Bn	-118.2	-129.9	-189.8	-195.6	-147.6	-144.2	-130.1	-112.4	-159.6	-183.8
Net Invisibles	US$ Bn	80	84.6	111.6	107.5	115.2	116.2	107.9	97.1	108.3	124.2
Current Account Deficit	US$ Bn	-38.2	-45.3	-78.2	-88.2	-32.4	-27.9	-22.2	-15.3	-51.2	-59.7
CAD (% of GDP)	%	-2.8	-2.6	-4.2	-4.7	-1.7	-1.4	-1.1	-0.7	-2	-2.2
Capital Account Balance	US$ Bn	51.6	62	67.8	89.3	48.8	90	41.1	36.5	64.9	52.5
Dollar-Rupee (Average)		47.4	45.6	47.9	54.4	60.5	61.2	65.5	67	64.8	70.0

Source: RBI, CSO, CGA, Ministry of Agriculture, Ministry of commerce, Bloomberg, PhillipCapital India Research

PhillipCapital India Coverage Universe: **Valuation Summary**

		CMP	Mkt Cap	Net Sales (₹ mn)		EBIDTA (₹ mn)		PAT (₹ mn)		EPS (₹)		EPS Growth (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		ROCE (%)	
Name of company	Sector	₹	₹ bn	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
Mahindra & Mahindra	Automobiles	655	814	535,596	596,267	76,055	84,670	46,458	50,391	39	42	10.9	8.5	16.7	15.4	2.3	2.1	10.7	9.6	13.8	13.6	12.8	12.6
Escorts	Automobiles	663	81	62,311	67,768	7,542	8,476	4,916	5,530	41	46	39.9	12.5	16.1	14.3	2.6	2.2	10.5	8.7	16.3	15.6	16.5	15.9
Tata Motors	Automobiles	177	555	3,085,012	3,354,298	336,840	413,523	71,774	77,209	-70	24	-409.4	-134.3	-2.5	7.4	1.4	1.2	3.8	3.3	17.9	16.4	-12.3	5.1
Bharat Forge	Automobiles	511	238	95,749	107,351	20,657	23,696	11,157	13,269	24	28	31.3	18.9	21.3	17.9	5.1	4.3	12.4	10.7	23.9	24.1	18.8	19.8
Bajaj Auto	Automobiles	2,910	842	291,270	328,428	48,189	54,761	42,956	46,781	148	162	4.8	8.9	19.6	18.0	3.9	3.4	17.4	15.3	19.8	19.0	20.0	19.3
Hero MotoCorp	Automobiles	2,676	534	337,788	372,864	51,381	58,479	35,556	39,360	178	197	-3.2	10.7	15.0	13.6	4.0	3.5	10.5	9.2	26.5	25.4	26.4	25.7
Apollo Tyres	Automobiles	214	122	177,195	200,502	20,650	25,395	8,685	11,663	15	20	20.0	34.3	14.1	10.5	1.2	1.1	7.7	6.8	8.2	10.1	6.0	7.2
Mahindra CIE	Automobiles	234	89	66,676	71,194	7,709	8,084	3,470	3,774	9	10	-5.0	8.8	25.5	23.4	2.3	2.2	12.7	12.3	9.0	9.5	8.3	9.1
