COVERAGE INITIATION

ESPIRITO SANTO INVESTMENT BANK
Research

India | Cement | Large Cap | 20-September-2013

Cement

Concrete recovery ahead

The Cement industry is amongst those few sectors that act as a proxy to both India's consumption and infrastructure growth story. While regulatory headwinds have stunted infrastructure growth, our detailed bottom-up demand analysis points to a 7.5% CAGR for cement demand in India over FY13-16E. Further, post-monsoon demand and pre-election spending should revive demand in 2H13. Owing to capacity additions over FY08-13, naysayers raise the spectre of an imminent price war to talk down the cement industry. However, we think the industry is mature enough to maintain its supply discipline and price 'sanity', as is evident from the low correlation between utilization levels/margins over the past 20 years. Moderation in capacity additions, rising capital costs, enlarged balance sheets (for marginal players) and rising raw material costs should also extend cost push support. We initiate with a BUY rating on Ultratech, Ambuja and ACC and a NEUTRAL on Shree Cement.

Demand: Underlying drivers intact; India – yet to ride the global curve

Our detailed bottom-up demand analysis points to demand growth at a 7.5% CAGR over FY13-16E, with housing (67% of total demand) to grow at 8.8% and Infrastructure (comprising irrigation, railways and water sanitation) to grow at 7.5% CAGR. In 2H13 we expect a good monsoon to spur consumption which, along with pre-election spending (10 state assembly and a general election), should drive demand revival. Rising state spending on cement-intensive sectors, increasing share of construction & real estate spend (as a % of GDP) and stable cement intensity bolster our faith in India's cement story. With per capita consumption at 40% of the global average, we think India has yet to ride the global curve. In our view, cement is a good proxy to Indian's infra and consumption growth story.

Expect price sanity to prevail, not because they are Good Samaritans

We think supply discipline generally prevails, not because the cement players are Good Samaritans but due to plain economics which captures operational/financial leverage. Whilst economic rationality isn't everything, we think the Indian cement industry has matured with no (price) war of attrition. Higher capital costs, increasing debt burden for marginal players, cost inflation and moderating capacity additions also point to the continuation of pricing 'sanity'.

Cost inflation is here to stay; cost efficiencies — order of the day

Raw material prices (fly ash/gypsum/limestone), power/coal costs (grid/linkage) and freight rates (rail/road) all look set to move up. Increasing under-recoveries should increase diesel prices, while price pooling could push coal prices up. Analysing historical cement prices/margins, we find cement makers have successfully passed on cost increases in the past. We also think cement makers have the potential to expand margins via increased usage of AFR, WHR systems and higher blending (fly ash/slag). We estimate that such cost-cutting initiatives could boost cumulative EBITDA for covered companies by 24% (see Figure 82)

Initiate with BUY on Ultratech, Ambuja, ACC; NEUTRAL on Shree Cement

We initiate on Ultratech (UTCEM IN, FV Rs 2221, 10x FY15E EV/OP), Ambuja (ACEM IN, FV Rs 206, 9x CY14E EV/OP) and ACC (ACC IN, FV Rs 1397, CY14E 9x EV/OP) with BUY ratings and on Shree Cement (SRCM IN, FV Rs 4199, FY14E 8x EV/OP + NPV) with a NEUTRAL. We assign above industry average target multiples to our top 4 as they offer: 1) Significantly higher market share (combined top 4 hold 40% of India cement production), 2) Superior growth visibility (i.e. 61% of total additions over FY14-16E), 3) Healthy balance sheets (UTCEM IN at ~0.2x vs. industry average at 1.5x; other 3 net cash) and importantly 4) above industry return ratios (at 16-17% vs. industry average at ~10%)

Ultratech Cements

BUY	29% upside
Fair Value	Rs2,221.00
Bloomberg ticker	**UTCEM IN**
Share Price	Rs1,720.00
Market Capitalisation	Rs471,280.00m
Free Float	40%

Ambuja Cements

BUY	14% upside
Fair Value	Rs206.00
Bloomberg ticker	**ACEM IN**
Share Price	Rs180.00
Market Capitalisation	Rs276,840.00m
Free Float	50%

ACC

BUY	31% upside
Fair Value	Rs1,397.00
Bloomberg ticker	**ACC IN**
Share Price	Rs1,065.00
Market Capitalisation	Rs200,220.00m
Free Float	50%

Shree Cement

NEUTRAL	6% upside
Fair Value	Rs4,199.00
Bloomberg ticker	**SRCM IN**
Share Price	Rs3,964.00
Market Capitalisation	Rs137,947.20m
Free Float	25%

Source: Espirito Santo Investment Bank Research, Company Data, Bloomberg

Key fundamental metrics indicate Ultratech as top pick, followed by Ambuja & ACC

Comparison Table	Ultratech	ACC	Ambuja	Shree
Return, Leverage & Growth	●	◕	◕	◕
Operational Characteristics	●	◕	◕	◕
Market Position	●	◕	◕	◑
Overall	●	◕	◕	◑

Source: ESIBR, Company Data

*Full green coloured circle = 4 (best), full white = 0 is worst (Relative to these 4)

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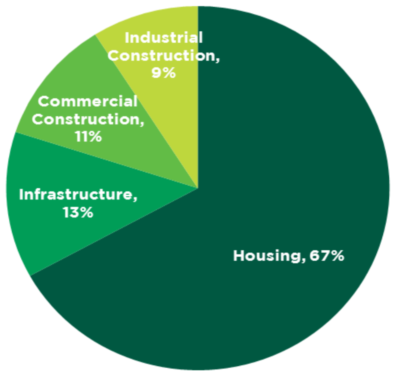
Contents

India demand — macro drivers & impact on multi-regional market

Macro drivers: The Indian cement consumption story is primarily being driven by housing demand, which accounts for 67% of total consumption, followed by infrastructure at 13%, commercial construction at 11% and Industrial construction at 9%. Housing, which commands the lion's share of total consumption, is likely to remain the key growth driver, as only 29% of the existing 247mn households have concrete roofs and the remaining 71% present an untapped opportunity. India's push to improve its ailing infrastructure is also expected by us to remain a key driver for cement demand. The GOI has an ambitious outlay of $1tn for infrastructure spending in the XIIth plan, which is double that allotted in the XIth plan. Other macro drivers that inspire faith in the long-term demand growth story include a) rising state spending on cement intensive sectors, b) increasing share of construction & real estate spending as a % of GDP, c) stable cement intensity (cement consumption per Rs Mn of construction + real estate spending) and d) GOI's renewed impetus on addressing urban housing & infrastructure needs.

Figure 1 With 67% of total consumption, Housing is the key growth driver (2012)



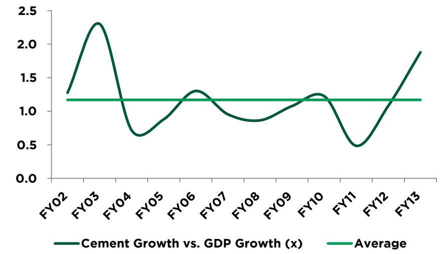
Source: Espirito Santo Investment Bank Research, CMA

Figure 2 ESIB bottom-up India cement consumption model: Housing to remain the key growth driver

Source: Espirito Santo Investment Bank Research for estimates, Company Data

India demand analysis – top down & bottom up: India's cement demand growth has tracked the GDP growth rate (Figure 3), with the 10-year average cement/GDP growth at 1.2x. Our bottom up analysis — which considers the four key segments a) Housing, b) Industrial, c) Infrastructure and d) Commercial construction growth — implies FY14E cement demand growth of 5.8%. Factoring long term cement intensity (1.2x) and our bottom up cement growth (at 5.9%), we infer expected GDP growth at 4.8%, which is substantially lower than most recent (September 13th, 2013) PMEAC's guidance at 5.3% leaving upside risk to our estimates.

Figure 3 Average Cement Growth/GDP Growth Ratio is 1.2 over the past 10 years



Source: Espirito Santo Investment Bank Research, CMA, RBI

a) **Housing demand:** We expect demand for cement from housing to grow at CAGR of 8.8% over FY13-FY16E, with rural to outpace urban. Our model assumes a new housing loan disbursement rate of 15% and urban share of total mortgage at 70%. Since 65% of the population resides in rural areas, we apportion cement demand between rural and urban areas in a similar ratio, implying a rural dominated consumption play. We expect housing to remain a structural growth driver not only because of a massive housing shortage (~20mn urban + ~40mn rural, MoHUPA) but also due to low cement usage in existing housing construction.

b) **Infrastructure growth:** We have divided infrastructure cement consumption into 4 sub segments, namely irrigation, railways, water supply & sanitation and others. Irrigation demand is driven by state spending, with a planned outlay of INR~710bn in FY13, implying ~20mt

We expect housing to remain a structural growth driver not only because of a massive housing shortage (~20 urban + ~40 rural) but also due to low cement usage in existing housing construction.

of cement demand. Irrigation spending by states show a clear uptrend and is expected by us to register strong growth of 8% over FY13-16E. As per the planning commission, India has ultimate irrigation potential of ~140mn ha, of which ~101mn ha has been created till the end of the Xth plan, implying significant investment potential ahead. As per planning commission, railways are expected to increase planned spending in the XIIth plan to 2.5x that of the last plan, which implies ~6-7mt of annual cement consumption. Water supply & sanitation is another state-spend based cement demand driver which contributes to ~2mt of annual cement demand. We expect increasing state spend in this sub segment to drive growth at a 7% CAGR over FY13-16E. We further expect others to grow at a meagre 2% over the same period. On an aggregate basis, we expect irrigation & railways to drive infrastructure growth at 7.5% CAGR over FY13-16E.

We expect irrigation & railways to driver infrastructure growth at 7.5% CAGR over FY13-16E.

c) **Industrial construction growth:** We have divided industrial construction demand into energy and others. Owing to a slowdown in power execution, we expect cement demand in this segment to drop by 2/3rd of the FY10 level to ~3.5mt in FY14E and then grow at a meagre 1% for the next two years. We further expect others to grow at the 5% level owing to moderation in new industrial project implementation.

d) **Commercial construction growth:** Owing to a moderation in commercial construction in urban areas, we expect commercial growth to remain at a 3% CAGR over FY13-16E.

We expect total cement demand to grow at a 7.5% CAGR over FY13-16E, which may be further boosted by a faster than expected recovery in infrastructure demand.

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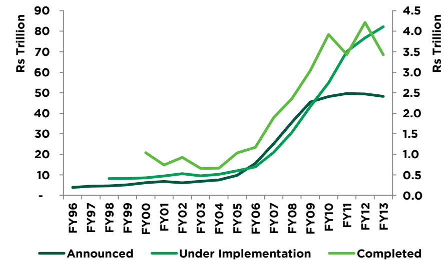
Under-implementation pipeline remains strong: We use the annual Centre for Monitoring Indian Economy (CMIE) data on announced projects, under implementation projects and completed projects across all sectors, (including manufacturing, textiles, chemicals, consumer goods, construction material, metals & mining, machinery, transport & transport equipment and construction & real estate) to gauge the impact of macro drivers on capital spend. CMIE data (Figure 4) for total announced projects, under implementation projects and completed projects in value terms show a strong correlation among two year lagged curves for these three categories. Further, the average ratio of completed to two year lagged under implementation projects over FY00-11 stands at 8%. Considering Rs77tn of projects under implementation as of FY12 and 8% completion to under implementation ratio, FY14 project completion will reach Rs6tn in FY14 vs. Rs3.4tn in FY13. Even assuming a 5% rate achieved in FY13, the FY14 project completion would be Rs3.8tn, i.e., 12% higher than that of FY13. With the under implementation pipeline still strong, we believe cement demand can be expected to remain strong in near term.

Figure 4 Under Implementation projects as per CMIE remains strong



Source: Espirito Santo Investment Bank Research, CMIE

Multi-regional market — high freight cost induces regionalism

The cement industry is largely regional in nature, as cement is a high volume/low value product and freight accounts for a significant portion of total cost (~20-25% of total). The Indian cement industry is accordingly divided into five regions, viz. East, West, North, South and Central (Appendix 5, Figure 196). Cement demand across regions is driven by the same macro factors as discussed above; however, the quantum of investment varies.

Cement industry is regional in nature, as cement is a high volume/low value product and freight accounts for a significant portion of total cost (~20-25% of total).

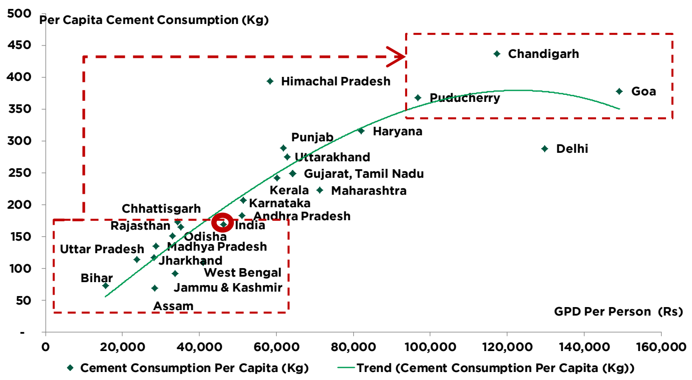
Regional cement curve — East and Central yet to ride the curve: The cement per capita demand across states/UTs varies from a low of 69kg (in Assam) to a high of 437kg (in Chandigarh). State-wise cement consumption (Figure 5) shows a similar trend to the international cement curve (Figure 173). Union territories represent the high end of the curve, while key growth states like Gujarat, Maharashtra, Tamil Nadu, Andhra Pradesh and

Cement per capita demand across state varies from a low of 69kg (in Assam) to a high of 437kg (in Chandigarh).

We expect two key trends to emerge as various states ride through the cement curve (Figure 141), 1) movement along the curve and 2) upward shift of the curve.

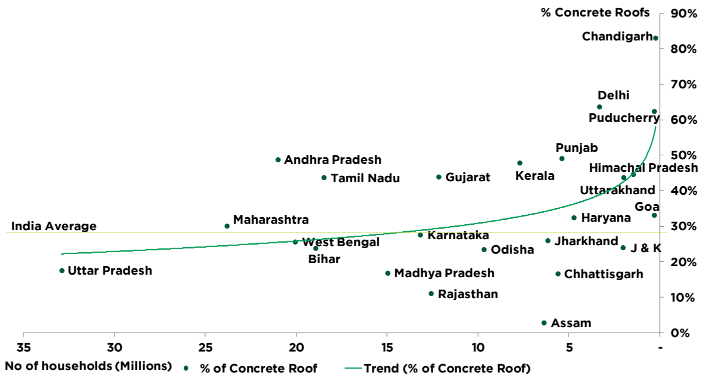
Karnataka represent the mid portion of the curve and eastern & central states represent the low end of the curve. We expect two key trends to emerge as various states ride through the cement curve (Figure 5): the first a movement along the curve and the second an upward shift of the curve. Leading states will try to catch up with world average, leading to an upward shift; while followers will move along the curve. The progress of the Indian cement story will be outlined by continued growth of key growth states (mid curve) and renewed growth from eastern & central states as they embark upon a rapid growth trajectory.

Figure 5 East and Central states yet to ride the cement curve



Source: Espirito Santo Investment Bank Research, CRISIL, RBI, 2010 Data

Figure 6 Concrete roofing as % of total is at a low 29% across India



Source: Espirito Santo Investment Bank Research, Planning Commission

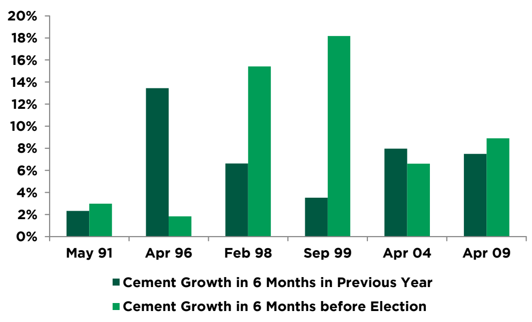
Cement consumption – regional demand trends

We expect demand to pick up in H2FY14 and factor a high single digit growth in FY15E & FY16E. We estimate state wise growth trends in Figure 9, with key growth drivers as outlined above (Figure 2). Cement growth tends to grow in election years (Figure 7). A look at the past six general elections shows that cement demand growth in the six months prior to an election generally exceeds that of the corresponding period in the prior year. *To put this into context, 10 states are slated for assembly elections in 2013-14, which as per CMA, together accounted for 43% of total cement consumption in FY12.* We think general elections, combined with state assembly elections in 10 states, will lead to higher state/central spending on housing and infrastructure projects, which in turn lead to increased cement demand.

We expect cement demand to pick up as ten Indian States get into assembly election mode over 2013-14 and impending general elections in May 2014. Empirical evidence indicates pick-up in cement demand before elections.

Our bottom up demand approach estimates election-bound states are likely to register high single digit growth rates. States like Madhya Pradesh in the Central region; New Delhi & Rajasthan in the North; Chhattisgarh, Odisha & Sikkim in the East and Andhra Pradesh in the South are poll-bound within the next one-year period and are generally expected to be demand drivers in respective regions.

Figure 7 Cement demand generally spurts before election



Source: Espirito Santo Investment Bank Research, ECI, DIPP

Figure 8 Elections in top cement consuming states in 2013-14

Year	Region	State	Year	Region	State
Dec-13	Central	Madhya Pradesh	Jan-14	East	Chhattisgarh
Dec-13	North	Delhi	Nov-14	East	Arunachal Pradesh
Dec-13	North	Rajasthan	Jun-14	East	Odisha
			May-14	East	Sikkim
			Dec-14	West	Maharashtra
			Oct-14	North	Haryana
			Jun-14	South	Andhra Pradesh

Source: Espirito Santo Investment Bank Research, ECI

Figure 9 Expect domestic demand to pick up in H2FY14

Domestic Consumption Growth	Region	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14E	FY15E	FY16E
Uttarakhand	North	25%	21%	14%	-4%	3%	0%	9%	9%	8%	9%	9%
Haryana	North	16%	13%	24%	4%	-6%	-1%	15%	10%	5%	8%	10%
Punjab	North	8%	15%	2%	-5%	5%	13%	8%	9%	3%	9%	9%
Rajasthan	North	19%	10%	13%	6%	13%	3%	11%	10%	8%	9%	10%
Himachal Pradesh	North	10%	17%	1%	2%	193%	20%	3%	9%	3%	9%	9%
Chandigarh	North	40%	38%	16%	2%	-1%	-42%	-56%	9%	3%	9%	9%
Delhi	North	-7%	-15%	19%	34%	-11%	-12%	5%	8%	8%	8%	8%
Jammu & Kashmir	North	7%	22%	1%	-14%	-51%	-16%	4%	8%	3%	8%	8%
North - Total	**North**	**12%**	**11%**	**12%**	**5%**	**12%**	**4%**	**9%**	**9%**	**6%**	**9%**	**9%**
Assam	East	-6%	-4%	-26%	124%	2%	26%	-3%	5%	4%	5%	5%
Meghalaya	East	-16%	12%	7%	-30%	-9%	-17%	-20%	5%	4%	5%	5%
Tripura	East	-	-	-	-	-6%	-13%	20%	10%	5%	10%	10%
Manipur	East	-	-	-	-	15%	-27%	117%	10%	5%	10%	10%
Nagaland	East	-	-	-	-	-9%	60%	-27%	5%	4%	5%	5%
Arunachal Pradesh	East	-	-	-	-	32%	21%	3%	10%	9%	10%	10%
Mizoram	East	-	-	-	-	19%	10%	-19%	5%	4%	5%	5%
Sikkim	East	-	-	-	-	0%	0%	-8%	5%	4%	5%	5%
Bihar	East	15%	3%	1%	12%	18%	11%	1%	10%	7%	10%	10%
Jharkhand	East	14%	0%	2%	16%	34%	6%	-2%	8%	4%	8%	8%
Odisha	East	7%	8%	6%	15%	12%	5%	13%	12%	9%	12%	12%
West Bengal	East	6%	5%	5%	6%	13%	11%	6%	8%	7%	8%	8%
Chhattisgarh	East	49%	14%	8%	9%	39%	1%	12%	12%	9%	12%	12%
East - Total	**East**	**11%**	**6%**	**3%**	**14%**	**19%**	**8%**	**5%**	**10%**	**7%**	**10%**	**10%**
Andhra Pradesh	South	47%	13%	20%	18%	-1%	-16%	4%	6%	4%	6%	6%
Tamil Nadu	South	22%	17%	13%	10%	15%	4%	3%	5%	4%	5%	5%
Karnataka	South	22%	19%	8%	1%	32%	2%	15%	10%	5%	10%	10%
Kerala	South	7%	8%	2%	11%	-8%	-1%	5%	5%	4%	5%	5%
Pondicherry	South	31%	19%	9%	2%	9%	-7%	-5%	5%	4%	5%	5%
Andaman & Nicobar	South	53%	45%	-3%	-4%	-6%	-23%	14%	10%	4%	10%	10%
Goa	South	-36%	-11%	14%	1%	-32%	12%	10%	10%	4%	9%	10%
South - Total	**South**	**25%**	**15%**	**12%**	**11%**	**9%**	**-4%**	**7%**	**7%**	**4%**	**7%**	**7%**
Gujarat	West	5%	10%	16%	4%	38%	9%	13%	8%	6%	8%	8%
Maharashtra	West	6%	8%	13%	9%	-6%	9%	11%	8%	6%	8%	8%
West - Total	**West**	**6%**	**9%**	**14%**	**7%**	**10%**	**9%**	**12%**	**8%**	**6%**	**8%**	**8%**
Uttar Pradesh	Central	1%	12%	2%	10%	8%	13%	9%	9%	7%	9%	9%
Mahdya Pradesh	Central	1%	3%	15%	12%	-3%	10%	10%	10%	8%	9%	10%
Central - Total	**Central**	**1%**	**9%**	**6%**	**11%**	**5%**	**12%**	**9%**	**9%**	**7%**	**9%**	**9%**
India - Total	**India**	**12.0%**	**10.4%**	**10.3%**	**9.3%**	**10.5%**	**4.2%**	**8.1%**	**8.4%**	**5.9%**	**8.3%**	**8.5%**

Source: Espirito Santo Investment Bank Research for estimates, Company Data

Strong state spending & stable cement intensity across regions

High expenditure to outlay ratio along with rising state spending points to stable and strong state level cement demand drivers

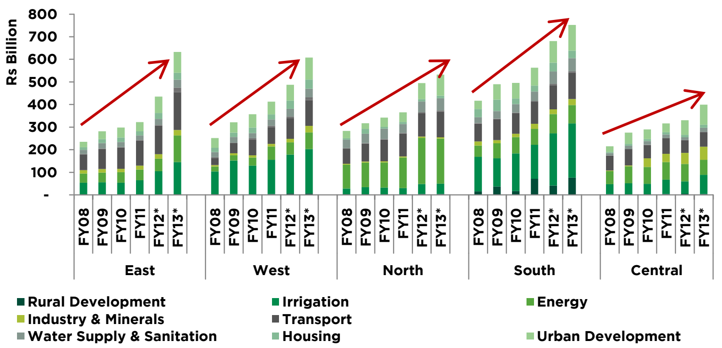
We have analysed region wise, state and total spending trends on construction & real estate to ascertain the impact on cement demand. The three key trends that emerge are a) increasing state spending on cement intensive sectors, b) stable cement intensity across regions and c) rising share of construction + real estate spending as a % of GDP, implying strong cement demand.

State spending - a key demand driver for cement consumption

Our bottom up analysis indicates state spending accounted for ~15% of total cement demand in FY13

State expenditure in irrigation, Energy, Transport & Urban Development has remained strong across regions, with these combined contributing to 73-85% of total spending in cement intensive sectors. In addition, states' expenditure to outlay ratio remains over 80% in FY08-FY11, indicating a higher degree of utilization of funds. Assuming civil works as 30% of total spending and cement cost at 20% of total civil works, it translates to 35Mt, or 15% of total cement demand in FY13. State spending in these sectors not only remains strong but is also rising on a yoy basis across regions, implying a stable source of consumption for cement.

Figure 10 Irrigation, Energy, Transport & Urban Development are key growth contributors to state plans



Source: Espirito Santo Investment Bank Research, GOI, * Planned outlay

Figure 11 Eastern states are increasing state based infrastructure/housing spending

Source: Espirito Santo Investment Bank Research, GOI

Rising construction & real estate spend as a % of GDP augurs well

Construction (Figure 12) and real estate (Figure 13) spending, over FY00-FY11, as a % of real Gross State Domestic Product (GSDP) is increasing steadily across regions. In addition, cement intensity (cement consumption T/(Rs million) of construction + real estate spends) has remained stable over the years, with average norm of ~30t/(Rs million). Cement intensity has still not reached the diminishing returns stage, which implies incremental spending on construction & real estate will translate into a proportionate increase in cement consumption.

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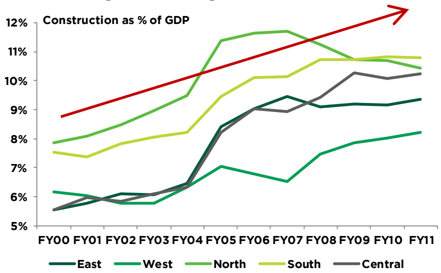
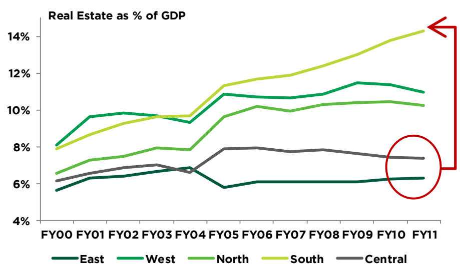
Figure 12 Construction spending as a % of GDP is increasing across regions



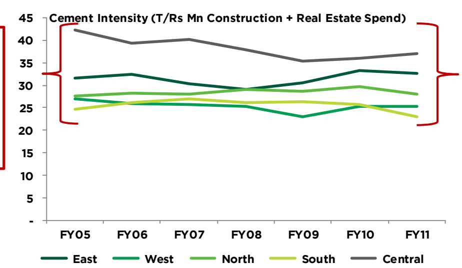
Source: Espirito Santo Investment Bank Research, RBI

Figure 13 Real Estate spending as a % of GDP is strong in South, North & West



Source: Espirito Santo Investment Bank Research, RBI

Figure 14 Cement Intensity is stable across regions



Source: Espirito Santo Investment Bank Research, RBI, CMA

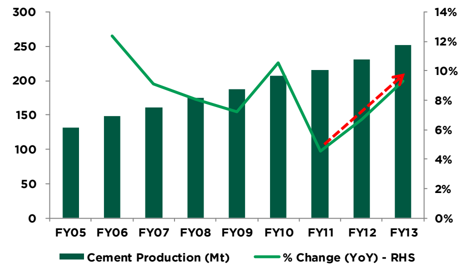
Based on FY11 real GDP (FY05 base) and regional cement consumption volumes, we estimate that for every 1% increase in Construction or Real Estate spending as a % of GDP, cement demand increases by ~3mt per region (or ~15mt at India level).

Construction spending as a % of GDP across regions is in a narrow band of 8-11%; however, there is a wide disparity in real estate spending between East/Central (6-7%) and South (14%). We thus see large potential in the East and Central regions as they catch up with the South. A 7 percentage point increase (to match the 14% level in South) in real estate spending (Figure 13) in the Central & Eastern regions implies a 42mt opportunity, assuming a 3mt increase in demand per 1% increase in spending.

Demand drops, but pops up again

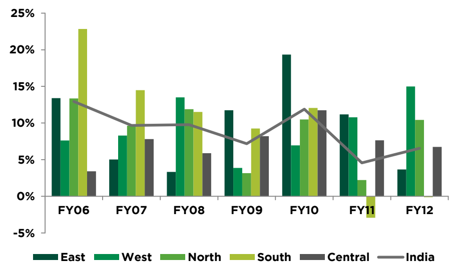
Further, looking at historical cement demand, we find it plummeted in FY11 & FY12 due to a steep decline in cement consumption in Southern states. In FY12, cement demand in the state of Andhra Pradesh declined by 11%, leading to a 1% decline in total Southern demand. We think the sharp demand drop was primarily due to the unrest over demand for creation of a new state in the Telangana region. Post this, cement demand recovered from low 4.5% growth in FY11 to an impressive 9.3% in FY13 (Figure 15).

Figure 15 Cement demand has recovered sharply from the lows of FY11



Source: Espirito Santo Investment Bank Research

Figure 16 FY10/11 demand slowdown owing to lower demand in South



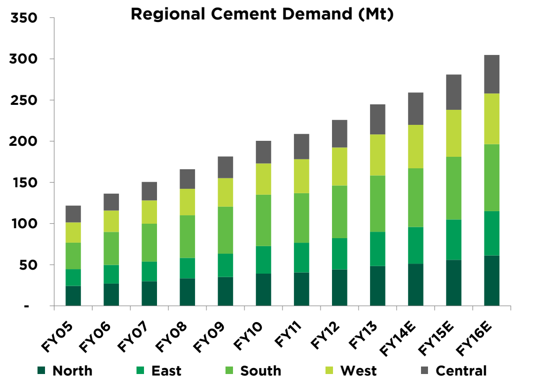
Source: Espirito Santo Investment Bank Research

Regional Supply – Demand imbalance continues....

The Southern & Western regions, comprising 6 large states, have traditionally been strong consumers of cement, together accounting for 48% of total demand in FY13. In FY13, the South was the largest cement consumer (at 28% of the total), followed by the West at 20%, the North at 20% and the East at

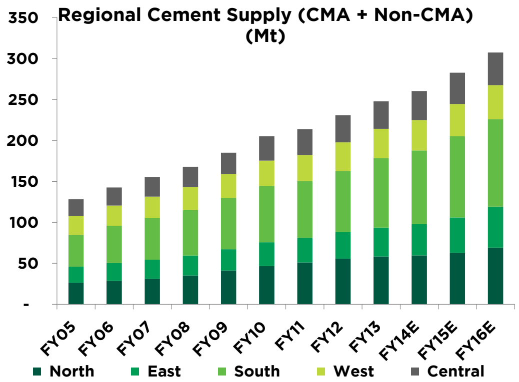
17%, while Central was the lowest (at 15%). In terms of capacity, the South leads the pack at 40% of the total in FY13, followed by the North at 20%, East at 14%, West at 14%, and Central at 12%. Cement capacity variance across regions can be attributed to a combination of both cement demand and limestone availability. Abundance of limestone reserves in the South (~50% of total) with strong consumption demand makes this region a leader in capacity addition. Despite having the second-largest limestone reserves (at 18%) East has only 14% of total capacity. We expect South & West to remain demand leaders, while laggards like the East & Central regions will likely try to make up for lost time with renewed growth drivers.

Figure 17 Expect West, East & Central to remain in deficit



Source: Espirito Santo Investment Bank Research for estimates, Company Data, CMIE, CMA

Figure 18 We expect strong production growth across all regions



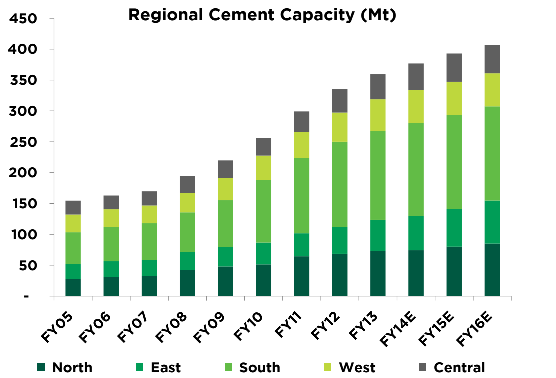
Source: Espirito Santo Investment Bank Research for estimates, Company Data, CMA, CMIE

Capacity additions — moderation a reality: East looks set to lead….

In comparison with massive capacity additions of 164mt over FY08-13, we expect capacity additions to moderate over FY14E-16E at ~47mt. We expect maximum capacity additions in the Eastern region at ~19mt, followed by the North at 12mt, South at 9mt, Central at 5mt and the lowest additions in the Western region at 2mt. Capacity additions by private players in the Eastern region are expected by us to outpace other regions owing to excess demand and better realization. It is interesting to note that the South will continue to add capacity despite utilization rates remaining at sub-60%. We expect supply discipline to prevail despite capacity additions owing to the higher sensitivity of EBITDA in the sector to pricing than to utilization.

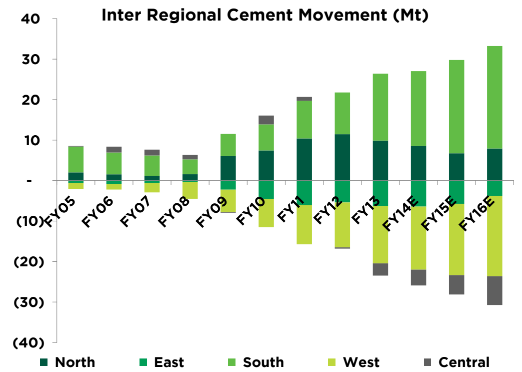
Regulatory issues, higher capital costs, rising interest rates have translated into moderation in capacity addition. Implementation of land acquisition bill will translate to higher land acquisition cost and hinder capacity additions in our view.

Figure 19 East to see maximum capacity addition to tap newfound opportunity



Source: Espirito Santo Investment Bank Research, Company Data, CMA, CMIE

Figure 20 South to West - key inter-regional movement



Source: Espirito Santo Investment Bank Research, Company Data, CMA, CMIE

Leading to Inter-regional movement:

A mismatch between cement capacity & consumption across regions is resulting in inter-regional cement movement. A closer look at inter-regional cement movement over FY09-13 (Figure 20) reveals that the South & North – as surplus capacity regions – are key suppliers, while the West dominates inter-regional consumption. We expect demand to remain strong across regions, with demand continuing to outstrip supply in the West, East & Central regions (Figure 17 & 18). South will remain a key supplier of interregional trade owing to surplus capacity and sustained capacity additions, while the West should remain the key consumer of interregional trade.

South & North being surplus capacity regions are key suppliers, while West dominates inter-regional consumption

We expect the pace of capacity additions to sharply reduce over FY14-16E to an average of ~16mtpa (47mt) vs. ~33mtpa (164mt) over FY08-13. Further, we do not rule out downside risk as certain capacity additions might face delays. Planned capacity additions over FY14-16E, which are asymmetrical across regions, should further increase interregional movement. Overall, we expect cement capacity additions to slow and demand to improve from now on with a likely pick up in public expenditure (in light of upcoming elections), pent up demand on the back of extended and healthy monsoons and stable housing demand. Hence, we believe a gradual increase in capacity utilization and price increases can be factored in from here on. The figure below highlights our key assumptions for cement supply, demand and utilization levels.

Figure 21 India - Demand & Supply model - expect gradual increase in utilization

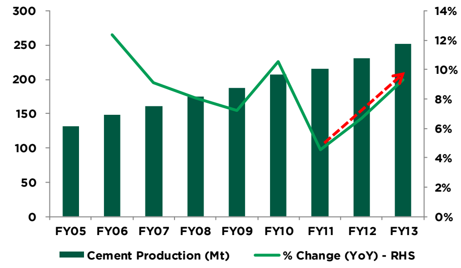
	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14E	FY15E	FY16E
Year End Capacity (Mt)	155	163	170	195	220	256	299	335	359	377	393	406
Total Supply (Mt)	128	143	155	168	185	205	214	231	248	260	283	307
Domestic Demand (Mt)	122	136	150	166	181	200	209	226	245	259	280	304
Exports (Mt)	6	6	6	4	4	2	2	2	2	1	2	3
Utilization (Year End) %	83%	87%	92%	86%	84%	80%	71%	69%	69%	69%	72%	76%
Utilization (Average) %		90%	93%	92%	89%	86%	77%	73%	71%	71%	73%	77%

Source: Espirito Santo Investment Bank Research for estimates, Company Data

Price/volume tradeoff – a delicate equilibrium

Cement prices have remained steady over FY08-13 despite massive capacity additions and demand moderation, which we think can be attributed to supply discipline. The Indian cement industry has seen moderation in cement demand to sub 10% annual growth and excessive capacity additions of 160 Mt over FY08-FY13. We think the moderation can be attributed primarily to tepid demand in the southern region, which in FY13 accounted for 40% of total capacity and 28% of consumption.

Figure 22 Tepid growth in south leading to moderation in demand



Source: Espirito Santo Investment Bank Research, Company Data

We explore various factors that should lead to supply discipline in Indian cement industry. Figure 23 shows four possible scenarios that could arise for small and large players based on their decision to increase or decrease utilization. The best case for a large or small player arises when it increases utilization and another player reduces utilization, leading to stable prices and supply. However, the other player knows that its competitor can react by increasing utilization, thereby leading to excess supply, resulting in a price crash. Thus it is in the best interest of all the players to maintain supply discipline, translating into stable prices. Since smaller players are more susceptible to price drops (Figure 25 & 27), we think it's in their best interest to avoid engaging in a price/volume war.

Figure 23 Supply discipline - guiding factors

		Large Player	
		Lower utilization	Higher Utilization
Small Player	Lower Utilization	1. Price sanity 2. Supply discipline	1. Large player gains as price remains stable
	Higher Utilization	1. Small player gains as price remains stable	1. Both suffer loss due to excess production 2. Prices crash

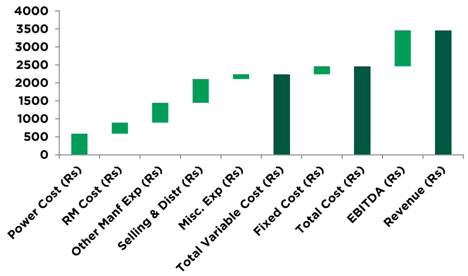
Source: Espirito Santo Investment Bank Research, Company Data

Large players – wary of not pushing smaller ones to the brink:

Cement players achieve a delicate balance of price and capacity utilization as dictated by regional market dynamics. Supply discipline generally prevails, not because the cement players are acting selflessly, but due to the higher sensitivity of their operating profits to realization vs. utilization levels. We simulate the operational leverage structure for a large scale cement player for a 1MT facility to capture the sensitivity impact. Our scenario analysis assumes 1MT cement plant with low fixed costs (at Rs223/t), higher variable costs (at Rs3138/t) and generating EBITDA/T of Rs1075 at 100% utilization levels. Our base case assumes 75% utilization, which implies EBITDA/T of Rs1,000. We find that a 10% increase in utilization from the base case (of 75%) and a 6% drop in realization results in a 23% drop at the absolute EBITDA level. This indicates that it would not be in the best interest of any player to wage a price war to gain market share, as larger players with lower operational leverage can sustain themselves for a prolonged period.

Supply discipline not because cement players are acting selflessly, but due to plain economics.

