INDIA

## Inside



**We have introduced 20% discount to our NPV**

| Target price | Old | New |
|---|---|---|
| ACC IN | 940 | 799 |
| ACEM IN | 129 | 110 |
| ICEM IN | 109 | 93 |
| UTCEM IN | 870 | 740 |
| Grasim IN | 2696 | 2528 |

Source: Macquarie Research, June 2011

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Macquarie Capital Securities India (Pvt) Ltd

# Indian Cement Sector

## Investigations, oversupply - significant risks

### Investigation intensifies, downside risk

Competition Commission of India (CCI) has been enquiring into sharp cement price increases given low demand for quite some time. Now the government has broadened the investigation by getting Securities Fraud Investigation Officer (SFIO), Department of Corporate Affairs in the ring. Global experience suggests that penalties, whenever imposed, have led to underperformance of stocks. In recent cases (2009), we saw penalties being imposed in our neighbouring country Pakistan. CCI can levy penalty up to 10% of revenue or 3x profits for years under consideration. Stocks have corrected from peaks, but we still **recommend reducing exposure**.

### Structural bull cycle at least 2yrs away

Cement prices have hit an all time high driven by supply discipline, supported by rising costs and at times helped by constraints on logistic infrastructure. However, industry fundamentals remain weak with capacity utilisation below 75%, clinker inventory at 8yr high and demand subdued at 5-6% down from 3yr average of 10%. We believe that cement price has held up stronger than anticipated, but now have peaked out.

### Cost rise is structural, margins dependent on cement price

For the first time cement companies are seeing all round inflation across all cost centres. Energy costs which account for 30% of the costs are increasing due to rising imported coal prices as well as due to recent hike by Coal India. Transport costs have been on the rise, though their full impact has not yet been felt as diesel prices are still subsidised. Staff costs have been rising in double digits, much higher than volume growth of 9-10% and eating into the margins. Raw material costs have also risen sharply, as most companies are now forced to pay for fly-ash. To add to the misery, we see no major easy cost saving potentials, as captive power plants and blending ratios, which were the main source of cost reduction in last decade, have been exhausted. The next big potential to reduce costs is captive coal mines, and we believe this is at least 3yrs away.

### Valuations to see de-rating

We do think that it might be too early to buy for structural tightness, as oversupply issues will not be resolved at least till 2013. While profits look reasonable, the risks are very high given the investigation and also due to increased volatility in cement prices. We think market will assign lower multiple to account for increased risk. We have introduced a 15% discount to our NPV and cut our target prices for all stocks.

**ACEM and ACC:** Fully priced in, merger delayed, likely to grow slower.

**UTCEM:** Fully valued, but one to own for medium term due to superior growth.

**Grasim:** Cheaper way to own UTCEM.

**India Cement:** Best play as it looks to reduce costs by Rs300/t.

# Investigations, oversupply - significant risks

## Investigation intensifies, downside risk

- Cement prices have hit an all time high driven by supply discipline, supported by rising costs and at times helped by constraints on logistic infrastructure. Competition Commission of India (CCI) has been enquiring into these price increases, and now government has broadened the investigation by getting Securities Fraud Investigation Officer (SFIO) in the ring. Global experience suggests that penalties, whenever imposed, have led to underperformance of stocks. CCI can levy penalty up to 10% of revenue or 3x of profits for years under consideration. Stocks have corrected from peaks, but we still recommend reducing exposure.

**Fig 1 Numerous instances of cement companies being fined**

| Region | Companies involved | Fine | Year | Comments |
|---|---|---|---|---|
| Europe | 6 cement companies including Holcim, Dyckerhoff, Heidelberg, and Lafarge and Cement Association | €248m | 1994 | This was reduced to €140mn after they won an appeal in 2004, and fine on association nullified |
| Europe | Lafarge | €187m | 2003 | For participating in another cartel |
| Korea | Seven companies, in addition to Korea Cement Manufacturing Association | $22m - companies<br>$428,000 - association | 2003 | |
| Taiwan | Cemex | $6.3m | 2005 | |
| Argentina | 5 cement companies operating a cartel during 1981-1999 | $107m | | |
| Romania | Lafarge Romcim, Holcim and Carpatcement | €27m or 6% of turnover | 2005 | Three companies shared 98% of Romania's cement market. |
| Pakistan | 20 companies penalised for cartel | Rs6312m | 2009 | |

Source: Macquarie Research, June 2011

## Structural bull cycle at least 2yrs away

***Little fundamental support to cement prices stability which is primarily done by curtailing supply***

- Indian cement market remains highly oversupplied and is operating around 72% capacity utilisation with clinker inventories already at 8-year high. We see another 30mt of capacity being added in CY11 and this should keep a lid on cement prices.
- Cement prices have become very volatile with alternate bouts of supply pressures and producer discipline. Overall prices have held up much higher than what street was initially estimating, led by supplier discipline. We are forecasting a slight up tick in pricing from FY11 levels with seasonal variations. However, profitability will likely remain low and rising costs are pressuring margins, but risks are to further downside.