Ceat	Automobiles	1,092	44	69,972	79,429	6,512	9,441	3,011	4,664	74	115	12.7	54.9	14.8	9.5	1.6	1.4	9.1	7.2	10.8	14.7	9.0	10.5
Ramkrishna Forgings	Automobiles	477	16	17,085	20,243	3,691	4,419	1,548	2,001	48	61	63.7	29.2	10.0	7.8	1.7	1.4	5.7	4.8	17.1	18.2	17.2	17.3
Maruti Suzuki	Automobiles	6,968	2,105	864,234	985,671	117,479	146,102	75,665	95,243	250	315	-2.0	25.9	27.8	22.1	4.5	4.0	17.9	14.2	16.3	18.1	15.6	17.6
Ashok Leyland	Automobiles	85	250	277,692	308,982	31,449	36,619	19,075	22,839	7	8	21.1	19.7	13.1	10.9	2.8	2.3	8.2	6.6	21.4	20.7	22.0	21.5
BHEL	Capital Goods	65	226	316,674	366,813	17,917	29,652	10,153	16,263	3	5	128.4	60.2	22.3	13.9	0.7	0.7	9.9	5.8	3.2	5.0	2.9	4.3
Larsen & Toubro	Capital Goods	1,285	1,802	1,413,124	1,578,136	173,198	188,827	87,383	94,638	62	67	20.2	8.1	20.6	19.1	2.9	2.6	16.4	15.3	14.1	13.8	6.7	6.4
VA Tech Wabag	Capital Goods	290	16	30,885	37,316	2,648	3,604	1,212	1,826	22	33	-11.9	50.7	13.1	8.7	1.3	1.2	7.2	4.6	9.9	13.3	6.9	9.4
CG Power & Industrial	Capital Goods	31	20	69,266	82,063	6,131	8,196	1,636	3,031	3	5	231.0	85.3	12.0	6.5	0.8	0.7	5.4	4.0	6.4	11.0	6.3	9.1
GE T&D	Capital Goods	285	73	45,539	39,659	4,544	4,265	2,645	2,641	10	10	8.6	-0.1	27.6	27.6	5.2	4.6	14.7	14.8	19.0	16.6	24.3	20.4
Voltas	Capital Goods	544	180	72,814	83,457	6,896	8,365	5,148	5,971	16	18	-7.1	16.0	34.9	30.1	4.2	3.8	25.8	21.0	12.1	12.7	13.0	14.2
Bharat Electronics	Capital Goods	80	196	114,100	128,052	23,643	26,259	15,220	16,387	6	7	3.4	7.7	12.8	11.9	2.2	2.0	8.0	7.0	17.4	16.7	16.1	15.2
Engineers India	Capital Goods	104	66	25,461	31,495	3,938	4,617	3,784	4,175	6	7	11.0	10.3	17.4	15.7	2.9	2.7	10.7	8.6	16.5	17.4	19.2	20.5
KEC International	Capital Goods	261	67	112,174	127,390	11,852	13,366	5,128	5,888	20	23	8.5	14.8	13.1	11.4	2.7	2.3	8.1	7.0	20.9	20.0	14.3	12.6
Cummins India	Capital Goods	720	200	56,451	63,377	8,937	10,252	7,511	8,544	27	31	6.0	13.8	26.6	23.4	4.7	4.4	21.7	18.8	17.7	18.7	16.6	18.0
Siemens	Capital Goods	978	348	126,399	143,537	12,308	15,361	8,390	10,517	24	30	21.7	25.4	41.5	33.1	4.2	3.8	25.3	20.0	10.1	11.6	9.8	10.6