Figure 24 Larger player has lower fixed cost and lower sensitivity to price



Source: Espirito Santo Investment Bank Research, Company Data

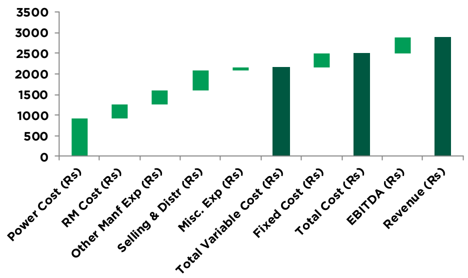
Figure 25 Price/volume tradeoff sensitivity

EBITDA (% Change)		Utilization level							
		70%	75%	80%	85%	90%	95%	100%	105%
Price Drop (%)	-2%	7%	9%	11%	12%	14%	15%	16%	17%
	-1%	2%	4%	6%	8%	9%	11%	12%	13%
	0%	-2%	0%	2%	3%	5%	6%	7%	8%
	2%	-11%	-9%	-7%	-5%	-4%	-3%	-1%	0%
	6%	-29%	-27%	-25%	-23%	-22%	-20%	-19%	-18%
	12%	-55%	-53%	-51%	-50%	-48%	-47%	-46%	-45%

Source: Espirito Santo Investment Bank Research, Company Data

Smaller players have higher sensitivity to price/volume tradeoffs: To gauge the price/volume impact for a smaller player, we look at a smaller capacity cement plant, with relatively higher fixed costs (Rs445/t) and variable costs at Rs2824/t. A higher fixed cost of Rs445/T (vs. a larger producer at Rs223/T) can be attributed to higher per tonne SG&A costs. Our base case assumes 75% utilization, implying EBITDA of Rs516/T. It shows that a 10% increase in utilization from the base case (of 75%) & a 6% drop in realization results in a 34% drop at the absolute EBITDA level. Further, if a smaller player is more leveraged compared to a larger player, then the price drop may also impact its ability to meet interest payment requirements.

Figure 26 Smaller players like Heidelberg have higher fixed cost per tonne of capacity



Source: Espirito Santo Investment Bank Research, Company Data

Figure 27 Higher utilization is unlikely to materialize in higher absolute EBITDA if price drops

EBITDA (% Change)		Utilization level							
		70%	75%	80%	85%	90%	95%	100%	105%
Price Drop (%)	-2%	8%	15%	21%	26%	31%	35%	38%	42%
	-1%	1%	7%	13%	18%	23%	27%	31%	34%
	0%	-7%	0%	6%	11%	16%	20%	23%	27%
	2%	-22%	-15%	-9%	-4%	1%	5%	8%	12%
	6%	-52%	-45%	-39%	-34%	-29%	-25%	-22%	-18%
	12%	-96%	-90%	-84%	-79%	-74%	-70%	-66%	-63%

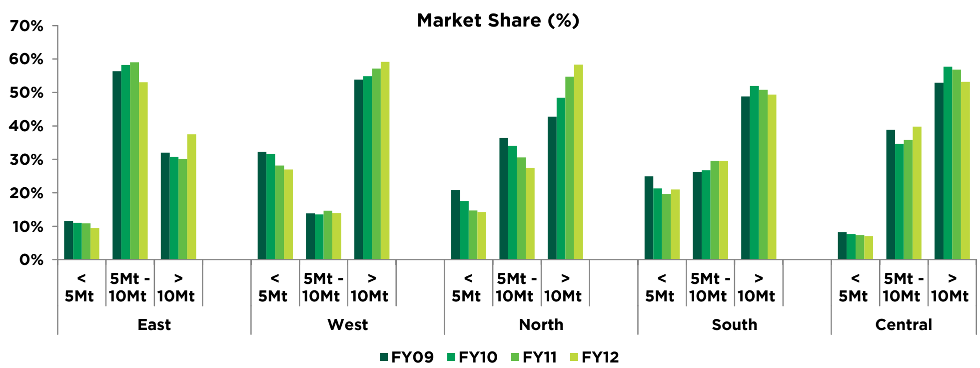
Source: Espirito Santo Investment Bank Research, Company Data

Large vs. Small - no clear winner or loser over FY09-12 on market share:

Contrary to the commonly-held belief that larger players typically accommodate smaller ones (through production cuts) to maintain supply discipline, we see no such trends. Market share (Figure 28) over FY09-12 across various categories (<5mt, 5-10mt & >10mt) doesn't indicate any clear trend of large players ceding market share to smaller ones. We have divided CMA members into three categories: a) those with <5mtpa capacity, b) capacity between 5-10mtpa and c) capacity >10mtpa to analyse the impact of major capacity additions over the same period. As per CMA, close to 50% of FY09 capacity was added over FY09-12. Cement players in <5mtpa capacity lost market share across regions, 5-10mtpa category gained in the Central & Southern regions, while >10mtpa gained in all other regions.

Contrary to the popular belief that larger players typically accommodate smaller ones (through production cuts) to maintain supply discipline, we see no such trends.

Figure 28 No clear winner or loser in market share



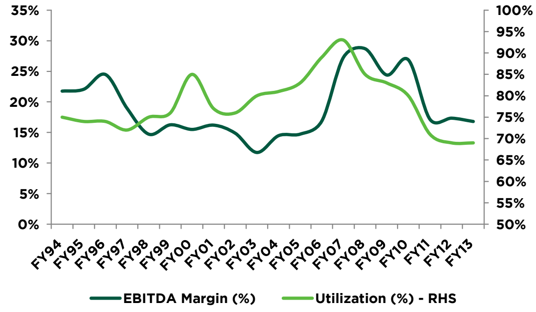
Source: Espirito Santo Investment Bank Research, CMA

Utilization, EBITDA Margin & RoCE trend point to supply discipline

The cement industry's EBITDA margin vs. capacity utilization over the past 20 years shows a weak positive relationship, with a correlation coefficient of 0.28, while RoCE vs. capacity utilization shows a strong positive relationship, with a correlation coefficient of 0.53. Weak correlation between EBITDA margins vs. utilization clearly suggests that supply discipline prevails even during periods of low capacity utilization, implying the absence of any prolonged price wars. Strong correlation in the case of RoCE vs. Utilization can be largely attributed to a higher denominator effect (higher capital employed).

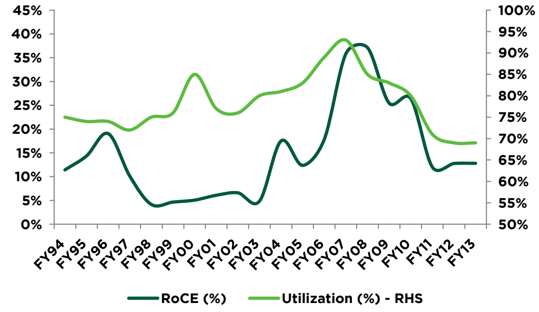
The cement industry's EBITDA margin vs. capacity utilization over the past 20 years shows a weak positive relationship, with a correlation coefficient of 0.28, while RoCE vs. capacity utilization shows a strong positive relationship, with a correlation coefficient of 0.53.

Figure 29 EBITDA vs. Utilization shows a low correlation of 0.3



Source: Espirito Santo Investment Bank Research, Company Data, CMA, Ace Equity

Figure 30 Capacity utilization & RoCE - show positive relationship



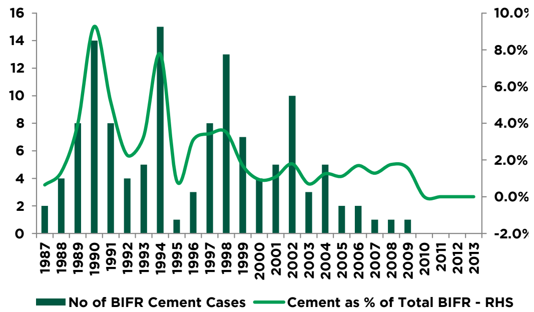
Source: Espirito Santo Investment Bank Research, Company Data, CMA, Ace Equity

(Price) War of attrition – not visible in the Indian industry

The Indian cement industry, post deregulation in 1989, hasn't seen a prolonged price war. A prolonged price war can lead to expulsion of marginal players from an industry or a war of attrition. Taking the number of distressed cement companies registering under the Board for Industrial & Financial Reconstruction (BIFR) as a proxy for a prolonged price war, we see that the number is virtually zero post 2010, despite significant capacity additions during FY09-FY12. In the last decade, the number of cement players registering under BIFR has also fallen significantly (1.36 vs. 4.67 since 1987). Further, there is no correlation between capacity utilization and the number of cement companies filing for BIFR, which also indicates that a price war isn't prevalent during periods of low capacity utilization. We therefore conclude that the Indian cement industry has achieved maturity in terms of supply discipline and pricing sanity.

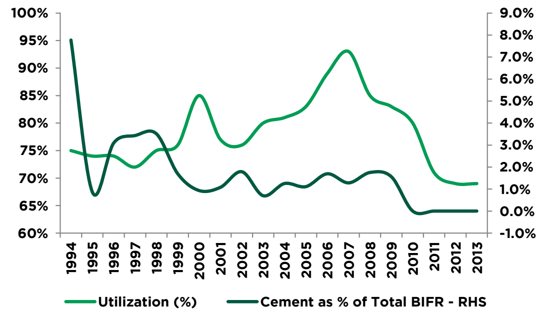
The Indian cement industry, post deregulation in 1989, hasn't seen a prolonged price war, with the last decade seeing an exceptionally lower (1.36 vs. 4.67 since 1987) number of cement players registering under the Board for Industrial & Financial Reconstruction (BIFR).

Figure 31 No. of cement companies approaching BIFR below historical mean in past decade



Source: Espirito Santo Investment Bank Research, Company Data

Figure 32 No correlation between capacity utilization and no. of cement BIFR cases



Source: Espirito Santo Investment Bank Research, Company Data

However, economic rationale isn't everything

Whilst our thesis indicates that price/volume equilibrium should be maintained in the long term, we don't rule out abrupt price drops in certain pockets based on regional demand/supply dynamics. We witnessed one such price war as recently as March 2013 in the state of Andhra Pradesh; however pricing 'sanity' eventually returned (by June 2013).

AP price crash - eventually back to normal

Cement prices in Andhra Pradesh dipped in March 2013 by 6.3% on YoY basis, and were 26% lower than in India on average. This was attributed to new

Figure 33 Sagar cement cannot sustain prolonged price war either

EBITDA (% Change)		Utilization level							
		70%	75%	80%	85%	90%	95%	100%	105%
Price Drop (%)	0%	-3%	0%	2%	5%	6%	8%	10%	11%
	3%	-18%	-16%	-13%	-11%	-9%	-7%	-6%	-4%
	6%	-34%	-31%	-29%	-26%	-25%	-23%	-21%	-20%
	9%	-49%	-47%	-44%	-42%	-40%	-38%	-37%	-35%
	12%	-65%	-62%	-60%	-57%	-56%	-54%	-52%	-51%
	15%	-80%	-78%	-75%	-73%	-71%	-69%	-68%	-66%

Source: Espirito Santo Investment Bank Research, Company Data

entrants resorting to price wars. We have analyzed AP-based cement producer, Sagar Cement (SGC IN, Not rated) on its ability to wage & sustain a price war. Figure 33 shows that a 10% increase in utilization from 75% to 85% and a 6% drop in prices (as happened in March 2013), results in a 26% decline in absolute EBITDA. As there were no winners in this price war, pricing 'sanity' finally prevailed and discipline returned to the market by June 2013.

High debt, capacity moderation & cost push to support pricing

We explore other possible factors that should help players to maintain supply discipline and price rationality. We expect factors like a) constraints on power availability, b) moderation in capacity addition, c) high debt in the system and d) input cost increases to force players to maintain economic rationality in the market.

High debt in system to impact capacity additions

As per the RBI, total credit outstanding to the cement industry from scheduled commercial banks (SCBs) increased by 3x over CY08-CY12 and stood at Rs435bn as of Jan 2013. Over the same period, cement capacity has increased by 160mt. Gross debt per tonne of capacity for Ultratech, ACC, Ambuja & Shree Cement combined stands at Rs680/t (Jan 2013), whereas the combined total for the remaining players (Figure 34) is 2.3x that of the top four, at Rs1,563/t (Jan 2013).

With majority of incremental capacity additions expected by our top 4, we think pricing 'sanity' will prevail even as balance additions are on a higher leverage basis

Cement producers (Ex. ACC, Ambuja, Ultratech & Shree; which are our top 4) are making similar weighted average EBITDA/T, but their average Net debt/EBITDA CY12/FY13 stands at 5.3x vs. -0.4x for our top four. Interest coverage for our top four is also at a healthy 22.1x vs. 3.3x for the other players. We think pricing discipline is likely to prevail, as we would expect relatively debt free players to be able to withstand a pricing war for longer than their leveraged counterparts.

Figure 34 High debt likely to deter others from pricing based competition

Company	Ticker	Capacity (Mt)	Realization (Rs/T)	EBITDA (Rs/T)	Net Debt (Rs Mn)	Net Debt/ Capacity (Rs/T)	Net Debt/ EBITDA	Interest Coverage
Under Coverage								
Ultratech Cement	UTCEM IN	50.9	4,133	949	30,847	606	0.66	14.5
Ambuja Cement	ACEM IN	28.0	4,410	1,088	(37,436)	(1,339)	(1.50)	49.6
ACC Cement	ACC IN	30.6	4,497	930	(28,949)	(946)	(1.45)	18.0
Shree Cement	SRCM IN	13.5	3,719	1,032	453	34	0.03	3.5
Wt. Average		**30.7**	**4,241**	**985**	**(2,895)**	**(285)**	**(0.4)**	**22.1**
Others								
JP Assoicates	JPA IN	32.6	3,815	671	522,573	16,054	7.91	1.1
Madras Cements	MC IN	12.5	4,202	1,331	19,272	1,543	1.99	3.8
Century Textiles	CENT IN	10.0	4,170	1,097	47,968	4,797	9.06	0.4
India Cements	ICEM IN	15.9	3,415	971	29,814	1,881	3.12	1.7
JK Lakshmi Cement	JKLC IN	5.3	4,084	930	7,506	1,416	1.75	3.3
Birla Corp	BCORP IN	5.8	3,901	779	5,699	986	1.56	3.4
JK Cement	JKCE IN	7.5	5,145	1,075	10,028	1,337	1.82	3.1
Kesoram Industries	KSI IN	7.3	4,170	1,097	43,215	5,961	14.95	(0.0)
Prism Cement	PRSC IN	5.6	3,950	340	17,730	3,166	5.68	0.6
Heidelberg Cement	HEIM IN	6.0	3,823	304	9,598	1,600	11.57	12.3
Mangalam Cement	MGC IN	2.0	3,853	673	1,187	593	0.96	20.3
Wt. Average		**10.0**	**3,973**	**864**	**170,624**	**6,477**	**6.0**	**2.7**
Wt. Average (Less JP)		**7.8**	**4,039**	**945**	**23,318**	**2,469**	**5.3**	**3.3**

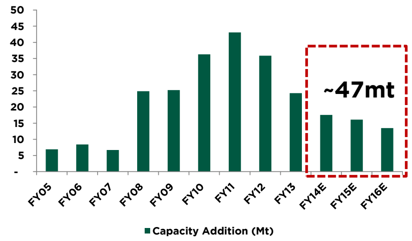
Source: Espirito Santo Investment Bank Research, Factset, Company Data, Capacity, Realization, EBITDA, net debt as of CY12/FY13

Capacity addition moderation – a reality

The confluence of significant capacity additions over the past 5 years (164mt in FY08-13), high leverage, slower GDP growth, rising cost of capacity additions and increasing input costs are forcing players to defer or cancel incremental capacity additions. As per CMIE, although the list of under-implementation projects remains high, our detailed analysis shows only ~47mt (Figure 35) of incremental additions are likely to become operational over FY14E-FY16E.

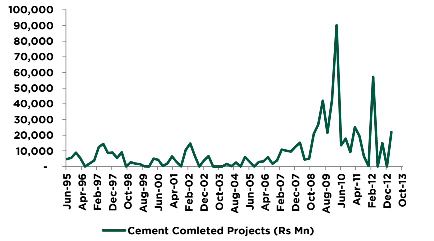
As per CMIE, though the list of under implementation projects remain high, a detailed analysis shows only ~47mt (Figure 35) of incremental additions are therefore likely to become operational over FY14-FY16E.

Figure 35 Capacity additions moderating



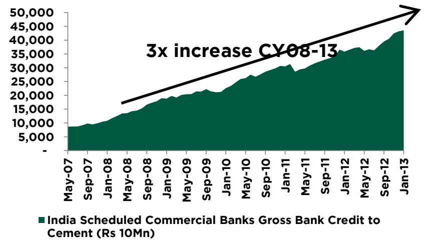
Source: Espirito Santo Investment Bank Research, CMA, CMIE

Figure 36 Cement investment peaked in 2010



Source: Espirito Santo Investment Bank Research, CMIE

Figure 37 Existing addition high on debt



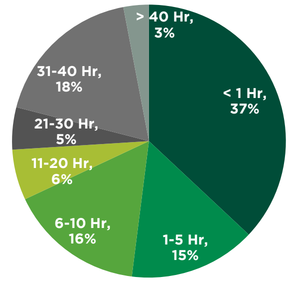
Source: Espirito Santo Investment Bank Research, Bloomberg

Constraints on capacity – nameplate capacity vs. name-sake capacity

Some industry participants frequently raise the spectre of a supply glut to counter price stability, which can lead to suggestions of a price war ahead. The issue is more pronounced in the Southern region, which is home to 40% of Indian cement capacity, and where lower capacity utilization (~60%) is being attributed to tepid demand growth. We think the industrial power shortage is a key issue in the states of Andhra Pradesh & Tamil Nadu, which limits actual available capacity vs. nameplate capacity. In its annual report, South-based cement producer Sagar Cement mentioned that *"severe shortage of power in Andhra Pradesh is leading to frequent power cuts resulting in stoppage of production"*. A recent FICCI report on power shortages shows that 26% of industrial power shortages across India fall under the 21+ hours per week of outages category. The impact is more pronounced in the states of Andhra Pradesh & Tamil Nadu (Figure 39) and we think this is one of the contributors to maintaining supply discipline.

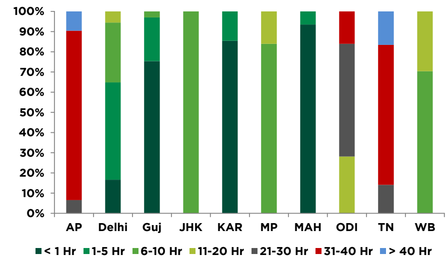
Second, the capacity information provided in the companies' annual reports is not audited. Annual Capacity is certified by the management and, being a technical matter, is accepted by the auditors as is. This can lead to discrepancies between name-sake (as reported) vs. nameplate (actual) capacity.

Figure 38 26% of total power shortage above 21 hours/week



Source: Espirito Santo Investment Bank Research, FICCI

Figure 39 AP & TN seeing severe industrial power outages

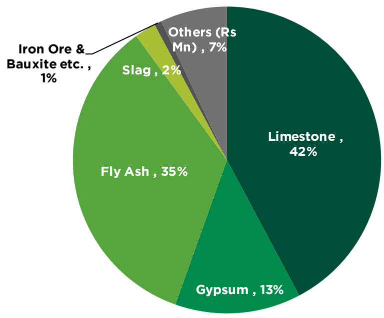


Source: Espirito Santo Investment Bank Research, FICCI

Input cost inflation is here to stay; embrace it

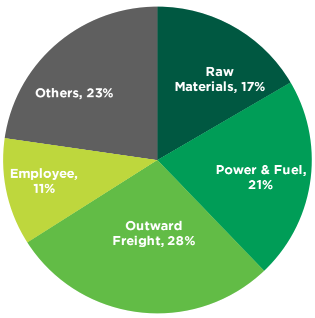
Raw material cost: Cement prices increased by 26% over FY07-13 (Figure 50), while prices for two key raw material inputs, coal and lime, increased by 69% and 41% respectively over the same period. Although most large players in India have access to captive limestone mines, limestone prices have increased by 21% (Figure 42) during FY07-11, while Gypsum cost has increased by 36%, Fly Ash cost by 23% and slag cost by 64% during the same period. From a cost structure perspective, raw materials account for ~15% of costs for Indian cement producers (with Shree a typical example).

Figure 40 Shree - breakdown of raw material cost (FY12)



Source: Espirito Santo Investment Bank Research, Company Data

Figure 41 Shree - cost breakdown (Q4FY13)



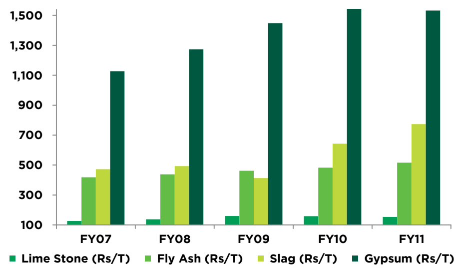
Source: Espirito Santo Investment Bank Research, Company Data

Fly ash cost increasing despite availability: Fly ash prices increased by 23% over FY07-FY11, despite excess supply across regions. As per CEA, only 55% of total fly ash being produced is currently being utilized, with cement accounting for 48% of total consumption. Further, as per the Electricity Act of 2009, all coal/lignite based thermal power stations or expansion units in operation before the date of this act are expected to achieve a target of 100 percent utilization of fly ash within five years of issue of the notification. As

Fly Ash: Stringent measures for utilization of fly ash being generated by thermal power plants could help rein in price increases.

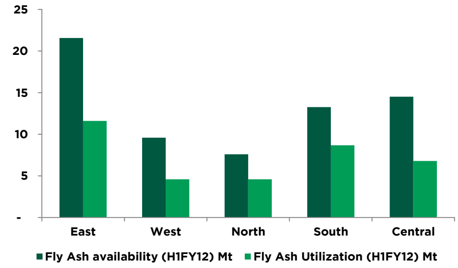
per CEA, total annual fly ash generation at the end of the XIIth plan is expected to increase by 58% to 271mt, and is expected to remain in surplus. We think the fly ash price increase partly reflects increasing freight costs and is partly due to suppliers taking price increases.

Figure 42 RM prices have increased by 21-64% over FY07-11



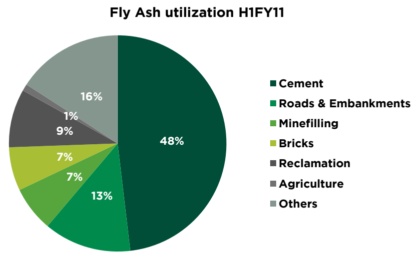
Source: Espirito Santo Investment Bank Research, Company Data

Figure 43 Only 55% of available fly ash being used



Source: Espirito Santo Investment Bank Research, Company Data

Figure 44 Cement is the biggest consumer of fly ash at 48%



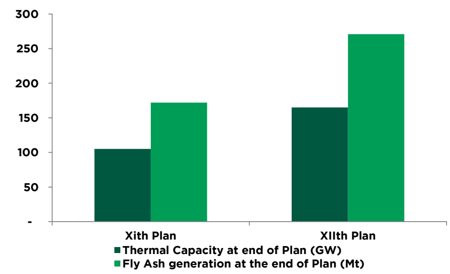
Source: Espirito Santo Investment Bank Research, Company Data

Limestone & Gypsum - focus on captive lime & synthetic gypsum:

Limestone costs for Ultratech increased by 48% (to Rs125/t) over FY07-11, which implies an increase of Rs39/t in PPC cement making cost. Whilst the impact of limestone cost increases should be limited for integrated players, the impact on non-integrated players could be 3-4x higher. Existing limestone reserves of 175bt (57% is cement grade) bode well for the industry; however, regulatory hurdles may affect brownfield & greenfield mine expansions going forward. (See Appendix 8)

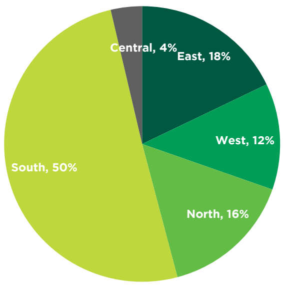
Gypsum costs increased by 12% over FY07-11 (to Rs1,393/t) for Ultratech, which implies an increase of Rs8/t in cement making cost. In India, gypsum reserves are concentrated in Rajasthan, with supply and mining monopolized by government organizations. This has resulted in a competitive scenario in gypsum procurement. Geographically concentrated reserves also make it difficult for cement players in far off states to procure the mineral and lead to higher logistics costs. Players like Ambuja and Shree cement are working on developing synthetic gypsum to rein in price volatility. The current quantum of synthetic gypsum being produced is <10% of these two companies' total requirements (See Appendix 9).

Figure 45 Fly Ash to remain in surplus



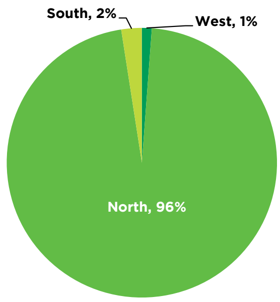
Source: Espirito Santo Investment Bank Research, Planning Commission

Figure 46 50% of limestone reserves in Southern region (FY11)



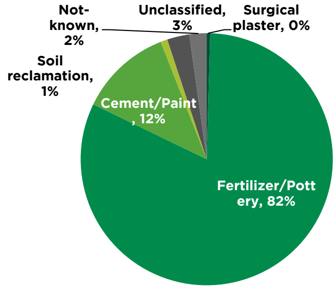
Source: Espirito Santo Investment Bank Research, Company Data

Figure 47 96% of gypsum R&R in Northern region (FY11)



Source: Espirito Santo Investment Bank Research, Company Data

Figure 48 Only 12% of gypsum is of cement grade (FY11)

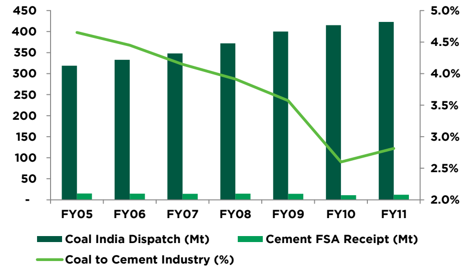


Source: Espirito Santo Investment Bank Research, Company Data

Coal & Power: Coal through linkage declined (Figure 49) by 20% over FY05-11 (to 12MT), while cement production during the same period increased by 64% (to 216MT). Coal India's dispatch to the cement industry as a percentage of total dispatch has declined from 4.7% in FY05 to 2.8% in FY11 (to 12MT). Cement companies are now increasingly dependent on e-auction and imported coal to meet their coal demand. Grid power costs across regions have increased (Figure 51) by 16-30% over FY08 to FY12, with the central region registering the maximum increase of 30%. With exception of Shree Cement, most cement players are dependent on grid power to the tune of ~10-40% of their total requirement and therefore have been affected by the grid power cost increase. From a cost structure perspective, coal/power costs account for ~25-30% of cement-makers' total costs.

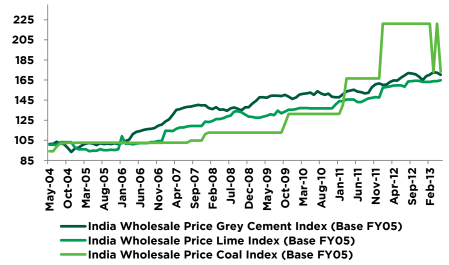
Reducing linkage availability is leading to high dependence on e-auction & imported coal. It is imperative for cement producers to lower power & fuel cost through access to captive blocks, WHR and AFRs

Figure 49 FSA + Linkage on a decline on absolute and % basis



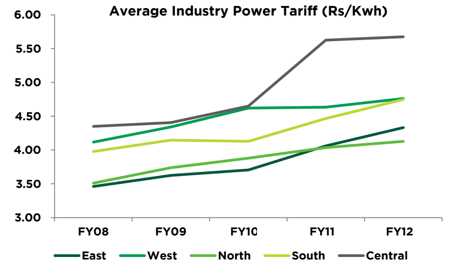
Source: Espirito Santo Investment Bank Research, Company Data

Figure 50 Cement prices tracking raw material prices



Source: Espirito Santo Investment Bank Research, Company Data

Figure 51 Average region wise grid power increased by 16-30%

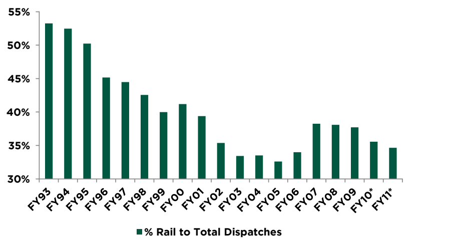


Source: Espirito Santo Investment Bank Research, Company Data

Freight cost on the rise – A combination of declining share of cement transport through rail and the rising base fare is hurting cement players. Rail's share of cement transportation has seen a secular decline from 53% in FY93 to ~35% in FY11, while the base fare has increased by ~40% over FY08-FY13. Freight cost via road has followed suit, with a ~49% increase over the same period. Freight cost accounts for 20-25% of total cement cost. Rising freight costs combined with increasing lead distance are hurting margins across industry, especially for players like India Cements (ICEM IN, Not Rated) that are targeting other regions in search of better realizations.

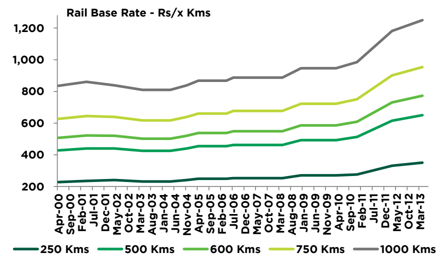
Rail's share of cement transportation has seen a secular decline from 53% in FY93 to ~35% in FY11, while the base fare has increased by ~40% in FY08-FY13

Figure 52 Rail as transport mode remain at sub 40%



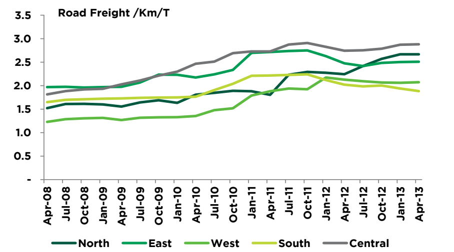
Source: ESIB Research, CMA, * Excluding ACC & Ambuja

Figure 53 Rail base rate has increased by an average of 40% over FY08-13



Source: Espirito Santo Investment Bank Research, Company Data

Figure 54 Road freight rates have increased by an average of 49% over FY08-FY13



Source: Espirito Santo Investment Bank Research, Company Data

We expect rail & road freight cost increases to have a similar impact on most players owing to their limited control over this factor. Further, Indian oil marketing companies have recently started to raise diesel prices by 1% per month, putting direct pressure on road freight and indirect pressure on rail freight. A few players (like Ambuja & Ultratech) have access to low-cost sea based transportation, but this accounts for only 10-15% of their total volumes. Like other cost push factors, we expect rising freight costs to be passed through to customers.

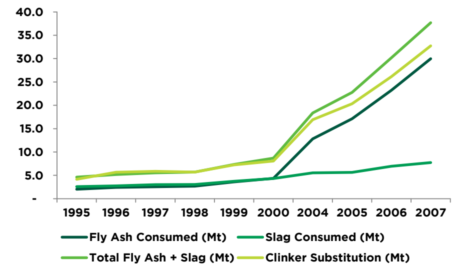
Cost reduction opportunities: Multiple avenues exist

Rising raw material & freight costs have forced cement producers to look for cost saving opportunities. We explore several possible cost savings opportunities and the progress being made on these fronts. We think a) clinker to fly ash substitution, b) usage of alternative fuels & pet-coke, c) waste heat recovery installations, d) access to captive coal blocks, and e) water transport modes are a few avenues that could help in cost reduction.

Raw Material – substitution

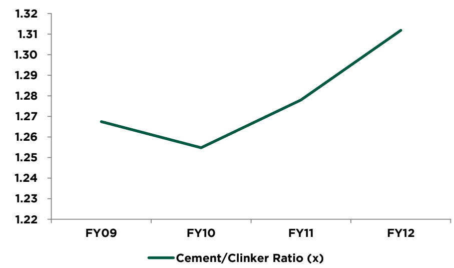
Blended cement (PPC – Portland Pozzolana Cement & Portland Slag Cement) currently commands 2/3rd of total market share in India. We think there are two opportunities for clinker to fly ash substitution: a) Ordinary Portland Cement (OPC) being replaced by PPC; and b) higher fly ash content in PPC. As per Bureau of Indian Standards (BIS) IS:1489, fly ash content in PPC can be as high as 35%, implying a cement to clinker ratio of 1.7x, as compared with 1.31x for the industry as of FY12 end. We expect the cement to clinker ratio to inch towards the permissible limit in future as the cost of clinker is ~2.5-2.6x that of fly ash (for a player like Ambuja). Second, we expect the trend of substitution from OPC to PPC to continue, leading to increased usage of fly ash in place of clinker (as OPC requires ~95% clinker vs. ~65% in PPC).

Figure 55 Fly ash consumption picked up pace since 2000s



Source: Espirito Santo Investment Bank Research, CMA

Figure 56 Cement to clinker ratio is well below permissible limit of 1.7x

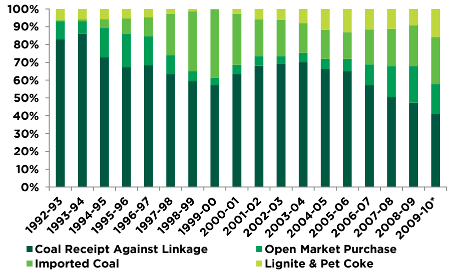


Source: Espirito Santo Investment Bank Research, CMA

Usage of alternative fuels & pet-coke

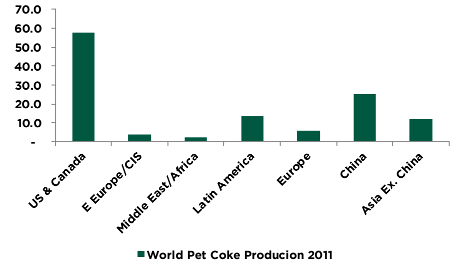
Pet Coke: The Indian cement sector's reliance on imported/e-auction coal has continued to increase over time, increasing at a 16% CAGR over FY95-2010 to 7MT as of FY10. While most of the plants located in the hinterland continue to prefer e-auction coal, cement plants located in Gujarat, Rajasthan and South India have begun to utilize pet coke, imported coal and lignite. While the usage of lignite has remained limited due to its poor calorific value, the quantum of imported coal and pet coke has increased over time. Our channel checks indicate that several cement makers now prefer pet coke over imported thermal coal to realize cost benefits on per heat realizations. Our back-of-the-envelope calculation indicates that imported pet coke with high calorific value is ~25% less expensive than imported thermal coal. We understand that companies like Shree cement currently have six month fixed price volume contracts with Reliance Industries (RIL IN, Not rated) and Essar Oil (ESOIL IN, Not Rated). Although one might expect pet coke prices to move up with the commissioning of RIL's gasification unit by 2016-17, we think incremental refining capacities in India (planned additional pet coke generation of 10MT by 2016) and the Midwest will keep global pet coke prices in check.

Figure 57 Increasing dependence on imported coal, e-auction and pet-coke



Source: Espirito Santo Investment Bank Research, Company Data

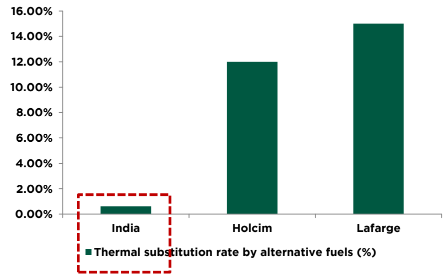
Figure 58 Pet-coke expected to remain in surplus



Source: Espirito Santo Investment Bank Research, Company Data

AFR - potential cost reduction source: Alternative fuels (AFR), like tyres, waste industrial oil and household & agricultural wastes are being used aggressively globally to substitute conventional fuel sources (coal, diesel oil) as cement producers look to reduce costs. In 2012, AFR accounted for 15% of the total fuel input used by global cement producer Lafarge cement and the company says it plans to increase this to 30% by 2015 and 50% by 2020. In contrast, Indian industry is still in its infancy in terms of AFR usage. For instance, in 2012 Ambuja Cement used 1.4% alternative fuels in kiln, while ACC used 1%. We expect Indian cement makers to aggressively invest in the usage of alternative fuels to mitigate production cost increases due to higher coal costs.

Figure 59 AFR is still in its infancy in India



Source: Espirito Santo Investment Bank Research, Company Data

The widespread usage of waste fuels has not yet caught on in India, primarily on account of a lack of organized collection systems. Municipal and agricultural wastes appear to have the most significant usage potential. Given the shortages foreseen in conventional fuel, the availability of facilitating combustion technologies and the presence of international majors with past experience in waste fuel usage, we think future utilisation will increase. With pioneering attempts already afoot, we expect leading players to substitute ~4-5% of their thermal inputs with AFR in the near future.

Figure 60 AFR accounts for 8% of total fuel input at Ambuja's Lakheri plant - FY11

ACC Lakheri Cement Works	Quantity (T)	(Kwh or Ton/Kl of fuel)	Waste Fuel as % of Total Energy
Soya bean Waste	3	2	0.0
Saw dust	174	88	0.7
Mustard Husk	721	412	3.5
Scrap tyre cutting	207	368	3.1
Animal Waste	21	9	0.1
Nevia Waste products	71	46	0.4
ETP bio solid sludge	41	13	0.1
White Coal	28	19	0.2
MSW	0	0	-
Total AFR	**1,267**	**957**	**8.0**

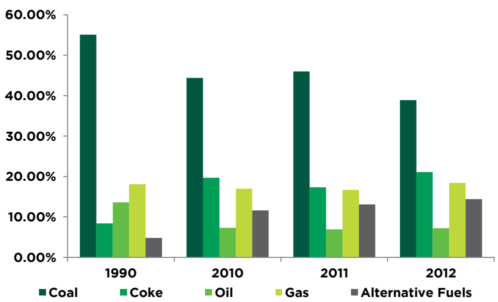
Source: Espirito Santo Investment Bank Research, Company Data

Figure 61 AFR fuel substituion is as high as 83% - FY11

Substitution of Fossil Fuels by Waste Derived Fuels	
Plant Location	Substitution (%)
Austria	46%
Germany	42%
France	34%
Netherland	83%
Switzerland	48%
Norway	45%

Source: Espirito Santo Investment Bank Research, Company Data

Figure 62 Lafarge targets to increase AFR to 50% by 2020



Source: Espirito Santo Investment Bank Research, Company Data

Waste heat recovery: An untapped cheap energy source

The cement manufacturing process releases 30-40% of total heat input in the form of waste heat from exit gases. These can be tapped to create a feedback loop in order to achieve better fuel efficiency. The entire industry currently has co-generation potential of around 400MW. Although the capital cost of co-generation, which works on waste heat gas, is around Rs100-120mn per MW, it scores on the operational front as the per unit power generation cost is only Rs0.30-0.40 vs. Rs3-4/Kwh for a coal based power plant. We expect more players to adopt a waste recovery mechanism to boost fuel efficiency and lower the power cost per tonne of cement production.