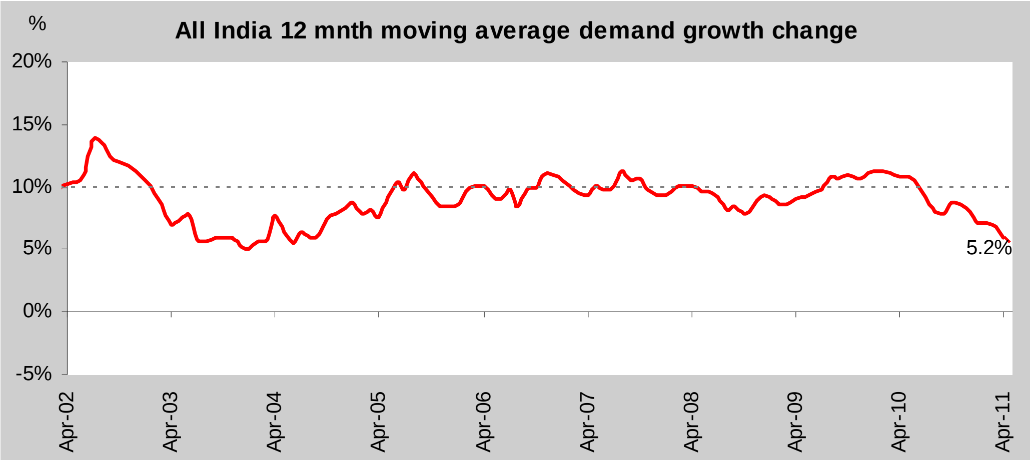
**Fig 2 Cement Supply Demand balance**

| Mnt | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11E | 2011-12E | 2012-13E |
|---|---|---|---|---|---|---|---|---|---|
| Clinker Capacity | 122.8 | 125.0 | 136.1 | 142.4 | 150.9 | 184.5 | 200.0 | 222.2 | 240.4 |
| Clinker Production | 109.4 | 116.3 | 121.4 | 129.7 | 138.5 | 153.9 | 160.0 | 194.8 | 208.6 |
| Capacity Utilisation | 89.1% | 93.1% | 89.2% | 91.1% | 91.8% | 83.4% | 80.0% | 87.7% | 86.8% |
| Less Clinker export | 6.0 | 3.2 | 3.1 | 2.2 | 2.6 | 3.1 | 2.0 | 2.4 | 2.4 |
| Less Clinker sale | 2.3 | 2.3 | 2.3 | 3.0 | 3.8 | 5.3 | 2.6 | 4.1 | 4.1 |
| Net Clinker | 101.1 | 110.8 | 116.0 | 124.5 | 132.1 | 145.5 | 155.4 | 188.3 | 202.2 |
| Conversion factor | 1.25 | 1.29 | 1.33 | 1.35 | 1.37 | 1.38 | 1.36 | 1.38 | 1.39 |
| Cement Capacity | **154.3** | **160.2** | **165.7** | **189.4** | **213.2** | **257.5** | **271.0** | **316.3** | **337.7** |
| Cement Production | 126.2 | 142.5 | 154.7 | 168.3 | 181.5 | 200.4 | 211.0 | 260.5 | 280.0 |
| Cement Capacity Utilisation | 82% | 89% | 93% | 89% | 85% | 78% | 78% | 82% | 83% |
| Less Cement export | 4.1 | 6.0 | 6.1 | 3.7 | 3.2 | 2.2 | 2.1 | 2.1 | 2.1 |
| Net Cement Available | **122.1** | **136.5** | **148.6** | **164.6** | **178.3** | **198.2** | **209.0** | **258.4** | **277.9** |
| Demand @ 9% | 123 | 135 | 149 | 164 | 178 | 196 | 209 | 232 | 252 |
| Gap | **(0.9)** | **1.5** | **(0.2)** | **0.6** | **0.6** | **1.1** | **(0.1)** | **24.8** | **23.5** |

Source: CMA, Macquarie Research, June 2011

- **Demand has been also muted** around 5-6%. This is down from 3yr average of 10% and we expect almost 3-4% growth for 1st half of current year.

**Fig 3 All India 12-month moving average demand growth – expected to weaken going forward**



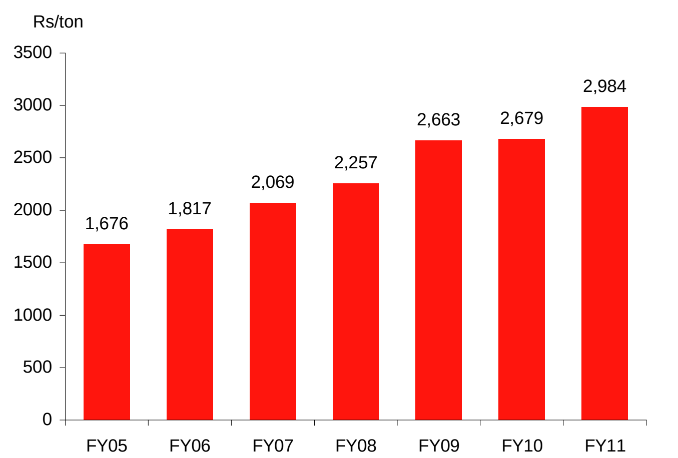

Source: CMA, Macquarie Research, June 2011

## Margins unlikely to expand as costs rise too

*Though oversupply in the market is in everyone's numbers, cost increase is being neglected for ACC/ACEM and Grasim*

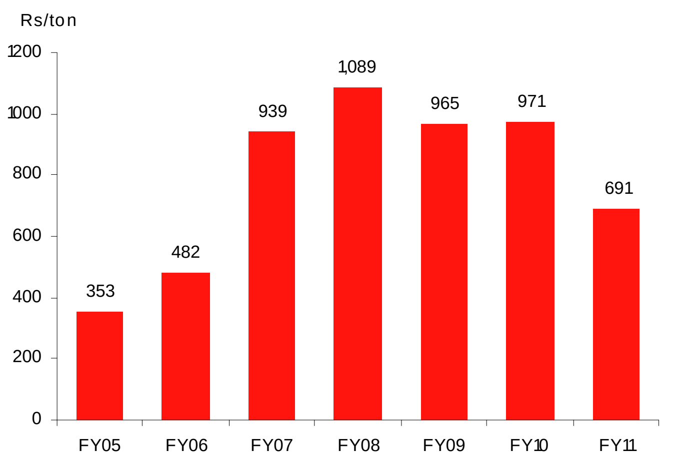
- For the first time cement companies are seeing all round inflation across all cost centres. Energy costs which account 30% of the costs are increasing due to rising imported coal prices as well as lower availability of subsidies domestic coal. Transport costs have been on increase, though full impact has not yet been felt as diesel prices are still subsidised. Staff costs have been rising in double digits much higher than volume growth of 9-10% and eating into the margins. Raw material costs have also been witnessing a sharp increase as most companies are now forced to pay for fly-ash.
- To add to the misery, we don't see any major easy cost saving potentials. Captive power plants and blending ratios which were the main source of cost reduction in the last decade have been exhausted. The next big potential to reduce costs is a captive coal mine which we think is at least 3yrs away. Though we do expect an increase in margins in FY12, we do not believe that cement companies can see the peak numbers they saw in FY08-10.

**Fig 4 Costs have been increasing in past years**




Source: Company data, Macquarie Research, June 2011

**Fig 5 Margins to grow, but more gradually under muted demand, over supply and cost pressures**




Source: Company data, Macquarie Research, June 2011

## Valuations – de-rating will likely continue

- We do think that it might be too early to buy for a structural tightness, as oversupply issues will not be resolved at least till 2013. While profits look reasonable, the risks are very high given the investigation and also due to increased volatility in cement prices. We think market will assign lower multiple to account for increased risk.

**Fig 6 Cement valuation Snapshot**

| | Reco | Current Price (Rs) | Target price (Rs) | Upside (%) | PER FY2011 | PER FY2012 | PER FY2013 | EV/EBITDA FY2011 | EV/EBITDA FY2012 | EV/EBITDA FY2013 | EV/t (US$) FY2011 | EV/t (US$) FY2012 | EV/t (US$) FY2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACC | UP | 952 | 799 | -16% | 16.7x | 14.7x | 12.2x | 10.4x | 8.0x | 6.0x | 119 | 115 | 104 |
| Ambuja | UP | 132 | 110 | -17% | 16.0x | 16.8x | 14.7x | 9.8x | 8.1x | 6.8x | 150 | 144 | 131 |
| Grasim | OP | 2,071 | 2,528 | 22% | 8.8x | 7.2x | 6.8x | 3.9x | 2.5x | 2.4x | 83 | 45 | 59 |
| India Cement | OP | 75 | 93 | 24% | 35.4x | 9.5x | 5.8x | 10.9x | 5.7x | 3.8x | 67 | 61 | 54 |
| Ultratech | UP | 965 | 740 | -23% | 19.4x | 11.8x | 9.2x | 9.8x | 6.6x | 5.4x | 135 | 121 | 117 |

Source: Bloomberg, Macquarie Research, June 2011, Prices as of 21 June 2011

- We have introduced 15% discount to our NPV and cut our target prices for all stocks. However, for Grasim, we are already building in a 20% discount, which we have increased to 25% as the risk of penalty will be on Ultratech.