PhillipCapital India Coverage Universe: **Valuation Summary**

		CMP	Mkt Cap	Net Sales (₹ mn)		EBIDTA (₹ mn)		PAT (₹ mn)		EPS (₹)		EPS Growth (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		ROCE (%)	
Name of company	Sector	₹	₹ bn	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
ABB India	Capital Goods	1,225	260	108,771	117,032	9,224	10,962	5,215	6,416	25	30	25.8	23.0	49.8	40.5	6.5	5.7	27.1	22.3	13.0	14.2	12.7	13.8
Thermax	Capital Goods	980	117	54,849	69,746	5,000	6,651	3,316	4,365	28	37	42.8	31.6	35.2	26.8	3.9	3.5	23.5	17.5	11.2	13.2	10.6	12.5
Cochin Shipyard	Capital Goods	348	46	29,431	27,875	5,776	4,880	4,709	3,864	36	29	20.3	-17.9	9.7	11.8	1.4	1.3	3.0	5.0	14.1	10.9	12.8	10.2
Hindustan Aeronautics	Capital Goods	655	219	182,158	202,808	25,081	27,685	15,225	19,079	46	57	-26.5	25.3	14.4	11.5	1.7	1.6	2.9	2.2	12.0	13.9	7.8	9.2
Bharat Dynamics	Capital Goods	290	53	43,514	36,086	7,020	5,662	5,162	4,452	28	24	-11.8	-13.7	10.3	11.9	2.3	2.1	6.0	6.4	22.6	17.3	18.8	14.9
Ultratech Cement	Cement	3,897	1,070	383,209	491,490	65,383	89,333	22,884	34,272	83	119	-11.0	42.5	46.8	32.8	3.8	3.0	19.6	14.5	8.1	9.3	6.1	7.4
Ambuja Cement	Cement	214	425	267,822	283,283	42,805	49,261	17,375	20,725	9	10	41.4	19.3	24.5	20.5	2.0	1.9	8.6	7.5	8.3	9.4	8.4	9.7
ACC	Cement	1,426	268	144,775	156,663	17,240	20,980	10,525	12,976	56	69	13.6	23.3	25.5	20.7	2.5	2.3	13.3	11.3	10.0	11.3	10.2	10.7
Shree Cement	Cement	16,651	583	119,963	147,398	28,024	33,991	13,117	15,581	377	447	-5.2	18.8	44.2	37.2	5.8	5.1	19.9	16.1	13.1	13.7	11.6	12.6
Odisha Cement	Cement	1,095	211	94,532	111,834	19,065	22,854	1,487	5,499	8	29	-49.1	269.9	142.0	38.4	2.0	1.9	13.2	11.6	1.4	5.0	3.4	4.8
India Cement	Cement	88	27	56,402	62,467	6,789	8,661	497	1,805	2	6	-25.2	263.1	54.7	15.1	0.5	0.5	8.7	7.0	1.0	3.5	2.7	4.0
JK Lakshmi Cement	Cement	324	38	37,739	41,810	4,811	6,951	572	2,359	5	20	8.9	312.6	66.7	16.2	2.6	2.3	12.2	7.9	3.8	14.2	6.2	10.4
JK Cement	Cement	710	55	48,918	51,024	8,089	8,492	2,507	2,398	32	31	-25.0	-4.3	21.9	22.9	2.1	2.0	9.4	10.3	9.7	8.9	7.6	6.8
HeidelbergCement Ind	Cement	150	34	21,394	22,447	3,943	4,302	1,857	2,206	8	10	39.4	18.8	18.3	15.4	2.8	2.3	8.6	7.1	15.1	15.2	11.4	11.9
Sanghi Cement	Cement	57	14	11,507	13,305	1,892	2,531	158	474	1	2	-83.1	200.5	90.8	30.2	0.9	0.9	12.6	11.4	1.0	2.9	2.5	3.4
Star Cement	Cement	96	40	17,973	20,264	4,984	5,337	3,194	3,284	8	8	-3.4	2.8	12.6	12.3	2.2	1.9	8.9	8.5	17.8	15.5	16.3	13.9
Mangalam Cement	Cement	214	6	10,765	11,339	1,027	1,423	222	482	8	18	95.0	117.3	25.8	11.9	1.0	1.0	8.6	5.7	4.0	8.1	5.5	7.8
ICICI Bank	Banks	346	2,229	266	313	237	270	45	149	7	23	-33.4	228.2	49.3	15.0	2.1	1.9	-	-	4.2	13.0	0.5	1.5
State Bank of India	Banks	268	2,388	865,140	985,952	578,481	655,740	58,367	275,507	7	29	-189.1	350.4	40.9	9.1	1.2	1.1	4.1	3.6	3.0	12.7	0.2	0.8
Bank of Baroda	Banks	101	267	182,743	222,890	133,603	169,687	24,663	82,427	8	28	-191.2	234.2	12.1	3.6	0.6	0.5	2.0	1.6	5.6	16.1	0.3	1.0
Punjab National Bank	Banks	71	272	167,584	211,645	96,986	118,933	-11,529	27,533	-3	7	-93.3	-338.8	-24.0	10.0	0.6	0.5	2.8	2.3	-2.8	5.9	-0.2	0.3
Canara Bank	Banks	231	174	142,172	160,439	91,740	106,012	11,217	24,810	12	28	-121.6	121.2	18.5	8.4	0.6	0.6	1.9	1.6	3.5	6.8	0.2	0.4
HDFC Limited	Banks	1,841	3,167	133,590	153,879	162,341	163,871	90,437	104,253	64	62	-12.5	-2.1	29.0	29.6	4.5	4.2	19.5	19.3	14.0	14.7	2.2	2.2