Captive coal blocks – the cheapest source of coal

Cement producers were allocated captive coal blocks as early as FY08; however none of the coal blocks are currently operational. Coal blocks given to Grasim, ACC & Ambuja Cements have been de-allocated due to unsatisfactory progress. These players have challenged the de-allocation in court and encashment of associated bank guarantees have been suspended. We expect increasing participation of cement producers in future coal block auctions as access to captive coal should provide a stable input source at the lowest possible price.

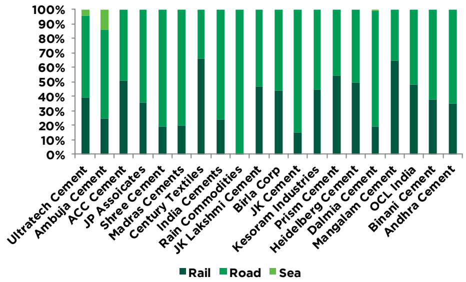
Though the capital cost of co-generation system, which works on waste heat gas, is around Rs100-120mn per MW, it scores on the operational front as per unit power generation cost is only Rs0.30-0.40 vs. Rs3-4/Kwh for a coal based power plant.

Figure 63 None of the capitve coal blocks is operational

Company	Allotment	Reserves	Block	Coalfield	State
Prism Cement Limited	29-May-07	30	Sial Ghoghri	Wardha	Madhya Pradesh
Jaiprakash Associates	17-Sep-07	195	Mandla North	Pench Kannan	Madhya Pradesh
Birla Corporation	12-Aug-08	21	Bikram	Sohagpur	Madhya Pradesh
Kesoram Industries	21-Nov-08	45	Gondkhari	Kamptee	Maharashtra
Revati Cement	21-Nov-08	14	Thesgora-B/ Rudrapuri	Pench Kannan	Madhya Pradesh
Century Textiles & Industries	29-May-09	47	Bander	Bander	Maharashtra
J.K.Cement	29-May-09	47	Bander	Bander	Maharashtra
Dalmia Cement (Bharat)	29-May-09	31	Khappa & Extn.	Kamptee	Maharashtra
Gujarat Ambuja	17-Jun-09	36	Dahegaon/Makardhokra IV	Umerer	Maharashtra
Lafarge India	17-Jun-09	25	Dahegaon/Makardhokra IV	Umerer	Maharashtra
Rashmi Cement	3-Jul-09	233	Andal East	Raniganj	West Bengal
ACC	6-Oct-09		Moira-Madhujore	Raniganj	West Bengal
Grasim	21-Nov-08		Bhaskarpara	Jhilimili	Chhattisgarh

Source: Espirito Santo Investment Bank Research, Company Data

Figure 64 Only Ultratech & Ambuja are using sea routes

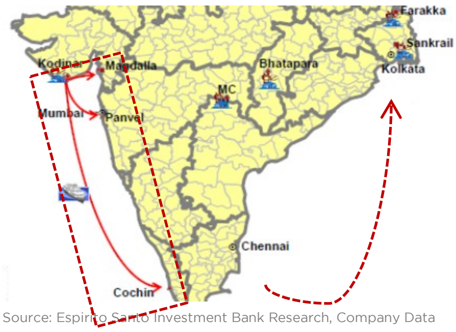


Source: Espirito Santo Investment Bank Research, Company Data

Sea/Inland water transport - limited usage of the cheapest transport mode

Sea is the cheapest mode of transport available, but only Ultratech & Ambuja are currently taking advantage of this. Ambuja is able to target the coastal markets of Surat, Mumbai, Mangalore and Cochin from its Junagarh-based facility, with lead distances as high as ~760 nautical miles compared to an average lead distance of ~600kms by rail. The eastern coast provides a similar opportunity to south-based players to the target coastal Odisha & West Bengal market. We expect cement players to increase their focus on sea and inland waterways as rising rail & road freight costs force them to explore cheaper alternatives. Our industry channel checks indicate that the cost of transport via sea is half that of rail.

Figure 65 East provides similar opportunity as West

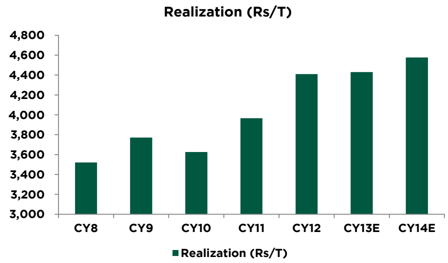


Source: Espirito Santo Investment Bank Research, Company Data

More often than not, cost is passed through

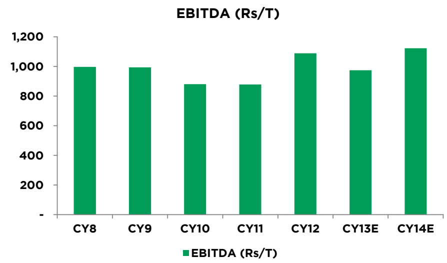
We expect cost inflation to be the order of the day. Raw material prices (fly ash/gypsum/limestone), power/coal costs (grid/auction/linkage) and freight rates (rail/road) are all expected by us to move up. Further, with 1.) Indian oil marketing companies widely expected to increase diesel prices more frequently (i.e. INR0.40-50/litre on a monthly basis (ex-VAT) and sale of bulk diesel at market rates) as a result of the depreciating rupee & increasing under recoveries and 2.) an expected increase in Coal India's linkage coal pricing as it eventually resorts to price pooling, pushing the average price up, we think cost inflation is here to stay. Interestingly, analysing historical cement prices/cost pressures, we infer that cement companies have been successful in passing on cost increases in the past, excluding periods in which demand growth has been weak (as seen in FY11, Figure 15). We believe Indian cement makers have been pro-active, enabling them to realize some gains on the back of several cost saving initiatives (raw material substitution, blending, alternate fuels, waste heat recovery, etc.) As cost inflation persists, we think Indian cement makers will enjoy at least stable margins as demand picks up. Besides, a continued focus on cost optimization should result in gradual margin expansion.

Figure 66 Ambuja - Realization has kept pace with cost increase



Source: Espirito Santo Investment Bank Research for estimates, Company Data

Figure 67 EBITDA/T largely flat - expect gains from cost saving initiatives



Source: Espirito Santo Investment Bank Research for estimates, Company Data

Cement supply discipline – is it a cartel?

The Competition Commission of India (CCI) has alleged that 11 players, along with the Cement Manufacturers Association (CMA), were operating a cartel to limit supply & artificially inflate prices over FY10-11. The parameters used by the CCI to ascertain the existence of a cartel are as follows: a) the existence of price parallelism among these parties; b) price increases after CMA meetings; c) low levels of capacity utilization & reduced production; d) existence of dispatch parallelism; and e) super normal profits earned by these players. The CCI imposed a penalty of 0.5x net profit for FY10 (from 20th Feb 2009) and FY11 of these players, amounting to Rs63.2bn. The criteria used to ascertain the quantum of penalty was the higher of: a) 3 times profit; or b) 10% of revenue over the period of the cartel's existence. In this case, 3x profits was higher than 10% of revenues during the period mentioned above, but the CCI limited the penalty to 0.5x profits.

Figure 68 CCI's arguments vs. Cement companies' counter-arguments

Parameter	CCI's arguments	Accused's counter-arguments
Price parallelism	# Cement prices move in same direction of these parties in different zones # Cement prices same across parties, despite different cost structure # Co-ordinated behavior to control prices	# Price parallelism is expected in an industry like cement with commoditized product # As per DG, there are 49 companies operating more than 173 large plants. It is impossible to coordinate prices across such large number of parties
Price increase after CMA meetings	# Cement prices increased after CMA meetings	# Cement prices also decreased after few meetings. CCI considered only those meetings after which prices increased
Low capacity utilization & reduced production	# Capacity utilization of cement companies down to 73% during FY11 from 83% in FY10 # Production growth not commensurate with capacity addition	# Lower utilization due to scarcity of key raw materials, erratic power supply, breakdown of machinery or stoppage of plants for up gradation, high inventory of clinker, logistic constraints, demand growth and labor disturbance # Lower utilization due to time required for stabilization of new plants # Indian capacity utilization in line with global capacity utilization at 82%
Dispatch parallelism	# Demand is inelastic, whatever is produced will be consumed # Lower dispatch to control supply	# Dispatch parallelism due owing to cyclical nature of cement industry and ability of companies to intelligently respond to actions of competitors
Super normal profits	# Companies trying to maximize EBITDA margins # High operating profit margins in the range of 20-48% implies super normal profit	# EBITDA margin is not a metric to calculate returns. Should use RoIC/RoE, IRR # There is no benchmark against which 20-48% operating margin can be considered super normal # Quarterly results ending 31st March 2010 indicate many companies reporting net losses

Source: Espirito Santo Investment Bank Research, Company Data, CCI

The CCI cited high prices, production & dispatch parallelism, lower utilization and high EBITDA margins in their arguments vs. the cement companies. It is interesting to note that for a country that produced 252mt (including mini plants) of cement in FY13, the system inventory remains at a meagre 1-2mt (Figure 71). System inventory remains low because cement is a low-value/high-volume product with high storage cost as a percentage of total value. Cement players frequently adjust production volumes based on market demand, which (combined with low inventory levels) may give the illusion of production & dispatch parallelism.

On the pricing front, though the CCI accepts that there is no single market leader, it mentions that all regions are dominated by one or two players who use price signalling to control prices. Price signalling is used in other industries too, generally by a market leader, as a tactical business tool. For example, an empirical study on retail gasoline markets in the Midwestern United States published by Ohio State University found that regional market leaders use price signalling to maintain pricing discipline. Owing to the homogenous nature of the product, competitors quickly follow pricing decisions of the market leader with a large majority of stations jumping to the exact same price within a 24 hour period, but this doesn't necessarily imply any collusive behaviour in the retail gasoline industry.

On the super normal profits argument, high operating margins is not a tool to ascertain returns in our view. In addition, we think the lack of any specification about what defines super normal profits further weakens the CCI's argument. The CCI has also argued that retail cement prices in India are among the highest in the world. However, this does not seem to be the case (see Figure 70) and according to the CMA, high cement prices in India can be attributed to high taxes, which account for ~60% of the ex-factory price.

Finally, the CCI has not been able to prove the existence of any agreement (Appendix 6: as per definition of cartel) between these parties to limit supply. Considering the number of players – 49 large players along with numerous mini plants – we think it would be a herculean task to co-ordinate price, production and supply on a weekly basis.

Empirical analysis of retail gasoline markets in Midwestern United States suggests regional market leaders use price signalling to maintain pricing discipline.

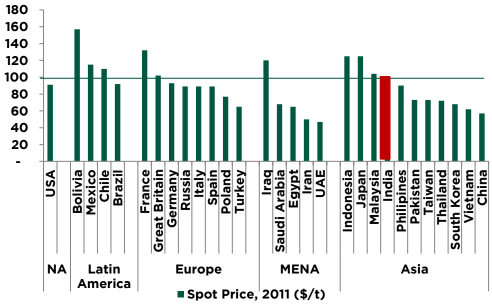
Owing to the homogenous nature of product, competitors quickly follow pricing decisions of the market leader with a large majority of stations jumping to the exact same price within a 24-hour period.

Figure 69 According to CMA, taxes and levies constitute 60% or more of the ex-factory price

Item	Rs/Tonne of Cement
Average Excise Duty	490
VAT	500
Limestone	84
Royalty on Coal	33
Electricity Duty	23
Others including Clean Energy Cess on Fuel	30
Total	1,160

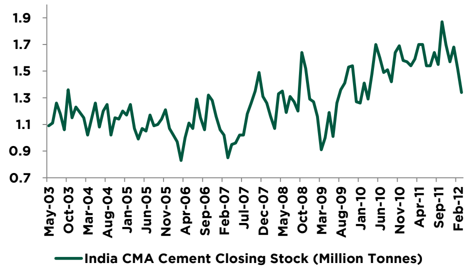
Source: Espirito Santo Investment Bank Research, Company Data

Figure 70 Indian cement prices near global median



Source: Espirito Santo Investment Bank Research, Cemnet, Year 2011

Figure 71 System inventory remains in the 1-2 million tonne range



Source: Espirito Santo Investment Bank Research, CMA

Figure 72 CCI levied a fine of Rs63.2bn on these players

Company	Total (Rs Bn)
ACC Ltd	11.5
Ambuja Cements Ltd	11.6
Binani Cements Ltd	1.7
Century Textiles Ltd	2.7
India Cements Ltd	1.9
JK Cements Ltd	1.3
Lafarge India Pvt. Ltd	4.9
Madras Cements Ltd	2.6
Ultratech Cement Ltd	11.8
Jaiprakash Associates Ltd	13.2
Total	**63.2**

Source: Espirito Santo Investment Bank Research, Planning commission

Despite the CMA's counter-arguments, the CCI & members of the Builders Association of India maintain their view that there is a cement cartel (CCI June 2012 Verdict). As per the builders' association, supply control helps cement producers maintain high cement prices and earn super normal profits. The builder's association has also provided anecdotal evidence of artificial shortages created by cement producers, but CCI hasn't been able to prove the existence of an agreement amongst cement producers. Furthermore, the existence of a large number of producers (49 large), falling industry EBITDA margins (from 29% in FY08 to 17% in FY11) and RoCE (from 37% in FY08 to 12% in FY11) suggests otherwise to us. Both sides are unwilling to concede defeat and they are awaiting COMPAT's final ruling. Cement producers haven't provisioned for the fine imposed by the CCI. In the worst case scenario, we estimate this could have a per share impact of Rs.8/Share for Ambuja, Rs.61/Share for ACC, Rs.43/Share for Ultratech and Rs.10/Share for Shree Cements.

Choose players – where do they stand?; what do they offer?

Operational characteristics & opportunities

Clinker % and blended cement: Ultratech has maximum potential:
The Indian cement industry is currently dominated by blended cements (PPC & PSC), which command over 75% of the total cement market share. Ambuja, one of the pioneers in blended cement production, leads the pack with blended cement constituting 92% (Figure 74) of total sales in CY12, while Ultratech trails behind the other three companies covered in this report, at ~70-75%. Hence, we see a big opportunity for Ultratech if it's able to improve its sales mix towards blended cement. In FY13, Ultratech produced 40mt of grey cement. Assuming it is able to shift its entire product mix towards blended cement, we estimate it could achieve a total cost benefit of Rs7.4bn. Similarly, we estimate Shree cement could achieve savings of around Rs.1.5bn, ACC Rs.1.9bn and Ambuja Rs1.0bn. However whether or not this is achievable remains a function of market awareness/acceptability of bended cement as well as management's willingness to pursue it

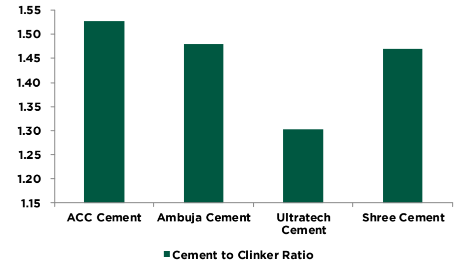
ACC Cement leads the pack in terms of cement to clinker ratio (at ~1.53x) as it also produces Portland slag cement, while Ultratech trails all at 1.28x. As per BIS standard, the cement to clinker ratio for PPC cement could be as high as 1.7x. If all 4 players move towards the maximum permissible cement to clinker ratio, then (based on the latest available production data) Ultratech could save Rs14.6bn, ACC Rs3.2bn, Ambuja Rs3.7bn and Shree Rs2.0bn annually. We think rising input costs and tepid demand will force the industry towards stringent cost saving initiatives and we see fly ash substitution as a low-hanging fruit.

Power & fuel - cost optimization & source diversification in progress
Power & fuel costs (~25-30% of total costs) have faced significant inflation on account of: a) reducing coal linkages, b) rising grid power cost, c) increasing dependence on imported coal and d) lack of access to captive coal blocks. Coal through linkage has declined by 20% over FY05-11 (Figure 49), while cement production increased by 64% during the same period. Grid power cost across the region has increased by 16-30% over FY08 to FY12E (Figure 51). Cement players are investing in cost saving avenues like a) Waste Heat Recovery systems and b) Alternative Fuels & Raw Materials. We expect these initiatives to generate significant annual savings and help cement players to mitigate rising power & fuel costs.

Of the four companies, Shree Cement has the lowest dependence on external power sources, which is reflected in its average per unit power cost of Rs.2.75/kwh. Power costs for ACC & Ambuja are similar owing to similar levels of external power purchases. Ultratech's average power cost is the highest of the four, despite its low dependence on the external grid (17%) owing to the higher cost of power generation by CPPs (Rs.4.21/kwh in FY12 vs. Rs3.84/kwh for Ambuja Cements.

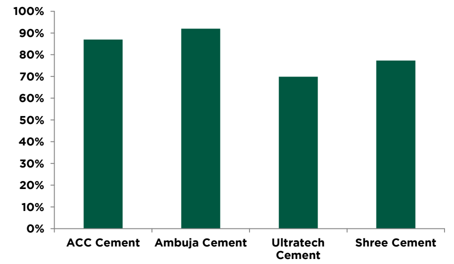
Energy parameters – among the best in class globally:
We think the average thermal and electrical energy consumption presently achieved by Indian cement makers (under our coverage) is in line with global performance benchmarks. The best thermal and electrical energy consumption presently achieved by the Indian cement industry is about 667 kcal/kg clinker and 67 kWh/t cement vs. 660 kcal/kg clinker and 65 kwh/t cement reported in Japan. Energy parameters of all four companies under our coverage are largely range bound at 710-790 kcal/kg of clinker, with Ultratech having lowest norm (at 710) and Shree cement having the highest requirement (at 790). Electricity consumption stands within a narrow band at 75-80 kwh/t of cement. Although power & fuel consumption norms are among the best globally, we think these players will strive to lower their consumption norms further. However, we expect this to materialize over a longer period of time, as achieving the best possible efficiency level would require a combination of

Figure 73 Ultratech has lowest cement to clinker ratio



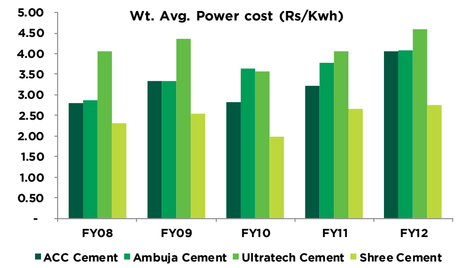
Source: Espirito Santo Investment Bank Research, Company Data, ACC - CY11, Ambuja CY12, Ultratech & Shree - FY12

Figure 74 Ultratech has lowest blended cement %



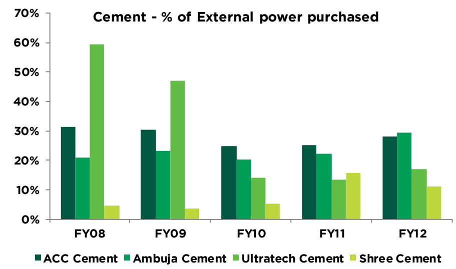
Source: Espirito Santo Investment Bank Research, Company Data, ACC & Ambuja CY12, Ultratech & Shree - FY12

Figure 75 Shree cement's power cost is lowest



Source: Espirito Santo Investment Bank Research, Company Data

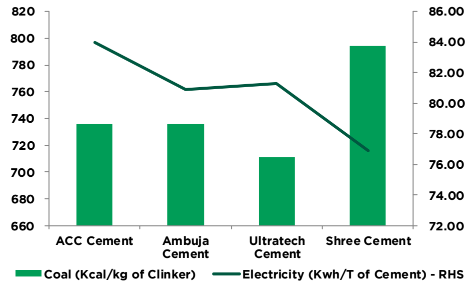
Figure 76 Ambuja has most dependence on external power



Source: Espirito Santo Investment Bank Research, Company Data

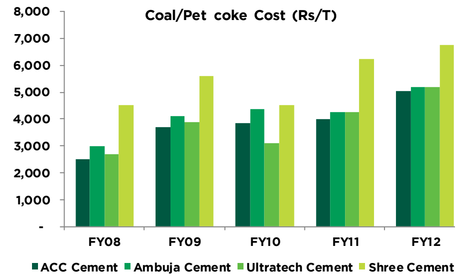
input mix optimization, change in existing machinery configuration & capex on new machinery.

Figure 77 Consumption norms - range bound



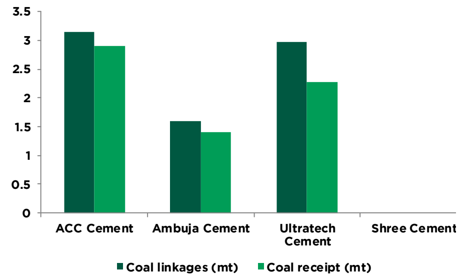
Source: Espirito Santo Investment Bank Research, Company Data

Figure 78 Shree's cost higher due to pet coke usage



Source: Espirito Santo Investment Bank Research, Company Data

Figure 79 Shree has no coal linkages



Source: Espirito Santo Investment Bank Research, Company Data

Waste Heat Recovery (WHR) & AFR – near-term optimization targets

WHR – In the near term, we think all four players will focus on WHR & alternative fuels to cut costs. The per unit cost for WHR is in the range of ~Rs0.4/Kwh vs. grid power at Rs5-6/Kwh. Ultratech has launched a major initiative on WHR and has identified multiple plants (in AP, MH, CTG, Raj & UAE) with generation potential of 90MW (or ~9mt cement, at 90% utilization). The company says it aims to substitute 10-12% of its total power requirement with WHR. Currently ~50MW of WHR projects at multiple plants in the states of Rajasthan, Maharashtra, Karnataka and Chhattisgarh are under implementation. We think, these plants combined can save around Rs~2bn annually, once operational. Ambuja has launched WHR initiatives in Rajasthan & Maharashtra with total capex of Rs1.65bn (~12-15MW), which the company plans to commission over 2012-14. We estimate this to provide annual cost benefit of Rs500mn. ACC has a 7MW WHR plant under implementation in the state of Himachal Pradesh which once operational is expected to generate ~45 million units of power per year translating into annual cost savings of ~Rs250m. Shree cement operates one of the largest WHR systems with 46MW capacity, which in FY12 helped it save 0.36mt of fuel.

Ultratech has launched a major initiative on WHR and has identified multiple plants (in AP, MH, CTG, Raj & UAE) with generation potential of 90MW (or ~9mt cement, at 90% utilization).

AFR - Alternative Fuels & Raw Materials - Although it is still in its infancy in India, we expect AFR to become one of the major cost saving avenues in the near future. As per ACC, currently only 0.6% of its total fossil fuel input in its kilns is substituted by AFR. ACC, one of the pioneers of AFR in India, is planning to substitute 5% of coal input in kilns with AFR, up from the current level of 1%. We think the incremental 4% substitution translates into Rs600m in annual savings. In 2011, ACC re-launched its Waste Management services under the brand name of "Geocycle", encompassing all activities concerning the utilization of Alternative Fuels and Raw Materials (AFR) in cement plants across the country. This is the Holcim group's umbrella brand for extending co-processing solutions for the management of wastes using cement kilns. Ambuja is also part of Holcim's "Geocycle" initiative (See Appendix 12); in 2012, it co-processed more than 0.1mt of waste (of which 50% was biomass) as alternative fuels in its cement kilns. Ultratech has also undertaken numerous initiatives for cost savings through AFR. In FY13, it used 130kt of alternative fuel, of which 70kt was biomass, which helped Ultratech to reduce its coal intake by 75kt. We think there is immense cost saving potential through the usage of AFR. For instance, global cement producer Lafarge cement – which in 2012 used 15% of total fuel input as AFR – says it plans to increase it to 30% by 2015 and 50% by 2020.

ACC, one of the pioneers of AFR in India, is planning to substitute 5% of coal input in kiln by AFR, from current levels of 1%.

Raw material cost - limestone cost at minimum levels; gypsum cost savings a possibility: Owing to access to captive limestone mines, the cost per tonne for most producers remains below Rs150. Although cement players say there is ample supply of limestone in India, the cost for a non-integrated producer can be as high as 3-4x that of an integrated producer. Ambuja purchased ~4% of its total limestone requirement in CY12 at ~Rs440/t. Since limestone forms the bulk of cement inputs, lack of access to a captive source can dent profitability. For instance, limestone cost for Ultratech (an integrated player) increased by 48%

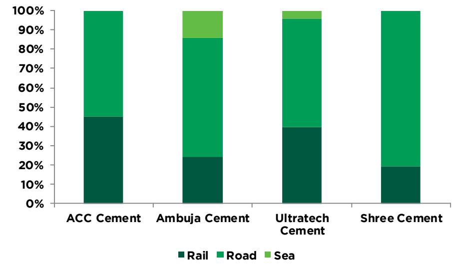
Though cement players talk about ample supply of limestone in India, the cost for a non-integrated producer can be as high as 3-4x that of integrated ones.

over FY07-11, which implies a Rs39/t increase in cost of PPC. For a non-integrated producer, the same % increase would have increased limestone cost by ~Rs120/t. Cement producers are focusing on raw material cost reduction through synthetic gypsum. Gypsum accounts for 5% of cement by weight and costs Rs1,200-2,000/t. In India, substantial sources of mineral gypsum are currently available only in Rajasthan, where the mineral's supply and mining is monopolized by government organizations. Even these reserves have been producing lower quantities in recent years, leading to a highly competitive scenario in gypsum procurement. Players like Ambuja and Shree Cement are working on synthetic gypsum projects to cut down on gypsum costs.

Freight cost - focus on railways & sea

Freight cost, which accounts for 20-25% of total cement cost, has increased significantly over the past 5 years. The railway base fare has increased by ~40% in FY08-FY13 while road rates have increased by ~49% during the same period. Deregulation of diesel rates should put further pressure on these rates. On a per tonne/kilometer basis, rail freight rates are ~36% lower than road freight rates, thereby making cement producers focus on rail linkages. Rail carries ~35% of total cement production, while road carries most of the rest. Sea accounts for a very small share of total cement transportation. Ambuja is undertaking various rail linkages & loading projects to increase rail share and at the same time investing in sea transport modes to target the coastal part of southern region. Ultratech is also investing in sea transport. Since the cost of transportation through the rail route is 2/3rd that of road and sea is half as expensive as rail, cement players can achieve significant cost savings by increasing their use of the sea mode. For a lead distance of 500kms, road will cost Rs1,160/t and rail Rs735/t, while the sea mode would cost Rs368/t.

Figure 80 Ambuja & Ultratech have access to sea route



Source: Espirito Santo Investment Bank Research, Company Data

Freight cost, which accounts for 20-25% of total cement cost, has seen steep rise over past 5 years.

Railway base fare has increased by ~40% in FY08-FY13 while road rates have increased by ~49% during the same period. Deregulation of diesel rates will further put pressure on these rates.

Cost mitigation: potential benefits – While we expect cost inflationary pressures to persist, we also believe this should be offset by price increases on the back of improving demand, leading to stable margins. We highlight below the impact of key cost heads on the companies under our coverage. We expect diesel price hikes to have the greatest impact on Ultratech & Ambuja (assuming road freight hike as proxy), while higher rail fares should hit ACC the most (45% freight share). On the other hand, a decline in pet coke prices is most advantageous to Shree, though a depreciating rupee tends to offset the cost gains. Please see the figure below for detailed cost impact analysis.

We also highlight some of the potential cost saving measures that we think these companies could undertake over time. While the management teams of these companies have refrained from divulging exact cost optimization targets, we see no reason to believe that this shouldn't be a key theme for them in the forthcoming years. As Ultratech has the lowest blend ratio of the four companies (at 1.3x), it stands to benefit most from an increase in the blending ratio. We think a shift from the current 1.3x to the permissible limit of 1.7x could lead to Rs359/t of cost savings. Ambuja's blended cement mix of 92% is the highest of the four and thus it has limited potential on this front. WHR is another potential cost saving avenue. Ultratech's 90MW projects can help it save Rs49/t. On the AFR front, ACC has taken the lead and we expect its recent plan to substitute 5% of coal for kiln substitution to provide a benefit of Rs25/t. Cement producers have long realized that cost leadership is the best way to build a competitive advantage and are exploring various avenues. We think AFR is still in its infancy in India and can provide a substantial cost benefit in the future.

Figure 81 Cost Impact - more sensitive to power & freight costs than to RM

Cost Impact (Rs/T of Cement)	Ultratech	ACC	Ambuja	Shree
Freight				
5% Shift in Road to Rail	22	21	24	14
5% Increase in Road Freight	34	29	34	30
5% Increase in Rail Freight	15	18	7	5
5% Increase in Avg. Lead Distance	49	47	42	35
Power				
5% Increase in External Power Purchase	9	4	5	9
5% Increase in Own Power Cost	17	18	16	10
5% Increase in Kiln Coal Cost	31	30	29	27
Raw Material				
5% Increase in Fly Ash Cost	4	10	6	8
5% Increase in Gypsum Cost	3	6	5	4
5% Increase in Limestone Cost	7	2	4	7

Source: Espirito Santo Investment Bank Research for estimates, Company Data

Figure 82 Ultratech has maximium cost saving potential

Cost savings opportunities (Rs/T)	Ultratech	ACC	Ambuja	Shree	Comments
Savings from increase in proportion of blended cement	181	78	48	136	Ambuja has highest PPC/Total Ratio
Savings from increase in blending ratio	359	133	175	184	Ultratech has lowest blending ratio of 1.28x
Savings from WHR implementations	49	10	23	-	Ultratech undertaking 90MW of WHR
Savings from AFR coal replacement	6	25	6	5	ACC to replace 5% of coal input by WHR

Source: Espirito Santo Investment Bank Research for estimates, Company Data

Figure 83 Operational Characteristics: Ultratech looks best positioned to maintain its market leadership

Comparison Table	Ultratech Cement	ACC Cement	Ambuja Cement	Shree Cement
Operational Characteristics				
Clinker Substitution Potential	●	◔	◑	◕
Wt. Avg. Power Cost	◑	◕	◕	●
External Power Purchased (%)	◕	◑	◔	●
Clinker Energy Consumption Norm	●	◕	◕	◑
Cement Electricity Consumption Norm	◕	◑	◕	●
WHR Initiatives	●	◑	◑	◕
AFR Initiatives	◕	●	◕	◔
Transport Mix	●	◕	◑	◔
Average Lead Distance	◕	◕	◕	●

Source: Espirito Santo Investment Bank Research, Company Data for estimates, Full green = 4 is best while Full white = 0 is worst, (Best & Worst is relative for these 4 companies)

Regional capacity and market share trends, P/V tradeoffs

Capacity & production market share trends (over FY04-FY13), along with the growing number of players across regions, indicate to us that the cement industry is competitive. The HHI index, based on production (In FY13) across regions is in the range of 7%-17%, with lowest in the South & highest in the West and Central regions. The HHI index for the East, North & South indicates no concentration, while that of the West & Central regions indicates moderate concentration. The South remains the most competitive market with as many as 38 players; while the Central region has the lowest number of players, at 9. Our estimates & detailed analysis of region wise capacity addition and utilization is described below.

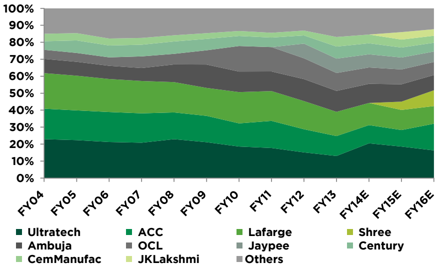
HHI index, based on production (In FY13) across regions is in the range of 7%-17%, with lowest in South & highest in West and Central regions. HHI index for East, North & South indicates no concentration, while that of West & Central region indicates moderate concentration.

East: Capacity chasing realization (to see maximum addition FY14-16E) – We expect the Eastern region to see the largest capacity additions over FY14E-16E, at 19mt, i.e. 40% total incremental capacity in India. We expect **Ultratech** to consolidate its market share with addition of ~4mt in FY14, which will increase its capacity share to 20%. We see Ultratech's capacity addition in the East as a welcome move as it is already operating at ~100% capacity utilization. Market leadership in the supply deficit market bodes well for Ultratech, which will help it achieve higher realization gains. Owing to no

We estimate Eastern region to witness maximum capacity addition over FY14-16 at 19mt, i.e. 40% total incremental capacity in India.

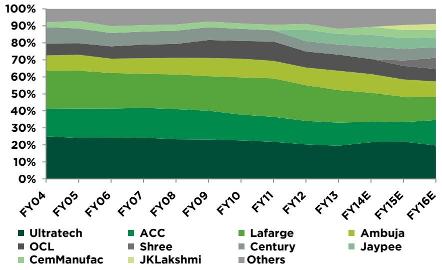
additions, Ambuja should see its capacity share drop from 12% in CY12 to 9% in CY15E. ACC is also aggressively focusing on this region with 5mt of capacity addition by CY15. We estimate ACC's utilization in the Eastern region to be in the ~80-82% range, which would have prompted its foray into a high supply deficient region. Shree will be a new entrant in the region and is expected by us to gain ~9% capacity share by FY16E, with a 6.5mt capacity addition. Further, others like Kalyanpur, Meghalaya, CCI etc. (apart from top 10) are operating at lower utilization as their capacity share is 17% vs. production share of 12%.

Figure 84 East: capacity share - Ultratech is market leader



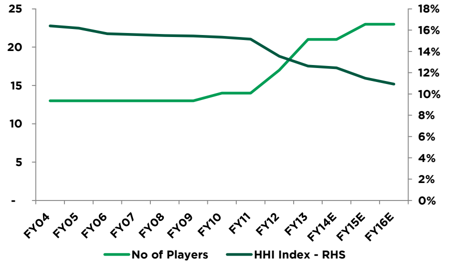
Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 85 East: production share - Ultratech is market leader



Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 86 East: HHI indicates no concentration or competitive market

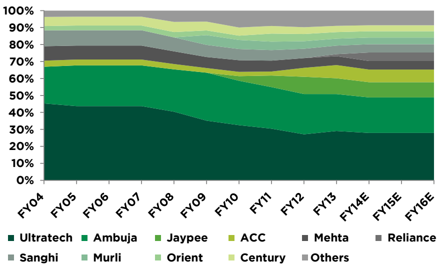


Source: Espirito Santo Investment Bank Research, Company Data, CMA\

West: Ultratech & Ambuja's bastion – Ultratech & Ambuja combined control ~51% of total capacity in the Western region, with the former being the market leader (29% in FY13). Other players have a sub-10% market share. Both these players also have plants in the coastal region, which not only allows them to target coastal markets of South, but also enables them to tap export markets (like the Middle East). West is expected to see only ~2mt in capacity additions over FY14-16E, which will have little impact on capacity share of Ultratech & Ambuja. Ultratech has agreed to buy Jaypee's 4.8mtpa Gujarat unit, which will boost its market share to 37%.

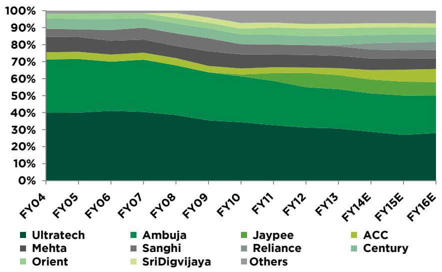
Ultratech & Ambuja together control ~51% of total capacity in western region, with former being market leader (29% in FY13).

Figure 87 West: capacity share - Ultratech is market leader



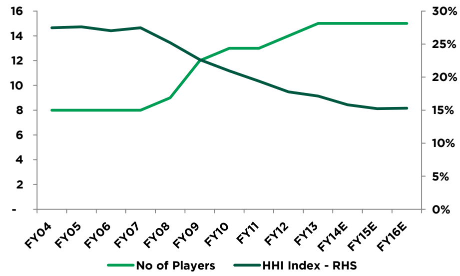
Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 88 West: production share - Ultratech is market leader



Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 89 West: HHI indicates no concentration or competitive market

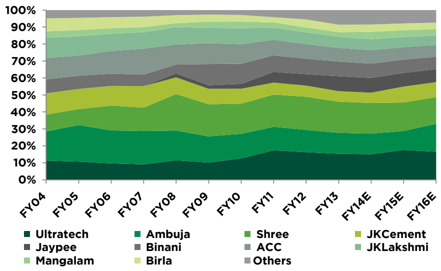


Source: Espirito Santo Investment Bank Research, Company Data, CMA

North: Shree, Ambuja & Ultratech – 3-way play – Shree cement, Ambuja & Ultratech together accounted for 46% of capacity share in FY13. Capacity additions by these three players over FY14-16 should enable them to maintain leadership in the region. We expect the North to add ~8.6mt over FY14-16, namely Mangalam (1.2mt), JK Cement (3mt), Ultratech (2.9mt) and Ambuja (1.5mt). Ultratech's capacity utilization in the North is ~74% and new capacity additions should help it attain market leadership. Shree, however, has ~90% capacity utilization; it is currently focusing on the Eastern region and at the same time adding clinker capacity in the Northern region. Ambuja has a utilization level of 90%, which explains its expansion in this region. ACC, like Shree is focusing on the Eastern region.

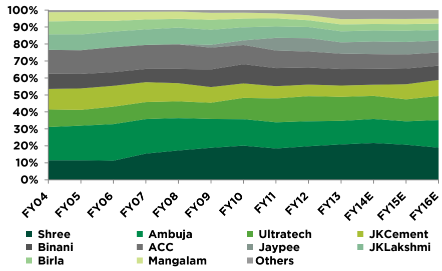
Shree cement, Ambuja & Ultratech together accounted for 46% of capacity share in FY13

Figure 90 North: capacity share - Shree cement is market leader



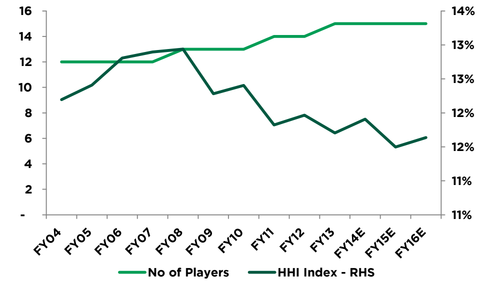
Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 91 North: production share - Shree cement is market leader



Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 92 North: HHI indicates no concentration or competitive market

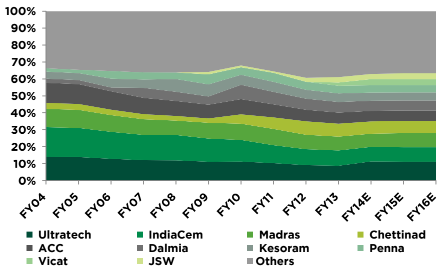


Source: Espirito Santo Investment Bank Research, Company Data, CMA

South: Most fragmented market – The Southern region is the most fragmented market, wherein others (aside from the top-10 players) command an impressive 39% of total market share. The top 5 players have market shares in the 7-9% range. With incremental addition of ~4mt capacity in FY14, Ultratech should attain capacity leadership in this market too and breach the 10% mark. It is interesting to note that Ultratech continued to operate above average regional utilization, with FY12 utilization of 73% vs. that of 54% for the region.