**Fig 7 We are reducing our target price across cement companies with a 15% discount to NPV**

| Target price | Old | New | Reco | Price | Upside |
|---|---|---|---|---|---|
| ACC | 940 | 799 | UP | 952 | -16% |
| ACEM | 129 | 110 | UP | 132 | -17% |
| ICEM | 109 | 93 | OP | 75 | 24% |
| UTCEM | 870 | 740 | UP | 965 | -23% |
| Grasim | 2696 | 2,528 | OP | 2071 | 22% |

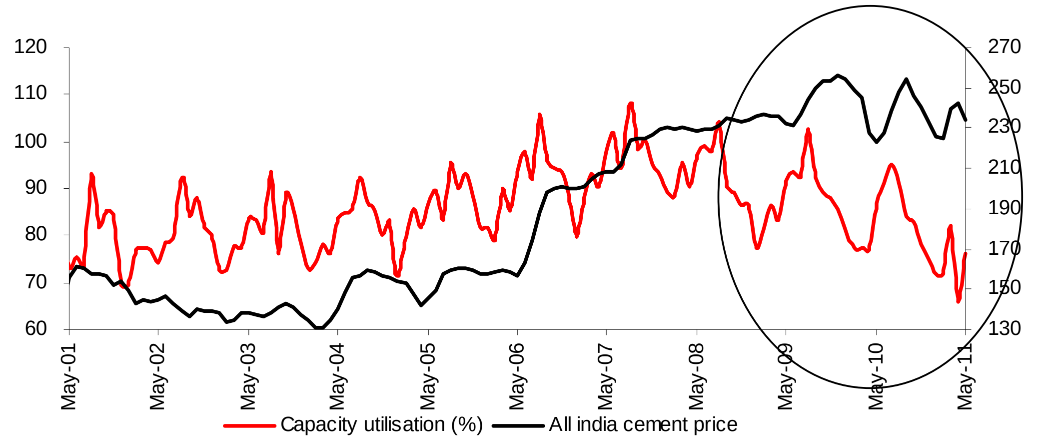
Source: Macquarie Research, June 2011, Prices as of 21 June 2011

# Investigation intensifies, downside risks

*Though cement utilisation is below 80% level, prices have been scaling new highs*

- **Cement prices have hit an all time high driven by supply discipline** supported by rising costs and at times helped by constraints on logistic infrastructure. Cement prices increased by 8% in May 2011 from April 2010 and are now close to all time high, while capacity utilisation has declined to 72% in May 2011 from 84% in April 2010.

**Fig 8 Cement capacity utilisation has moved from 78% in Jan to 72% for May, 2011 while cement prices have increased by Rs33/bag**




Source: CMA, Macquarie Research, June 2011

## Attracts investigations by CCI and SFIO

*Competition Act 2002- new act, new grounds of investigation and new scope of penalties*

- **Competition Commission of India (CCI)** is a newly formed government body which replaced the earlier act Monopolistic Restrictive Trade Practices Commission (MRTPC). CCI is a much more powerful act as compared to the toothless MRTPC, and it has powers to levy penalties on cases of cartelisation. CCI had started investigation into cartelisation and price increases some time back. For last two months, they have had several long sessions with cement companies, grilling them for pricing practices and have taken significant amount of data. They have also clubbed the earlier enquiry of the 2007 price increase with the 2010 price increase.
- **Penalties could be high:** As per the legislation, CCI, if it establishes that price fixing has been done, can recommend **penalty of up to 3 times its profit for each year of the continuance of such agreement or 10% of its turnover for each year of continuance of such agreement, and whichever is higher**. In case an enterprise is a 'company' its directors/officials who are guilty are also liable for the penalty.
- **Serious fraud office (SFIO)** which works under Department of Company Affairs has initiated an investigation into financial irregularities by cement industry players and is also looking at possible cartelisation. Our interaction with industry participants do reveal that SFIO officers have spent 3-4 days at each major company collecting lots of data. The scope of enquiry seems much wider and includes financial irregularities. 70% of the data requested by them is about foreign currency transactions, board meetings and accounting methods. 30% was related to cement pricing.
- One of the prime difficulties faced by the investigation is in establishing the working of a cartel. By bringing in SFIO, the investigation has taken a more serious turn.

- **Global experience – numerous cases, some as near as Pakistan:** Numerous cases of cartelisation have been found since 1994 in cement industry globally and companies have been levied fines amounting to as high as US$250m. In two instances, even the cement association was fined, being cited as the meeting ground for participants in the cartel.

## Fig 9 Numerous instances of cement companies being fined

| Region | Companies involved | Fine | Year | Comments |
|---|---|---|---|---|
| Europe | 6 cement companies including Holcim, Dyckerhoff, Heidelberg, and Lafarge and Cement Association | €248m | 1994 | This was reduced to €140m after they won an appeal in 2004, and fine on association nullified |
| Europe | Lafarge | €187m | 2003 | For participating in another cartel |
| Korea | Seven companies, in addition to Korea Cement Manufacturing Association | $22m - companies<br>$428,000 - association | 2003 | |
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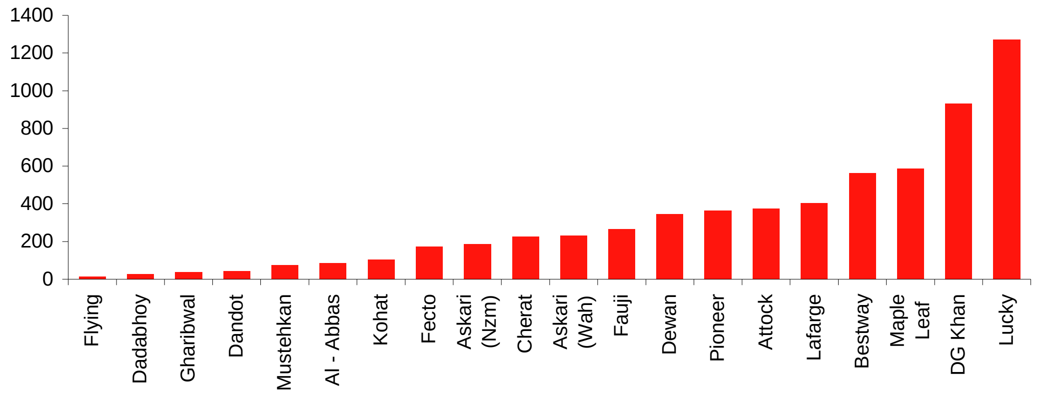
| Argentina | 5 cement companies operating a cartel during 1981-1999 | $107m | | |
| Romania | Lafarge Romcim, Holcim and Carpatcement | €27m or 6% of turnover | 2005 | Three companies shared 98% of Romania's cement market. |
| Pakistan | 20 companies penalised for cartel | Rs6312m | 2009 | |

Source: Macquarie Research, June 2011

- **Most recent example has been from Pakistan**: Here on 25th August 2009, the Competition Commission of Pakistan imposed a penalty of PKR6.4bn on 20 companies for alleged price cartelisation. This resulted in a hefty sell-off of cement scrips at the KSE. Cement sector did underperform by 13% in the following month.

***Globally we see instances of penalties – can CCI try and make an example in India as well?***

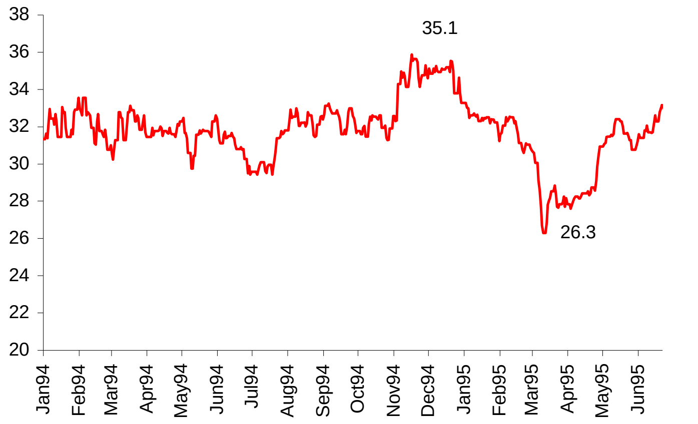
## Fig 10 Penalties imposed by Cement Commission of Pakistan (PKR m)




Source: Bloomberg, Macquarie Research, June 2011

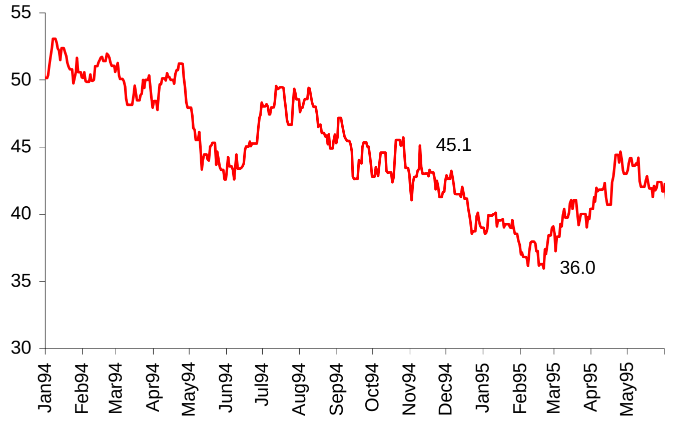
- **Strong de rating is a possibility:** While in most cases it leads to multiple appeals and in some cases the penalties have been diluted, the damage was already done in the form of de-rating of the stocks.