PhillipCapital India Coverage Universe: **Valuation Summary**

		CMP	Mkt Cap	Net Sales (₹ mn)		EBIDTA (₹ mn)		PAT (₹ mn)		EPS (₹)		EPS Growth (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		ROCE (%)	
Name of company	Sector	₹	₹ bn	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
AXIS Bank	Banks	718	1,846	215,460	258,215	179,754	218,628	40,978	104,695	16	40	1.6	154.2	46.0	18.1	2.8	2.5	10.3	8.4	6.2	14.5	0.6	1.4
Indian Bank	Banks	221	106	69,388	79,688	48,482	57,949	8,175	18,602	17	39	-35.1	127.6	13.0	5.7	0.7	0.6	2.2	1.8	5.1	11.0	0.3	0.6
HDFC Bank	Banks	2,092	5,693	467,627	567,826	381,497	463,872	209,779	252,696	78	93	15.1	20.5	27.0	22.4	3.9	3.4	14.9	12.3	16.6	16.2	1.9	1.9
Indusind Bank	Banks	1,479	891	111,023	139,919	93,957	118,086	47,551	66,271	69	94	14.4	36.1	21.5	15.8	3.3	2.7	9.5	7.5	16.5	19.0	1.9	2.1
DCB Bank	Banks	182	56	11,776	14,972	6,338	8,648	3,034	4,165	10	12	23.7	25.9	18.5	14.7	1.8	1.5	8.9	6.5	10.2	11.5	0.9	1.0
Union Bank	Banks	70	82	104,580	119,680	75,046	86,256	3,421	19,746	2	10	-103.8	477.2	40.7	7.1	0.5	0.4	1.1	0.9	1.4	6.9	0.1	0.4
Oriental Bank of Comm	Banks	81	51	48,359	57,178	40,944	47,279	-2,482	5,452	-3	6	-96.9	-319.6	-28.1	12.8	0.5	0.5	1.2	1.1	-2.1	3.9	-0.1	0.2
Kotak Mahindra Bank	Banks	1,215	2,319	113,790	141,406	89,688	109,058	51,097	62,918	27	33	24.7	23.1	45.3	36.8	5.5	4.8	25.9	21.3	12.8	13.8	1.8	1.8
Britannia	FMCG	3,054	734	110,200	124,432	17,745	21,089	11,719	13,188	49	55	16.7	12.5	62.6	55.6	18.3	15.7	41.2	34.5	29.3	28.3	31.2	31.0
Jubilant Foodworks	FMCG	1,273	168	35,635	41,037	6,066	7,528	3,299	4,212	25	32	59.8	27.7	50.9	39.8	12.7	10.1	27.1	21.3	25.0	25.2	27.6	27.9
ITC	FMCG	275	3,370	447,401	490,867	174,517	193,411	122,334	134,111	10	11	13.2	9.6	27.5	25.1	6.1	5.7	19.1	17.1	22.3	22.9	22.2	22.8
Hindustan Unilever	FMCG	1,738	3,761	339,260	390,450	72,760	86,488	52,990	62,291	25	29	44.9	17.6	70.8	60.3	53.0	46.2	51.2	42.9	74.9	76.7	65.5	68.7
Colgate	FMCG	1,260	343	44,557	49,706	12,560	14,621	7,501	8,847	28	33	9.5	17.9	45.7	38.7	23.0	23.5	26.9	23.1	50.3	60.7	45.8	57.8
Glaxo Smithkline Cons	FMCG	7,199	303	40,970	45,852	8,834	11,248	7,001	8,968	166	213	6.6	28.1	43.2	33.8	8.7	7.7	30.2	23.3	20.1	22.7	20.0	23.0
Titan Company	FMCG	1,017	902	190,807	225,437	21,763	27,354	15,761	19,600	18	22	25.6	24.4	57.3	46.0	14.5	11.8	40.8	32.1	25.2	25.5	26.8	29.3
Asian Paints	FMCG	1,402	1,345	196,241	224,832	37,198	45,747	23,019	28,227	24	29	16.9	22.6	58.4	47.6	14.2	12.6	36.2	29.3	24.4	26.4	23.5	25.6
Godrej Consumer Prod	FMCG	657	671	105,303	115,430	21,652	24,247	14,717	16,816	14	16	1.2	14.3	45.6	39.9	9.9	9.3	31.6	28.1	21.8	23.4	16.9	17.9
Emami	FMCG	400	182	27,227	31,125	7,534	8,562	3,287	4,128	7	9	7.0	25.6	55.2	44.0	8.5	8.4	24.1	20.9	15.5	19.1	16.3	19.1
Agro Tech Foods	FMCG	565	14	8,446	9,091	676	728	351	366	14	15	10.8	4.4	39.2	37.6	3.7	3.4	19.5	17.7	9.5	9.2	9.9	9.5
Marico Industries	FMCG	340	439	74,043	84,471	12,852	16,035	9,164	11,501	7	9	12.5	25.5	47.9	38.2	16.0	13.9	34.2	27.3	33.3	36.5	35.0	39.3
Dabur India	FMCG	436	769	86,987	98,281	18,309	21,015	15,227	17,588	9	10	11.0	15.5	50.5	43.7	13.9	11.7	42.4	36.5	27.5	26.8	25.7	27.7
Bajaj Corp	FMCG	389	52	8,825	9,663	2,781	3,048	2,281	2,170	15	15	8.1	-4.9	25.2	26.4	12.1	12.0	18.6	17.0	48.2	45.5	46.1	44.5
Parag Milk Foods	FMCG	220	19	22,366	26,335	2,395	2,999	1,168	1,581	14	19	48.7	35.3	15.8	11.7	2.2	1.9	8.4	6.4	14.1	16.2	18.1	20.0