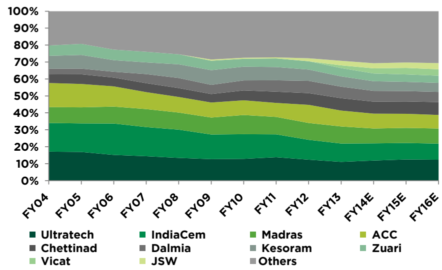
Southern region is most fragmented market, wherein others (apart from top 10 players) command an impressive 39% of total market share.

Figure 93 South: capacity share - India Cements is market leader



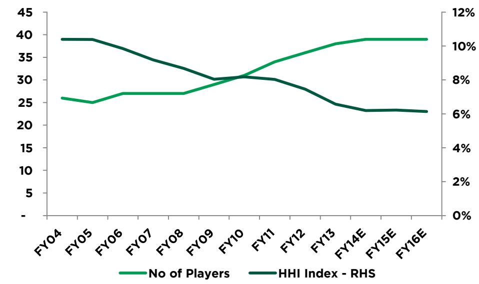
Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 94 South: production share - India Cements is market leader



Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 95 South: HHI indicates no concentration or competitive market

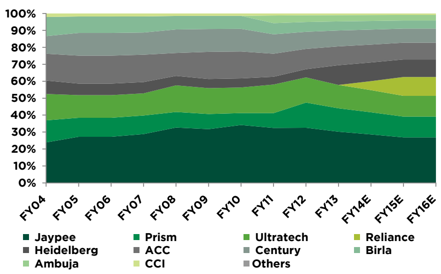


Source: Espirito Santo Investment Bank Research, Company Data, CMA

Central: Jaypee is market leader by wide margin - Jaypee is the clear market leader in the Central region (with 30% capacity share in FY13), while the next two have half the capacity. If the proposed Ambuja-HIPL merger goes through, then combined entity will achieve a number two position (with an 20% market share). This region has the lowest number of players and the top 5 combined accounted for 81% of total market share in FY13. The central region is expected by us to add 8mt of capacity over FY14-16E, namely Ambuja (3mt) and Reliance (5mt). We expect Ambuja, despite operating at ~73% capacity utilization, to add another 3mt in the central region.

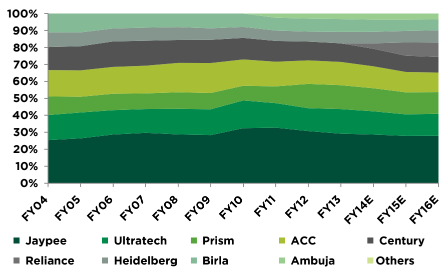
Jaypee is clear market leader in central region (with 30% capacity share in FY13), while next two have half the capacity.

Figure 96 Central: capacity share - Jaypee is market leader



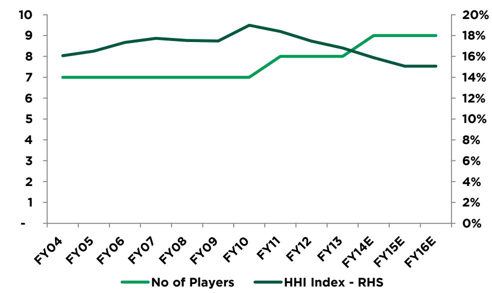
Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 97 Central: production share - Jaypee is market leader



Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 98 Central: HHI indicates no concentration or competitive market



Source: Espirito Santo Investment Bank Research, Company Data, CMA

Price volume tradeoffs: Whilst we see volume growth and market share as the primary themes, we highlight the impact of price/volume trade-offs in a scenario with increasing/declining prices and utilization levels. Owing to legacy issues, ACC has the highest fixed costs amongst the four companies under our coverage. The variable cost for ACC, Ambuja and Ultratech is in the range of ~Rs3,000-Rs 3,100/t, while Shree has significantly lower costs (at

All these players are worse off in a declining price and utilization environment and with decline being more sensitive to price than volume; we believe none of them would ideally like to play market share game at the cost of price decline.

Rs2,400/t) owing to lower power & freight costs. Ambuja has the lowest sensitivity to a drop in price and utilization (Figure 100), so it is least affected in a declining price/volume environment. Overall, all of these players are worse off in a declining price and utilization environment and with decline being more sensitive to price than volume, we think none of them would ideally like to play the market share game at the cost of a price decline.

Figure 99 ACC - high sensitivity owing to higher fixed cost

EBITDA (% Change)		Utilization level							
		70%	75%	80%	85%	90%	95%	100%	105%
Price Drop (%)	-2%	6%	11%	17%	21%	25%	28%	32%	34%
	-1%	0%	6%	11%	15%	19%	23%	26%	29%
	0%	-6%	0%	5%	9%	13%	17%	20%	23%
	3%	-23%	-17%	-12%	-8%	-4%	0%	3%	6%
	6%	-40%	-34%	-29%	-25%	-21%	-18%	-14%	-11%
	12%	-75%	-69%	-64%	-59%	-56%	-52%	-49%	-46%

Source: Espirito Santo Investment Bank Research, Company Data

Figure 100 Ambuja - least sensitive to price and volume drop

EBITDA (% Change)		Utilization level							
		70%	75%	80%	85%	90%	95%	100%	105%
Price Drop (%)	-2%	7%	10%	12%	14%	16%	17%	19%	20%
	-1%	2%	5%	7%	9%	11%	13%	14%	15%
	0%	-3%	0%	2%	4%	6%	8%	9%	10%
	3%	-17%	-15%	-12%	-10%	-8%	-7%	-5%	-4%
	6%	-32%	-29%	-27%	-25%	-23%	-21%	-20%	-19%
	12%	-61%	-58%	-56%	-54%	-52%	-51%	-49%	-48%

Source: Espirito Santo Investment Bank Research, Company Data

Figure 101 Shree - low cost helps in better margins

EBITDA (% Change)		Utilization level							
		70%	75%	80%	85%	90%	95%	100%	105%
Price Drop (%)	-2%	5%	11%	15%	19%	23%	26%	29%	32%
	-1%	0%	5%	10%	14%	18%	21%	24%	26%
	0%	-5%	0%	5%	9%	12%	16%	19%	21%
	3%	-21%	-16%	-11%	-7%	-4%	0%	3%	5%
	6%	-37%	-32%	-27%	-23%	-20%	-16%	-13%	-11%
	12%	-69%	-64%	-59%	-55%	-51%	-48%	-45%	-43%

Source: Espirito Santo Investment Bank Research, Company Data

Figure 102 Ultratech - second least sensitive

EBITDA (% Change)		Utilization level							
		70%	75%	80%	85%	90%	95%	100%	105%
Price Drop (%)	-2%	8%	11%	13%	15%	17%	19%	20%	22%
	-1%	3%	5%	8%	10%	12%	13%	15%	16%
	0%	-3%	0%	2%	5%	6%	8%	10%	11%
	3%	-19%	-16%	-13%	-11%	-9%	-8%	-6%	-5%
	6%	-34%	-32%	-29%	-27%	-25%	-24%	-22%	-21%
	12%	-66%	-63%	-61%	-59%	-57%	-55%	-54%	-52%

Source: Espirito Santo Investment Bank Research, Company Data

Figure 103 Ultratech looks best positioned to maintain its market leadership

Comparison Table	Ultratech Cement	ACC Cement	Ambuja Cement	Shree Cement
Market Position				
Absolute Capacity	●	◕	◑	◔
Capacity Utilization (%)	◑	◕	◔	●
Capacity Addition (FY14-16)	●	◑	◑	◕
Regional Presence	●	●	◕	◔
Market Leadership	●	◑	◑	◔

Source: Espirito Santo Investment Bank Research, Company Data, Full green = 4 is best while Full white = 0 is worst, (Best & Worst is relative for these 4 companies)

Growth & Cost saving opportunities: Ultratech has the most potential

Ultratech: Ultratech, which is a pan-India player, should attain market leadership in 4 (E, W, N, S) out of 5 (E, W, N, S, C) regions post expansion over FY14-16E. We think its plans for capacity additions in the supply-deficient Eastern region where its plants are operating at full utilization bodes well for the company. In terms of cost saving initiatives, Ultratech has launched a 90MW WHR expansion and plans to substitute 10-14% of conventional power source through this medium. In terms of operational metrics, it has maximum potential as its blending ratio, at 1.3x, is the lowest amongst these 4 companies. Finally, it is the second-least sensitive of the four to price & utilization drops (Figure 102), which should help it better sustain profitability in a declining pricing environment.

> Overall, Ultratech is a pan India player and we expect it to attain market leadership in 4 (E, W, N, S) out of 5 (E, W, N, S, C) regions post expansion over FY14-16E.

ACC: ACC's capacity additions in the Eastern region should help it achieve 2nd place in the region by CY15E. No capacity additions in other regions should result in a capacity share drop by 1-2 percentage points (North – decline from 8% in CY12 to 7% in CY15E, Central – decline from 11% in CY12 to 9% in CY15E). ACC has launched AFR & WHR initiatives to combat cost inflation. We think 5% substitution of kiln coal is just a beginning and we expect more to be in the offing. On the blending front, it has limited scope as its ratio, at 1.53x, is one of the highest in the industry. ACC is the most sensitive to price & utilization drops owing to its higher fixed costs, which we think can be addressed through a modernization drive in the future.

> ACC has launched AFR & WHR initiatives to combat cost inflation. We think 5% substitution of kiln coal is just the beginning and expect more to be in the offing.

Ambuja: Ambuja's capacity additions in the central region, with lower capacity utilization may result in a suboptimal utilization level for the company; however, capacity additions in the North bode well (~90% utilization). Ambuja's blended cement ratio of 92% leaves limited room for further cost improvement on this front, but WHR & AFR initiatives will be key avenues going forward. Ambuja is the least sensitive to a price & utilization drop, which bodes well in a falling price environment.

Shree: We see Shree's foray into the Eastern region as a well thought-out strategy to diversify from a single market presence. Clinker expansion in the North and future capacity additions should help it maintain a leadership position in the North (although no grinding expansion in FY14-16 should result in Ultratech becoming market leader). We expect Shree to replicate its record execution and cost efficient operations in the Eastern region as well. Of the 4 cement companies under our coverage, Shree is the 3rd most sensitive to price & volume drops owing to higher fixed costs but its ambitious expansion plans (to double its capacity) should help it attaining scale, which should result in lower per-unit fixed costs in future.

Ambuja's capacity addition in central region, with lower capacity utilization, may result in a suboptimal utilization level for the company. However capacity addition in the North bodes well owing to high (~90%) utilization.

Clinker expansion in North & future capacity addition will help it sustain leadership in North (no grinding expansion in FY14-16 should result in Ultratech becoming market leader).

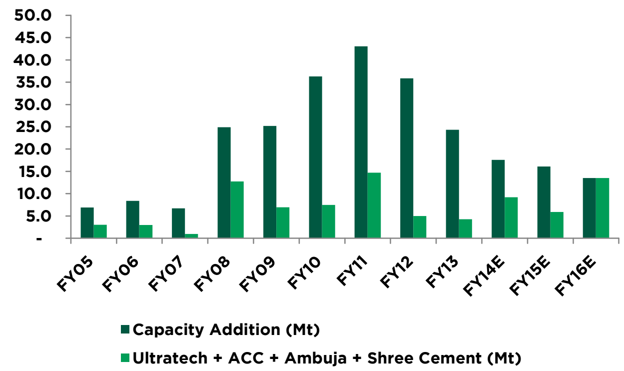
Financial metrics

Top 4: Capacity addition - From dormant (FY09-13) to active (FY14-16E):

The combined capacity additions of Ultratech, ACC, Ambuja & Shree Cement (our top 4) trailed industry growth rates over FY09-13 (Figure 104 & 105). However, we expect our top 4 to stage a comeback and account for 61% (figure 105) of total capacity additions over FY14-16E as opposed to 23% over FY09-13. We believe this bodes well for our top 4 and will help them gain market share in the near future. The majority of capacity additions by Ultratech will be completed by FY14; however those of ACC & Ambuja Cements will largely be back ended (by FY16E). Shree cement's 6.5mt capacity addition is expected to be evenly distributed over FY15-16E.

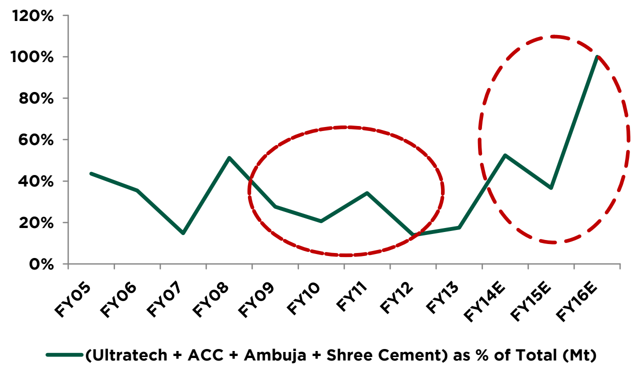
We expect our top 4 to stage a comeback and account for 61% of total capacity addition as against 23% over FY09-13.

Figure 104 Capacity addition of Ultratech + ACC + Ambuja + Shree trailed that of industry in FY08-12



Source: Espirito Santo Investment Bank Research, Company Data, CMA

Figure 105 Majority of capacity addition over FY14-16 to be done by our top 4



Source: Espirito Santo Investment Bank Research, Company Data, CMA

Key assumptions: Volume growth to pick up in H2FY14

While we expect modest volume growth for CY13E/FY14E, the top-4 companies should register robust volume growth in CY14E/CY15E on the back of expected demand improvement. We expect grey cement realizations to improve and offset cost pressures resulting in margin expansion. Ambuja & Shree should lead the pack in margin expansion in grey cement. ACC & Ultratech may face some challenges in the RMC segment but for Ultratech, white cement should more than offset the impact. The figure below highlights our key assumptions.

We expect Ambuja & Shree to lead the pack in margin expansion in grey cement. ACC & Ultratech may face some challenges in RMC segment but for Ultratech, white cement will more than offset the impact.

Figure 106 Grey Cement - realization, ebitda & volume estimates

	ACC Cement			Ambuja Cement			Shree Cement			Ultratech Cement		
Estimates (Grey Cement)	CY12	CY13E	CY14E	CY12	CY13E	CY14E	FY13	FY14E	FY15E	FY13	FY14E	FY15E
Volumes	24.1	24.3	26.1	22.0	21.8	22.7	12.5	13.9	14.8	40.8	41.8	44.8
Realization (Rs/T)	4,497	4,493	4,762	4,410	4,363	4,629	3,719	3,720	3,818	4,133	4,154	4,279
EBITDA (Rs/T)	930	742	939	1,088	920	1,226	1,032	978	1,027	949	920	1,055
Cost (Rs/T)	3,568	3,751	3,823	3,322	3,443	3,403	2,687	2,742	2,790	3,184	3,234	3,224

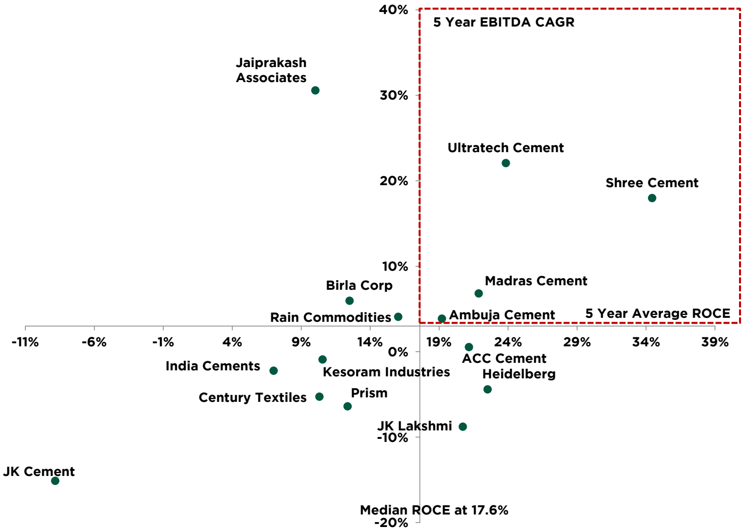
Source: Espirito Santo Investment Bank Research for estimates, Company Data

Balance sheet strength puts our top 4 on a strong footing:

Figure 107 & 108 shows a scatter plot of various cement players based on EBITDA growth, RoIC and Net Debt/EBITDA over the past 5 years. An ideal player would have above-median EBITDA growth & RoIC and below median Net Debt/EBITDA. Ultratech, Shree Cement & Ambuja score well on all three fronts vs. other players, while ACC has lagged behind only on growth terms. With new capacities expected from these players over FY14-FY16, and a healthy balance sheet, we expect Ultratech, Shree Cement and ACC to outperform (in terms of growth & returns) their peers in the medium term. In addition, we think a combination of lower solvency ratios (FY13/CY12) Net Debt/EBITDA of -0.4x for our top 4 vs. 5.3x for others, interest coverage at 22.1x vs. 3.3x for others) & above-industry-average growth rates will help the our top 4 participate in the Indian cement growth story on a much stronger footing.

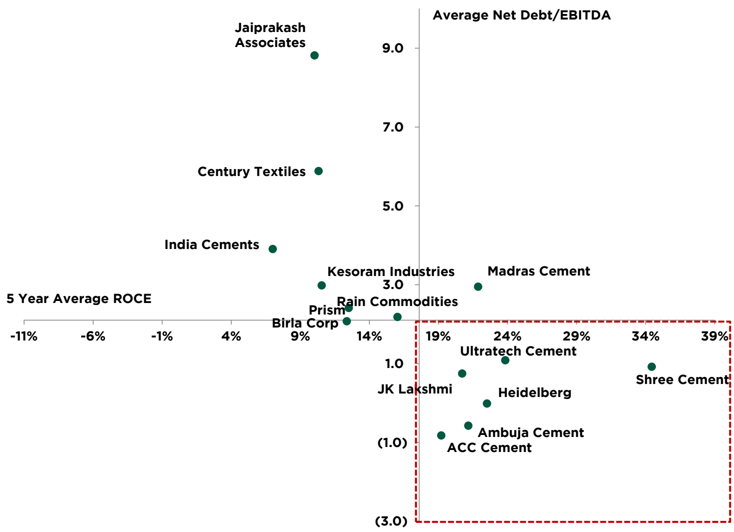
Ultratech, Shree Cement & Ambuja score well vs. other players on EBITDA growth, RoIC and Net Debt/EBITDA metrics, while ACC has lagged behind only on growth terms.

Figure 107 Ultratech, Shree Cement & Ambuja score above median RoIC & EBITDA growth (FY09-13)



Source: Espirito Santo Investment Bank Research, factset

Figure 108 Ultratech, Shree Cement, ACC & Ambuja all in best quadrant in Net Debt/EBITDA and RoIC (FY09-13)

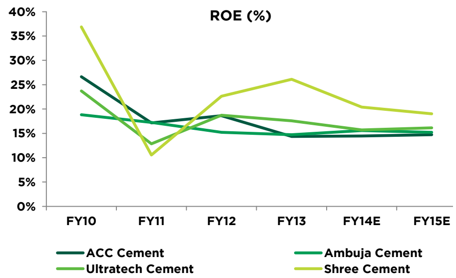


Source: Espirito Santo Investment Bank Research, factset

Return ratios look set to improve

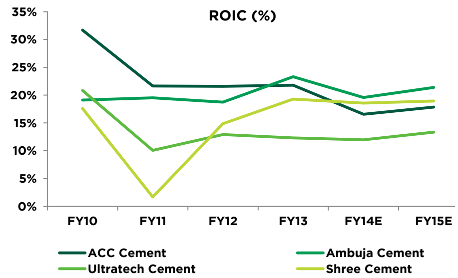
Return ratios for our top 4 have declined from peak levels of ~30-35% in FY07 to ~15-20% in FY13 as a result of demand moderation, capacity additions and rising input costs. However, we expect the ratios to improve going forward with a pick-up in demand and moderation in capacity addition. Our estimates do not factor in potential gains on cost saving initiatives and hence we see upside risk to our estimates. Our top 4 have strong balance sheets with gearing below 0.2x. Most of these producers say they expect to fund their growth capex through internal accruals, implying a moderate increase in gearing.

Figure 109 ROE - expected to remain flat



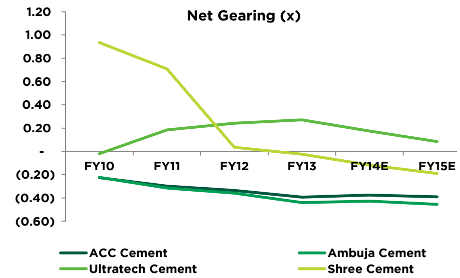
Source: Espirito Santo Investment Bank Research for estimates, Company Data

Figure 110 ROIC - to improve further



Source: Espirito Santo Investment Bank Research for estimates, Company Data

Figure 111 Net gearing - low & stable



Source: Espirito Santo Investment Bank Research for estimates, Company Data

Figure 112 Financial metrics: Ultratech looks best positioned to maintain its market leadership position

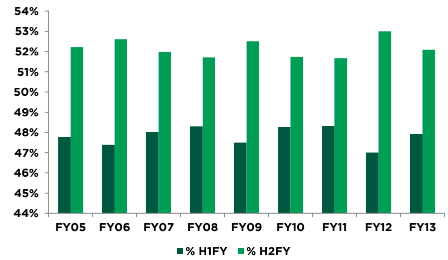
Comparison Table	Ultratech Cement	ACC Cement	Ambuja Cement	Shree Cement
Return, Leverage & Growth				
Last 5 year Avg. RoIC	◕	◑	◔	●
Last 5 year Avg. Net Debt/EBITDA	◔	◕	●	◑
Last 5 year Avg. EBITDA CAGR	●	◔	◑	●
EBITDA CAGR 2yr Forward	●	◑	◕	◕
1yr. Fwd. EV/EBITDA	◕	●	◔	◕

Source: Espirito Santo Investment Bank Research, Company Data, Full green = 4 is best while Full white = 0 is worst, (Best & Worst is relative for these 4 companies)

Earnings momentum – downgrades already behind?

Whilst we have little doubt that long-term demand fundamentals for the sector are positive, Indian cement makers have suffered over the last 6 months due to sluggish demand (1HCY13 growth at 5.3% yoy) primarily on the back of an unfavourable demand/supply equation, early and extended monsoons, and pushback on central government public expenditure. As a result of the aforementioned factors, consensus has sharply cut earnings estimates for all four companies, as can be seen in the figure below. In addition, Ultratech, ACC, Ambuja and Shree Cement have all corrected by 15-25% YTD vs. the Sensex gain of 1.94%.

Figure 113 H2FY cement consumption better than H1FY



Source: Espirito Santo Investment Bank Research, Company Data

What do consensus estimates reflect?

At this point we think the negatives are well factored in and the same events should pave way for earnings upgrades going forward. Our back of the envelope calculation indicates that the Street is now factoring in volume growth of 9%, 2%, 3% for Ultratech, ACC, Ambuja Cement respectively for CY13/FY14. Figure 114 also indicates the derived volume growth for FY14/15.

Figure 114 Implied volume growth from consensus estimates

Standalone (Rs Mn)	ACC Cement		Ambuja Cement		Shree Cement		Ultratech Cement	
	CY13E	CY14E	CY13E	CY14E	FY14E	FY15E	FY14E	FY15E
Consensus Net Sales (Rs Mn)	117,401	133,306	100,220	113,442	62,697	71,622	220,704	253,091
Grey Cement (as % Net Sales)	94%	94%	100%	100%	82%	82%	83%	83%
Grey Cement Net Sales (Rs Mn)	110,357	125,308	100,220	113,442	51,412	58,730	183,184	210,066
FY13/CY12 Realization(Rs/T)	4,497	4,497	4,410	4,410	3,719	3,719	4,154	4,154
Implied Volumes (Mt)	24.5	27.9	22.7	25.7	13.8	15.8	44.1	50.6
Implied Growth - yoy (%)	2%	14%	3%	13%	11%	14%	5%	15%
ESIBe Growth - yoy (%)	1%	7%	-1%	4%	12%	6%	0%	7%

Source: Espirito Santo Investment Bank Research for estimates, Bloomberg for consensus

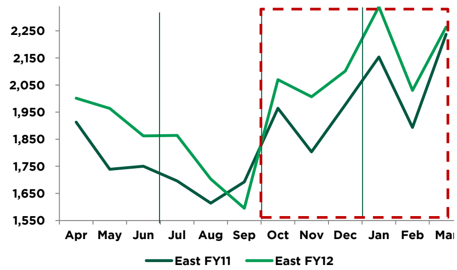
Post monsoon, election spending to revive demand:

We estimate an increase in demand in the medium term on the back of: 1. pick-up in construction activity post monsoons. Historical data indicate weak cement demand in the June to September period, with a pick-up in the following months. Besides prolonged and above average monsoons, higher MSP's for farmers and central government handouts on social schemes imply higher disposable income and pent-up demand. 2. Whilst the central government has pushed back its expenditure schemes, we expect pent up demand to materialize on this front as the country nears elections. Besides, state elections in MP, Delhi, Rajasthan and Chhattisgarh should push up demand further. The figure below highlights the seasonal production trends in recent years.

Historical data indicate weak demand in the June to September period, with a pick up in the following months.

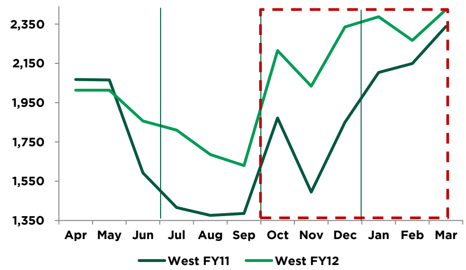
Exhibit: (Figure 115-119) Post monsoon, demand to pick-up; Pre-election spend to play out

Figure 115 East - demand picks up in H2FY



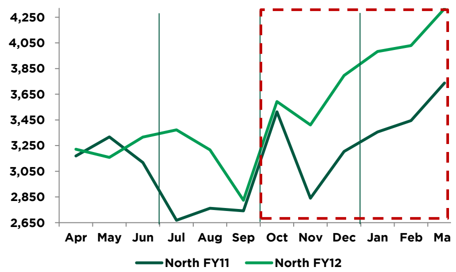
Source: Espirito Santo Investment Bank Research, Company Data

Figure 116 East - demand picks up in H2FY



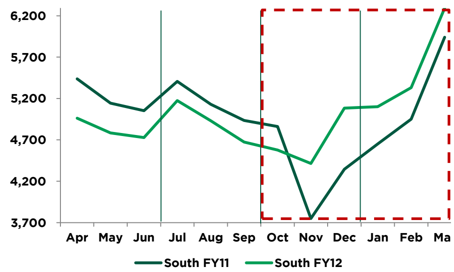
Source: Espirito Santo Investment Bank Research, Company Data

Figure 117 North - demand picks up in H2FY



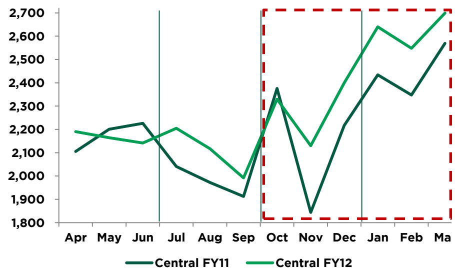
Source: Espirito Santo Investment Bank Research, Company Data

Figure 118 South - demand picks up in H2FY



Source: Espirito Santo Investment Bank Research, Company Data

Figure 119 Central - demand picks up in H2FY



Source: Espirito Santo Investment Bank Research, Company Data

Initiate with BUY on ULCT, Ambuja & ACC; Neutral on SRCM

We initiate with BUY ratings on Ultratech Cement (FV Rs 2221), Ambuja Cement (FV Rs 206) and ACC (FV Rs 1397) and with a NEUTRAL rating on Shree Cement (FV Rs 4199)

Our view on Ultratech, Ambuja, ACC and Shree Cement is based on our analysis of the companies': market share and growth potential, balance sheet strength, operational characteristics and potential costs saving opportunities going forward. We think the market leader, Ultratech Cement, should continue to benefit from industry growth owing to its major capacity addition plan over FY14-16. Ambuja is our second pick owing to its stable input costs and expected growth ahead. ACC & Ambuja have a combined plan to add ~10mt of capacity by CY15. ACC is our third pick on fundamental parameters and while we currently do not read too much into ACEM's stake building plans, any incremental stake purchase via a creeping acquisition could offer support to ACC's share price. We like Shree cement for its strong growth profile and operating metrics but see limited upside at current valuations. Overall, we initiate with BUY ratings on Ultratech Cement (FV Rs 2221), Ambuja Cement (FV Rs 206) and ACC (FV Rs 1397) and with a NEUTRAL rating on Shree Cement (FV Rs 4199).

Figure 120 Ultratech looks best positioned to maintain its market leadership position

Comparison Table	Ultratech Cement	ACC Cement	Ambuja Cement	Shree Cement
Return, Leverage & Growth				
Last 5 year Avg. RoIC	◕	◑	◔	●
Last 5 year Avg. Net Debt/EBITDA	◔	◕	●	◑
Last 5 year Avg. EBITDA CAGR	●	◔	◑	●
EBITDA CAGR 2yr Forward	●	◑	◕	◕
1yr. Fwd. EV/EBITDA	◕	●	◔	◕
Operational Characteristics				
Clinker Substitution Potential	●	◔	◑	◕
Wt. Avg. Power Cost	◑	◕	◕	●
External Power Purchased (%)	◕	◑	◔	●
Clinker Energy Consumption Norm	●	◕	◕	◑
Cement Electricity Consumption Norm	◕	◑	◕	●
WHR Initiatives	●	◑	◑	◕
AFR Initiatives	◕	●	◕	◔
Transport Mix	●	◕	◑	◔
Average Lead Distance	◕	◕	◕	●
Market Position				
Absolute Capacity	●	◕	◑	◔
Capacity Utilization (%)	◑	◕	◔	●
Capacity Addition (FY14-16)	●	◑	◑	◕
Regional Presence	●	●	◕	◔
Market Leadership	●	◑	◑	◔
Overall	●	◕	◕	◑

Source: Espirito Santo Investment Bank Research, Company Data, Full green = 4 is best while Full white = 0 is worst, (Best & Worst is relative for these 4 companies)

Valuation metrics & methodology

Valuation methodology: We prefer EV/EBITDA over P/E and EV/T

We prefer to value cement companies on earnings-based multiples over EV/T as the former captures actual growth rates and utilization levels while the latter captures the name plate capacity. Further, we prefer EV/EBITDA (x) over PE (x) for the sake of consistency as several cement players (like Shree Cement) follow aggressive depreciation policies that suppress profits. We value pure cement companies Ultratech, ACC and Ambuja on 1-year forward EV/EBITDA (x), and use a SOTP valuation for Shree Cement, using DCF for its power operations and 1-year fwd EV/EBITDA to its cement operations.

We prefer to value cement companies on earnings based multiples over EV/T, wherein the former captures actual growth rates and utilization levels, as against the latter, which captures the nameplate capacity.

Ultratech, Ambuja and ACC Cement deserve premium

Whilst the bears might argue that one could find several mid-sized companies offering higher growth rates and cheaper valuations, we think these three companies offer significantly higher market share (based on current capacity), growth visibility (based on expected additions), strong execution track record, above median return ratios and importantly a lot of comfort on the balance sheet front. We value Ultratech Cement at 10x 1-year forward FY EV/EBITDA while we value ACC and Ambuja at 9x 1-year forward CY 14 EV/EBITDA i.e. at a 10% discount to Ultratech. We value Shree (Cement business) at a target multiple of 8x FY14 EV/EBITDA, with implied EV/EBITDA multiple for entire operations at 15% premium to its 5yr average. We value Ambuja on a standalone basis (excluding ACC), as the necessary approvals for proposed HIPL & Ambuja merger are still pending.

We value Ultratech Cement at 10x 1-year forward FY EV/EBITDA, whilst, value ACC and Ambuja at 9x 1-year forward CY 14 EV/EBITDA i.e. 10% discount to Ultratech. We value Shree (Cement business) at a target multiple of 8x FY14 EV/EBITDA, with the implied EV/EBITDA multiple for its entire operations at a 15% premium to its 5yr average.

Our top 4 stands out against global majors

Whilst the bears might argue that our top 4 Indian cement makers are trading at a ~20% premium to the global 'Big 5' (Lafarge [LG FP, Not rated], Holcim

[HOLN VX, Not rated], Cemex [CX US, Not rated], Heidelberg [HEI DE, Not rated], Vicat [VCT FP, Not rated]) on 1 year forward EV/EBITDA or 2x on P/B (x) parameters, we think these companies deserve the premium given they offer: 1) A structural growth play (please read: *India yet to ride the curve* below) 2) Superior return ratios (i.e. average RoE at ~15% vs. Big 5 at ~5% FY13/CY12) 3) Robust and relatively clean balance sheets (i.e. average net debt/EBITDA at 1.5x vs. Big 5 at 4.1x (FY13/CY12) and 4) Decent pay-out profiles (i.e. average at 1.2% vs. Big 5 at 2% (FY13/CY12). Further, although one might debate the India growth story (a mirage?) over stuck infrastructure projects, lack of political will, etc., we think the sector offers the best proxy and is more a consumption theme driven by housing demand, which accounts for 67% of total 2012 consumption. Considering the growth opportunities in the country & expected capacity addition by these players, we think the premium for top 4 is justified. Our order of preference is 1) Ultratech Cement; 2) Ambuja Cement; and 3) ACC Cement; and 4) Shree Cement.

Figure 121 Ultratech should grow above median level

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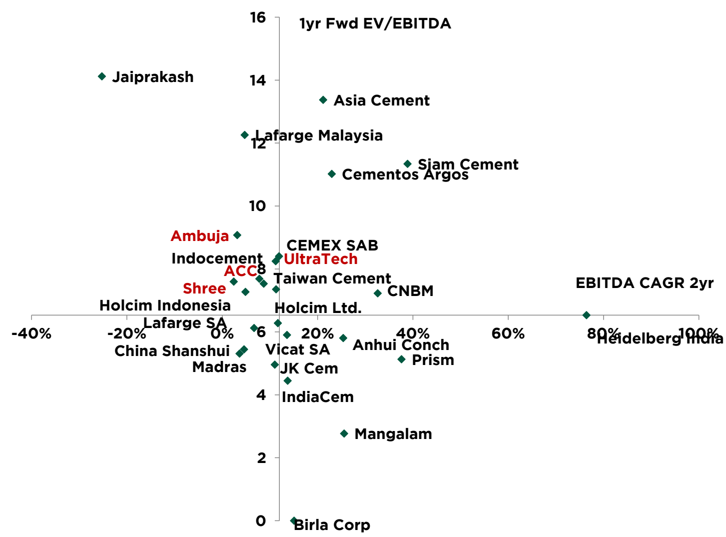
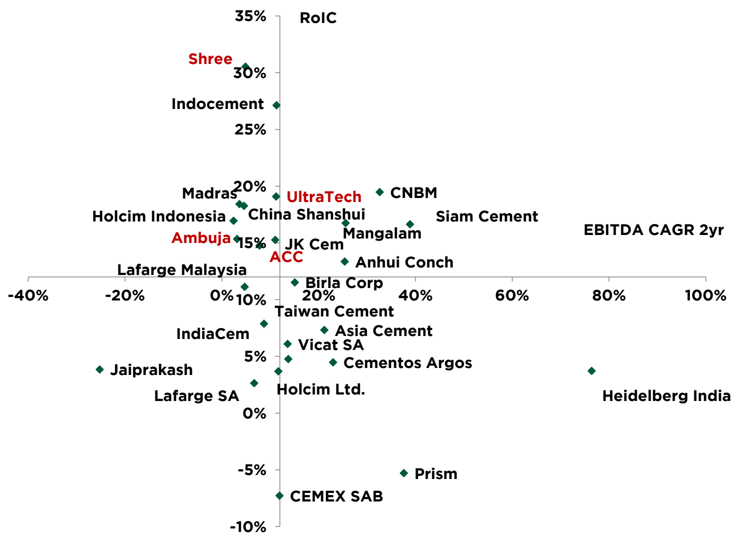


Source: Espirito Santo Investment Bank Research for estimates, Company Data, Factset for non covered stocks

Figure 122 Ultratech has above median RoIC and EBITDA growth

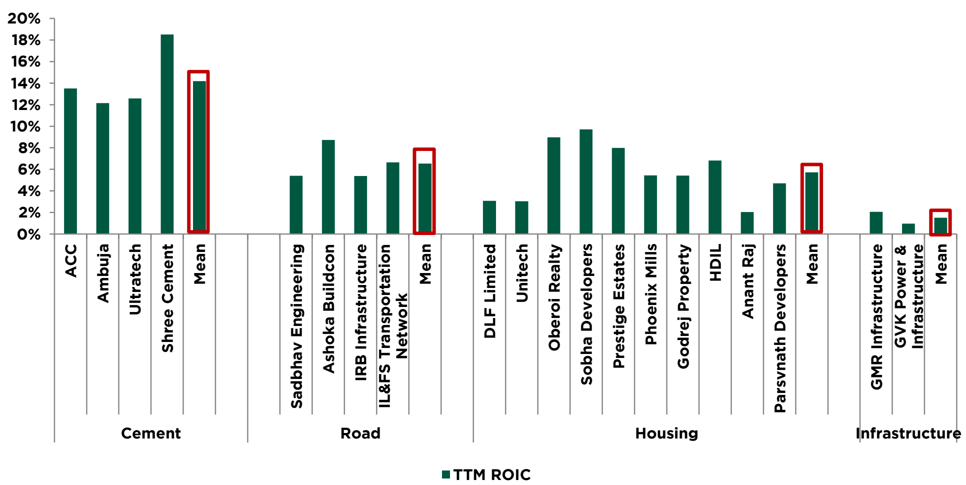


Source: Espirito Santo Investment Bank Research for estimates, Company Data, Factset for non covered stocks

Cement vs. Infrastructure/Road/Housing – Better than the rest?

Cement is an essential part of the infrastructure, road and housing value chain. Owing to better return ratios (Figure 123) & strong balance sheets, we think Indian cement producers can be seen as a better proxy for the infrastructure, road and housing sectors than sector constituents. We think India's infrastructure/road/housing growth story can be played through exposure to the cement sector.

Figure 123 Cement - best RoIC in value chain



Source: Espirito Santo Investment Bank Research, Company Data, Bloomberg, Year - TTM (Trailing Twelve Months)

COVERAGE INITIATION

India | Cement | Large Cap | 20-September-2013

Ultratech Cement

On a rapid growth trajectory

We initiate coverage of Ultratech - our top pick - with a BUY rating and FV of Rs2,221/sh. In our view, Ultratech's plan to expand its existing capacity by 20% by FY16 should help it maintain a market leadership position at both the regional and pan-India levels. We think its presence across the cement value chain (grey cement & RMC) and in high value segments (white cement & putty) will help sustain its long-term growth. We expect cost saving initiatives through fuel mix optimization, Waste Heat Recovery (WHRs), Alternative Fuels & Raw Materials (AFRs) and a better cement/clinker ratio to help mitigate rising input costs. We think Ultratech's two-pronged approach of volume growth with input cost optimization should help it maintain margins and consolidate its market position.