**Fig 11 Holcim – between Nov 1994 and Mar 1995**



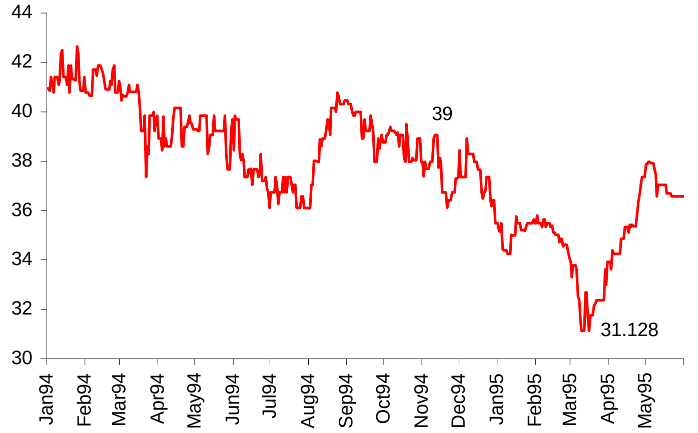

Source: Bloomberg, Macquarie Research, June 2011

**Fig 12 Lafarge – between Nov 1994 and Mar 1995**



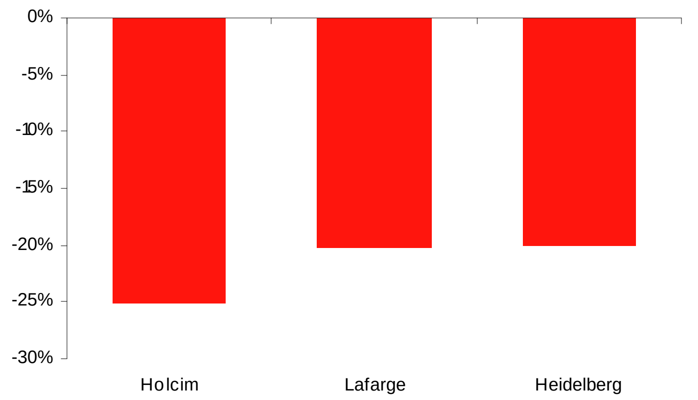

Source: Bloomberg, Macquarie Research, June 2011

**Fig 13 Heidelberg – between Nov 1994 and Mar 1995**




Source: Bloomberg, Macquarie Research, June 2011

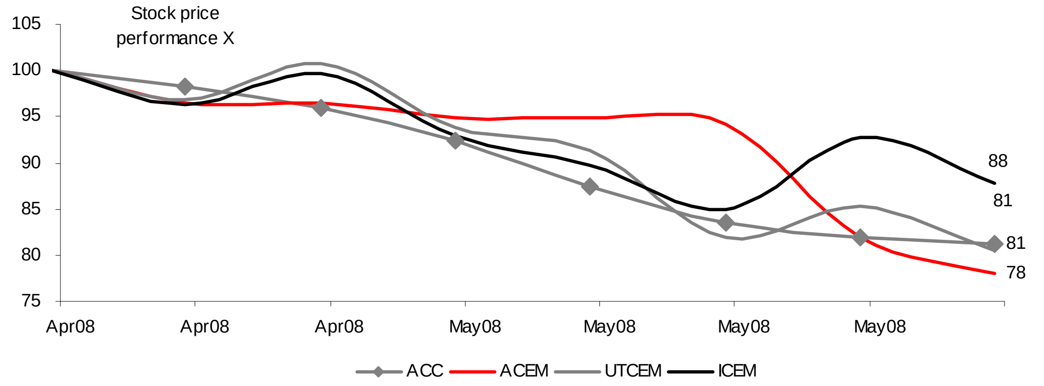
**Fig 14 % decline in share price between penalties imposed and the appeal made by the company**




Source: Bloomberg, Macquarie Research, June 2011

- **India has also seen de rating:** We saw in 2008, that government intervention to cap cement prices had actually strongly de-rated the sector even though no visible impact was seen on the profitability.

**Fig 15 Indian cement stocks severely de rated within one month when government imposed a ban on exports to control prices**




Source: Bloomberg, Macquarie Research, June 2011

# Structural bull cycle at least 2yrs away

***Fundamentals also don't seem exciting***

- **Cement market oversupplied at least till 2013:** Cement market remains highly oversupplied. The industry has not stopped adding capacity and we are expecting another 60-70mt to be added over the next 2 years or so. This means oversupply of around 10%+ even after assuming demand growth of 9%. High cement prices have actually motivated companies to continue with their expansions, with near term profitability leading to lower long term profitability.

**Fig 16 Cement Supply Demand balance**

| Mnt | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11E | 2011-12E | 2012-13E |
|---|---|---|---|---|---|---|---|---|---|
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| Less Clinker sale | 2.3 | 2.3 | 2.3 | 3.0 | 3.8 | 5.3 | 2.6 | 4.1 | 4.1 |
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| Cement Capacity utilisation | 82% | 89% | 93% | 89% | 85% | 78% | 78% | 82% | 83% |
| Less Cement export | 4.1 | 6.0 | 6.1 | 3.7 | 3.2 | 2.2 | 2.1 | 2.1 | 2.1 |
| Net Cement Available | **122.1** | **136.5** | **148.6** | **164.6** | **178.3** | **198.2** | **209.0** | **258.4** | **277.9** |
| Demand @ 9% | 123 | 135 | 149 | 164 | 178 | 196 | 209 | 232 | 252 |
| Gap | **(0.9)** | **1.5** | **(0.2)** | **0.6** | **0.6** | **1.1** | **(0.1)** | **24.8** | **23.5** |

Source: Macquarie Research, June 2011

- **New capacity pipeline** looks pretty healthy and on track. We don't expect any major delays here, maybe around 3-6 months in some cases.