PhillipCapital India Coverage Universe: **Valuation Summary**

		CMP	Mkt Cap	Net Sales (₹ mn)		EBIDTA (₹ mn)		PAT (₹ mn)		EPS (₹)		EPS Growth (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		ROCE (%)	
Name of company	Sector	₹	₹ bn	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
Nestle	FMCG		1,034	112,792	126,945	27,730	31,700	16,594	19,383	172	201	35.4	16.8	62.3	53.3	27.2	24.1	36.5	31.6	43.6	45.2	28.5	29.6
Thangamayil	FMCG	318	4	14,972	17,807	731	899	301	398	22	29	31.8	32.0	14.5	11.0	2.3	1.9	7.8	6.5	15.7	17.7	23.1	25.0
Sadbhav Engineering	Infrastructure	176	30	37,504	43,130	4,388	4,960	2,434	2,286	14	13	10.3	-6.1	12.4	13.2	1.4	1.3	9.9	8.7	11.6	9.9	9.1	8.1
KNR Construction	Infrastructure	201	28	20,012	25,015	3,902	4,127	2,246	1,685	16	12	-17.5	-25.0	12.6	16.8	2.0	1.8	-	-	17.7	11.5	16.1	11.0
IRB Infrastructure	Infrastructure	134	47	65,979	68,927	29,805	28,332	9,002	5,859	26	17	-2.1	-34.9	5.2	8.0	0.7	0.6	6.5	7.6	14.0	7.6	4.3	3.8
Ahluwalia Contracts	Infrastructure	286	19	18,442	22,130	2,351	2,932	1,313	1,677	20	25	13.7	27.7	14.6	11.4	2.6	2.1	7.6	6.0	19.1	20.1	20.0	20.8
PNC Infratech	Infrastructure	127	32	28,963	39,100	4,229	5,591	2,454	2,546	10	10	-2.3	3.8	13.2	12.7	1.6	1.4	8.9	7.4	12.8	11.8	12.4	11.2
Adani Ports & SEZ	Infrastructure	325	672	110,949	124,997	72,897	83,424	45,159	49,446	22	24	8.8	9.5	14.9	13.6	2.8	2.3	11.5	9.8	18.5	17.2	10.4	11.9
NCC	Infrastructure	84	51	120,193	145,434	13,942	15,998	5,976	6,852	10	11	65.4	14.7	8.5	7.4	1.1	0.9	5.1	4.5	12.6	12.8	13.5	13.8
ITD Cementation	Infrastructure	106	18	33,026	37,980	3,633	4,178	1,430	1,529	8	9	-5.3	6.9	12.7	11.9	1.5	1.3	6.5	5.8	11.6	11.1	11.8	11.8
Ashoka Buildcon	Infrastructure	114	32	35,500	46,150	4,615	5,769	2,820	2,690	10	10	19.0	-4.6	11.4	11.9	1.5	1.3	8.3	7.6	13.1	11.2	12.4	11.8