Capacity expansion should ensure market leadership position

Ultratech is in the midst of a major expansion plan to increase its capacity by c.20% over the next three years. FY13 saw the commissioning of 2.15mt of cement capacity (Maharashtra & Gujarat) & 3.3mt of clinker in Chhattisgarh, while projects at Raipur (4.8mt), Malkhed (4.4mt) and Shambhupura (2.9mt) are under construction. Capacity expansion is spread across regions, which should help fortify its regional & pan India market dominance. Ultratech has been able to maintain higher utilization level at 84% in FY13 vs. c.70% for the industry. The company announced the acquisition of 4.8mt JP Gujarat will help consolidate its position in the Western region to 37% (29% in FY13).

Diversified product offerings & presence across value chain: LT +VE

Ultratech not only has market leadership in the grey cement market but is also a leader in the RMC segment, as well as a key player in white cement. Its presence in the RMC segment should help protect its turf in the long run as the market shifts from SMCs to RMCs. Its recent expansion in white cement & putty, 3.5x realizations vs. grey cement, will help it target high value segments. White cement & RMC combined accounted for 17% of total revenues in FY13.

Cost savings measures on the anvil; clinker optimization also an option

Ultratech is rolling out initiatives to rein-in rising input costs. In FY13, its energy cost fell by 2% YoY to Rs989/t owing to the increased usage of pet coke. In FY13, it increased pet coke consumption to 34% of the total requirement, resulting in an 8% drop in imported coal volumes and also helping to offset a 15% increase in grid power cost. Ultratech's initiatives for 90MW WHR could in our view help it reduce its power cost by Rs2bn annually. We think its cement/clinker ratio of 1.3x is one of the lowest in the industry and a move towards the permissible limit of 1.7x offers the potential for annual cost savings of ~Rs14.5bn on our estimates. On the AFR front, Ultratech successfully reduced its coal intake by 75kt by using 130kt of alternative fuels in FY13.

Initiate with BUY and FV of Rs.2,221/share

We value Ultratech Cement at 10x FY15E EV/EBITDA, i.e., at a 10% premium to its 3-year average 1yr forward EV/EBITDA. We think Ultratech offers an attractive combination of: 1) highest volume growth amongst its peers (at 12% CAGR over FY13-16E), 2) market leadership position, 3) diversification into high-margin complementary business lines (wall putty/white cement), 4) robust and clean balance sheet and importantly 5) credible management and no corporate governance issues. Initiate with BUY and FV of Rs.2,221/share.

ESPIRITO SANTO INVESTMENT BANK
Research

Accounting & corporate governance	GREEN
Franchise Strength	GREEN
Earnings Momentum	AMBER

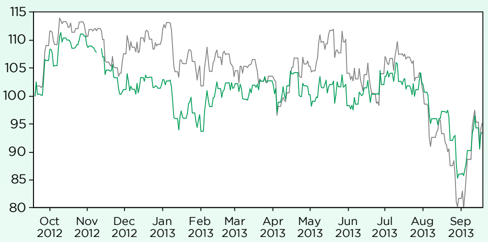
BUY	29% upside
Fair Value	Rs2,221.00

Bloomberg ticker	**UTCEM IN**
Share Price	Rs1,720.00
Market Capitalisation	Rs471,280.00m
Free Float	40%

INR m Y/E 31-Mar	2012A	2013A	2014E	2015E
Revenue	192,357	213,191	222,738	246,131
EBITDA	41,939	48,393	50,628	61,932
EBIT	32,310	38,160	39,217	48,532
Net Income	24,033	26,777	28,048	34,231

Y/E 31-Mar	2012A	2013A	2014E	2015E
P/E (x)	19.6	17.6	16.8	13.8
P/BV (x)	3.7	3.1	2.7	2.3
EV/EBITDA (x)	12.0	10.6	10.1	8.0
EBITDA margin	21.8%	22.7%	22.7%	25.2%
Net Debt / EBITDA	0.7	0.9	0.8	0.4
ROE	18.7%	17.6%	15.9%	16.5%
RoIC	12.9%	12.3%	11.6%	13.3%
Net Gearing (x)	0.2	0.3	0.2	0.1

Share Price Performance



Source: Espirito Santo Investment Bank Research, Company Data, Bloomberg

Analysts

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Ultratech Cement

Recommendation:	**BUY**
Fair Value:	**Rs 2,221**
Share Price:	Rs 1,720
Upside / Downside	29%
3 Month ADV ($m)	6.3
Free Float	40%
52 Week High / Low	INR 1,508- 2,075
Bloomberg:	UTCEM IN

Shares In Issue (mn)	274
Market Cap (Rs mn)	471,280
Net Debt (Rs mn) - FY14E	24,850
Enterprise Value (Rs mn)	496,130

Forthcoming Catalysts:
Compat verdict on CCI penalty levied on Ultratech
Timely completion of ~10mt expansion plans
Implementation of 90MW of WHR plants

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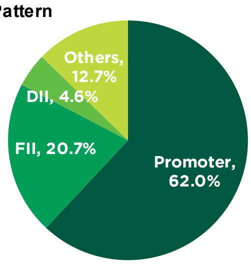
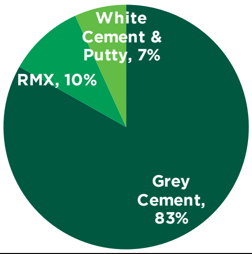
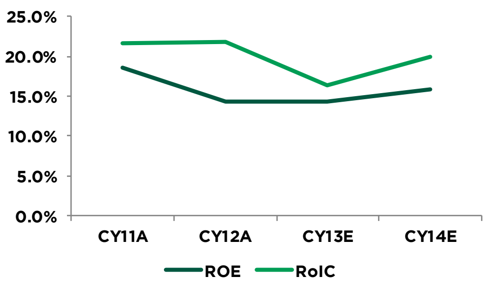
Shareholding Pattern



Segment Revenue (%) - FY13



Return ratios



Valuation Metrics	FY12A	FY13A	FY14E	FY15E
P/E (x)	19.6	17.6	16.8	13.8
P/BV (x)	3.7	3.1	2.7	2.3
EV/EBITDA (x)	12.0	10.6	10.1	8.0
EV/Sales (x)	2.6	2.4	2.3	2.0

Key ratios	FY12A	FY13A	FY14E	FY15E
EBITDA margin	21.8%	22.7%	22.7%	25.2%
EBIT margin	16.8%	17.9%	17.6%	19.7%
Net Debt / EBITDA	0.5	0.5	0.5	0.2
EBIT / Net Interest	12.6	15.1	12.4	15.4
ROE	18.7%	17.6%	15.9%	16.5%
RoIC	12.9%	12.3%	11.6%	13.3%
Net Gearing (x)	0.2	0.3	0.2	0.1

P&L Summary	FY12A	FY13A	FY14E	FY15E
Revenue	**192,357**	**213,191**	**222,738**	**246,131**
% change	39.4%	10.8%	4.5%	10.5%
EBITDA	**41,939**	**48,393**	**50,628**	**61,932**
% change	55.6%	15.4%	4.6%	22.3%
% margin	21.8%	22.7%	22.7%	25.2%
Depreciation & Amortisation	9,629	10,234	11,411	13,400
EBIT	**32,310**	**38,160**	**39,217**	**48,532**
% change	71.6%	18.1%	2.8%	23.8%
% margin	16.8%	17.9%	17.6%	19.7%
Operating Profit	**32,310**	**38,160**	**39,217**	**48,532**
Net Financials	2,564	2,523	3,158	3,158
Other Pre-tax Income	3,708	3,036	3,601	3,621
Pre Tax Profit	**33,454**	**38,672**	**39,660**	**48,995**
Income Tax Expense	9,481	11,791	11,508	14,660
Associates	-	-	-	-
Minority Interests	(60)	103	103	103
Exceptional Item	-	-	-	-
Net Income	**24,033**	**26,777**	**28,048**	**34,231**
ESIB Net Income	24,033	26,777	28,048	34,231
Reported EPS	87.7	97.7	102.3	124.8
ESIB EPS	**87.7**	**97.7**	**102.3**	**124.8**
Shares in issue (Millions)	274	274	274	274

Cash Flow Summary	FY12A	FY13A	FY14E	FY15E
Operating EBIT	32,310	38,160	39,217	48,532
Add: Depreciation	9,629	10,234	11,411	13,400
Less: Cash Tax	9,444	10,109	11,508	14,660
Less: Increase in Working Capital	(1,517)	(398)	(224)	(1,443)
Less: Other Opex	234	108	464	341
Operating Cash Flow	**33,778**	**38,574**	**38,880**	**48,374**
Less: Capex	26,822	44,201	35,780	30,780
Free Cash Flow	**6,955**	**(5,627)**	**3,100**	**17,594**
Less: Increase in Investments	17,663	2,531	-	-
Add: Other Income	3,708	3,036	3,601	3,621
Add: Increase in Debt	3,411	14,674	-	-
Add: Increase in Equity	21	102	(142)	-
Less: Interest Paid	2,564	2,523	3,158	3,158
Less: Dividend	1,921	2,551	2,897	3,541
Change in Cash	**(8,053)**	**4,579**	**504**	**14,515**

Balance Sheet Summary	FY12A	FY13A	FY14E	FY15E
Cash & Equivalents	28,538	33,117	33,621	48,136
Tangible Fixed Assets	127,702	143,161	172,530	199,911
CWIP	19,397	36,011	31,011	21,011
Goodwill	5,444	7,337	7,337	7,337
Associates & Financial Investments	23,946	26,478	26,478	26,478
Other Assets	75	84	84	84
Non-Cash Working Capital	2,034	1,636	1,412	(31)
Total Assets	**207,136**	**247,823**	**272,472**	**302,925**
Interest Bearing Debt	59,613	74,287	74,287	74,287
Deferred Tax Liability	17,411	19,096	19,096	19,096
Other Liabilities	1,245	1,364	1,364	1,364
Shareholders' Equity	128,244	152,296	176,945	207,397
Minority Interests	623	781	781	781
Total Equity & Liability	**207,136**	**247,823**	**272,472**	**302,925**
Net Debt	22,009	25,354	24,850	10,335

Source: Espirito Santo Investment Bank Research estimates, Company data and Bloomberg, SHP – June 2013, Segment Revenue – FY13

Company snapshot

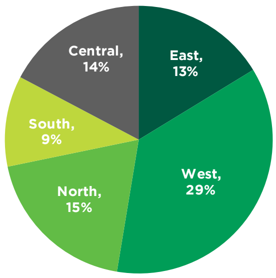
Ultratech Cement is India's largest cement manufacturer with a global installed capacity of 53.9mt in FY13, which it plans to expand further to 64.5mt by FY16. Its grey cement capacity in India stands at 50.9mt (in FY13), while its Middle East based subsidiary "Star Cement" has 3mtpa capacity. Ultratech is market leader in RMC with 100+ operational plants which are capable of producing more than 13 million m3 annually. It is also a leading player in the white cement (0.56mt) & wall care putty (0.4mt) categories. Ultratech is India's leading cement exporter with total exports in FY13 of 1.07mt. In FY13, grey cement accounted for 83% of total revenues, while RMC accounted for 10% and white cement segment accounted for 7%.

Figure 124 Ultratech - ESIB vs. Consensus

Ultratech	ESIB		Consensus		Difference (%)	
Consol (Rs Mn)	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E
Sales	222,738	246,131	233,838	268,834	-5%	-8%
EBITDA	50,628	61,932	51,596	61,261	-2%	1%
PAT	28,048	34,231	29,149	35,063	-4%	-2%

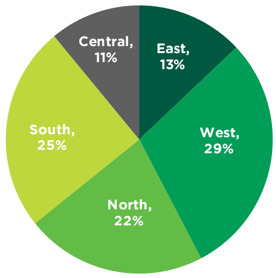
Source: Espirito Santo Investment Bank Research estimates, Bloomberg for consensus

Figure 125 Ultratech has market leadership in most of the regions - Capacity share FY13



Source: Espirito Santo Investment Bank Research, Company Data

Figure 126 West accounts for 29% of Ultratech's total capacity (FY13)



Source: Espirito Santo Investment Bank Research, Company Data

Figure 127 Ultratech valuation – FY15E FV of Rs2,221

Valuations	FY15E
EBITDA (Rs Mn)	61,932
Multiple	10.0x
EV (Rs Mn)	619,319
Debt (Rs Mn)	74,287
Cash + Investments (Rs Mn)	63,952
Equity Value (Rs Mn)	608,985
No of Shares (Mn)	274
FV Rs/Share	2,221

Source: Espirito Santo Investment Bank Research estimates

Figure 128 Scenario Analysis

	Low case	Base case	High case
Fair value	**1,768**	**2,221**	**2,633**
Upside/downside:	**3% Upside**	**29% Upside**	**53% Upside**
FY15 EBITDA(Rs Bn)	**48.5**	**61.9**	**70.6**
Assumptions	• Grey Cement volumes at 5% below our estimates • Realization at 5% below our estimates • White Cement & Wall Care Putty volumes & realization 5% below our estimates • RMC volumes & realization 5% below our estimates	• Grey cement volumes at 41.8/44.8mt in FY14E/FY15E • RMC volumes at 5.7/6.23mn m3 • White Cement & Wall Care Putty Volumes at 1.15mt & 1.2mt • Grey Cement Realization at Rs.4,154/T & Rs4,279 • Grey Cement EBITDA at Rs.920/T & Rs1055 in FY14E & FY15E	• Realization at 5% above our estimates

Source: Espirito Santo Investment Bank Research for estimates

Figure 129 SWOT analysis

Strengths

- Ultratech commands market leadership in grey cement at the pan India level and it is also a top 3 player in all regions
- Ultratech is India's largest RMC player with over 100 operational plants and total installed capacity of 13 million m3
- Ultratech is India's leading white cement & wall care putty producer with c.1mt of installed capacity

Weaknesses

- 19% of the total power requirement in FY13 was met through external sources at Rs6.33/kwh vs. own generation of Rs4.15/kwh. Increase in external power share can increase total power & fuel cost.
- Of the total requirement of 6.42MT (power + kiln), Ultratech has FSAs of ~3mtpa, owing to which it has to depend on e-auction & imported coal, which leads to higher production cost at Rs4.1/kwh
- Ultratech's Bhaskarpara coal block, with 47.37% share was de-allocated in FY13 by IMG for delays in achieving milestones. The matter is currently pending a ruling from the High Court of Chhattisgarh. a negative verdict can result to de-allocation.

Opportunities

- Capacity growth of 10.55mt, by FY15, to increase total capacity to 64.55mt which will help maintain market leadership
- White cement & putty division, which has 3.5x realizations as that of grey cement, doesn't suffer from excess supply and further expansion will help to boost profitability.
- Ultratech is undertaking 90MW of WHR projects which will lower total power cost. WHR CoP is at Rs0.41/kwh vs. purchased power of Rs6.33/kwh in FY13
- Ultratech was able to substitute 75kt of coal with alternative fuels in FY13. AFR is still in nascent stage and further initiatives can help reduce overall power & fuel cost
- Cement to clinker ratio for Ultratech is at 1.3x vs. 1.7x permissible limit. Usage of more fly ash can help reduce overall cost.

Threats

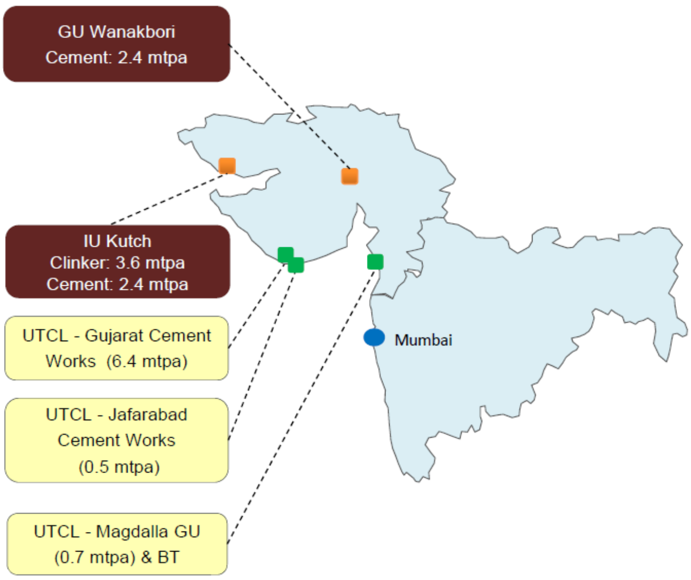
- Prolonged weakness in demand may force marginal players to resort to predatory pricing, which may hurt margins
- Prolonged weakness in demand can lead to sub-optimal plant utilization levels from FY13 level of 84%
- CCI imposed a penalty of Rs11.75bn in June 2012 for alleged contravention of the provisions of competition act. The case is now being heard by COMPAT (Competition Appellate Tribunal) and a negative verdict would lead to a cash outflow of Rs11.75bn.
- Increasing diesel prices and freight cost (Rail & Road) will lead to increase in total cost. Rail and road together account for 96% of its freight mode.

Source: Espirito Santo Investment Bank Research for estimates

Ultratech - JP Gujarat acquisition

Ultratech Cement recently announced the acquisition of 4.8mt JP Gujarat for an EV of Rs38bn implying EV/T of $124, which will help in consolidating the west market share to 36% (29% in FY13). The deal will include equity issuance of Rs1.5bn (0.32% equity dilution) and the rest is via debt of Rs36.5bn. JP's assets include recently commissioned plants with latest technology and split grinding units. The land area of 5,479Ha and limestone reserves of ~500mt provides scope to double the capacity going forward. Other assets are a CPP of 57.5MW, DG of 30MW, Jetty of 2,500DWT, desalination plant and a cement bag manufacturing unit (0.3mn bags/day). These plants will provide operating leverage in Gujarat, wherein UTCEM's plants are functioning at a high utilization rate (~95%) and can help in targeting the coastal markets of Mumbai, Kochi, Mangalore and Sri Lanka. Management expects the deal to be EPS accretive from the third year onwards and synergy gains of Rs300-400mn per annum through market realignment and higher utilization. We think the deal will further help Ultratech maintain market leadership at the pan India & regional levels and provide access to the high growth coastal market. In addition, the integrated nature of plants with strong infrastructure should help maintain low operating costs. The proposed Jaypee – Ultratech transaction is subject to the approval of shareholders and creditors, sanction of the Scheme of Arrangement by the High Courts, approval of the Competition Commission of India and all other statutory approvals. The timeline expected for the event is 7 to 9 months. Given pending regulatory approvals, our base case currently does not factor in the transaction. However, on the basis that it was approved and we incorporated the higher debt and earnings contribution into our model, we currently calculate that our FV would fall to Rs2,158/share (vs. our base case at Rs2,221/share).

Figure 130 JP Gujarat - Expected synergy gain of Rs300-400mn per annum



Source: Espirito Santo Investment Bank Research, Company Data

Figure 131 Long-term benefit - EPS accretive from year 3 onwards

Valuations (+ JP Gujarat)	FY15E
EBITDA (Rs Mn)	64,032
Multiple	10.0x
EV (Rs Mn)	640,319
Debt (Rs Mn)	110,787
Cash + Investments (Rs Mn)	63,952
Equity Value (Rs Mn)	593,485
No of Shares (Mn)	275
FV Rs/Share	2,158

Source: Espirito Santo Investment Bank Research estimates

Parameter	Traffic signal	Reasons
Accounting & governance	**GREEN**	We don't find anything untoward, using our proprietary model, in Ultratech's corporate governance practices. Increased disclosure on matters such as the recent Jaypee deal and details on several cost heads would be appreciated by the Street
Franchise strength	**GREEN**	Ultratech Cement is India's largest cement manufacturer. In our view, its plan to add 20% of existing capacity by FY16E should help it maintain market leadership at both the regional & pan India levels. We think its presence across the cement value chain (grey cement & RMC) and in high value segments (white cement & wall care) will help sustain its long-term growth. Ultratech is also a market leader in RMC with 100+ operational plants. ULTC enjoys considerable brand premium and enjoys robust business model.
Earnings momentum	**AMBER**	Tepid cement demand growth in past 6 months (~3.3%) has resulted in downward revision in India demand expectation for FY14E at ~6% vs. 9.3% in FY13. This has resulted in downward revision in growth rates for some companies and consensus expects Ultratech to grow at 6% in FY14, which has resulted in earnings downgrades.

Source: Espirito Santo Investment Research for estimates

Valuation Methodology

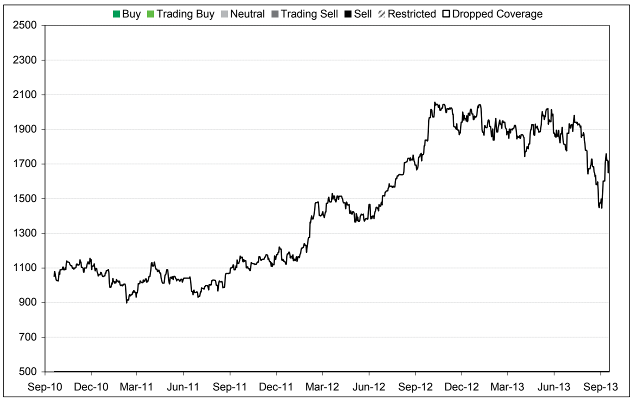
We value Ultratech Cement at 10x FY15E EV/EBITDA, i.e., at a 10% premium to its 3-year average 1yr forward EV/EBITDA.

Risks to Fair Value

- **CCI Penalty:** CCI imposed a penalty of Rs11.8bn on Ultratech in June 2012, for alleged contravention of the provisions of competition act. The case is being heard at COMPAT (Competition Appellate Tribunal) and a negative verdict would lead to a cash outflow to the tune of imposed penalty.
- **Sand mining ban:** Sand is an essential ingredient in concrete. Owing to rampant sand mining without regulatory approvals, National Green Tribunal (NGT) has called for a mining ban across all rivers in India. A further stringent set of rules will negatively impact cement demand.
- **Captive block (de)/allocation:** coal blocks allotted to Ultratech have been de-allocated for lack of progress and the matter is pending in the high courts of the respective jurisdictions. In the event of a favorable outcome, the power cost for associated power plants can reduce by 2/3rd (to Rs1-1.2/kwh)
    - **Ultratech:** Coal block of Bhaskarpara Coal Company Ltd. (Ultratech's 47.37% ownership) was de-allocated owing to delays in achieving milestones. The company has filed a written petition the in High Court of Chhattisgarh and is under review.
- **External limestone purchase:** Cost of external purchased limestone is 4x that from own quarry. 5% substitution of own limestone by external sources could increase per tonne cost by Rs7.
- **Increase in Freight rates:** Cement is largely transported by road & rail modes. Taking a producer with 50% rail/road transport mode and average lead distance of 520kms, a 5% increase in rail freight would result in a Rs18/t cement cost while a 5% increase in road freight would increase costs by Rs29/t.
- **Increase in external power purchase:** Cost of external power is ~50% higher than that of own power. Ultratech depends on external power sources to the tune of 14%. A 5% substitution of own power by external means would result in a per tonne cost increase by Rs9.
- **Increase in coal & pet coke rates:** Owing to limited coal linkages, most cement producers are dependent on e-auction and imported coal. A 5% rise in kiln coal cost would increase per tonne cost by Rs30.
- **Sharp drop in demand:** Our estimates factor in 5.9% & 8.3% growth in FY14E & FY15E respectively. A sharp drop in demand is a risk to our volume estimates for Ultratech cement.
- **Prolonged price war:** New entrants could resort to price wars to gain market share. A prolonged price war could result in a sharp drop in realization in affected regions.
- **Greenfield & brownfield expansion:** Ultratech is undertaking various greenfield & brownfield expansions. Delays in land acquisition & environmental clearances, inadequate supply of raw materials (like limestone, linkage coal & fly ash) may hamper expansion plans.
- **Increase in taxes or levies on Cement:** As per CMA, taxes and levies constitute 60% or more of the ex-factory price. Further increase in tax rates or levies may impact cement demand.

- **Tax credits and incentives:** Cement producers enjoy several tax credits and incentives for capex under 80IA & subsidy in states like HP. Withdrawal of these incentives may result in higher effective tax rates in future.

Ultratech Cements *UTCEM IN*



Report date	Recommendation	Fair value	Share price (INR)
Recommendation history is not available			

Source: Bloomberg, Espirito Santo Investment Bank Research

Please visit our website at www.EspiritoSantoIB.co.uk for up to date recommendation charts.

India | Cement | Large Cap | 20-September-2013

Ambuja Cements

Minority concerns overdone

ACEM offers best in class operating metrics thanks to its high exposure to the trade segment, highest percentage of blended mix (of the companies we cover) and efficient operational/logistics systems. We see further scope for improvement as it focuses on cost-saving initiatives. We see ACEM's expansion into North/Central India as encouraging and complementary to ACC's existing facilities. While the HIPL-ACEM transaction has raised some eyebrows (especially on the Rs35bn cash payment to Holcim), from a long-term perspective we think the deal is favourable for ACEM's minority shareholders. The transaction remains subject to regulatory/shareholder approvals, so we currently do not incorporate it into our FV. We initiate coverage on Ambuja Cements with a BUY rating and FV of Rs 206/share.

HIPL-ACEM transaction: minority concerns look overdone

We think the HIPL-ACEM merger transaction is neutral in terms of the price paid for the stake in Holcim India Private Limited (HIPL) (figure 139-141). While the transaction is earnings dilutive in the near term, we think consensus and media concerns are overdone as both have overlooked the potential synergy gains, with the merger set to give ACEM a pan-India foothold and a presence in two premium brands. Importantly, the transaction implies an attractive EV/T at US$115, at a sharp discount to 1) the Ultratech-Jaypee deal at US$124 (with sub optimal ratios) or 2) greenfield cost of US$130-140. Besides, the issuance of new shares to Holcim at an EV/T of US$153 implies a sharp premium to the implied valuation for the 50.01% stake in ACC (implied EV/T of US$115). With the Land Acquisition Bill now an act, we think the cost of setting up a cement plant will only increase, thereby raising entry barriers. Based on the SEBI's recent circular (4 Feb 2013), both legs of the transaction are subject to approval of the majority of the minority shareholders (exhibit 1 and 2).

Gaining exposure in the right regions; complementary to ACC

Post its 0.6MT expansion at Bhatpara (Chhattisgarh), ACEM is set for further expansion in the Eastern region at Sankrail (a 0.8MT grinding unit) by CY14, and also plans to set up a 2.17MT clinker (1.5mt cement plant) in Rajasthan and associated grinding plants of 1.5MT each in Dadri (UP) and Osara (MP) by CY15-16E. We think the company's incremental exposure to the North is the right strategic move given Ambuja's high capacity utilization in the North. Post expansion, ACEM's capacity will stand at 33.5MT. Further, ACEM's current capacity/expansion plans have limited overlap with ACC's capacities, which bodes well from a market positioning/pan India perspective for both companies.

Best in class operating metrics; further cost/synergy gains expected

ACEM has best in class operating metrics thanks to high exposure to the retail segment and flexible & efficient logistics. We believe the proposed HIPL-ACEM transaction is favourable for ACEM's minority shareholders from a long-term investment horizon perspective and therefore we would recommend ACEM's minority shareholders accept the merger terms.

Initiate with a BUY & FV of Rs206; Post HIPL-ACEM merger FV of Rs198

We value ACEM's cement operations at 9x CY14 EV/EBITDA (10% discount to UTCEM). Given pending approvals, we do not factor in the impact of the transaction and initiate with a BUY and FV of Rs206/share. Even post the HIPL-ACEM deal, we expect ACEM's BS to be net cash thanks to its strong cash flow profile.

ESPIRITO SANTO INVESTMENT BANK
Research

Accounting & corporate governance	AMBER
Franchise Strength	GREEN
Earnings Momentum	AMBER

BUY 14% upside

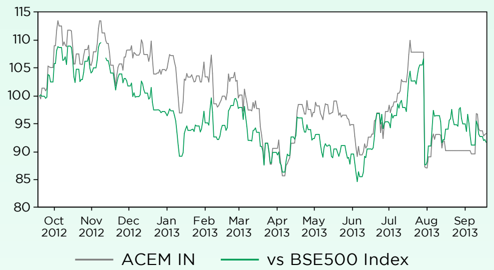
Fair Value Rs206.00

Bloomberg ticker	**ACEM IN**
Share Price	Rs180.00
Market Capitalisation	Rs276,840.00m
Free Float	50%

INR m Y/E 31-Dec	2011A	2012A	2013E	2014E
P/E (x)	22.5	21.3	19.4	15.1
P/BV (x)	3.4	3.1	2.9	2.6
EV/EBITDA (x)	12.5	9.6	11.2	7.7
EBITDA margin	23%	26%	22%	28%
Net Debt / EBITDA	(1.5)	(1.6)	(2.0)	(1.9)
ROE	15%	15%	15%	17%
Op. RoIC	19%	23%	19%	26%
Net Gearing (x)	(0.4)	(0.4)	(0.4)	(0.5)

Y/E 31-Dec	2011A	2012A	2013E	2014E
Revenue	84,568	96,415	95,105	104,844
EBITDA	19,770	24,730	21,049	28,999
EBIT	15,319	19,078	15,116	22,833
Net Income	12,289	12,971	14,236	18,331

Share Price Performance



All share price data as at close on 18-Sep-2013

Source: Espirito Santo Investment Bank Research, Company Data, Bloomberg

Analysts

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Ambuja Cements

Recommendation:	**BUY**
Fair Value (*):	**Rs 206**
Share Price:	Rs 180
Upside / Downside	14%
3 Month ADV ($m)	9.5
Free Float	50%
52 Week High / Low	INR 163 - 221
Bloomberg:	ACEM IN

* FV - on pre HIPL - ACEM merger

Shares In Issue (mn)	1,538
Market Cap (Rs mn)	276,822
Net Debt (Rs mn)	(41,201)
Enterprise Value (Rs mn)	235,621

Forthcoming Catalysts:
Compat verdict on CCI penalty levied on Ambuja
Timely completion of ~5mt expansion plans
Implementation of AFR & WHR Cost reduction projects

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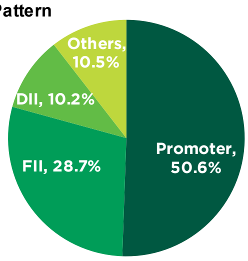
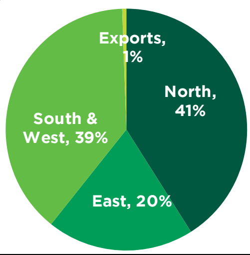
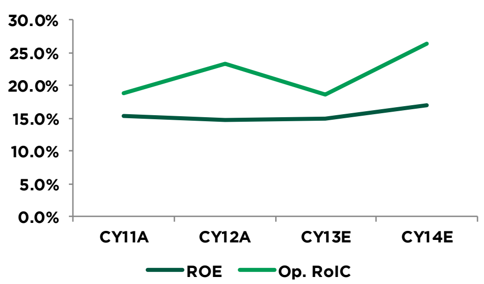
Shareholding Pattern



Market Mix (%) - CY12



Return ratios



Valuation Metrics	**CY11A**	**CY12A**	**CY13E**	**CY14E**
P/E (x)	22.5	21.3	19.4	15.1
P/BV (x)	3.4	3.1	2.9	2.6
EV/EBITDA (x)	12.5	9.6	11.2	7.7
EV/Sales (x)	2.9	2.5	2.5	2.1

Key ratios	**CY11A**	**CY12A**	**CY13E**	**CY14E**
EBITDA margin	23.4%	25.6%	22.1%	27.7%
EBIT margin	18.1%	19.8%	15.9%	21.8%
Net Debt / EBITDA	-1.5	-1.6	-2.0	-1.9
EBIT / Net Interest	29.1	25.2	24.7	37.3
ROE	15.2%	14.7%	14.9%	17.0%
Op. RoIC	18.7%	23.3%	18.5%	26.4%
Net Gearing (x)	-0.4	-0.4	-0.4	-0.5

P&L Summary	**CY11A**	**CY12A**	**CY13E**	**CY14E**
Revenue	**84,568**	**96,415**	**95,105**	**104,844**
% change	14.4%	14.0%	-1.4%	10.2%
EBITDA	**19,770**	**24,730**	**21,049**	**28,999**
% change	8.4%	25.1%	-14.9%	37.8%
% margin	23.4%	25.6%	22.1%	27.7%
Depreciation & Amortisation	4,452	5,652	5,933	6,166
EBIT	**15,319**	**19,078**	**15,116**	**22,833**
% change	6.6%	24.5%	-20.8%	51.0%
% margin	18.1%	19.8%	15.9%	21.8%
Operating Profit	**15,319**	**19,078**	**15,116**	**22,833**
Net Financials	526	757	612	612
Other Pre-tax Income	2,479	3,489	4,500	3,967
Pre Tax Profit	**17,271**	**21,810**	**19,004**	**26,188**
Income Tax Expense	4,740	6,048	4,768	7,856
Associates	-	-	-	-
Minority Interests	-	-	-	-
Exceptional Item	(243)	(2,791)	-	-
Net Income	**12,289**	**12,971**	**14,236**	**18,331**
ESIB Net Income	12,289	12,971	14,236	18,331
Reported EPS	8.02	8.43	9.26	11.92
ESIB EPS	**8.02**	**8.43**	**9.26**	**11.92**
Shares in issue (Millions)	1,532	1,538	1,538	1,538

Cash Flow Summary	**CY11A**	**CY12A**	**CY13E**	**CY14E**
Operating EBIT	15,319	19,078	15,116	22,833
Add: Depreciation	4,452	5,652	5,933	6,166
Less: Cash Tax	4,147	7,001	4,768	7,856
Less: Increase in Working Capital	(3,310)	(1,956)	1,269	(1,696)
Operating Cash Flow	**18,933**	**19,685**	**15,013**	**22,838**
Less: Capex	5,600	2,744	10,000	7,000
Free Cash Flow	**13,333**	**16,941**	**5,013**	**15,838**
Less: Increase in Investments	5,228	1,557	-	-
Less: Other Net Assets	(444)	25	-	-
Add: Other Income	2,236	697	4,500	3,967
Add: Increase in Debt	(222)	(82)	-	-
Add: Increase in Equity	799	826	-	-
Less: Interest Paid	526	757	612	612
Less: Dividend	5,703	6,448	6,448	6,448
Change in Cash	**5,133**	**9,595**	**2,452**	**12,745**

Balance Sheet Summary	**CY11A**	**CY12A**	**CY13E**	**CY14E**
Cash & Equivalents	28,380	37,976	40,427	53,172
Tangible Fixed Assets	61,865	58,624	56,691	53,525
CWIP	4,868	5,201	11,201	15,201
LT Investments	954	1,120	1,120	1,120
LT Loans & Advances	4,769	6,159	6,159	6,159
Other Assets	321	394	394	394
Non-Cash Working Capital	(13,380)	(15,336)	(14,068)	(15,763)
Total Assets	**87,776**	**94,137**	**101,925**	**113,809**
Interest Bearing Debt	428	346	346	346
Deferred Tax Liability	6,436	5,483	5,483	5,483
Other Liabilities	217	258	258	258
Shareholders' Equity	80,694	88,051	95,839	107,722
Total Equity & Liability	**87,776**	**94,137**	**101,925**	**113,809**
Net Debt	(28,906)	(38,749)	(41,201)	(53,946)

Source: Espirito Santo Investment Bank Research for estimates, Company Data, * December ending company

Company snapshot

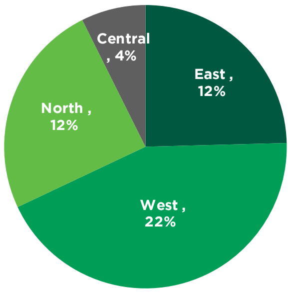
Ambuja Cements, which is part of the Holcim Group, is the fourth-largest pan India cement producer, with a total capacity of 28mt. It is one of the pioneers in the split grinding system, whereby grinders are placed near the end-market and kilns are located near limestone quarries. Ambuja has also pioneered the use of sea transport to target markets along the western coast from Gujarat to Kerala. It manufactures both OPC and blended (PPC) cement, with OPC accounting for 8% of total production in CY12. Ambuja is one of the early adopters of AFR and plans to increase its usage through an end-to-end waste recycling solution called Geo-cycle. As per the recent merger announcement between Holcim India Private Limited (HIPL) and Ambuja, a 50.01% stake in ACC will now be transferred to Ambuja with a cash outflow of Rs35bn. Post-merger, Holcim's stake in Ambuja will increase from 50.06% to 61.39%, while the number of shares outstanding will increase to 1,978mn from 1,538mn.

Figure 132 Ambuja - ESIB vs. Consensus

Ambuja	ESIB		Consensus		Difference (%)	
SA (Rs Mn)	CY13E	CY14E	CY13E	CY14E	CY13E	CY14E
Sales	95,105	104,844	100,220	113,442	-5%	-8%
EBITDA	21,049	28,999	21,986	26,424	-4%	10%
PAT	14,236	18,331	14,560	16,954	-2%	8%

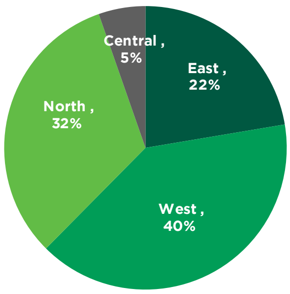
Source: Espirito Santo Investment Bank Research estimates, Bloomberg consensus

Figure 133 Ambuja has presence across most of the regions of India (CY12)



Source: Espirito Santo Investment Bank Research, Company Data

Figure 134 The West accounts for 40% of total capacity (CY12)



Source: Espirito Santo Investment Bank Research, Company Data

Figure 135 Ambuja – CY14E FV of Rs 206

Valuations	CY14E
EBITDA (Rs Mn)	28,999
Multiple	9.0x
EV (Rs Mn)	262,409
Debt (Rs Mn)	346
Cash + Investments (Rs Mn)	54,292
Equity Value (Rs Mn)	316,355
No of Shares (Mn)	1,538
FV Rs/Share	206

Source: Espirito Santo Investment Bank Research for estimates, Company Data

Figure 136 Scenario Analysis

	Low case	Base case	High case
Fair value	158	206	250
Upside/downside:	12% downside	14% Upside	39% Upside
CY14E EBITDA(Rs Bn)	21.6	28.99	35.7
Assumptions	• Grey Cement volumes at 5% below our estimates • Realization at 5% below our estimates	• Grey cement volumes at 21.8/22.7mt in CY13E/CY14E • Grey Cement Realization at Rs.4,363/T & Rs.4,629/T in CY13E/CY14E • Grey Cement EBITDA at Rs.920/T & Rs1,209/T in CY13E/CY14E	• Grey Cement volumes at 5% above our estimates • Realization at 5% above our estimates

Source: Espirito Santo Investment Bank Research for estimates

Figure 137 SWOT analysis

Strengths

- Ambuja is the fourth-largest pan India cement producer with total capacity of 28mt as of CY12.
- Ambuja is one of the pioneers in split grinding system, which helps optimize supply chain cost by placing grinding units near the end market.
- Ambuja uses the sea transport mode to target markets on western coast (from Gujarat to Kerala). Transport via sea accounts for 14% of its total shipments.