**Fig 17 Close to 30mt of capacity is coming online in CY11 alone**

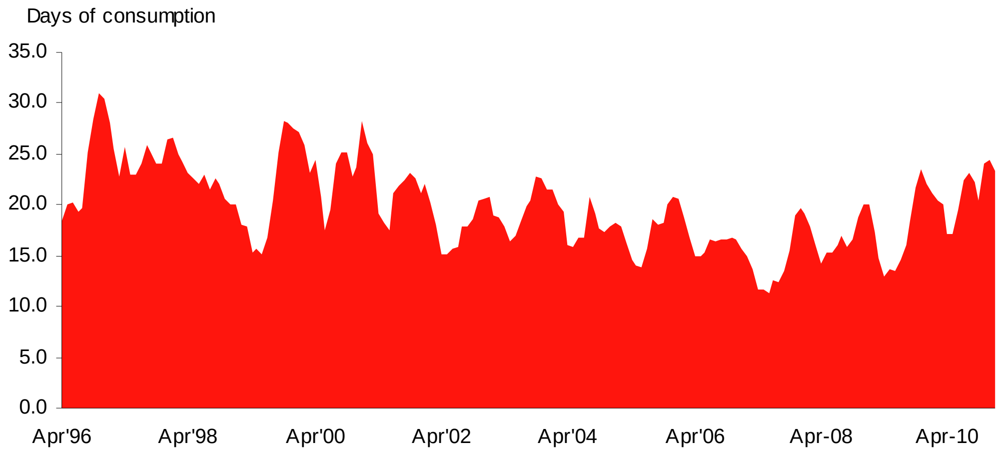
| Company | State | Location | Greenfield / Brownfield | Clinker / Integrated / Grinding | Region | Status | Qtr | Year | Clinker (Mnt) | Cement (Mnt) |
|---|---|---|---|---|---|---|---|---|---|---|
| ACC | Maharashtra | Chanda | B | I | West | Confirmed | Q1 | 2011 | 2.20 | 2.60 |
| Birla Corp | Madhya Pradesh | Satna | B | I | Central | Confirmed | Q1 | 2011 | 0.70 | 0.60 |
| Jaypee | Chattisgarh | Bhilai | G | G | East | Confirmed | Q1 | 2011 | 0.00 | 1.50 |
| | | | | | | | | | **2.90** | **4.70** |
| KCP | Andhra Pradesh | Muktyala | B | I | South | Confirmed | Q2 | 2011 | 1.30 | 2.00 |
| Shree | Rajasthan | Jaipur | G | G | North | Confirmed | Q2 | 2011 | 0.00 | 1.00 |
| | | | | | | | | | **1.30** | **3.00** |
| ABG | Gujarat | Kutch | G | G | West | Confirmed | Q3 | 2011 | 0.00 | 1.50 |
| CMCL (Star) | Meghalaya | Lumshnong | G | G | East | Confirmed | Q3 | 2011 | 1.00 | 1.65 |
| Green Valley | Meghalaya | Lumshnong | G | I | East | Confirmed | Q3 | 2011 | 0.40 | 0.60 |
| Jaypee | Jharkhand | Bokaro | G | G | East | Confirmed | Q3 | 2011 | 0.00 | 1.00 |
| Jaypee | Andhra Pradesh | Nalgonda | G | I | South | Confirmed | Q3 | 2011 | 3.30 | 5.00 |
| Jaypee | Gujarat | Kutch | B | I | West | Confirmed | Q3 | 2011 | 2.40 | 3.00 |
| JSW Cement | Andhra Pradesh | Betamcherla | G | I | South | Confirmed | Q3 | 2011 | 2.00 | 1.10 |
| Prism | Madhya Pradesh | Satna | B | I | Central | Confirmed | Q3 | 2011 | 2.20 | 3.50 |
| | | | | | | | | | **11.30** | **17.35** |
| Jaypee | Madhya Pradesh | Nigri | B | I | Central | Confirmed | Q4 | 2011 | 1.50 | 1.95 |
| Jindal | Chattisgarh | Raigarh | G | I | East | Confirmed | Q4 | 2011 | 1.00 | 1.65 |
| Lafarge | Jharkhand | Jojobera | B | G | East | Confirmed | Q4 | 2011 | 0.00 | 1.00 |
| Ultratech | Andhra Pradesh | Tadpatri | B | G | South | Confirmed | Q4 | 2011 | 0.00 | 1.00 |
| | | | | | | | | | **2.50** | **5.60** |
| **Total capacity coming online** | | | | | | | | | **18.00** | **30.65** |

Source: CMA, Macquarie Research, June 2011

*Cement inventory has remained at elevated levels*

- **Clinker inventory – indicates oversupply:** Clinker inventory is also a good indicator of the oversupply situation. Normally cement plants have storage capacities of around 25-30 days of production. Once the clinker stocks reach these levels, companies are forced to stop production. Currently clinker stocks stand at more than 23 days of consumption and hence, we are expecting that companies are already forced to shutdown and that is reflected in falling capacity utilisations. This makes us pretty certain that oversupply issues will last for another 1-2 yrs till the time demand catches up.

**Fig 18 Clinker inventory inching to an all time high**

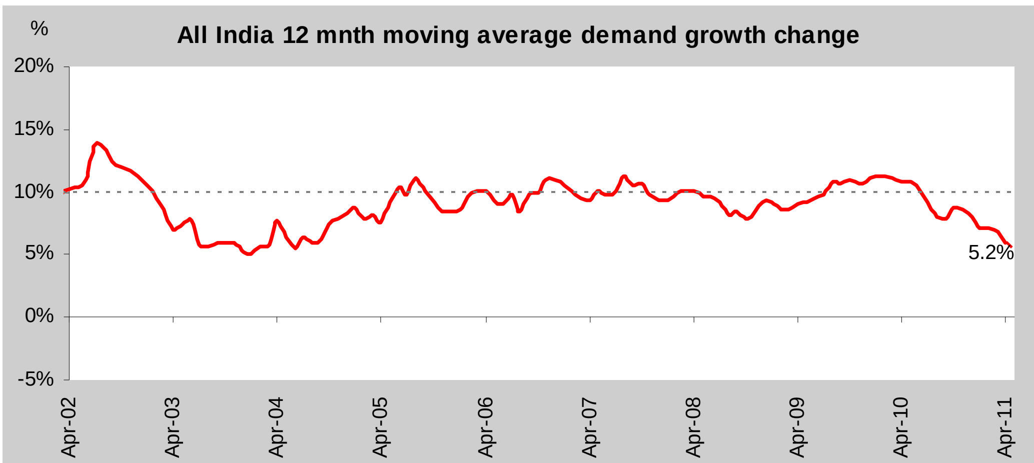



Source: CMA, Macquarie Research, June 2011

*Though producers have been constraining supply in the past few months- demand has also seen a dip*

- **Demand has slackened and will likely take time to recover:** The industry has reported demand growth of 5-6% till May down from 3yr average of 10%. In fact, the growth rate has slowed to 0% in the recent months and we believe that 1H FY12 will not see much improvement from these levels. Initially the weakness was due to slowdown in infrastructure projects, but now rising interest costs have also brought urban housing demand to a standstill.

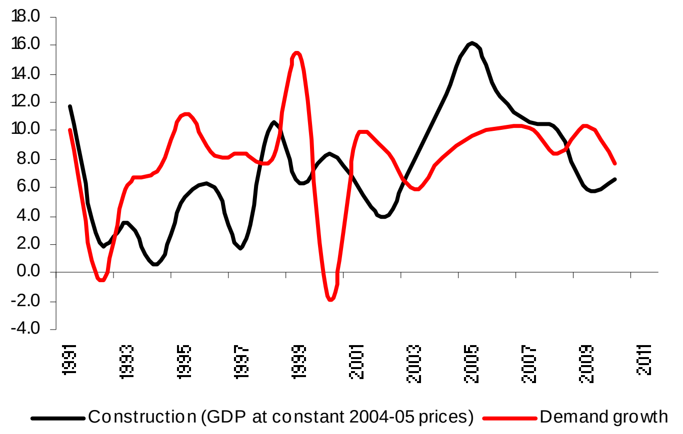
**Fig 19 The all India demand growth has seen a slowdown in the past one year and is now at 5.2%**