Tata Consultancy	IT Services	2,055	7,711	1,460,459	1,599,180	397,316	438,017	315,094	339,983	84	91	24.2	7.9	24.5	22.7	8.9	7.3	19.3	17.4	36.4	32.1	35.0	34.2
Infosys Technologies	IT Services	735	3,211	823,427	897,518	210,944	233,974	159,678	177,761	37	41	8.9	11.3	20.0	18.0	5.0	4.4	13.7	12.2	24.9	24.7	23.5	25.9
Wipro	IT Services	374	1,691	584,883	633,815	116,502	133,987	88,340	103,461	20	23	10.4	17.1	19.0	16.3	3.2	2.9	14.8	12.8	16.7	17.7	15.4	16.5
HCL Technologies	IT Services	1,063	1,442	598,604	691,500	140,035	168,102	100,472	107,547	74	79	17.2	7.0	14.4	13.4	3.5	3.0	10.3	8.5	24.4	22.1	23.6	21.3
Tech Mahindra	IT Services	827	811	346,621	371,553	62,973	65,701	43,067	44,388	49	50	13.5	2.1	16.8	16.5	3.6	3.2	12.8	12.0	21.2	19.3	15.7	14.9
L&T Infotech	IT Services	1,728	300	93,817	108,339	18,973	21,113	15,048	16,825	88	99	29.6	11.8	19.6	17.5	6.6	5.2	15.6	13.8	33.6	29.7	33.2	30.7
L&T Technology Servi	IT Services	1,501	156	50,306	57,922	8,984	10,403	7,512	8,002	74	79	48.3	6.5	20.3	19.1	6.8	5.4	17.5	15.0	33.3	28.2	33.0	28.7
Mindtree	IT Services	898	147	69,655	78,950	10,657	11,963	7,439	8,158	45	50	30.5	9.7	19.8	18.0	4.5	3.8	13.7	12.1	22.8	21.3	24.8	23.0
Cyient Limited	IT Services	635	72	46,562	52,296	6,529	7,426	4,411	5,612	39	50	2.8	27.2	16.2	12.7	2.7	2.4	9.7	8.2	16.9	18.6	16.5	18.3
Persistent Systems	IT Services	643	51	33,886	36,277	6,138	6,165	3,742	4,034	47	50	15.8	7.8	13.7	12.7	2.1	1.9	7.8	7.6	15.3	14.8	15.2	14.6
NIIT Technologies	IT Services	1,317	81	36,616	42,191	6,550	7,607	4,139	4,858	68	79	47.7	17.4	19.5	16.6	4.1	3.4	11.2	9.2	21.0	20.7	21.1	21.4
Intellect Design Arena	IT Services	187	25	14,297	16,924	1,301	1,616	1,174	1,009	9	8	140.4	-14.0	20.9	24.3	2.7	2.4	20.5	17.1	-	-	8.2	9.2