Weaknesses

- 35% of total power requirement in CY12 was met through external sources at Rs5.19/kwh vs. own generation of Rs3.84/kwh. Increase in external power share can increase total power & fuel cost.
- Of the total requirement of 2mt (power), Ambuja has FSAs of ~1.6mtpa, owing to which it has to depend on e-auction & imported coal, which leads to higher production cost.
- One of the coal blocks (Wardha valley coal private ltd.) was de-allocated in CY13 by IMG for delays in achieving milestones. The matter is currently pending in Delhi High Court and negative verdict may hamper fuel security plans.

Opportunities

- Capacity growth of 5mt, by CY15, to increase total capacity to 33MT which will help recoup lost market share.
- Cement to clinker ratio for Ambuja is 1.48x vs. 1.7x permissible limit. Usage of more fly ash can help reduce overall cost.
- Amubja-HIPL merger could provide synergy benefits of $150mn through supply chain optimization and shared services according to the company.
- Geocycle waste management initiative will help in obtaining sustainable source of AFR which will help lower power & fuel cost.
- Ambuja has planned for WHRs in Maharashtra & Chhattisgarh, wind farms in Rajasthan and Solar projects in Rajasthan & Gujarat to reduce power & fuel cost.

Threats

- Prolonged weakness in demand may force marginal players to resort to predatory pricing which may hurt margins.
- Prolonged weakness in demand could lead to sub-optimal plant utilization levels from the current 72% level.
- CCI imposed a penalty of Rs11.64bn in June 2012 for alleged contravention of the provisions of the Competition Act. The case is being heard by COMPAT (Competition Appellate Tribunal) and negative verdict could lead to cash outflow of Rs11.64bn.
- Increasing diesel prices and freight cost (Rail & Road) will lead to increase in total cost.

Source: Espirito Santo Investment Bank Research for estimates

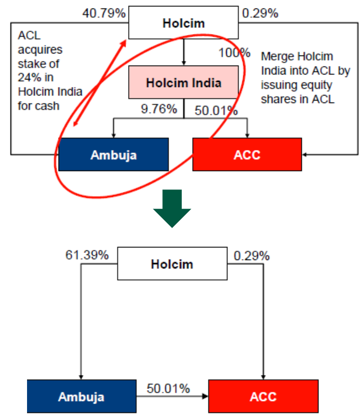
HIPL – ACEM transaction details: Minority concerns look overdone

The board of Ambuja Cement (ACEM) has approved its merger with Holcim India Private Limited (HIPL). As per the merger announcement, the transaction will be carried out in two parts. First, Ambuja Cements will purchase a 24% stake in HIPL for a consideration of Rs35bn. Second, Ambuja will issue 58.4m shares to Holcim (foreign parent). HIPL currently holds a 9.76% stake in Ambuja Cements & 50.01% stake in ACC Limited and therefore ACC will become a subsidiary of ACEM. As per SEBI's recent circulars, the draft schemes of arrangement are interdependent transactions and hence approval of both legs of the transaction is now connected. This should help allay investor concerns over Holcim drawing out Rs35bn cash from 'Ambuja' without shareholder approvals. We think the merger transaction is neutral for Ambuja in terms of the price paid for the stake in HIPL. While the proposed transaction will be earnings dilutive in the near term, we think the transaction offers additional benefits through potential synergy gains for long-term investors.

On a per share basis, our calculation indicates ACEM minority shareholders will face 1) a cash loss (Rs23/share); and 2) dilution impact (Rs43/share), which should be partly offset by 3) a gain of Rs58/share on account of the merger. This translates into a negative per share impact of ~Rs7/share. Our calculation does not factor in the proposed Rs9bn of synergy gains over two years.

Whilst it's a short-term negative for Ambuja's shareholders, we think the Street has overlooked the potential synergy gains (US$150m), pan India foothold (access to complementary geographies) and presence in two premium brands. Importantly, the transaction implies an attractive EV/T at US$115, at a sharp discount to 1) the Ultratech-Jaypee deal at US$124 (with sub-optimal ratios, operating margins at 5%) or 2) greenfield cost of US$130-140 or 3) ACC's average historical trading multiples at US$124-126 EV/T; or 4) existing trading multiples of Indian larger peers at US$112-132. Besides, the issuance of new ACEM shares to Holcim at EV/T of US$153 implies a sharp premium to the implied US$115 EV/T valuation for the 50.01% stake in ACC. With the Land Acquisition Bill now in force, we think the cost of setting up a cement plant will only increase and consequently the barriers to entry will also rise.

Figure 138 Ambuja (ACEM/ACL) merger transaction details



Source: Espirito Santo Investment Bank Research, Company Data

Figure 139 Price paid for stake in HIPL is in line with SOTP of HIPL's % stake in Ambuja & ACC

Company	ACC	Ambuja
No of Shares (Mn)	188	1,538
Share Price (Rs/Share) - [24-Jul-2013]	1,231	191
Market Cap (Rs Mn)	231,108	293,893
Holcim's Stake (%)	50.01%	50.55%
Holcim India's Stake	50.01%	9.76%
Value of Holcim India's Stake (Rs Mn)	115,577	28,684
Total (Rs Mn)	144,261	
Number of Shares (Mn)	5,690	
Per Share Value (Rs)	25.35	

Source: Espirito Santo Investment Bank Research for estimates, Company Data

Figure 140 HIPL-ACEM: 2 step transaction process

Transaction	
Step 1.	
Ambuja Purchases 24% stake in Holcim India (Mn)	1,366
Price Paid (Rs/Share)	25.63
(a) Value (Rs Mn)	35,003
Step 2.	
Merge Holcim India with Ambuja	
Swap Ratio Ambuja: HIPL of 1:7.4	
Number of Shares issued (Mn)	584
(b) Value (Rs Mn)	111,682
Total Transaction Value (Rs Mn) = (a) + (b)	146,685
No Ambuja Shares Post Merger (Mn)	1,978

Source: Espirito Santo Investment Bank Research, Company Data

Figure 141 HIPL & ACEM merger dilutive in near term

Accrual to Minority Holders	
Cash loss due to 24% buyout (Rs/Share)	(22.8)
Gain from merger of ACC (Rs/Share)	58.4
Loss from dilution of Ambuja shares (Rs/Share)	(42.5)
Net Gain/(Loss) per share (Rs)	(6.8)

Source: Espirito Santo Investment Bank Research, Company Data

Synergy gains likely to be substantial; strong cash flow to see balance sheet stay net cash

As per management, the proposed merger would unlock potential synergy gains worth US$150m. Supply chain optimization through clinker / cement swaps and corresponding lower lead distances could translate into cost savings of US$60-70m. Further, management expects targeted fixed cost reduction and shared services like common procurement, etc. to yield another US$70-80m by CY15-16. Our estimates currently do not capture any of the aforementioned benefits and consequently these benefits, if they materialize, pose upside risk to our estimates.

When it announced the proposed transaction, HOLCIM management re-iterated its commitment to India, citing its investments in the 4.5MT Marwar Mundwa project (Board approval still pending) and it intends to invest up to Rs30bn to acquire incremental ownership in ACC. We note that the work at the proposed Marwar Mundwa project has already started, with EC clearances secured, associated limestone mine ready and land acquisition progressing in full swing. Further, the ordering processing is expected to begin once the company receives board approval. On the proposed incremental acquisition into ACC, at present we don't read much into it although based on this we see a possibility that ACC could eventually be merged into ACEM. In fact, Ambuja's recent presentation clearly mentions this possibility, stating that the company intends to "*evaluate full merger of operating companies into a culturally unified company*".

With current cash on books expected to fund the first phase of the transaction, we expect ACEM to rely on its cash flow to fund its growth capex. We expect ACEM to generate cumulative OCF of Rs37.8bn over the next two years, which should be enough to cover its growth capex (Rs17bn) and enable the company maintain its net cash position (Rs53.9bn, CY15e).

Shareholder approval a must; either case a win-win scenario in our view

Whilst, the proposed HIPL-ACEM merger requires several approvals (see Exhibit 3 below), we think the most crucial would be the shareholders' approval *requiring a majority of the minority vote*. As per SEBI's recent circulars, it's clear that the draft schemes of arrangement are interdependent transactions and hence both legs of the transaction are now connected. Furthermore, SEBI's recent circular dated 21 May 2013 (Exhibit 1) states that a majority of minority votes is required for the transaction to go through. In addition, as per a proviso under the Companies Act: 1) the approval of a majority of persons representing "3/4th in value" is also required for the transaction to go through. ACEM's promoters' shareholding stands at 50.55%, FII's 28.7% and DII's at 10.11%. With the presence of several long-term high quality investors on its holders list, we see little risk that the transaction will not go through.

Exhibit 1: Extracts from SEBI circular pointing to majority of minority vote

"Such Schemes shall also provide that the Scheme shall be acted upon only if the votes cast by the public shareholders in favour of the proposal ***are more than the number of votes cast by the public shareholders against it****. The term 'public' shall carry the same meaning as defined under Rule 2 of Securities Contracts (Regulation) Rules, 1957."*

Exhibit 2: Extracts from Companies Act

"(6) Where, at a meeting held in pursuance of sub-section (1), **majority of persons representing three-fourths in value of the creditors, or class of creditors or members or class of members**, as the case may be, voting in person or by proxy or by postal ballot, agree to any compromise or arrangement and if such compromise or arrangement is sanctioned by the Tribunal by an order, the same shall be binding on the company, all the creditors, or class of creditors or members or class of members, as the case may be, or, in case of a company being wound up, on the liquidator and the contributories of the company."

Exhibit 3: list of approvals required for the transaction to go through

- Shareholders and creditors of Ambuja and Holcim India
- BSE Limited and National Stock Exchange of India Limited
- Securities and Exchange Board of India (SEBI)
- Foreign Investment Promotion Board (FIPB), India
- Jurisdictional High Courts at Delhi and Gujarat

Figure 142 ACEM FV at Rs198/share, if the transaction goes through

Valuations - CY14E	Ambuja	ACC
EBITDA (Rs Mn)	28,999	25,055
% Ownership	100%	50.01%
Attributable EBITDA	28,999	12,530
Multiple	9.0x	9.0x
EV (Rs Mn)	262,409	113,384
Debt (Rs Mn)	346	1,652
Cash + Investments (Rs Mn)	54,292	38,519
Net Debt (Rs Mn)	(53,946)	(36,867)
Attributable Net Debt (Rs Mn)	(53,946)	(18,437)
Less: Transaction outgo	35,000	-
Net Debt (Rs Mn)	(18,946)	(18,437)
Equity Value (Rs Mn)	281,355	131,821
Holding Discount (%)		17%
Equity Value (Rs Mn)	281,355	109,411
No Share (Mn)	1,978	
FV (Rs/Share)	198	

Source: Espirito Santo Investment Bank Research for estimates, Company Data

What if the transaction goes through?

We believe the proposed HIPL-ACEM transaction is favourable for ACEM's minority shareholders with a long-term investment horizon and therefore we would recommend ACEM's minority shareholders accept the merger terms. If the merger is successful and we incorporated the transaction into our model, on current calculations our FV would be Rs198/share (see the previous figure).

Parameter	Traffic signal	Reasons
Accounting & governance	**AMBER**	In February 2013, ACEM passed a resolution to increase royalty rates to 1% till CY14 (vs. 0.67% earlier). This was despite the majority of shareholders voting against an increase in royalty rates. Several of ACEM's existing board members holding the title of Independent Director have been in the position for more than 10 years. We think this long association this could raise concerns about their independence.
Franchise strength	**GREEN**	ACEM, which is part of Holcim Group, is the 4th largest pan India cement producer. ACEM offers best in class operating metrics with its high exposure to trade segment, highest percentage of blended mix and efficient operational/logistic systems. If the proposed HIPL- ACEM transaction goes through, ACEM with 50% stake in ACC will have pan India presence and have scope to realize potential synergy gains. ACEM enjoys a strong ex
Earnings momentum	**AMBER**	Tepid cement demand growth in the past 6 months (~3.3%) has resulted in downward revision in India demand expectation for FY14E at ~6% vs. 9.3% in FY13. This has resulted in downward revision in growth rates for companies and street expects ACEM to have muted growth in FY14, which has led to earnings downgrades.

Source: Espirito Santo Investment Bank Research for estimates

Valuation Methodology

We value ACEM's cement operations at 9x CY14 EV/EBITDA (10% discount to UTCEM).

Risks to Fair Value

- **CCI Penalty:** CCI imposed a penalty of Rs11.6bn on Ambuja in June 2012, for alleged contravention of the provisions of competition act. The case is being heard by COMPAT (Competition Appellate Tribunal) and a negative verdict would lead to a cash outflow to the tune of imposed penalty.
- **HIPL & ACEM proposed merger:** If the merger is successful and we incorporated the transaction into our model, our current CY14E FV drops to Rs198/share (from Rs206). With synergy benefits expected from CY15/16 onwards, the impact of any cash outflow would more pronounced in the near term.
- **Sand mining ban:** Sand is an essential ingredient in concrete. Owing to rampant sand mining without regulatory approvals, National Green Tribunal (NGT) has called for a mining ban across all rivers in India. A further stringent set of rules will negatively impact cement demand.
- **Captive block (de)/allocation:** coal blocks allotted to Ambuja have been de-allocated for lack of progress and the matter is pending in the high courts of the respective jurisdictions. In the event of a favorable outcome, the power costs for associated power plants could fall by 2/3rd (to Rs1-1.2/kwh)
    - Ambuja: The Ministry of Coal has de-allocated Wardha Valley Coal Field Pvt. Ltd.'s (Ambuja' stake at 27.27%) coal block in the state of Maharashtra. The company has filed a writ in the High Court of Delhi and it is under review.
- **External limestone purchase:** Cost of external purchased limestone is 4x that from own quarry. 5% substitution of own limestone by external sources could increase per tonne costs by Rs19. A 5% substitution would result in a Rs19/t increase in costs.
- **Increase in Freight rates:** Cement is largely transported by road & rail modes. Taking a producer with 50% rail/road transport mode and average lead distance of 520kms, a 5% increase in rail freight would result in a Rs18/t cement cost while a 5% increase in road freight would increase costs by Rs29/t.
- **Increase in external power purchase:** The cost of external power is ~35% higher than that of own power. Ambuja depends on external power sources to the tune of 35%. A 5% substitution of own power by external means would result in per tonne cost increase by Rs6.
- **Increase in coal & pet coke rates:** Owing to limited coal linkages, most cement producers are dependent on e-auction and imported coal. A 5% rise in kiln coal cost would increase per tonne costs by Rs29.
- **Sharp drop in demand:** Our estimates factor 5.9% & 8.3% growth in FY14E & FY15E respectively. A sharp drop in demand is a risk to our volume estimates for Ambuja.
- **Prolonged price war:** New entrants could resort to price wars to gain market share. A prolonged price war could result in a sharp drop in realization in affected region.
- **Greenfield & brownfield expansion:** Ambuja is undertaking various greenfield & brownfield expansions. Delays in land acquisition &

environmental clearances, inadequate supply of raw materials (like limestone, linkage coal & fly ash) may hamper expansion plans.

- **Increase in taxes or levies on Cement:** As per CMA, taxes and levies constitute 60% or more of the ex-factory price. A further increase in tax rates or levies may impact cement demand.
- **Increase in technology know-how fee:** Ambuja Cements is currently entitled to pay 1% of net sales as technology know how fee to Holcim. Royalty rates are subject to revision on a triennial basis and further increases remain a risk to our FV.
- **Tax credits and incentives:** Cement producers enjoy several tax credits and incentives for capex under 80IA & subsidy in states like HP. Withdrawal of these incentives may result in higher effective tax rates in future.

Ambuja Cements *ACEM IN*

Report date	Recommendation	Fair value	Share price (INR)
Recommendation history is not available			

Source: Bloomberg, Espirito Santo Investment Bank Research

Please visit our website at www.EspiritoSantoIB.co.uk for up to date recommendation charts.

COVERAGE INITIATION

India | Cement | Large Cap | 20-September-2013

ACC

Cost efficiency drive & capacity growth

We initiate on ACC with a BUY rating and FV of Rs1,397, implying 31% upside from current levels. This is because we believe the (positive) winds are blowing following muted volume growth (lack of capacity additions) and declining market share that have weighed down the erstwhile market leader over the years. ACC's new marketing strategy, incremental capacity expansions in the supply deficient East, and favourable geography mix along with cost gains should see it shrug off its laggard status and spur 15% earnings CAGR over the next two years, even with forecast modest volume growth at 4% CAGR. We think the proposed HIPL-ACEM restructuring is neutral for ACC minority shareholders.

Favorable geographical mix, incremental additions in the right regions

ACC plans to increase its cement capacity by 5.1MT in the eastern region with a 2.79MT clinker unit at Jamul and associated grinding/clinkering units at Sindri, Jharkhand (1.36MT), Jamul, Chhattisgarh (1.1MT) and a 2.7MT greenfield unit at Kharagpur (West Bengal). The company has placed equipment orders and we expect gradual commissioning by CY15. We think incremental capacity addition in the Eastern region offers ACC a long-term opportunity to tap the under-penetrated region. Post expansion, ACC's capacity will increase to 35MT. Further, management's recent strategy to increase ad-spend and dissect regional markets further are conscious efforts to regain the company's lost ground in the south/west regions.

Cost efficiencies to support margins; synergy gains an add-on

ACC, being the oldest cement company in India, has higher fixed costs owing to legacy costs and therefore sub-optimal operating parameters. However, recent management initiatives like higher blending and consequently lower clinker production (despite higher cement volumes), higher pet coke consumption and lower power costs are very encouraging. We think cost opportunities like higher blending, optimizing fuel mix (AFR/WHR), and reducing power consumption put together could see ACC reap a cost benefit to the extent of Rs168/t over the next couple of years, thereby improving profitability. Further, our estimates do not factor in any company targeted synergy gains from the HIPL & ACEM merger (indicated at ~Rs900m) through supply chain optimization, sharing of services, etc. over the next two years.

Balance sheet looks solid; net cash end CY14E = 18% of market cap

We expect ACC to register cumulative FCF of Rs15.8bn over the next two years, post Rs22bn of growth capex and without taking into consideration any synergy cost gains. End CY12, ACC's net cash stood at Rs28.9bn and we expect this to increase to Rs35.8bn, end CY14E, i.e. 18% of current market cap.

Initiate with BUY and FV of Rs1,397/share

We value ACC at 9x CY14E EV/EBITDA, i.e. a 10% discount to Ultratech. As part of the restructuring, ACEM says it intends to acquire a further stake in ACC, investing up to Rs30bn over the next two years. Whilst we currently do not read too much into this, any incremental stake purchase via a creeping acquisition could offer support to ACC's share price. A further increase in royalty rates, CCI penalty payment remain key risks for the stock.

ESPIRITO SANTO INVESTMENT BANK
Research

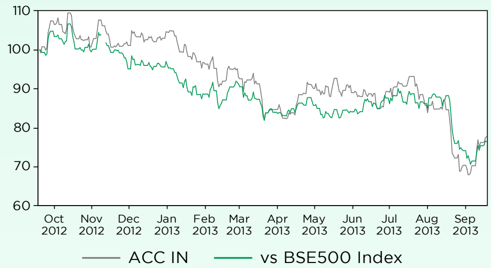
Accounting & corporate governance	AMBER
Franchise Strength	GREEN
Earnings Momentum	AMBER

BUY	31% upside
Fair Value	Rs1,397.00
Bloomberg ticker	**ACC IN**
Share Price	Rs1,065.00
Market Capitalisation	Rs200,220.00m
Free Float	50%

INR m Y/E 31-Dec	2011A	2012A	2013E	2014E
Revenue	102,372	113,582	115,856	131,626
EBITDA	19,212	21,966	18,697	25,055
EBIT	14,112	16,277	12,722	19,022
Pre Tax Profit	15,053	17,764	14,609	20,954
Net Income	13,008	10,593	11,757	14,817

Y/E 31-Dec	2011A	2012A	2013E	2014E
P/E (x)	15.4	18.9	17.0	13.5
P/BV (x)	2.9	2.7	2.5	2.3
EV/EBITDA (x)	9.2	7.8	9.1	6.5
EBITDA margin	19%	19%	16%	19%
Net Debt / EBITDA	(1.2)	(1.3)	(1.6)	(1.4)
ROE	19%	14%	15%	17%
RoIC	22%	22%	17%	22%
Gearing (x)	(0.3)	(0.4)	(0.4)	(0.4)

Share Price Performance



All share price data as at close on 18-Sep-2013

Source: Espirito Santo Investment Bank Research, Company Data, Bloomberg

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ACC

Recommendation:	**BUY**
Fair Value:	**Rs 1,397**
Share Price:	Rs 1065
Upside / Downside	31%
3 Month ADV ($m)	6.4
Free Float	50.0%
52 Week High / Low	INR 952 - 1,515
Bloomberg:	ACC IN

Shares In Issue (mn)	188
Market Cap (Rs mn)	200,220
Net Debt (Rs mn)	(29,689)
Enterprise Value (Rs mn)	170,531

Forthcoming Catalysts:
Compat verdict on CCI penalty levied on ACC
Completion of HIPL & Ambuja merger
Timeline for 10% buyback by Ambuja post HIPL merger

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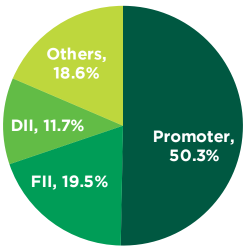
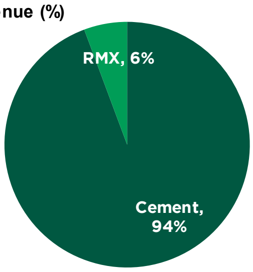
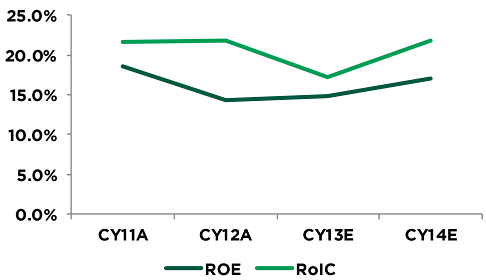
Shareholding Pattern



Segment Revenue (%)



Return ratios



Valuation Metrics	**CY11A**	**CY12A**	**CY13E**	**CY14E**
P/E (x)	15.4	18.9	17.0	13.5
P/BV (x)	2.9	2.7	2.5	2.3
EV/EBITDA (x)	9.2	7.8	9.1	6.5
EV/Sales (x)	1.7	1.5	1.5	1.3

Key ratios	**CY11A**	**CY12A**	**CY13E**	**CY14E**
EBITDA margin	18.8%	19.3%	16.1%	19.0%
EBIT margin	13.8%	14.3%	11.0%	14.5%
Net Debt / EBITDA	-1.2	-1.3	-1.6	-1.4
EBIT / Net Interest	14.6	14.2	14.7	22.0
ROE	18.6%	14.4%	14.9%	17.0%
RoIC	21.6%	21.8%	17.1%	21.8%
Gearing (x)	-0.3	-0.4	-0.4	-0.4

P&L Summary	**CY11A**	**CY12A**	**CY13E**	**CY14E**
Revenue	**102,372**	**113,582**	**115,856**	**131,626**
% change	20.1%	11.0%	2.0%	13.6%
EBITDA	**19,212**	**21,966**	**18,697**	**25,055**
% change	6.5%	14.3%	-14.9%	34.0%
% margin	18.8%	19.3%	16.1%	19.0%
Depreciation & Amortisation	5,100	5,689	5,976	6,033
EBIT	**14,112**	**16,277**	**12,722**	**19,022**
% change	-0.3%	15.1%	-21.6%	53.1%
% margin	13.8%	14.3%	11.0%	14.5%
Operating Profit	**14,112**	**16,277**	**12,722**	**19,022**
Net Financials	969	1,147	865	865
Other Pre-tax Income	1,910	2,633	2,752	2,796
Pre Tax Profit	**15,053**	**17,764**	**14,609**	**20,954**
Income Tax Expense	2,155	3,911	3,006	6,286
Associates	110	95	156	151
Minority Interests	0	1	1	1
Exceptional Item	0	-3,354	0	0
Net Income	**13,008**	**10,593**	**11,757**	**14,817**
ESIB Net Income	13,008	10,593	11,757	14,817
Reported EPS	69.3	56.4	62.6	78.9
ESIB EPS	**69.3**	**56.4**	**62.6**	**78.9**
Shares in issue (Millions)	188	188	188	188

Cash Flow Summary	**CY11A**	**CY12A**	**CY13E**	**CY14E**
Operating EBIT	14,112	16,277	12,722	19,022
Add: Depreciation	5,100	5,689	5,976	6,033
Less: Tax	2,155	3,911	3,006	6,286
Less: Increase in Working Capital	3,027	2,602	(573)	(2,858)
Operating Cash Flow	**14,031**	**15,454**	**16,264**	**21,627**
Less: Capex	4,157	387	11,000	11,000
Free Cash Flow	**9,874**	**15,067**	**5,264**	**10,627**
Less: Increase in Investments	276	1,076	-	-
Add: Other Income	2,105	(739)	2,908	2,947
Add: Increase in Debt	(132)	(3,529)	-	-
Add: Increase in Equity	-	-	-	-
Less: Interest Paid	969	1,147	865	865
Less: Dividend	6,110	6,546	6,546	6,546
Change in Cash	**4,492**	**2,031**	**762**	**6,164**

Balance Sheet Summary	**CY11A**	**CY12A**	**CY13E**	**CY14E**
Cash & Equivalents	28,549	30,579	31,341	37,504
Tangible Fixed Assets	64,071	59,347	54,371	49,338
CWIP	3,694	3,116	13,116	23,116
Associates & Financial Investments	5,596	6,671	6,671	6,671
Other Assets	561	1,658	1,658	1,658
Non-Cash Working Capital	(18,481)	(16,933)	(17,506)	(20,365)
Total Assets	**83,989**	**84,439**	**89,651**	**97,924**
Interest Bearing Debt	5,181	1,652	1,652	1,652
Deferred Tax Liability	5,238	5,226	5,226	5,226
Other Liabilities	3,755	3,811	3,811	3,811
Shareholders' Equity	69,791	73,724	78,936	87,207
Minority Interests	25	26	27	28
Total Equity & Liability	**83,989**	**84,439**	**89,651**	**97,924**
Net Debt	(23,368)	(28,927)	(29,689)	(35,852)

Source: Espirito Santo Investment Bank Research estimates, Company Data and Bloomberg, SHP – June 2013, Segment Revenue – CY12

Company snapshot

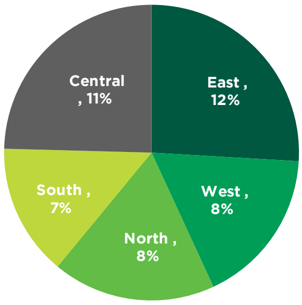
ACC, which is part of Holcim Group, is the 3rd largest pan India cement producer with total capacity of 30.5mt as of CY12 and has a presence across all regions. It is one of the key RMC producers with total installed capacity of 3 million m3. It manufacturers both OPC and blended (PPC & PSC) types of cement, with OPC accounting for 13% of total CY12 production. ACC is one of the early adopters of AFR and plans to increase usage through an end-to-end waste recycle solution named Geo-cycle. In CY12, RMC business accounted for 6% of total revenues while grey cement accounted for 94%. As per the recent merger announcement between Holcim India Pvt Ltd and Ambuja Cement, ACC will become a subsidiary of Ambuja Cements.

Figure 143 ACC Cement - ESIB vs. Consensus

ACC	ESIB		Consensus		Difference (%)	
Consol (Rs Mn)	CY13E	CY14E	CY13E	CY14E	CY13E	CY14E
Sales	115,856	131,626	118,878	133,668	-3%	-2%
EBITDA	18,697	25,055	20,447	24,290	-9%	3%
PAT	11,757	14,817	13,145	15,589	-11%	-5%

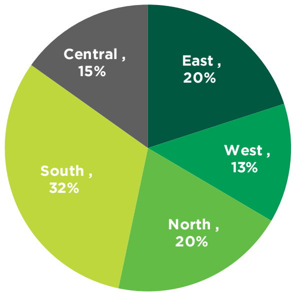
Source: Espirito Santo Investment Bank Research for estimates, Bloomberg

Figure 144 ACC has presence across all regions - capacity share in CY12



Source: Espirito Santo Investment Bank Research, Company Data

Figure 145 South accounted for 32% of total capacity in CY12



Source: Espirito Santo Investment Bank Research, Company Data

Figure 146 ACC valuation - CY14 FV of Rs1,397/Share

Valuations	CY14E
EBITDA (Rs Mn)	25,055
Multiple	9.0x
EV (Rs Mn)	225,495
Debt (Rs Mn)	1,652
Cash + Investments (Rs Mn)	38,519
Equity Value (Rs Mn)	262,362
No of Shares (Mn)	188
FV Rs/Share	1,397

Source: Espirito Santo Investment Bank Research for estimates, Co data

Figure 147 Scenario Analysis

	Low case	Base case	High case
Fair value	1,001	1,397	1,580
Upside/downside:	6% downside	31% Upside	48% Upside
CY14E EBITDA(Rs Bn)	17.6	25.1	28.5
Assumptions	• Grey Cement volumes at 5% below our estimates • Realization at 5% below our estimates	• Grey cement volumes at 24.3/26.1 mt in CY13E/CY14E • RMC volumes at 1.5 mn m3 in CY13E/CY14E • Grey Cement Realization at Rs.4,493/T & 4,762/T in CY13E/CY14E • Grey Cement EBITDA at Rs.742/T & Rs.939/T in CY13E/CY14E	• Realization at 3% above our estimates

Source: Espirito Santo Investment Bank Research for estimates

Figure 148 SWOT analysis

Strengths

- ACC is the third largest pan India cement producer with total capacity of 30.5mt as of CY12 and presence across all regions
- ACC is one of the key RMC producers with total installed capacity of 3 million m3.
- ACC produces all types of cement, with blended (PPC & PSC) accounting for 87% of total production

Weaknesses

- 26% of total power requirement in CY12 was met through external sources at Rs5.36/kwh vs. own generation of Rs4.3/kwh. Increase in external power share can increase total power & fuel cost.
- Of the total requirement of 5.5MT (power + kiln), ACC has FSAs of ~3mtpa, owing to which it has to depend on e-auction & imported coal, which leads to higher production cost
- One of the coal blocks (Semaria-Piapria) was de-allocated in January 2013 for non-receipt of EC & FC clearance. The matter is currently pending in the High Court of Jabalpur and a negative verdict may hamper fuel security plans

Opportunities

- Capacity growth of 5mt, by CY15, to increase total capacity to 35.6mt which will help recoup market share
- ACC plans alternative fuels to substitute coal intake by 5% by CY15, which will help lower power & fuel cost
- Cement to clinker ratio for ACC is at 1.53x vs. 1.7x permissible limit. Usage of more fly ash can help in reducing overall cost.
- Geocycle waste management initiative should help obtain a sustainable source of AFR, which in turn will help lower power & fuel cost

Threats

- Prolonged weakness in demand may force marginal players to resort to predatory pricing, which may hurt margins
- Prolonged weakness in demand could lead to sub-optimal plant utilization levels from the current 79% level
- CCI imposed a penalty of Rs11.48bn in June 2012 for alleged contravention of the provisions of the competition act. The case is being heard at COMPAT (Competition Appellate Tribunal) and a negative verdict would lead to cash outflow of Rs11.48bn.
- Increasing diesel prices and freight cost (Rail & Road) will lead to increase in total costs. Rail and road together account for 100% of its freight modes.

Source: Espirito Santo Investment Bank Research for estimates

Parameter	Traffic signal	Reasons
Accounting & governance	**AMBER**	In February 2013, ACEM passed a resolution to increase royalty rates to 1% till CY14 (vs. 0.67% earlier). This was despite the majority of minority shareholders voting against an increase in royalty rates. Several of ACEM's existing board members holding the title of Independent Director have been in the position for more than 10 years. We think this long association this could raise concerns about their independence.
Franchise strength	**GREEN**	ACC, which is part of Holcim Group, is the 3rd largest pan India cement producer with total capacity of 30.5mt as of CY12. It is also one of the key RMC producers. ACC has been an innovator and early adopter of AFR. Muted volume growth and declining market share have over the years weighed down the erstwhile market leader. However, we think incremental expansion plans and cost saving measures will see the company back on an even footing. As per the recent merger announcement between Holcim India Pvt Ltd and Ambuja Cement, ACC will become a subsidiary of Ambuja Cements.
Earnings momentum	**AMBER**	Tepid cement demand growth in the past 6 months (~3.3%) has resulted in a downward revision in India demand expectation for FY14E at ~6% vs. 9.3% in FY13. This has resulted in some downward revisions in consensus growth rates for companies and street expects ACC to have muted growth in CY13, which has resulted in earnings downgrades.

Valuation Methodology

We value ACC at 9x CY14E EV/EBITDA, i.e. a 10% discount to Ultratech.

Risks to Fair Value

- **CCI Penalty:** CCI imposed a penalty of Rs11.5bn on ACC in June 2012, for alleged contravention of the provisions of the competition act. The case is being heard at COMPAT (Competition Appellate Tribunal) and a negative verdict would lead to a cash outflow to the tune of imposed penalty.
- **Sand mining ban:** Sand is an essential ingredient in concrete. Owing to rampant sand mining without regulatory approvals, National Green Tribunal (NGT) has called for a mining ban across all rivers in India. A further stringent set of rules would negatively impact cement demand.
- **Captive block (de)/allocation:** coal blocks allotted to ACC have been de-allocated for lack of progress and the matter is pending in the high courts of the respective jurisdictions. In the event of a favorable outcome, power costs for associated power plants could fall by 2/3rd (to Rs1-1.2/kwh)
    - **ACC:** "Semaria-Piapria" coal block, which was allotted to Madhya Pradesh State Mining Corporation (MPSMC) & ACC's 100% subsidiary ACC Mineral Resources Limited (AMRL) in 2009, has been de-allocated owing to limited progress. The block was expected to produce 0.5mt annually. AMRL's 49% stake in the block implies an annual share of 0.25mt or 20% of the current thermal coal requirement. AMRL has filed a written petition in the High Court of Jabalpur and this is under review.
    - **ACC:** AMRL's other 3 blocks includes, a) Bichapur, b) Marki Bakra and c) Morga in which it holds a 49% stake. Outputs from these blocks have not been factored into our estimates and present an upside risk.
- **External limestone purchase:** Cost of external purchased limestone is 4x that from own quarry. 5% substitution of own limestone by external sources could increase per tonne cost by Rs2-5.
- **Increase in Freight rates:** Cement is largely transported by road & rail modes. Taking a producer with 50% rail/road transport mode and average lead distance of 520kms, a 5% increase in rail freight would result in a Rs18/t cement cost while a 5% increase in road freight would increase costs by Rs29/t.
- **Increase in external power purchase:** The cost of external power is ~25% higher than that of own power. ACC depends on external power sources to the tune of 26%. A 5% substitution of own power by external means would result in a per tonne cost increase by Rs6.
- **Increase in coal & pet coke rates:** Owing to limited coal linkages, most cement producers are dependent on e-auction and imported coal. A 5% rise in kiln coal cost would increase the per tonne cost by Rs30.
- **Sharp drop in demand:** Our estimates factor 5.9% & 8.3% growth in FY14E & FY15E respectively. A sharp drop in demand is a risk to our volume estimates for ACC.
- **Prolonged price war:** New entrants could resort to price wars to gain market share. A prolonged price war could result in a sharp drop in realization in affected region.

- **Greenfield & brownfield expansion:** ACC is undertaking various greenfield & brownfield expansions. Delays in land acquisition & environmental clearances, inadequate supply of raw materials (like limestone, linkage coal & fly ash) may hamper expansion plans.

- **Increase in taxes or levies on Cement:** As per CMA, taxes and levies constitute 60% or more of the ex-factory price. A further increase in tax rates or levies may impact cement demand.

- **Increase in technology know-how fee:** ACC Cement is currently entitled to pay 1% of net sales as technology know how fee to Holcim. Royalty rates are subject to revision on a triennial basis and further increases remain a risk to our FV.

- **Tax credits and incentives:** Cement producers enjoy several tax credits and incentives for capex under 80IA & subsidy in states like HP. Withdrawal of these incentives may result in higher effective tax rates in future.

- Following the restructuring we would note the risk that cash at ACC may not be optimally utilized – ACC's current return ratios are currently 15%+.

ACC *ACC IN*

Report date	Recommendation	Fair value	Share price (INR)
Recommendation history is not available			

Source: Bloomberg, Espirito Santo Investment Bank Research

Please visit our website at www.EspiritoSantoIB.co.uk for up to date recommendation charts.

COVERAGE INITIATION

ESPIRITO SANTO INVESTMENT BANK
Research

India | Cement | Small & Mid Cap | 20-September-2013

Accounting & corporate governance	GREEN
Franchise Strength	GREEN
Earnings Momentum	AMBER

Shree Cement

Looking East to diversify

Around 5x capacity addition over FY04-12 in record commissioning timelines along with new benchmarks for capital/operational costs speaks volumes of management's capabilities and potential. After gaining market leadership in the North, it has now set itself a target to diversify market presence. Shree's distinct model of using pet coke as a fuel input in power plants has not only helped to maintain its low power cost for cement operations but also register healthy profits in power operations. Cost reduction initiatives like WHR, synthetic gypsum and zinc slag will continue to help in reducing input costs. We think management's proactive approach to cost-saving initiatives and significant expansion plans will help it join the large capacity league sooner than later. Though we like Shree's operational prowess, we would wait for a more favourable entry point in the stock. Initiate with a NEUTRAL and FV of Rs4199/share.

Market leadership in North; East on management radar now

We expect Shree to add another 6.5MT in capacity by FY16E in the eastern region (via the greenfield route). Shree has mastered swift project execution and has set new industry benchmarks in the commissioning of cement and power plants. We expect it to maintain a similar track record while adding new capacities in the eastern region, though required time may be higher owing to the greenfield nature of the projects. We see its foray into the supply deficient Eastern region as good news as we believe it will reduce market concentration risk.

Power — not just another segment

Shree Cement's unique model to use pet coke as a fuel for power plants has helped it rein in costs and maintain healthy margins (EBITDA/kwh at Rs1.0+). Availability of captive power at half the grid rates helps the company keep a tab on fuel costs and is one of the key reasons why its cement EBITDA/t is in line with large peers. We expect Shree to adopt a similar power strategy for its new plants in the eastern region to maintain its cost leadership, as power & fuel costs account for c.20-25% of total input cost for cement firms. With pet coke expected to remain in surplus in India, we don't foresee any spike in fuel costs for the company.