Source: CMA, Macquarie Research, June 2011

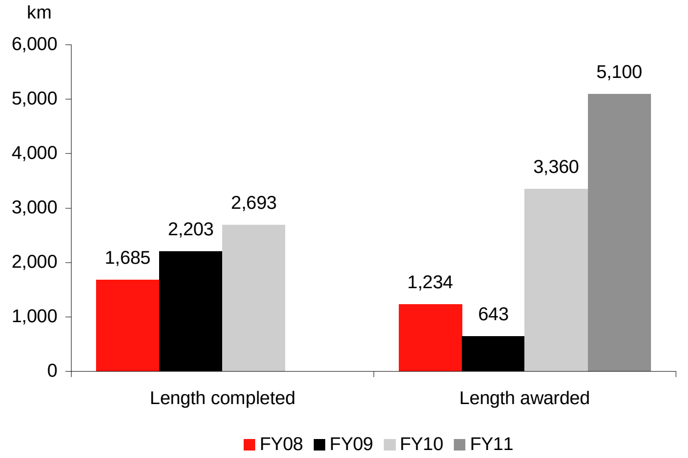
- **Can demand recover?** FY12 is the last year of the current 5-year plan, and historically we have seen a step up in government activity. However, the government is currently besieged with corruption issues and its attention is far away from investments. Also, the strict enforcements of environmental laws have actually scared the private investors and have pushed out the capex cycle by 1-2yrs. We have seen an increase in road projects being awarded in the past one year, but don't expect activities on the ground for another 2-3 quarters. Similarly, rising interest rates and property pricing staying high has reduced the affordability, which is impacting the housing demand. We expect further 50bps hike in interest rates and think that it will take a few quarters before things start to normalise.

**Fig 20 Construction demand weakening**




Source: CMIE, Macquarie Research, June 2011

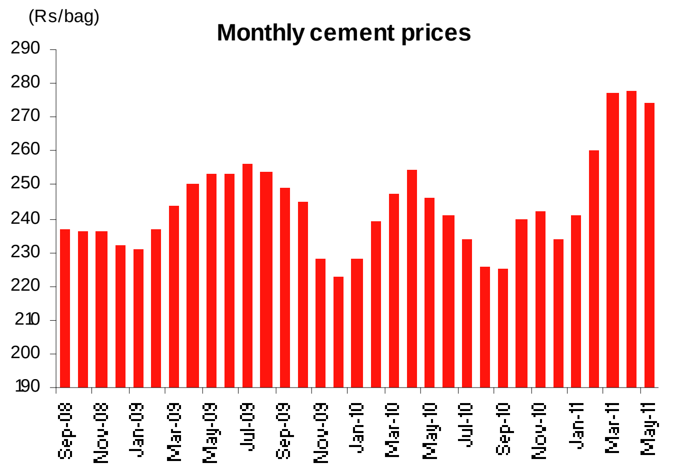
**Fig 21 Government has stepped up the awarding of road projects in the last year, but execution lacks**




Source: CMIE, Macquarie Research, June 2011

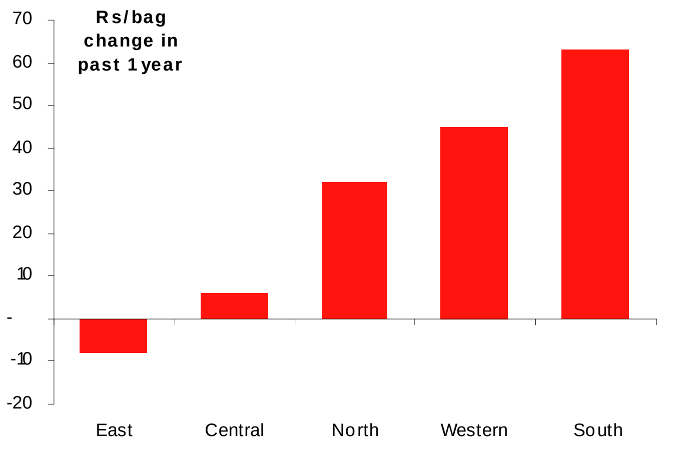
- **South India – surprise package, holding up the price:** The revival in cement prices started with South India and surprisingly the prices have been very steady, unlike our earlier experience of oversupplied markets. Rest of the regions followed and we saw prices reach an all time high.

**Fig 22 Monthly cement prices have reached an all time high at Rs274/bag…**




Source: CMA, Macquarie Research, June 2011

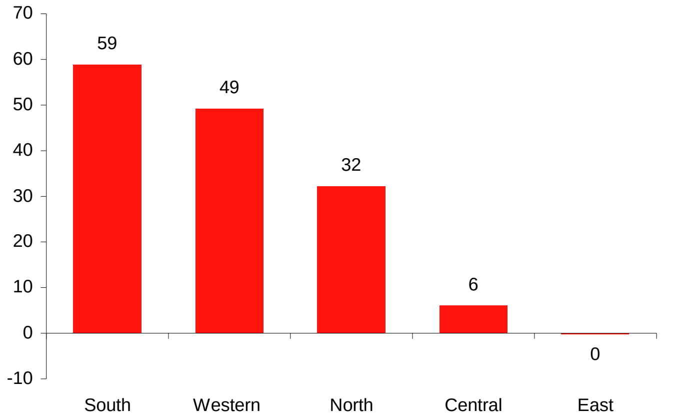
**Fig 23 …these have been led by West and South regions, respectively (May 2011-May 2010)**




Source: CMA, Macquarie Research, June 2011

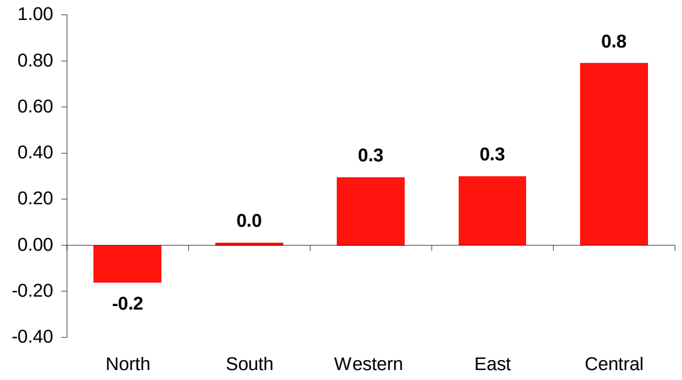
- **Price increase in Southern and Western markets** has been offset by low despatch numbers in these two markets. This clearly shows that producers have been trying to keep pricing strong through supply discipline.

**Fig 24 Price change from Mar 2010 to Mar 2011**




Source: CMA, Macquarie Research, June 2011

**Fig 25 Despatch change from Mar 2010 to Mar 2011**

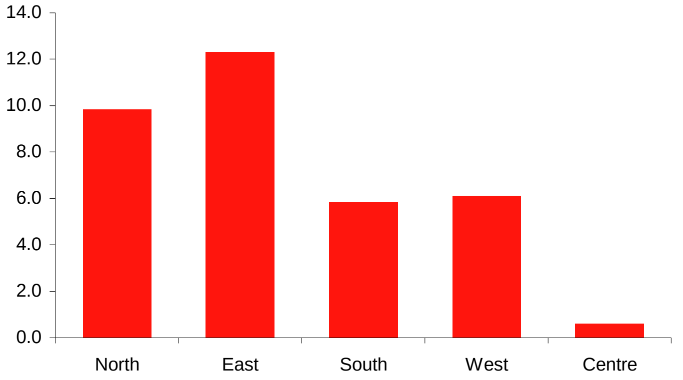



Source: CMA, Macquarie Research, June 2011

***North and East prices have seen lower movement***

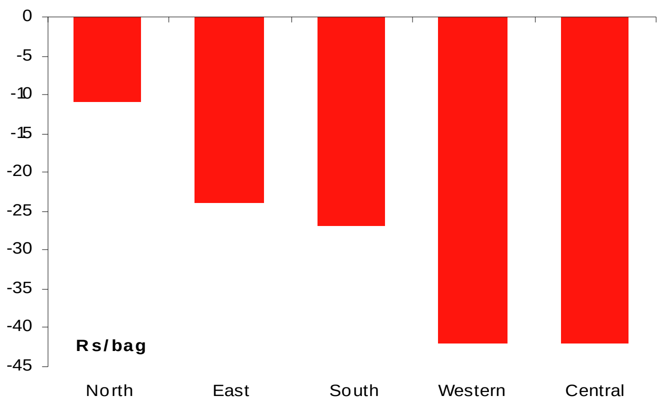
- **Northern and Eastern regions have not seen a very steep increase**, which is also because they did not witness the kind of correction that happened in the other regions despite more capacity being added in these regions.