PhillipCapital India Coverage Universe: **Valuation Summary**

		CMP	Mkt Cap	Net Sales (₹ mn)		EBIDTA (₹ mn)		PAT (₹ mn)		EPS (₹)		EPS Growth (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		ROCE (%)	
Name of company	Sector	₹	₹ bn	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
Majesco	IT Services	454	13	9,763	10,907	873	1,076	631	777	22	28	-	23.2	20.3	16.5	2.1	1.8	13.9	10.7	10.2	11.1	9.3	9.4
Praj Inds.	Logistics	139	25	10,794	13,303	886	1,658	602	1,168	3	7	100.1	93.9	41.5	21.4	3.3	3.0	27.4	14.1	8.0	14.0	8.0	14.3
Pennar Inds.	Logistics	33	4	20,698	23,096	1,742	2,203	623	840	5	7	8.5	34.9	6.4	4.7	0.6	0.6	3.8	3.1	9.7	11.9	12.7	14.6
Indo Count Industries	Logistics	36	7	20,304	22,768	2,395	3,005	1,163	1,456	6	7	-7.1	25.1	6.1	4.9	0.7	0.6	4.5	3.8	11.2	12.5	10.7	12.1
Sintex Plastics Techno	Logistics	18	12	51,055	56,932	6,992	8,407	1,745	2,882	3	4	-29.0	65.1	7.0	4.2	0.3	0.3	5.8	4.7	4.8	7.5	4.9	6.3
KDDL	Logistics	435	5	5,709	6,741	527	675	166	228	15	21	-3.7	38.0	28.5	20.6	3.3	3.0	12.6	10.2	11.7	14.6	8.3	10.0
Gateway Distriparks	Logistics	108	12	4,162	4,622	819	930	988	1,147	9	11	18.9	16.0	11.8	10.2	1.1	1.1	15.5	13.6	9.7	11.1	9.7	11.0
Container Corp Of India	Logistics	474	289	66,658	81,640	14,790	18,617	12,200	15,512	25	32	16.3	27.1	18.9	14.9	2.3	2.1	18.0	14.1	12.1	14.4	12.1	14.5
Navkar	Logistics	41	6	4,892	6,141	1,521	2,026	556	830	4	6	-44.9	49.2	11.0	7.4	0.3	0.3	6.7	4.6	3.0	4.3	3.7	4.5
Allcargo Logistics	Logistics	99	24	67,405	74,358	4,462	5,346	2,154	2,856	9	12	20.9	32.6	11.3	8.5	1.2	1.1	5.9	4.8	10.3	12.5	9.8	11.9
VRL Logistics	Midcap	240	22	21,203	23,774	2,366	3,057	940	1,256	10	14	1.5	33.6	23.1	17.3	3.4	3.0	9.9	7.8	14.7	17.4	12.0	14.0
VGuard Industries	Midcap	197	84	26,081	29,937	2,258	2,855	1,636	2,141	4	5	22.9	30.8	51.2	39.1	9.5	8.0	37.0	29.2	18.6	20.5	19.1	21.3
Bajaj Electricals	Midcap	450	46	67,398	63,098	4,392	4,816	2,175	2,488	21	25	25.8	14.4	21.0	18.3	4.1	3.5	13.1	11.3	19.5	19.0	14.0	13.6
Uniply Industries	Midcap	42	7	7,056	11,516	909	1,385	380	637			-	-	-	-	-	-	11.6	7.7	8.6	7.5	9.4	10.2
Finolex Cables	Midcap	390	60	31,211	35,024	4,571	5,333	3,708	4,225	24	28	3.5	13.9	16.1	14.1	2.4	2.1	12.8	10.8	14.9	15.0	15.4	15.6
KEI Industries	Midcap	324	26	41,686	48,855	4,249	5,107	1,759	2,322	22	30	21.7	32.0	14.4	10.9	3.3	2.6	7.9	6.5	22.9	23.5	16.3	17.7
Havells India	Midcap	692	433	102,520	118,665	12,450	15,267	8,377	9,652	13	15	19.6	15.2	51.7	44.8	10.3	9.0	34.5	28.1	19.9	20.1	19.0	19.6
Orient Paper & Industr	Midcap	33	7	7,110	7,791	1,444	1,641	1,019	1,065			-	-	-	-	-	-	4.9	4.4	7.2	7.1	6.7	6.4
Orient Electric Ltd	Midcap	143	30	15,998	19,527	15,998	19,527	15,998	19,527			-	-	-	-	-	-	1.9	1.6				
Indiabulls Housing Fi	NBFC	658	281	53,594	63,661	63,889	74,924	42,676	52,362	100	123	18.9	22.7	6.6	5.4	1.9	1.6	4.4	3.8	30.3	32.4	3.0	3.1
Muthoot Finance	NBFC	517	207	45,506	51,198	31,482	35,373	19,704	22,115	49	55	14.5	12.2	10.5	9.4	2.2	1.9	6.6	5.9	23.2	21.9	5.6	5.6
Shriram City Union Fin	NBFC	1,630	108	36,537	39,356	23,222	24,966	9,720	10,333	147	157	46.2	6.3	11.1	10.4	1.7	1.5	4.6	4.3	16.4	15.4	3.2	3.2
Cholamandalam Invest	NBFC	1,217	190	35,568	43,001	21,760	25,014	11,787	13,431	75	82	21.0	8.7	16.2	14.9	3.1	2.3	8.7	7.6	20.9	18.0	2.7	2.5