Input cost optimization — a recurring theme

Shree Cement runs one of the largest WHR plants in India, with 46MW capacity, COP at ~Rs0.5 vs. grid cost at Rs.5-6/kwh. It is also one of the few companies that utilize low grade limestone as a SO_2 filter to produce synthetic gypsum to maintain stable gypsum costs. Other initiatives include using zinc slag as a replacement for laterite. We think the management will continue to seek new avenues (like WHRs), to maintain its competitive cost structure.

Initiate with NEUTRAL and FV of Rs.4,199/share

We value Shree's power business via a DCF at Rs369/share and the cement business at 8.0x (a 20% discount to UTCEM) FY14E EV/EBITDA, i.e. implied 15% premium to its historical 5-year trading average. We like Shree's capacity exposure to high utilization geographies (North/East), high ROE/RoIC ratios with a robust balance sheet and best in class capital/operational costs. With the stock having run up 142% in 2 years vs. 21% for BSE Sensex, we find the current valuation expensive and difficult to justify. Initiate with NEUTRAL and FV of Rs4199/share.

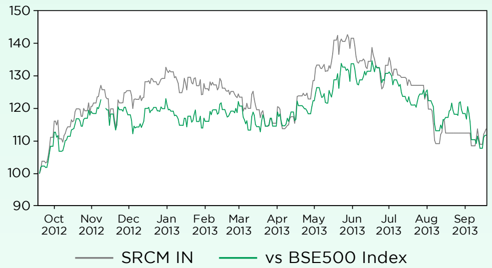
NEUTRAL	6% upside
Fair Value	Rs4,199.00

Bloomberg ticker	**SRCM IN**
Share Price	Rs3,964.00
Market Capitalisation	Rs137,947.20m
Free Float	25%

INR m Y/E 30-Jun	2012A	2013A	2014E	2015E
Revenue	58,981	55,671	62,599	66,914
EBITDA	16,458	15,378	16,632	18,100
EBIT	7,727	11,022	11,569	12,272
Net Income	6,185	10,040	9,078	9,850
ESIB EPS	178	288	261	283

Y/E 30-Jun	2012A	2013A	2014E	2015E
P/E (x)	22.3	13.8	15.2	14.0
P/BV (x)	5.1	3.6	3.0	2.5
EV/EBITDA (x)	8.4	8.9	7.9	7.0
EBITDA margin	28%	28%	27%	27%
Net Debt / EBITDA	0.1	(0.1)	(0.4)	(0.7)
ROE	23%	26%	19%	18%
RoIC	15%	19%	18%	18%
Net Gearing (x)	0.0	(0.0)	(0.1)	(0.2)

Share Price Performance



All share price data as at close on 18-Sep-2013

Source: Espirito Santo Investment Bank Research, Company Data, Bloomberg

Analysts

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Shree Cement

Recommendation:	**NEUTRAL**
Fair Value:	**Rs 4,199**
Share Price:	Rs 3,964
Upside / Downside	6%
3 Month ADV ($m)	1.0
Free Float	25%
52 Week High / Low	INR 3,050- 5,210
Bloomberg:	SRCM IN

Shares In Issue (mn)	35
Market Cap (Rs mn)	138,095
Net Debt (Rs mn)	(11,937)
Enterprise Value (Rs mn)	126,158

Forthcoming Catalysts:
Compat verdict on Rs3.98bn fine imposed by CCI
Timely completion of ~5mt expansion plans

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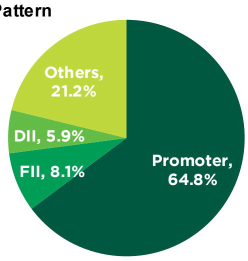
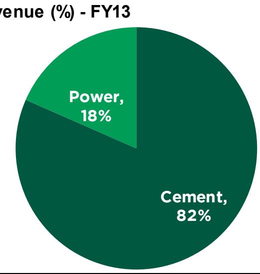
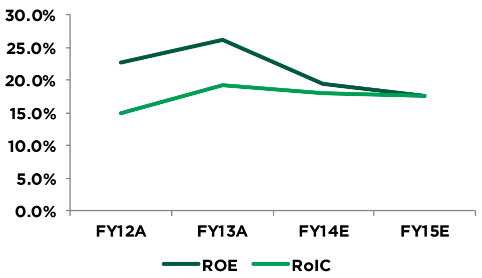
Shareholding Pattern



Segment Revenue (%) - FY13



Return ratios



Valuation Metrics	**FY12A**	**FY13A**	**FY14E**	**FY15E**
P/E (x)	22.3	13.8	15.2	14.0
P/BV (x)	5.1	3.6	3.0	2.5
EV/EBITDA (x)	8.4	8.9	7.9	7.0
EV/Sales (x)	2.4	2.5	2.1	1.9

Key ratios	**FY12A**	**FY13A**	**FY14E**	**FY15E**
EBITDA margin	27.9%	27.6%	26.6%	27.0%
EBIT margin	13.1%	19.8%	18.5%	18.3%
Net Debt / EBITDA	0.1	-0.1	-0.4	-0.7
EBIT / Net Interest	3.3	5.7	13.2	14.0
ROE	22.6%	26.1%	19.4%	17.7%
RoIC	14.9%	19.3%	17.9%	17.5%
Net Gearing (x)	0.0	0.0	-0.1	-0.2

P&L Summary	**FY12A**	**FY13A**	**FY14E**	**FY15E**
Revenue	**58,981**	**55,671**	**62,599**	**66,914**
% change	70.8%	-5.6%	12.4%	6.9%
EBITDA	**16,458**	**15,378**	**16,632**	**18,100**
% change	86.0%	-6.6%	8.2%	8.8%
% margin	27.9%	27.6%	26.6%	27.0%
Depreciation & Amortisation	8,731	4,356	5,063	5,828
EBIT	**7,727**	**11,022**	**11,569**	**12,272**
% change	269.6%	42.6%	5.0%	6.1%
% margin	13.1%	19.8%	18.5%	18.3%
Operating Profit	**7,727**	**11,022**	**11,569**	**12,272**
Net Financials	2,354	1,931	880	880
Other Pre-tax Income	1,628	2,114	1,415	1,742
Pre Tax Profit	**7,001**	**11,205**	**12,104**	**13,134**
Income Tax Expense	693	1,155	3,026	3,283
Associates	-	-	-	-
Minority Interests	-	-	-	-
Exceptional Item	123	11	-	-
Net Income	**6,185**	**10,040**	**9,078**	**9,850**
ESIB Net Income	6,185	10,040	9,078	9,850
Reported EPS	177.5	288.2	260.6	282.8
ESIB EPS	**177.5**	**288.2**	**260.6**	**282.8**
Shares in issue (Millions)	34.8	34.8	34.8	34.8

Cash Flow Summary	**FY12A**	**FY13A**	**FY14E**	**FY15E**
Operating EBIT	7,727	11,022	11,569	12,272
Add: Depreciation	8,731	4,356	5,063	5,828
Less: Tax	693	1,155	3,026	3,283
Less: Increase in Working Capital	(3,208)	2,829	(2,612)	(186)
Operating Cash Flow	**18,974**	**11,394**	**16,218**	**15,002**
Less: Capex	5,948	7,331	10,000	10,000
Free Cash Flow	**13,026**	**4,063**	**6,218**	**5,002**
Less: Increase in Investments	356	3,389	-	-
Add: Other Income	1,504	2,104	1,415	1,742
Add: Increase in Debt	(1,511)	(7,782)	-	-
Add: Increase in Equity	-	-	-	-
Add: Other Financials	2,102	1,867	-	-
Less: Interest Paid	2,354	1,931	880	880
Less: Dividend	810	810	810	810
Change in Cash	**11,602**	**(5,878)**	**5,944**	**5,055**

Balance Sheet Summary	**FY12A**	**FY13A**	**FY14E**	**FY15E**
Cash & Equivalents	16,590	10,712	16,656	21,710
Tangible Fixed Assets	15,211	18,185	22,122	25,294
CWIP	967	967	1,967	2,967
Goodwill	-	-	-	-
Associates & Financial Investments	15,405	18,794	18,794	18,794
Other Assets	697	938	938	938
Non-Cash Working Capital	(104)	3,178	566	380
Total Assets	**48,766**	**52,774**	**61,042**	**70,083**
Interest Bearing Debt	17,556	9,774	9,774	9,774
Deferred Tax Liability	-	-	-	-
Other Liabilities	3,871	4,564	4,564	4,564
Shareholders' Equity	27,339	38,437	46,705	55,745
Minority Interests	-	-	-	-
Total Equity & Liability	**48,766**	**52,774**	**61,042**	**70,083**
Net Debt	966	(938)	(6,882)	(11,937)

Source: Espirito Santo Investment Bank Research Estimates, Company Data and Bloomberg, SHP – June 2013, Segment Revenue – FY13

Company snapshot

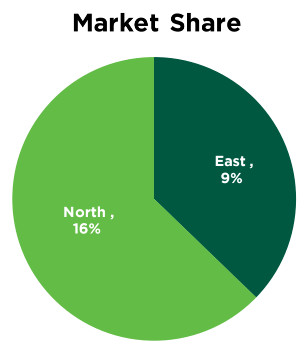
Shree Cement is North India's largest cement producer with an installed capacity of 13.5mtpa as of FY12. Its power segment has an installed capacity of 560MW, which is not only used for cement production but also for external sales. Power sales have increased 10-fold in the last 4 years to 1,322mu in FY12. Shree Cement has mastered swift project execution, and has set a national record in setting up cement & power plants. It is the first company in the world to utilize 100% pet-coke in all its operations for both cement and power plants. This helps in keeping power costs at sub Rs2.5/kwh, despite lacking FSAs and captive blocks.

Figure 149 ESIB vs. consensus

Shree Cement	ESIB		Consensus		Difference (%)	
SA (Rs Mn)	FY14E	FY15E	FY14E	FY15E	FY14E	FY15E
Sales	62,599	66,914	62,697	71,622	0%	-7%
EBITDA	16,632	18,100	17,399	19,972	-4%	-9%
PAT	9,078	9,850	9,685	11,553	-6%	-15%

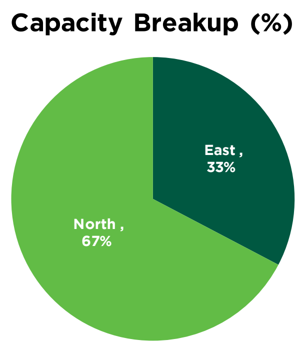
Source: Espirito Santo Investment Bank Research for estimates, Bloomberg

Figure 150 Foray into East is expected to give 9% of capacity market share by FY16E



Source: Espirito Santo Investment Bank Research for estimates

Figure 151 Grinding capacity expansion is largely concentrated in Eastern region - FY16E



Source: Espirito Santo Investment Bank Research for estimates

Figure 152 Shree valuation – FY14E at Rs4199

Valuations	FY14E
NPV Power (Rs Mn)	12,872
EBITDA Cement (Rs Mn)	13,939
Multiple	8.0x
EV (Rs Mn)	111,508
Debt (Rs Mn)	9,774
Cash + Investments (Rs Mn)	31,670
Equity Value (Rs Mn)	146,277
No of Shares (Mn)	35
FV Rs/Share	4,199

Source: Espirito Santo Investment Bank Research for estimates, Co data

Figure 153 Scenario Analysis

	Low case	Base case	High case
Fair value	**3,377**	**4,199**	**5,084**
Upside/downside:	**15% downside**	**6% Upside**	**28% Upside**
FY14E EBITDA(Rs Bn)	**13.2**	**16.6**	**20.3**
Assumptions	• Grey Cement volumes at 5% below our estimates • Power sales volumes at 5% below our estimates • Realization at 5% below our estimates	• Grey cement & clinker volumes at 13.9/14.8mt in FY14E/FY15E • Power sales volumes at 2,678/2,602 mu in FY14E/FY15E • Grey Cement Realization at Rs.3,720/T & Rs3,818/T in FY14E/FY15E • Grey Cement EBITDA at Rs.978/T & Rs1,027/T in FY14E/FY15E	• Grey Cement volumes at 5% above our estimates • Power sales volumes at 5% above our estimates • Realization at 5% above our estimates

Source: Espirito Santo Investment Bank Research for estimates

Figure 154 SWOT analysis

Strengths

- Shree Cement is market leader in Northern region with 18% market share, as of FY13E
- 560MW of installed power capacity helps in maintaining per unit cost in sub Rs2.5/kwh range
- Shree Cement has set national record in project execution. It set up kiln #8 in a record time of 330 days vs. the industry average of 630 days. It set up 150mw power plant in a record 21 months vs. the industry average of 30 months.

Weaknesses

- Market concentration in North region makes it vulnerable to dynamics of one region
- Lack of captive coal block & linkages leaves it vulnerable to external fuel cost fluctuations

Opportunities

- Capacity growth of 6.5mt, by FY16E, in Eastern region, will increase total capacity to 20mt which will help diversify markets
- Higher sales from power segment which accounted for 18% of total revenues in FY13 will help mitigate seasonality effect of cement business
- Implementation of WHR can help reduce overall power cost
- Complete reliance on synthetic gypsum can help in reducing raw material uncertainty and reduce cost
- Cement to clinker ratio for Shree Cement is at 1.47x vs. 1.7x permissible limit. Usage of higher fly ash to reduce cost.

Threats

- Prolonged weakness in demand may force marginal players to resort to predatory pricing which may hurt margins
- Prolonged weakness in demand can lead to sub-optimal plant utilization levels, below management guidance of 90%
- CCI imposed a penalty of Rs3.98bn in June 2012 for alleged contravention of the provisions of the competition act. The case in being heard at COMPAT (Competition Appellate Tribunal) and a negative verdict would lead to a cash outflow of Rs3.98bn.
- Increasing diesel prices and freight cost (Rail & Road) will lead to increase in total cost. Rail and road together account for 100% of its freight modes.
- Shree Cement's new expansions are greenfield plants which may face execution issues

Source: Espirito Santo Investment Bank Research for estimates

Parameter	Traffic signal	Reasons
Accounting & governance	**GREEN**	Using our proprietary model we don't find anything untoward about the corporate governance practices followed by Shree. Timely disclosures pertaining to segmental volumes for cement & power, expansion plans would be appreciated by the street.
Franchise strength	**GREEN**	Shree has strong project execution skills, which helps it to add capacity in record time. Its low cost of operations helps it achieve similar EBITDA/t as that of large players, despite lower realizations. Owing to strong cash flow generation and balance sheet strength, we expect it to manage its capacity addition largely through internal accruals
Earnings momentum	**AMBER**	Tepid cement demand growth in the past 6 months (~3.3%) has resulted in downward revision in India demand expectation for FY14E at ~6% vs. 9.3% in FY13. This has resulted in consensus downward revisions of growth rates for some companies and street expects Shree to grow at 4% in FY14, which has resulted in earnings downgrades.

Source: Espirito Santo Investment Bank Research for estimates

Figure 155 Power business NPV

Cashflows	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22
EBIT			(4,131)	1,628	1,214	1,245	1,271	1,302	1,377	1,380	1,383
EBIT After tax			(3,428)	1,351	1,008	1,034	1,055	1,081	1,143	1,145	1,148
EBIT after tax + Depreciation			3,386	2,273	1,956	2,010	2,059	2,112	2,215	2,273	2,330
Less: Capex			-	(500)	(500)	(500)	(500)	(500)	(1,000)	(1,000)	(1,000)
Less: WC			-	1,218	517	600	679	762	395	483	570
Funds inflow	(16,500)	-	-	-	-						
Free Cashflow	(16,500)	-	3,386	2,990	1,973	2,110	2,238	2,374	1,610	1,756	1,900
Less: Interest			668	668	650	614	578	542	506	470	434
Less: Debt Repayment	(7,425)	-	-	-	400	400	400	400	400	400	400
Add: Dividend Received			-	-	-	-	-	-	-	-	-
Net Equity cashflow	(9,075)	-	2,717	2,322	923	1,096	1,260	1,431	704	885	1,066
Net Equity cashflow to Shree	(9,075)	-	2,717	2,322	923	1,096	1,260	1,431	704	885	1,066
Discount Rate			12%								
FY14 NPV			12,872								

Cashflows	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
EBIT	1,385	1,387	1,388	1,375	1,348	1,320	1,292	1,263	1,234	1,204	1,173	1,142
EBIT After tax	1,150	1,151	1,152	1,142	1,119	1,096	1,072	1,048	827	806	786	765
EBIT after tax + Depreciation	2,387	2,444	2,500	2,558	2,618	2,677	2,736	2,795	2,655	2,718	2,780	2,841
Less: Capex	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
Less: WC	657	743	829	417	507	596	685	773	681	768	854	1,110
Funds inflow												
Free Cashflow	2,044	2,187	2,329	1,975	2,124	2,273	2,421	2,568	2,337	2,486	2,634	2,951
Less: Interest	398	362	326	290								
Less: Debt Repayment	400	400	400	400	400	400	400	400	400	400	400	225
Add: Dividend Received	-	-	-	-	-	-	-	-	-	-	-	-
Net Equity cashflow	1,246	1,425	1,603	1,285	1,724	1,873	2,021	2,168	1,937	2,086	2,234	2,726
Net Equity cashflow to Shree	1,246	1,425	1,603	1,285	1,724	1,873	2,021	2,168	1,937	2,086	2,234	2,726

Source: Espirito Santo Investment Bank Research for estimates (FY14-33), Company Data

Valuation Methodology

We value Shree's power business via a DCF at Rs369/share and the cement business at 8.0x (a 20% discount to UTCEM) FY14E EV/EBITDA, i.e. implied 15% premium to its historical 5-year trading average.

Risks to Fair Value

- **CCI Penalty:** CCI imposed a penalty of Rs3.98bn on Shree cement in June 2012, for alleged contravention of the provisions of competition act. The case is being heard by the COMPAT (Competition Appellate Tribunal) and a negative verdict would lead to cash outflow to the tune of imposed penalty.
- **Market concentration risk:** Shree Cement's focus is only in the Northern region, and lower demand in this region vs. the average in India may have a bigger impact on it compared to pan-India players like ACC, Ambuja and Ultratech.
- **Sand mining ban:** Sand is an essential ingredient in concrete. Owing to rampant sand mining without regulatory approvals, National Green Tribunal (NGT) has called for a mining ban across all rivers in India. A further stringent set of rules will negatively impact cement demand.
- **External limestone purchase:** Cost of external purchased limestone is 4x that from own quarry. 5% substitution of own limestone by external source can increase per tonne cost by Rs7.
- **Increase in freight rates:** Cement is largely transported by road & rail modes. Based on a producer with 50% rail/road transport mode and average lead distance of 520kms, a 5% increase in rail freight would result in a Rs18/t increase in cement costs while a 5% increase in road freight would increase costs by Rs29/t.
- **Increase in coal & pet coke rates:** Owing to limited coal linkages, most cement producers are dependent on e-auction and imported coal. A 5% rise in kiln coal cost would increase per tonne costs by Rs27.
- **Sharp drop in demand:** Our estimates factor in 5.9% & 8.3% demand growth in FY14E & FY15E respectively. A sharp drop in demand is a risk to our volume estimates for Shree cement.
- **Pro-longed price war:** New entrants could resort to price wars to gain market share. A prolonged price war could result in a sharp drop in realization in affected regions.
- **Greenfield & brownfield expansion:** Shree Cement is undertaking various greenfield & brownfield expansions. Delays in land acquisition & environmental clearances, inadequate supply of raw materials (like limestone, linkage coal & fly ash) may hamper expansion plans.
- **Increase in taxes or levies on Cement:** As per CMA, taxes and levies constitute 60% or more of the ex-factory price. Further increases in tax rates or levies may impact cement demand.
- **Tax credits and incentives:** Cement producers enjoy several tax credits and incentives for capex under 80IA & subsidy in states like HP. Withdrawal of these incentives may result in higher effective tax rates in the future.

Shree Cement *SRCM IN*

Report date	Recommendation	Fair value	Share price (INR)
Recommendation history is not available			

Source: Bloomberg, Espirito Santo Investment Bank Research

Please visit our website at www.EspiritoSantoIB.co.uk for up to date recommendation charts.

Appendix – 01: Global Valuation Metrics

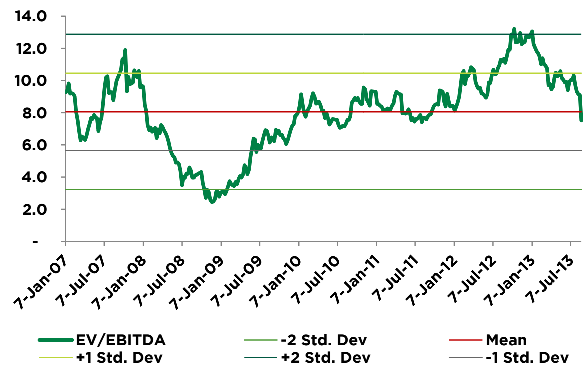
Figure 156 Global - valuation metrics

Comparison Table	Bloomberg Ticker	2yr EBITDA CAGR	Last Reported RoIC	Last Reported RoE	RoE (+1)	1yr Fwd EV/EBITDA	1yr Fwd P/B	1yr Fwd P/E	Net Debt/EBITDA	YTD. Performance
India - Large										
UltraTech Cement Ltd.	**UTCEM IN**	**13%**	**12%**	**18%**	**17%**	**8.0**	**2.3**	**13.8**	**0.2**	**-14%**
Ambuja Cements Ltd.	**ACEM IN**	**8%**	**23%**	**15%**	**17%**	**7.7**	**2.6**	**15.1**	**(1.9)**	**-11%**
ACC Ltd.	**ACC IN**	**7%**	**22%**	**14%**	**15%**	**6.5**	**2.3**	**13.5**	**(1.4)**	**-26%**
Jaiprakash Associates Ltd.	JPA IN	-25%	4%	3%	4%	14.9	0.6	20.8	9.5	-60%
Shree Cement Ltd.	**SRCM IN**	**8%**	**19%**	**26%**	**19%**	**7.9**	**3.0**	**15.2**	**(0.4)**	**-15%**
Madras Cements Ltd.	MC IN	5%	18%	14%	16%	6.6	1.5	10.6	2.6	-33%
India Cements Ltd.	ICEM IN	14%	5%	4%	6%	5.3	0.4	9.0	4.5	-46%
Median		**8%**	**18%**	**14%**	**16%**	**7.7**	**2.3**	**13.8**	**0.2**	**-26%**
Median - top 4		**8%**	**21%**	**16%**	**17%**	**7.8**	**2.4**	**14.4**	**(0.9)**	**-15%**
India - Mid & Small										
Birla Corp. Ltd.	BCORP IN	15%	12%	10%	12%		0.6	6.3	3.4	-32%
J.K. Cement Ltd.	JKCE IN	11%	15%	11%	13%	5.5	0.7	6.3	2.5	-50%
Prism Cement Ltd.	PRSC IN	38%	-5%	7%	13%	6.9	1.3	18.3	6.3	-41%
HeidelbergCement India Ltd.	HEIM IN	76%	4%	5%	7%	10.0	1.0	20.1	12.5	-33%
Mangalam Cement Ltd.	MGC IN	26%	17%	11%	15%	5.2	0.5	4.7	1.7	-45%
Median		**26%**	**12%**	**10%**	**13%**	**6.2**	**0.7**	**6.3**	**3.4**	**-41%**
Global - Comparables										
Lafarge SA	LG FP	7%	3%	5%	7%	7.2	0.9	18.4	4.1	9%
Holcim Ltd.	HOLN VX	12%	4%	8%	9%	7.4	1.2	16.2	3.4	1%
Vicat SA	VCT FP	14%	6%	7%	9%	7.1	1.0	15.1	3.4	7%
HeidelbergCement AG	HEI DE	19%	2%	5%	6%	6.9	0.8	16.1	4.3	25%
CEMEX SAB de CV	CX US	12%	-7%	-3%	1%	10.0	1.1		6.5	22%
Median		**12%**	**3%**	**5%**	**7%**	**7.2**	**1.0**	**16.2**	**4.1**	**9%**
Indoensia										
PT Holcim Indonesia Tbk	SMCB IJ	2%	17%	12%	13%	8.5	2.1	17.1	0.6	-14%
PT Indocement Tunggal Prakarsa Tbk	INTP IJ	11%	27%	23%	22%	8.5	3.2	14.0	0.0	-11%
Median		**7%**	**22%**	**18%**	**17%**	**8.5**	**2.7**	**15.5**	**0.3**	**-12%**
China										
Anhui Conch Cement Co., Ltd.	914 HK	25%	13%	15%	16%	6.9	2.0	13.1	2.1	-7%
China National Building Material Co. Ltd.	3323 HK	33%	19%	15%	15%	8.1	0.9	6.3	9.7	-32%
China Shanshui Cement Group Ltd.	691 HK	4%	18%	11%	12%	5.9	0.8	7.0	3.5	-43%
Median		**25%**	**18%**	**15%**	**15%**	**6.9**	**0.9**	**7.0**	**3.5**	**-32%**
Thailand										
Siam Cement Public Co. Ltd.	SCC TB	39%	17%	21%	21%	12.8	3.2	15.4	5.6	1%
Siam City Cement Public Co. Ltd.	SCCC TB	23%	21%	25%	28%	13.8	5.2	20.5	0.9	2%
Median		**31%**	**19%**	**23%**	**24%**	**13.3**	**4.2**	**18.0**	**3.3**	**2%**
Taiwan										
Taiwan Cement Corp.	1101 TT	9%	8%	9%	10%	8.4	1.5	16.3	4.6	5%
Asia Cement Corp.	1102 TT	21%	7%	8%	9%	15.1	1.4	16.2	8.4	4%
Median		**15%**	**8%**	**9%**	**9%**	**11.8**	**1.4**	**16.3**	**6.5**	**4%**
Malaysia										
Lafarge Malaysia Bhd.	LMC MK	5%	11%	11%	12%	13.5	2.7	24.6	0.0	4%
Cementos Argos Ante Caribe SA	CEMARGOS CB	23%	4%	4%	6%	13.7	1.8	47.5	3.7	-2%
Median		**14%**	**8%**	**7%**	**9%**	**13.6**	**2.3**	**36.1**	**1.8**	**1%**

Source: Espirito Santo Investment Bank Research estimates for our Top 4, Company Data, Factset for not covered stocks.

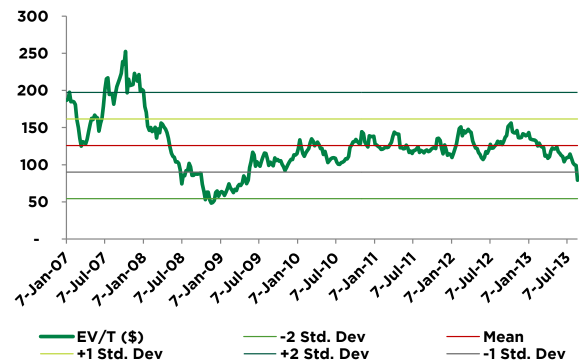
Appendix – 02: EV/EBITDA & EV/T band charts

Figure 157 ACC - EV/EBITDA - trading below mean valuations



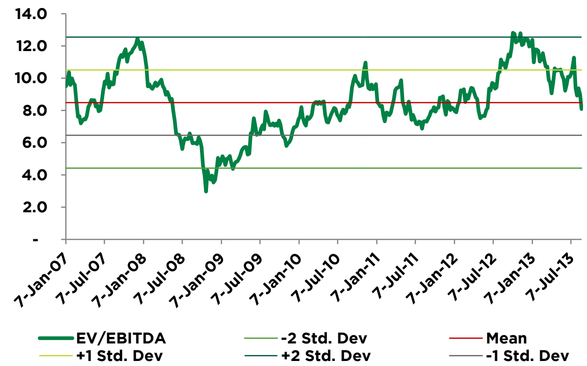
Source: Espirito Santo Investment Bank Research, Bloomberg

Figure 158 ACC - EV/T ($) - price fall exagerated by rupee fall



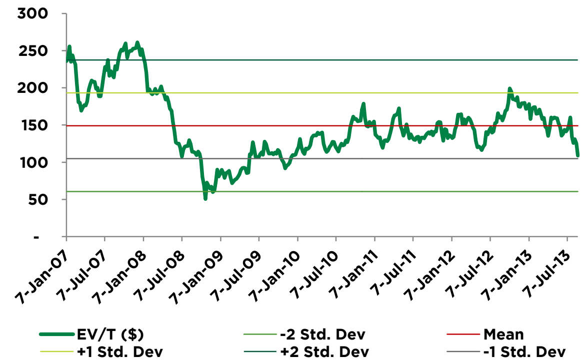
Source: Espirito Santo Investment Bank Research, Bloomberg

Figure 159 Ambuja - EV/EBITDA - Trading below mean valuation



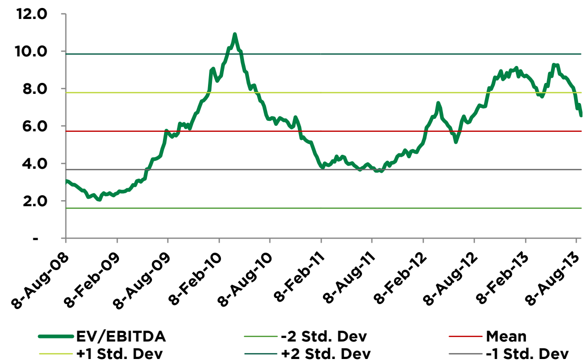
Source: Espirito Santo Investment Bank Research, Bloomberg

Figure 3 Ambuja - EV/T ($) - price fall exagerrated by rupee fall



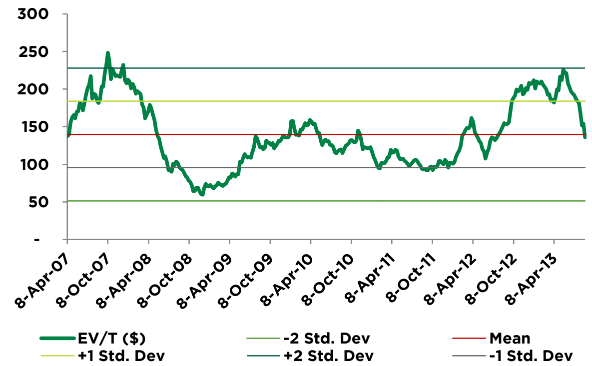
Source: Espirito Santo Investment Bank Research, Bloomberg

Figure 161 Shree - EV/EBITDA trading above mean. Re-rating on capacity addition



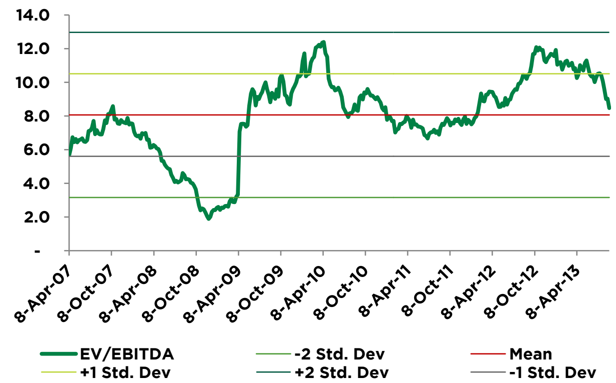
Source: Espirito Santo Investment Bank Research, Bloomberg

Figure 162 Shree - EV/T ($) - at mean valuation



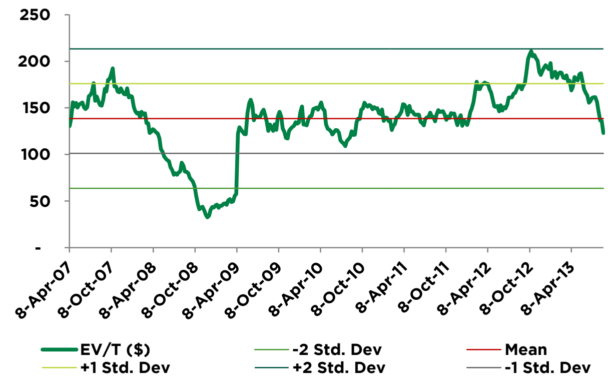
Source: Espirito Santo Investment Bank Research, Bloomberg

Figure 163 Ultratech - EV/EBITDA - re-rating post L&T Cement and Grasim merger (July 2010)



Source: Espirito Santo Investment Bank Research, Bloomberg

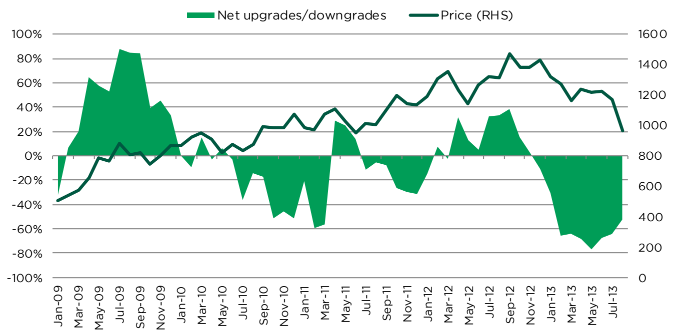
Figure 164 Ultratech - EV/T ($) - fall exagerrated by rupee fall



Source: Espirito Santo Investment Bank Research, Bloomberg

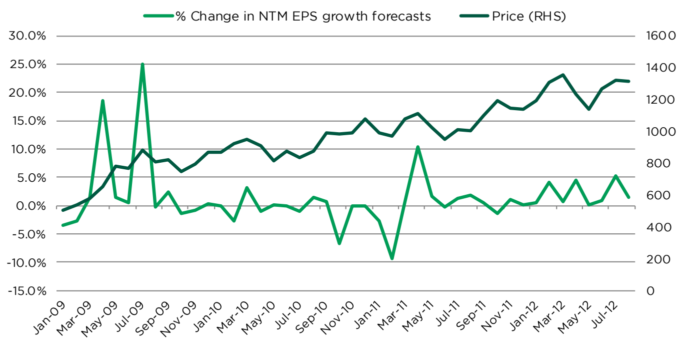
Appendix – 03: Earnings momentum charts

Figure 165 ACC - downgrades tapering off



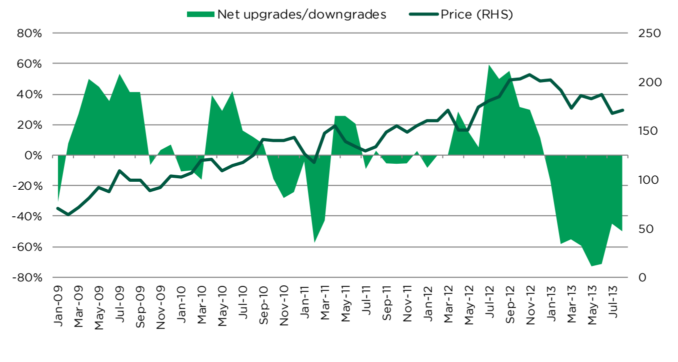
Source: Espirito Santo Investment Bank Research, FactSet

Figure 166 ACC - earnings forecast remains flat



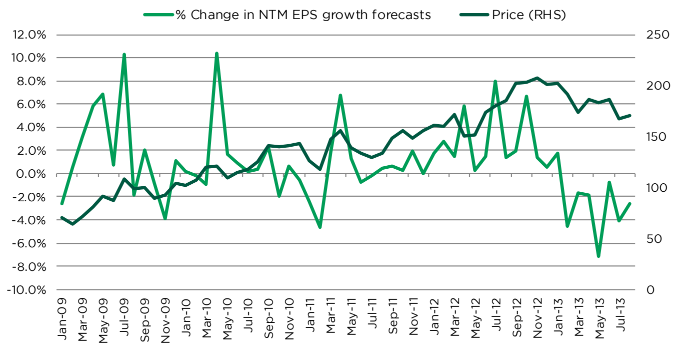
Source Espirito Santo Investment Bank Research, FactSet

Figure 167 Ambuja - downgrades tapering off



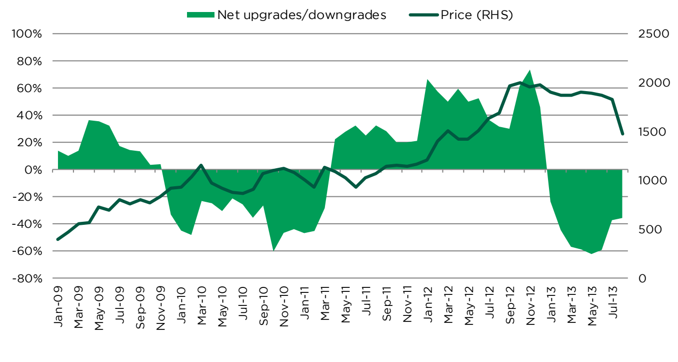
Source: Espirito Santo Investment Bank Research, FactSet

Figure 168 Ambuja - earnings forecast in negative zone



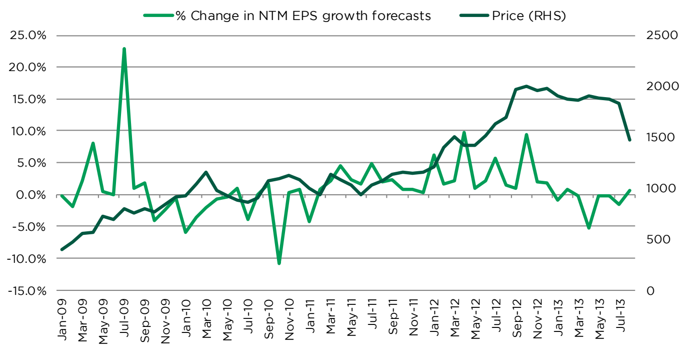
Source: Espirito Santo Investment Bank Research, FactSet

Figure 169 Ultratech - downgrades tapering off



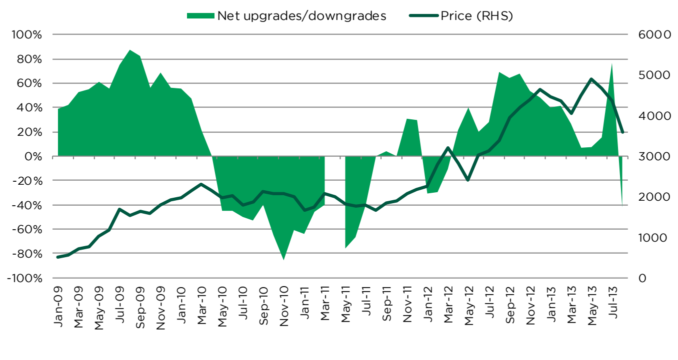
Source: Espirito Santo Investment Bank Research, FactSet

Figure 170 Ultratech - earnings forecast is flat



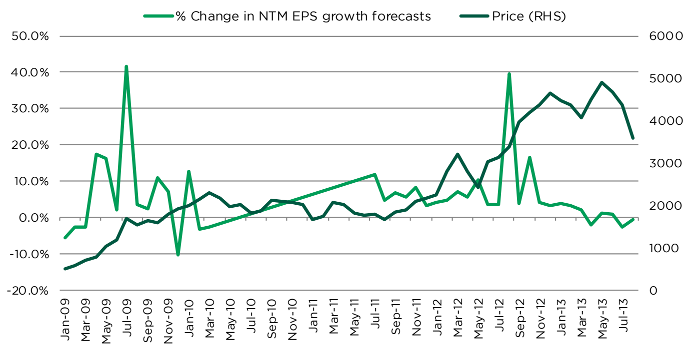
Source: Espirito Santo Investment Bank Research, FactSet

Figure 171 Shree - spike in downgrades



Source: Espirito Santo Investment Bank Research, FactSet

Figure 172 Shree - earnings forecast remains flat



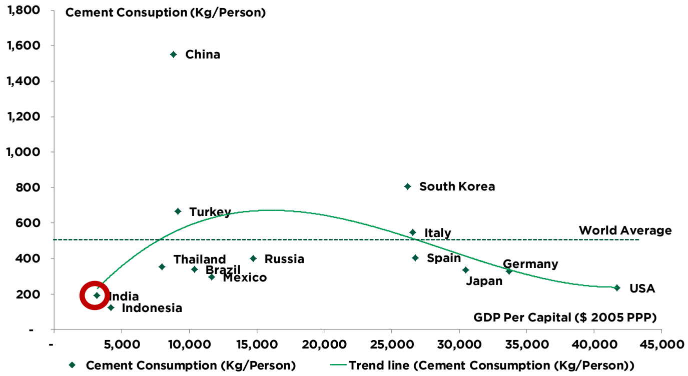
Source: Espirito Santo Investment Bank Research, FactSet

Appendix – 04: Demand by sector

India vs. US cement consumption - India yet to ride the curve

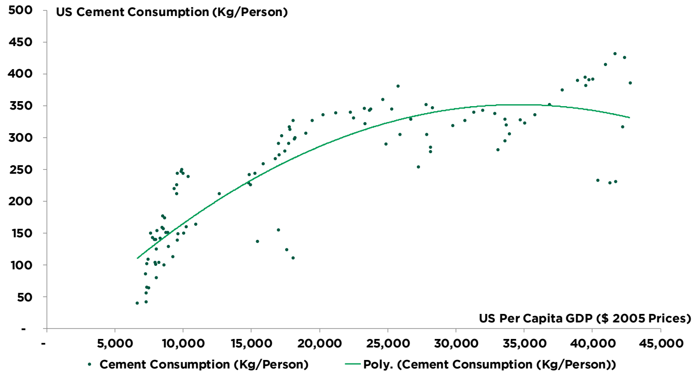
Despite the fact that it is already the world's second-largest cement producer, we expect India to go through a prolonged growth period as it rides through the cement curve (Figure 173), helped by rising housing & infrastructure demand. As of 2011, per capita cement consumption in India was at 185kg vs. the global average of 480kg. India & the US are at opposite ends of the global cement curve (Figure 173), with the US having completed its journey. A closer look at the US per capita cement consumption trend since 1900 (Figure 174) provides an indication of how the Indian cement growth story might develop. The US took 64 years to reach peak consumption of 432/kg per capita in 2005, from the current Indian per capita level. Taking Indian per capita GDP growth at 3x that of US (2% CAGR over 64 years), we estimate it would require another 15 years for India to reach the peak level achieved by US.