**Fig 26 More capacity has come online in FY11 in North and East even though …**




Source: CMA, Macquarie Research, June 2011

**Fig 27 ...correction in prices from April to September 2010 had been less harsh in East and North regions**

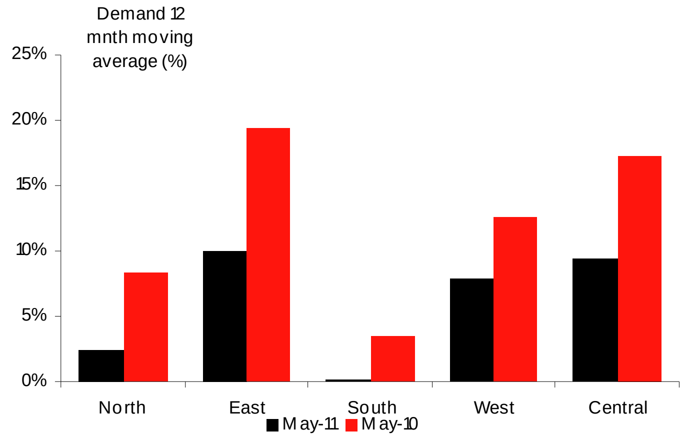



Source: CMA, Macquarie Research, June 2011

***The slowdown in Central, South and North has impacted demand***

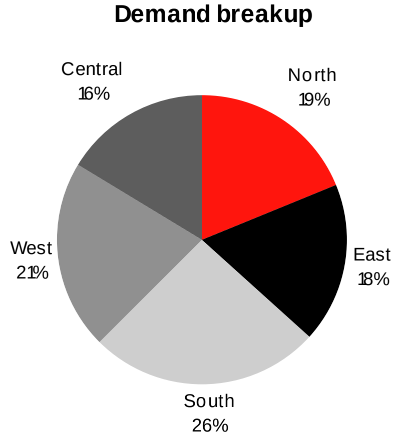
**Region wise breakdown** shows that all the regions have seen deceleration of demand in the past 12 months, led by Central. Also, Northern and Southern regions, which were 47% of the total market in Jan 2009 have seen a decline in growth rate and now contribute 44% of the total share.

**Fig 28 The past one year has seen a decline in demand in all the regions…**




Source: CMA, Macquarie Research, June 2011

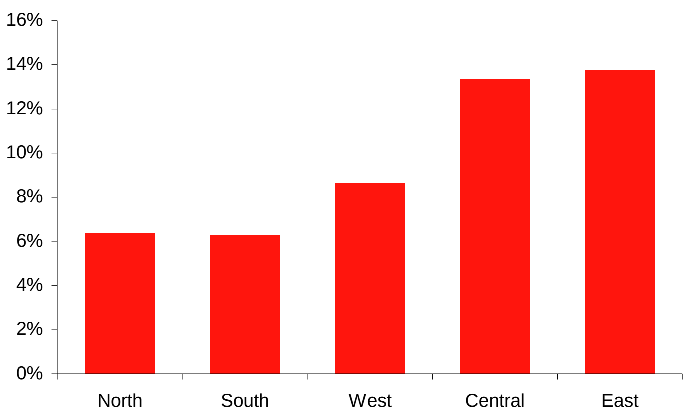
**Fig 29 Market share for South has declined by 100bps in past one year**




Source: CMA, Macquarie Research, June 2011

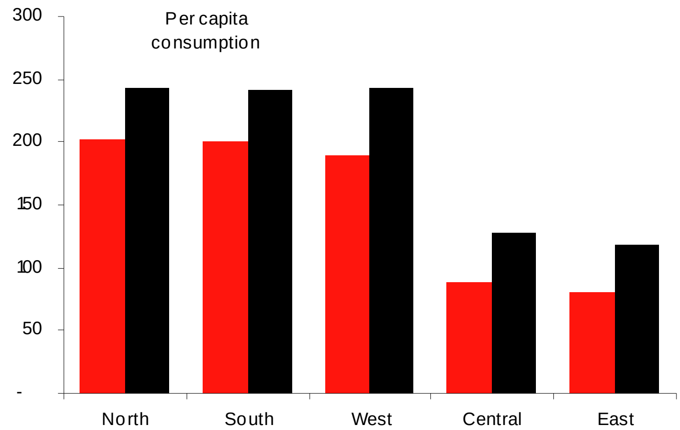
- **Central and Eastern regions have been the hallmark of growth**: Since FY08, cement demand has increased by 13% and 14% in Central and Eastern India, as per capita consumption increased from 80 to 120. Other regions have also seen an increase in demand by 6–9%, as per capita has increased from 200 to 240 levels. We believe that the demand growth will continue to be led by Central and Eastern regions only as further increase in other regions will be a bit slow.

**Fig 30 Cement demand (CAGR) – Central and East remain strong**




Source: CMA, Macquarie Research, June 2011

**Fig 31 Central and Eastern regions per capita remains low – this is where growth will come from**




Source: CMIE, CMA, Macquarie Research, June 2011

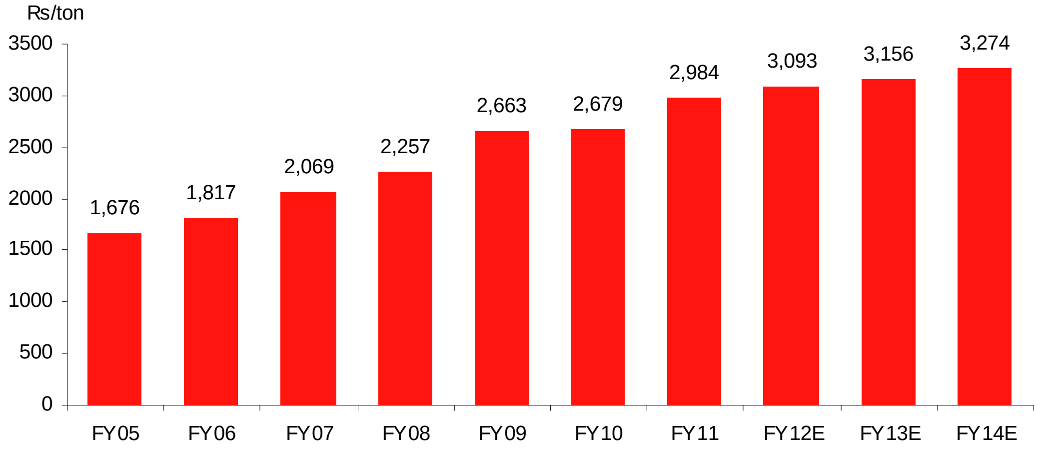
- **Recently concluded elections can be a catalyst:** In central region, Uttar Pradesh is due for election in 1Q FY13 and Madhya Pradesh in 3Q FY14. However, the recently concluded election in Bihar (3QFY11) and West Bengal (1QFY12) will likely see an increase in activity level.

# Cost rise is structural, margins dependent on cement price

*With lack of pricing power, the companies will be unable to pass on cost increases and see margin compression*

- **Cost increase is structural:** Cement companies are seeing all round inflation across all cost centres. Historically, cement companies have been able to absorb these cost increases by increasing blending with low cost materials like fly ash or slag. However, this number has reached to an optimal level and in fact, rising price of fly ash etc has limited the economic benefit available here.