PhillipCapital India Coverage Universe: **Valuation Summary**

		CMP	Mkt Cap	Net Sales (₹ mn)		EBIDTA (₹ mn)		PAT (₹ mn)		EPS (₹)		EPS Growth (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		ROCE (%)	
Name of company	Sector	₹	₹ bn	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
Shriram Transport Fina	NBFC	1,131	257	75,369	83,691	59,561	65,355	23,539	27,399	104	121	59.5	16.4	10.9	9.4	1.8	1.5	4.3	3.9	17.3	17.3	2.6	2.7
LIC Housing Finance	NBFC	467	236	38,520	44,281	33,649	38,672	21,941	24,931	43	49	10.3	13.6	10.7	9.5	1.5	1.4	7.0	6.1	15.6	15.2	1.2	1.3
Repco Home Finance	NBFC	330	21	4,647	5,178	4,036	4,461	2,263	2,561	36	41	8.9	13.2	9.1	8.1	1.3	1.2	5.1	4.6	15.8	15.5	2.2	2.2
Dewan Housing Fina	NBFC	128	40	21,225	23,924	18,188	20,488	10,849	12,118	35	39	-7.4	11.7	3.7	3.3	0.4	0.4	2.2	2.0	11.7	11.8	1.1	1.2
Mahindra & Mah Fin	NBFC	398	246	45,740	52,894	31,095	35,767	13,637	16,385	22	27	60.5	20.2	17.9	14.9	2.3	2.1	7.9	6.9	13.7	14.5	2.3	2.3
Manappuram Finance	NBFC	114	96	23,301	25,830	12,574	14,513	7,962	9,143	9	11	13.7	14.8	12.0	10.5	2.1	1.8	7.6	6.6	19.2	18.9	5.1	5.1
Magma Fincorp	NBFC	104	28	13,158	14,279	7,220	7,956	3,024	3,852	11	14	15.5	27.4	9.3	7.3	1.0	0.9	3.9	3.5	12.1	13.6	2.0	2.2
Ipca Laboratories	Pharma	803	101	36,299	42,411	6,786	8,187	4,299	5,381	34	43	79.9	25.2	23.4	18.7	3.2	2.8	15.2	12.2	13.9	14.8	11.7	13.1
Aurobindo Pharma	Pharma	718	420	202,535	222,258	41,317	48,230	26,389	30,075	45	52	8.3	14.0	15.8	13.9	2.9	2.5	10.8	9.0	18.6	17.6	17.6	18.4
Divi's Laboratories	Pharma	1,640	435	50,067	57,291	19,226	21,427	13,499	14,961	51	56	59.0	10.8	32.2	29.1	6.4	5.5	22.6	20.2	19.7	18.9	-	-
Cadila Healthcare	Pharma	319	326	126,638	151,739	28,344	34,272	17,774	19,878	17	19	0.5	11.8	18.4	16.4	3.1	2.6	14.2	11.5	16.4	15.4	10.8	10.9
Sun Pharma	Pharma	443	105	293,951	338,070	69,507	82,616	42,918	54,227	18	23	34.7	26.4	24.8	19.6	2.5	2.3	1.2	0.6	10.2	11.5	8.6	9.7
Cipla	Pharma	551	444	160,497	183,985	28,569	35,141	13,794	18,641	17	23	-6.3	35.1	32.1	23.7	2.9	2.6	16.0	12.6	8.9	10.9	-	-
Lupin	Pharma	768	347	161,785	178,673	25,984	33,815	8,483	15,256	19	34	-37.2	79.8	40.9	22.7	2.5	2.3	15.7	11.7	6.0	10.0	-	-
Glenmark Pharma	Pharma	584	165	96,271	107,869	17,990	21,327	8,445	10,865	30	39	8.8	28.7	19.5	15.2	2.6	2.2	10.8	9.0	13.3	14.7	9.6	11.0
Dr Reddy's Labs.	Pharma	2,646	439	152,984	172,790	32,127	38,014	17,853	21,890	105	128	76.3	22.6	25.3	20.6	3.2	2.8	14.8	12.2	13.3	13.8	8.4	9.0
Biocon	Pharma	617	370	54,202	71,502	13,509	19,690	6,872	11,356	11	19	137.5	65.2	53.8	32.6	6.4	5.4	28.4	19.5	11.5	16.2	10.9	15.9
SRF	Specailty Che	2,255	130	77,443	87,178	14,017	17,261	6,841	8,836	119	154	64.7	29.2	18.9	14.7	3.1	2.6	11.6	9.2	16.4	17.8	10.6	11.8
Camlin Fine Sciences	Specailty Che	44	5	8,820	12,547	750	1,882	43	785	0	6	-114.0		124.9	6.8	1.4	1.2	13.2	4.9	2.7	20.4	-	-
Aarti Industries	Specailty Che	1,394	113	50,421	57,510	9,933	11,157	5,159	5,836	63	72	55.0	13.1	22.0	19.4	5.5	4.3	13.6	12.5	25.5	22.7	-	-
Vinati Organics	Specailty Che	1,455	75	11,320	15,031	3,993	4,995	2,783	3,503	54	68	105.0	25.9	26.9	21.3	7.1	5.3	18.7	14.4	26.4	25.0	-	-
Atul	Specailty Che	3,300	98	41,848	46,653	7,909	8,957	4,710	5,315	159	179	67.5	12.8	20.8	18.4	3.7	3.1	11.9	10.1	17.4	16.6	-	-

Source: PhillipCapital India Research Estimates

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