Figure 173 India (2nd largest producer) is yet to ride the curve



Source: Espirito Santo Investment Bank Research, Company Data

Figure 174 US Cement consumption pattern since 1900



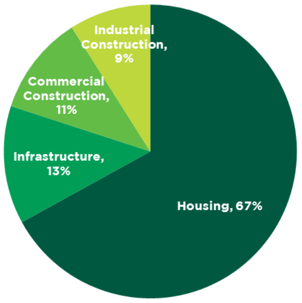
Source: Espirito Santo Investment Bank Research, Company Data

Cement demand – skewed towards housing

The Indian cement consumption story is primarily being driven by housing demand, which accounts for 67% of total 2012 consumption, followed by infrastructure at 13%, commercial construction at 11% and Industrial construction at 9%.

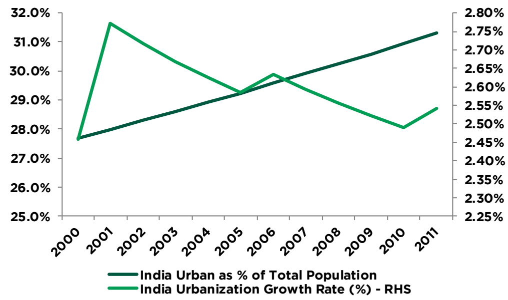
Key trends like mass urbanization (expected ~250mn migration over the next 20 years, IHB), rising per capita income and a rising number of nuclear families are driving housing demand. The urbanization trend is also fuelling demand for the commercial segment in urban and semi-urban areas. The government's impetus to shore up India's ailing infrastructure with $1 trillion in spending over the 12th five year plan is also likely to boost cement demand.

Figure 175 Housing is key growth driver with 67% of total consumption (2012)



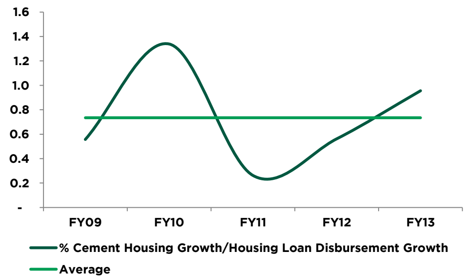
Source: Espirito Santo Investment Bank Research, Company Data

Figure 176 Rapid urbanization is leading to sustained housing demand



Source: Espirito Santo Investment Bank Research, Company Data

Figure 177 Cement housing consumption growth at 0.7x housing loan growth

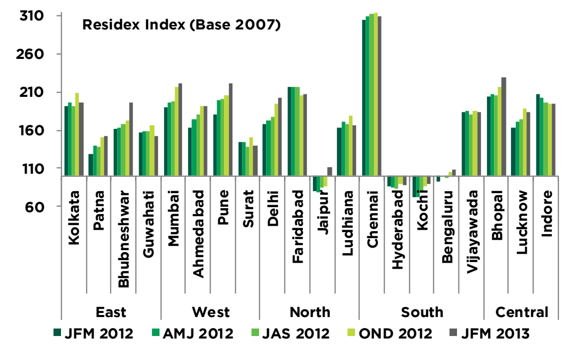


Source: Espirito Santo Investment Bank Research, Company Data

Housing Demand – 67% of total cement consumption

India's housing sector is still in a nascent stage and should continue to fuel cement demand for a sustained period. As per the 2011 census, India has 247mn households (excluding institutional households), out of which only 29% have a concrete roof, while 62% have concrete-based walls. Assuming an average house size of 300sq. ft. and 20kg/sq. ft. cement consumption, existing households present a billion-tonne cement opportunity. Further, the expected urbanization of ~250mn people over next 20 years will create additional demand. India's mortgage to GDP ratio is currently (FY13) at a low 8% (Figure 148) and we expect it to increase with rising per capita income growth, which should further fuel cement demand for housing.

Figure 178 Housing demand across India remains strong



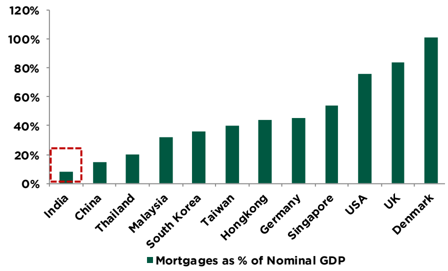
Source: Espirito Santo Investment Bank Research, NHB

Figure 179 EWS & LIG shortage driving government spend on housing

Housing shortage among categories		
Category	**No (Mn)**	**%**
EWS	10.6	56
LIG	7.4	39
MIG & above	8.0	4
Total	18.8	100

Source: Espirito Santo Investment Bank Research, MoHUPA

Figure 180 India lags behind most in Mortgage to GDP ratio – FY13

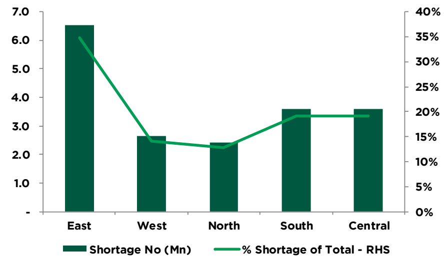


Source: Espirito Santo Investment Bank Research, HDFC

State & GOI led housing demand

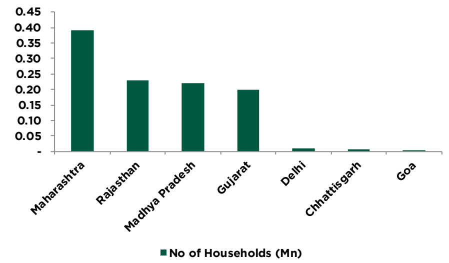
GOI & State governments are working to tackle the housing shortage, ~19mn in 2012, through various welfare schemes. Affordable housing for ~19mn units at 400sq. ft. and 20kg/sq. ft. cement consumption presents a 152mt cement opportunity. Ten states contribute to 76% of the urban housing shortage - UP, Maharashtra, WB, AP, TN, Bihar, Rajasthan, MP, Karnataka and Gujarat. Central schemes such as JnNURM, RAY and affordable housing programmes are channelled towards the supply side, while Rajiv Rinn Yojana (RRY), 1% interest subvention scheme, the credit mortgage risk guarantee fund and urban housing fund are being used to fuel demand.

Figure 181 East accounts for 35% of total shortage (FY12)



Source: Espirito Santo Investment Bank Research, Company Data, MoHUPA

Figure 182 RRY plans to target 20% of shortage in XIIth plan



Source: Espirito Santo Investment Bank Research, Company Data, MoHUPA

Demand drivers for EWS & LIG: Various state & central schemes are being launched to provide funds to the urban poor who are currently unable to obtain loans from HFCs and Banks.

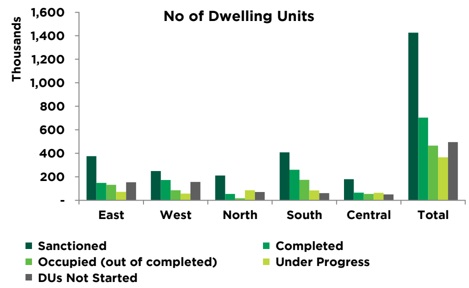
- RRY intends to provide housing loans up to Rs. 0.5mn for EWS and Rs. 0.8mn for LIG with an interest subsidy of 5% restricted up to Rs. 0.5mn. RRY is expected to target 20% of shortage for the state during the XIIth 5 year plan.
- Credit Mortgage Risk Guarantee Fund totalling Rs.1,000Crs has been established to mitigate high risk perception of the Banks/HFC for informal sector housing loans
- Urban Housing Fund is being created for increased credit flow to the urban poor

Supply-side drivers: GOI & State governments are giving out various financial and non-financial incentives to promote the supply of affordable housing. Financial incentives include service tax exemption, direct tax rebates, direct capital grant support. Non-financial incentives include reduced timeline for approval, access to state/city land holdings inventory, increased land availability, increased FSI/TDR facilities and policy support for promotion of mass housing.

JnNURM, RAY – Urban housing & infrastructure

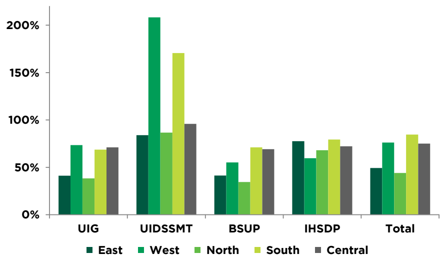
The Jawaharlal Nehru Urban Renewal Mission (JnNURM) was launched on 3rd Dec 2006 as a 7-year program with an investment of Rs1 Trillion for urban infrastructure and housing development, with GOI's share at 66%. The plan was subsequently extended for another 2 years until FY14. Two sub divisions under JnNURM, namely Urban Infrastructure and Governance (UIG) deals with infrastructure projects, while Basic Services for Urban Poor (BSUP) deals with housing facilities for the urban poor. Although the current investment in JnNURM of ~Rs400bn for a 7 year period implies annual cement consumption of ~3-4mt (assuming ~30t/Rs mn of investment), we expect this to increase further as the scope of project is increased to cover a larger part of India.

Figure 183 861K DUs are under progress or yet to start (FY12)



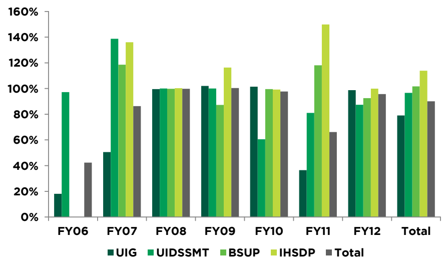
Source: Espirito Santo Investment Bank Research, MoHUPA

Figure 184 GOI has made 66% of allocation (vs. planned outlay)



Source: Espirito Santo Investment Bank Research, MoHUPA

Figure 185 ACA releases to allocation above 80% in most of the regions

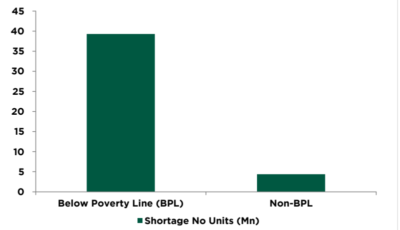


Source: Espirito Santo Investment Bank Research, MoHUPA

Rural demand – through IAY

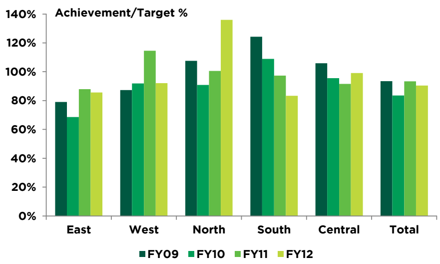
GOI's flagship rural housing programme, Indira Awaas Yojana (IAY), provides assistance of Rs45,000 for new construction in plains areas and Rs48,500 for construction in hilly/difficult areas. IAY was allotted Rs152bn in the FY13-14 budget, which – along with other rural programmes (MGNREGS, PMGSY) – saw a 46% increase YoY in allocation on an aggregate basis. The GOI has also decided to increase per unit assistance from Rs45,000 to Rs70,000 from 1st April 2013. In FY12, the South reported the lowest target achievement of 83%, while the North reported a maximum of 136%. We think the combination of a high degree of target achievement on a pan-India level (90% in FY12 – Figure 187) and a 56% YoY increase in per unit assistance should provide a boost to cement demand.

Figure 186 90% of rural housing shortage is in BPL category (as of 2012)



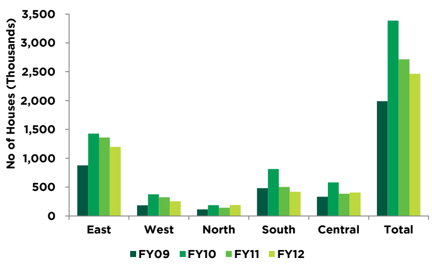
Source: Espirito Santo Investment Bank Research, Company Data

Figure 187 IAY: 90% target achieved in FY12



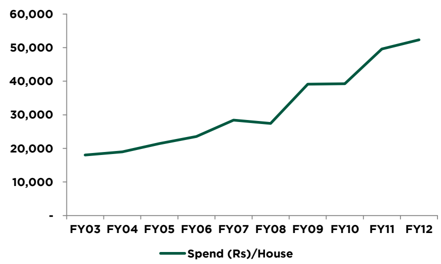
Source: Espirito Santo Investment Bank Research, MoRD

Figure 188 East accounted for 49% of total achievement



Source: Espirito Santo Investment Bank Research, MoRD

Figure 189 IAY - per house spend to rise to Rs70,000



Source: Espirito Santo Investment Bank Research, MoRD

Near term trend in private housing

Owing to the dearth of new housing start data by region, we have used the National Housing Bank's (NHB) Residex Index (Figure 178) as a proxy for housing demand. The Residex Index gives housing prices across multiple cities based on current transactions, with a base year of 2007. The Residex index in Q4FY13 remained strong across India, indicating strong housing demand, except for a few regions like Hyderabad, Kochi, Bengaluru and Jaipur.

Housing starts, as per real estate advisory firm Cushman & Wakefield, have moderated in few tier-1 cities owing to either soft demand or city specific issues; however, mid/lower segment demand remains strong across cities.

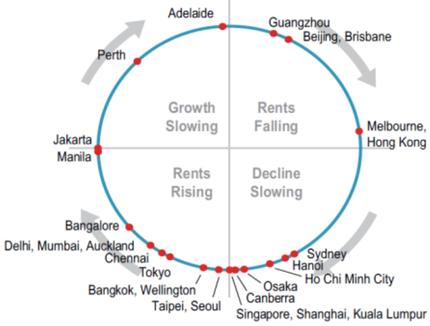
Commercial construction demand – 11% of total cement demand

Office space across key regions has remained stable in terms of net absorption and net asking rent rates. Owing to a dearth of volume data for commercial construction space, we have used pricing as a proxy for demand. Rental rates in the cities of Ahmedabad, Pune & Mumbai in the west, Kolkata in the east, Hyderabad & Chennai in the south and NCR in the North are generally expected to either remain stable or increase on a YoY basis.

On the retail front, food & beverage (F&B) and apparel segments remain key demand drivers, leading to stable or increasing leasing & mall rentals. As per Cushman & Wakefield, rental prices are expected to remain stable or increase in the cities of Ahmedabad & Mumbai in the West, Chennai & Hyderabad in the South, Kolkata in the East and NCR in the North. Demand in Pune remains moderate, but lack of new supplies may drive rental prices.

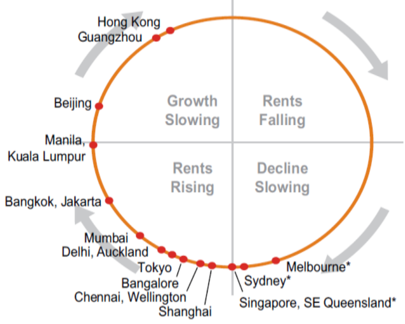
Demand for commercial construction (office & rental, JLL) to gather momentum as increasing prices will drive new construction. As per JLL, office & retail spaces in key areas of Mumbai, Bangalore & Chennai remain in the rents rising quadrant, implying stable to increasing demand.

Figure 190 Commercial - Grade A office - Rising rent across key cities



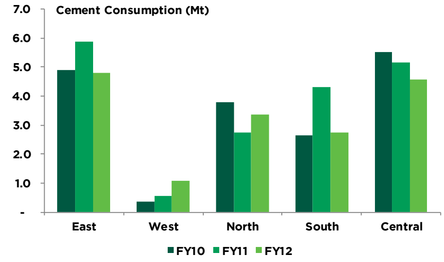
Source: Espirito Santo Investment Bank Research, JLL

Figure 191 Retail - rising rent across key citites



Source: Espirito Santo Investment Bank Research, JLL

Figure 192 MGNREGA is a stable source of cement demand



Source: Espirito Santo Investment Bank Research, PIB

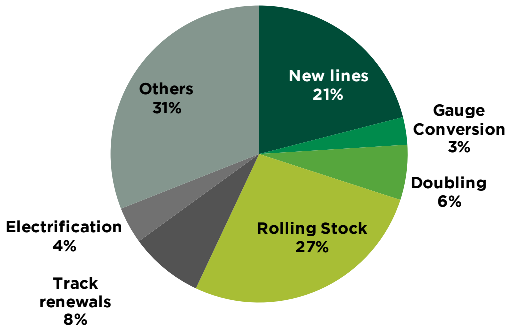
Infrastructure (13% of total 2012 demand) - Public spending remains strong

State spending on irrigation, energy, transportation, housing and urban development remains strong and is a stable contributor to cement demand. Figure 10 shows the increasing trend in state investments in these segments driving demand across all regions. As per the planning commission, total state spending on construction-intensive sectors was pegged at ~Rs3T in FY13 and owing to the high level of actual spend/plan outlay ratio at ~80-85%, it translates to cement demand of ~35-40mt.

MGNREGA: boosting cement demand – The Mahatma Gandhi National Rural Employment Guarantee Act has boosted cement demand. The scheme, with annual expenditure of ~Rs100bn on cement and aggregates, translates into ~18mtpa of cement demand. The East and Central regions have been the biggest beneficiaries of the scheme, contributing to a combined 56% of total demand.

Railways: on a booster dose - As per the planning commission, investment in the railways sector in the XIIth plan is expected to be around $94bn, i.e., 2.5x that of the XIth plan. Assuming an 80% ratio for actual to planned investment, as achieved in the XIth plan, actual investment during the XIIth plan can be assumed to be around $75bn, which implies annual capex of $15bn. Considering civil works at 30% of total annual capex, and cement at 15% of total civil works, this translates to annual cement consumption of ~6-7mt, i.e., double that of the previous plan.

Figure 193 Railways - Capex breakdown in XIIth plan



Source: Espirito Santo Investment Bank Research, Ministry of railways

Figure 194 Annual demand could be double that of XIth plan

	XIth plan	XIIth plan
Planned capex (Rs bn)	2,333	5,192
Actual/likely capex (Rs bn)	1,908	4,154
Achievement rate (%)	82%	80%
Likely annual capex (Rs bn)	382	831
Civil works (%)	30%	30%
Civil works (Rs bn)	114.6	249.3
Cement as % of Civil	15%	15%
Cement demand (mt)	3.4	7.5

Source: Espirito Santo Investment Bank Research, Planning commission

Highways/roads – an untapped opportunity: India has a road network of 3.3 million kilometres, of which ~80% are rural roads and only 2% are national highways. National highways are largely made of bitumen, which accounts for 88% of total length, while concrete makes up the remaining 12%. As per the Indian Roads Congress (IRC), 40% of the roads in western countries including the US, Germany and Austria are made of concrete, whereas only 2% of India's roads (by length) are made of concrete. Approximately 1000 tonnes of cement are required for the construction of one kilometre of a two-lane concrete road. Roads remain a potential demand driver, assuming a 40% share for concrete road and 1,000T/Km of cement, this translates into a 1,254mt opportunity. Concrete roads outscore bitumen in terms of fuel efficiency and durability, while a long curing time of 28 days remains a drawback. With new products, like UTWT 24 & Speedcrete, developed by ACC, concrete roads can be trafficked within 24 hours and 8 hours respectively, thereby solving the long curing issue.

Figure 195 New products for reduced curing time


Media Release

ACC

ACC's new integrated rapid concrete solutions to solve road problems in India

ACC Concrete, India's leading manufacturer of ready mix concrete and a division of ACC Limited, today introduced 2 breakthrough solutions **UTWT 24** and **Speedcrete** for instant road surface overlay and repair in India. UTWT 24 and Speedcrete are high performance overlays laid in depth ranging from 100mm - 150 mm for road sections in India. Designed as complete solutions from study of raw materials, **UTWT 24** and **Speedcrete** allow roads to be trafficked within 24 hours and 8 hours respectively from the time of application. These solutions thus help in servicing public and society at large with uninterrupted business through efficient road transport system.

Source: Espirito Santo Investment Bank Research, ACC

Appendix: 05 - India cement regions

Figure 196 India cement regions

Northern Region	Eastern Region	Southern Region	Western Region	Central Region
Uttarakhand	Assam	Andhra Pradesh	Gujarat	Uttar Pradesh
Haryana	Meghalaya	Tamil Nadu	Maharashtra	Madhya Pradesh
Punjab	Tripura	Karnataka		
Rajasthan	Manipur	Kerala		
Himachal Pradesh	Nagaland	Pondicherry		
Chandigarh	Arunachal Pradesh	Andaman & Nicobar		
Delhi	Mizoram	Goa		
Jammu & Kashmir	Bihar			
	Jharkhand			
	Odisha			
	West Bengal			
	Chhattisgarh			

Source: Espirito Santo Investment Bank Research, CMA

Appendix – 06: Definitions

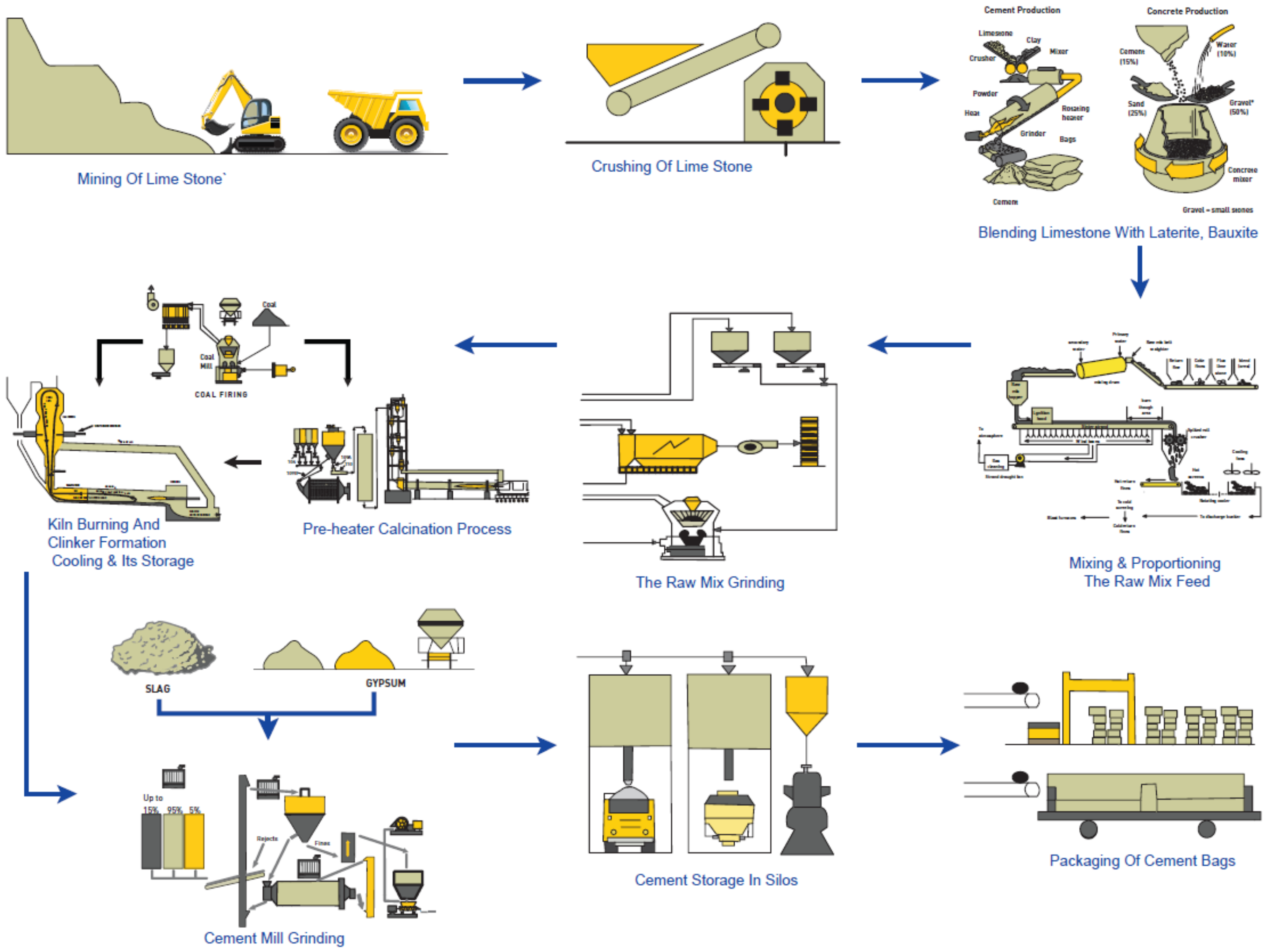
Affordable Housing: Individual dwelling units with a carpet area of not more than 60 Sq. meters.

Affordable Housing Projects: Housing projects where at least 60% of the FAR/FSI is used for dwelling units of carpet area of not more than 60 Sq. meters. The project shall also reserve 15% of the total FAR/FSI or 35% of the total number of dwelling units for EWS category.

CCI's definition of Cartel: "Cartel" includes an association of producers, sellers, distributors, traders or service providers who by agreement amongst themselves, limit, control or attempt to control the production, distribution, sale or price of, or, trade in goods or provision of services.

Appendix – 07: Cement manufacturing process

Figure 197 Cement Manufacturing Process



Source: Espirito Santo Investment Bank Research, JSW

Appendix: 08 – Limestone deposits

India's limestone deposits are concentrated in a few states, wherein Karnataka (30% of total), Andhra Pradesh (20%), Rajasthan (11%), Gujarat (11%), Meghalaya (9%), Chhattisgarh (5%) together account for 86% of total FY13 reserves. Owing to the availability of limestone reserves, these states combined accounted for 57% (Andhra Pradesh - 22%, Karnataka - 8%, Rajasthan - 13%, Gujarat - 8%, Meghalaya - 1%, Chhattisgarh - 5%) of total cement capacity in FY13. States like Maharashtra (6% capacity in FY13) and Tamil Nadu (10%), despite having negligible reserves, have significant capacity on account of being key cement consumers. Out of total reserves, 30% are located in forests and other regulated areas which may not be available for cement manufacture. Though current limestone reserves are sufficient for the next 30-40 years, lack of access to captive mines can impact companies on an individual basis. For instance, Ambuja is currently purchasing 5% of its limestone from the external market, which costs ~4x that of a captive source.

Figure 198: South holds half of Indian limestone reserves (2011)

Lime Stone Reserves	R&R (Mt)	% of Region	% of Total
East	**31,354**	**100%**	**18%**
Arunachal Pradesh	483	2%	0%
Assam	1,305	4%	1%
Bihar	859	3%	0%
Chhattisgarh	9,038	29%	5%
Jharkhand	746	2%	0%
Manipur	46	0%	0%
Meghalaya	16,054	51%	9%
Nagaland	1,038	3%	1%
Odisha	1,738	6%	1%
Sikkim	2	0%	0%
West Bengal	45	0%	0%
West	**21,750**	**100%**	**12%**
Gujarat	20,012	92%	11%
Maharashtra	1,737	8%	1%
North	**27,216**	**100%**	**16%**
Haryana	71	0%	0%
Himachal Pradesh	4,762	17%	3%
Jammu & Kashmir	1,356	5%	1%
Rajasthan	19,486	72%	11%
Uttarakhand	1,540	6%	1%
South	**88,598**	**100%**	**51%**
Andhra Pradesh	35,179	40%	20%
Daman & Diu	129	0%	0%
Karnataka	51,886	59%	30%
Kerala	207	0%	0%
Puducherry	16	0%	0%
Tamil Nadu	1,182	1%	1%
Central	**6,427**	**100%**	**4%**
Madhya Pradesh	5,921	92%	3%
Uttar Pradesh	506	8%	0%
Total	**175,345**	**100%**	**100%**

Source: Espirito Santo Investment Bank Research, Company Data, IBM

Appendix: 09 - Gypsum deposits

In India, gypsum reserves are concentrated in Rajasthan (82% of total - 2011) where its supply and mining is monopolized by government organizations. This has resulted in a competitive scenario in gypsum procurement from external markets. Geographically concentrated reserves also imply that cement players in far off states find it difficult to procure the mineral and have to bear higher logistic costs. Further, only 12% of India's total gypsum reserves (Figure 199) are suitable for cement production.

Figure 199 Rajasthan accounts for 82% of total R&R - 2011

Gypsum Reserves	R&R (Kt)	% of Region	% of Total
East	**-**	**0%**	**0%**
West	**15,176**	**100%**	**1%**
Gujarat	15,176	100%	1%
North	**1,239,812**	**100%**	**96%**
Himachal Pradesh	4,446	0%	0%
Jammu & Kashmir	177,772	14%	14%
Rajasthan	1,055,547	85%	82%
Uttarakhand	2,047	0%	0%
South	**31,442**	**100%**	**2%**
Andhra Pradesh	404	1%	0%
Karnataka	3,784	12%	0%
Tamil Nadu	27,254	87%	2%
Central	**69**	**100%**	**0%**
Madhya Pradesh	69	100%	0%
Total	**1,286,499**	**100%**	**100%**

Source: Espirito Santo Investment Bank Research, Company Data, IBM

Figure 200 12% of total reserves are of cement grade - 2011

Gypsum Reserves (Kt)	Grade Wise	% of Total
Surgical plaster	5,670	0%
Fertilizer/Pottery	1,051,483	82%
Cement/Paint	152,816	12%
Soil reclamation	11,395	1%
Unclassified	36,625	3%
Not-known	28,508	2%
Total	**1,286,497**	**100%**

Source: Espirito Santo Investment Bank Research, Company Data, IBM

Appendix: 10 – India cement capacity

Figure 201 East to see maximium capacity addition over FY14-16E (~19mt)

India Capacity (Kt)	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14E	FY15E	FY16E
East	23,839	24,439	25,697	26,222	28,812	31,247	35,538	37,260	43,648	50,723	55,473	61,173	69,673
West	27,770	28,770	28,770	28,770	31,670	36,428	39,396	42,081	47,223	51,473	53,553	53,553	53,553
North	26,199	27,659	30,690	32,614	42,284	47,991	51,216	64,315	68,588	72,922	74,172	80,072	85,072
South	50,581	51,281	55,396	59,143	64,443	75,945	101,480	122,294	137,860	143,610	150,810	152,510	152,510
Central	19,265	22,415	22,415	22,915	27,347	28,157	28,420	33,165	37,665	40,565	42,845	45,645	45,645
Total	**147,654**	**154,564**	**162,968**	**169,664**	**194,555**	**219,768**	**256,051**	**299,115**	**334,985**	**359,293**	**376,853**	**392,953**	**406,453**

Source: Espirito Santo Investment Bank Research for estimates, Company Data

Appendix: 11 – Sand mining issues

Sand mining: For every tonne of cement consumed, ~1.5-2.5 tons of sand is required, depending on the end application/purpose. Hence, India's annual sand consumption would stand anywhere between ~375MT and 625MT. In addition, the Supreme Court order dated February 2012 stated that all mining projects spread over 5+ hectares require environmental clearance. However, as per the MoEF website, between Delhi, Haryana and Uttar Pradesh, i.e. 16% of India's cement consumption (in FY13) and implied sand 58MT of sand consumption, only 10 projects have been granted EC since 2012. This clearly indicates the nature of the industry and suggests the extent of illegal mining. With no real economically viable alternatives available to sand, we think if illegal sand mining is exposed it could pose a formidable risk to cement production across the country. The approval of leases with a mining area of 5-50 hectares (ha) should be given by the State Environmental Impact Assessment Authority (SEIAA) and for above 50 ha the approving authority is the Central Environmental Impact Assessment Authority (CEIAA). Both SEIAA and CEIAA function under the MoEF. The state pollution control boards can give approval for those leases with a mining area below five ha. Further, the law indicates that sand should not be removed from depths of more than three meters and the distance between any two blocks should be at least 1km. The figure below highlights current rules/policies in operation:

Kerala: The Kerala Protection of River Banks and Regulation of Removal of Sand Act, 2001. Sand mining in select areas and each selected area or Kadavu will be managed by a Kadavu Committee which will decide on matters such as the quantum of mining to be permitted. The committee will also mobilise local people to oversee these operations and ensure the protection of rivers and riverbanks.

Tamil Nadu: The state has a policy that ensures that quarrying of sand in government poramboke lands and private patta lands will only be undertaken by the government. Mechanised sand mining is prohibited. In 2008, this policy was countermanded by the government and private parties were given permits for mining.

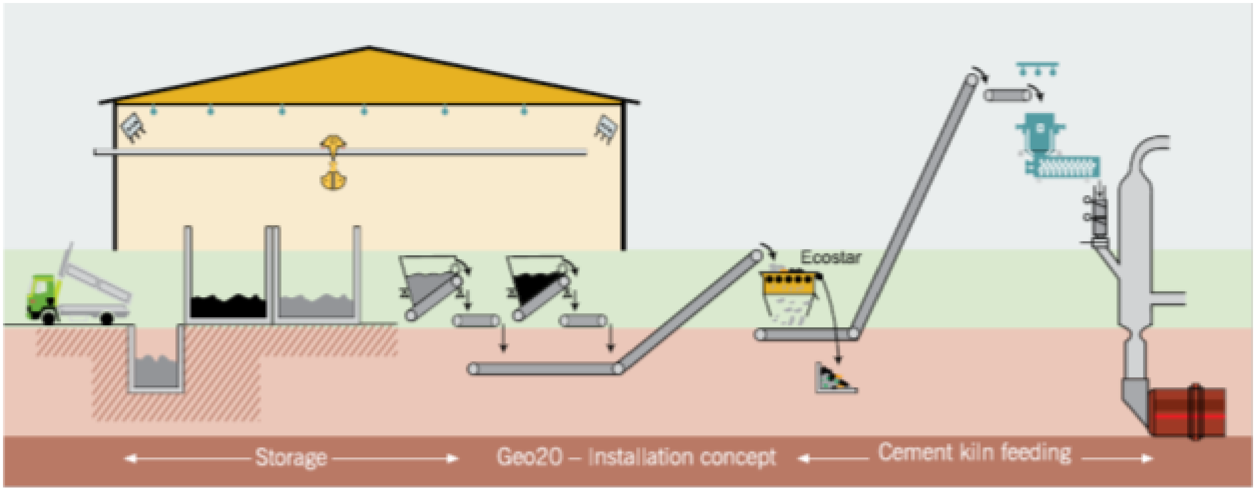
Karnataka: The Uniform Sand Mining Policy does not allow sand mining in Coastal Regulation Zone (CRZ) areas and prohibits the use of machinery to mine sand from rivers. The High Court of Karnataka banned mechanised boats for sand mining in the state from April 2011. From September 2011, according to Karnataka Minor Mineral Concession (Amendment) Rules 2011, the responsibility of oversight of sand mining has been transferred to the Public Works, Ports and Inland Water Transport Department.

Andhra Pradesh: In 2006, the government introduced a new policy that allows only manual labour and bullocks to mine sand in riverbeds. Bullock carts, mules and other animals are exempt from any mining tax. Contractors will be allotted sand through open bidding by a committee headed by district joint collectors. Sand can be sold only if it has a maximum retail price tag, otherwise there will be a penalty. Use of poclaines has been banned entirely, and mining will be prohibited below three metres.

Maharashtra: Under a new policy announced in October 2010, contractors are required to obtain permission from the Gramsabha for sand mining. A ban on the use of suction pumps in dredging and sand mining licences can be given only through a bidding process. Sand mining projects also have to obtain environmental clearances.

Appendix: 12 – Ambuja & ACC – waste recycling management

Figure 202 Geo 20 installation concept at Ambuja & ACC



Source: Espirito Santo Investment Bank Research, Company Data, Ambuja Cement

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