**Fig 32 Average cost per ton is accelerating with no signs of abating soon**

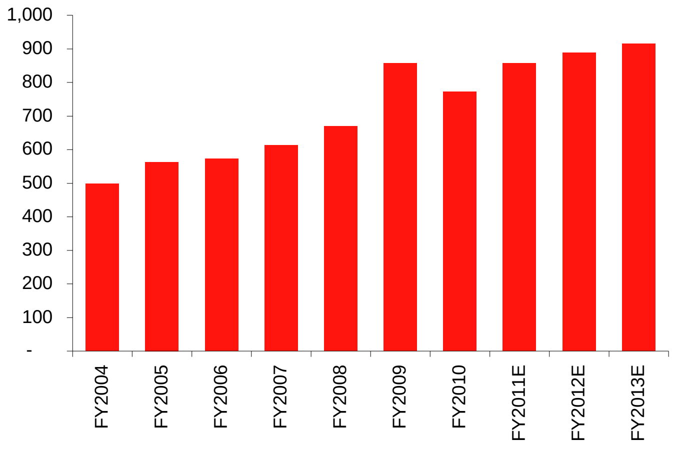



Source: Company Data, Macquarie Research, June 2011

*A double whammy from Coal India- increase in coal prices and lack of linkage coal*

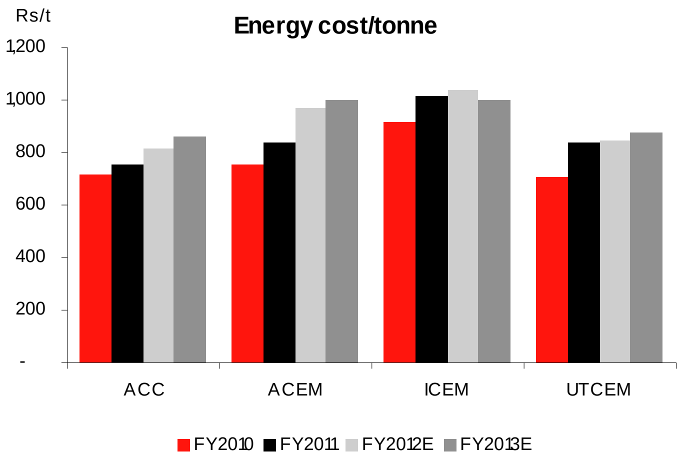
- **Energy costs** which account 30% of the costs are increasing due to rising imported coal prices as well as lower availability of subsidised domestic coal. Indian cement companies have been dependent on subsidised coal from Coal India. Since the end of Feb, this has changed dramatically as Coal India has increased prices by 30%. This has opened the possibility of sharper rise going forward. Secondly, the availability of coal from Coal India has also been on a decline. Hence, companies have to resort to costly imported coal.

**Fig 33 Average energy cost per ton has seen an increase of 55% in FY2004-2010**




Source: Company data, Macquarie Research, June 2011

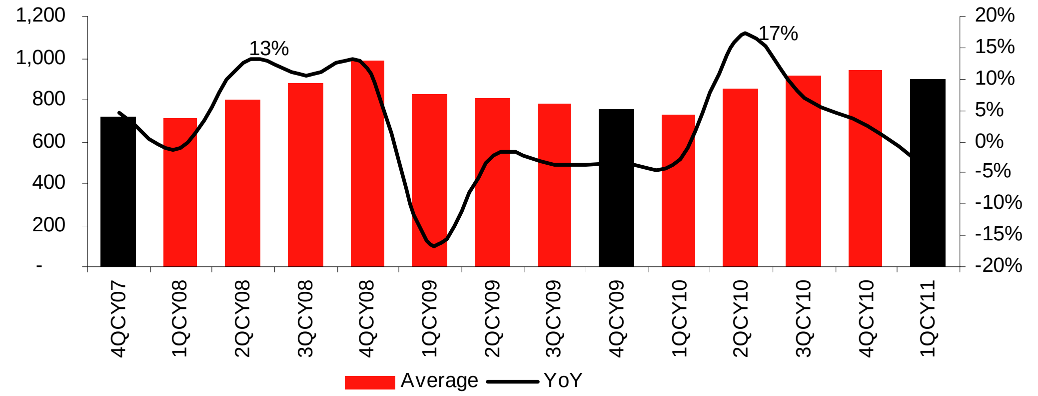
**Fig 34 Going forward, we expect these costs to continue to trend up with increasing coal pricing**




Source: Company data, Macquarie Research, June 2011

- **Historically, an increase in coal prices by Coal India** flows though by the end of the following quarter. In 2007, an increase of 10% raised energy costs by 13% and in 2009, an 11% increase in coal prices increased costs by 17%.

**Fig 35 Increase in energy costs will start flowing in the July- Sep quarter**




Source: Company data, Macquarie Research, June 2011

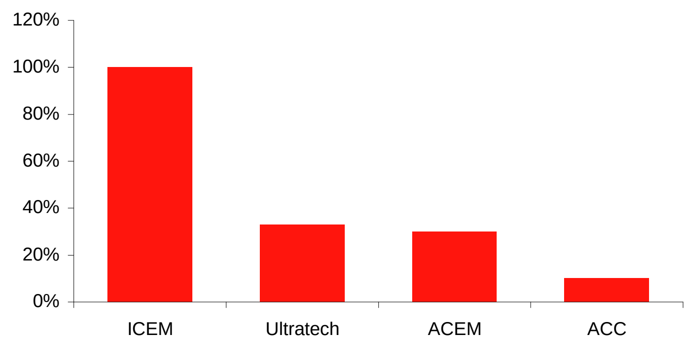
- **India Cement can see a decline in coal costs:** As can be seen from the data below, India Cement is expected to see a decline in the coal cost per ton if its captive mines in Indonesia come online.

**Fig 36 Coal cost per ton (Rs/t and YoY %)**

| | FY2008 | FY2009 | FY2010 | FY2011E | FY2012E | FY2013E | FY2011E | FY2012E | FY2013E |
|---|---|---|---|---|---|---|---|---|---|
| ACC | 312 | 401 | 398 | 395 | 476 | 518 | -1% | 20% | 9% |
| ACEM | 297 | 394 | 401 | 440 | 593 | 611 | 10% | 35% | 3% |
| ICEM | 472 | 693 | 600 | 707 | 720 | 677 | 18% | 2% | -6% |
| UTCEM | 175 | 241 | 174 | 346 | 305 | 312 | nmf | -12% | 2% |

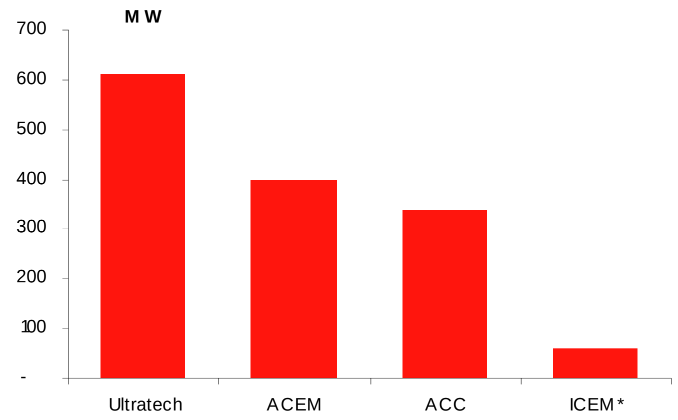
Source: Company data, Macquarie Research, June 2011

**Fig 37 Imported coal (%) –ICEM can see benefit from Indonesia mines flowing through**




Source: Company data, Macquarie Research, June 2011

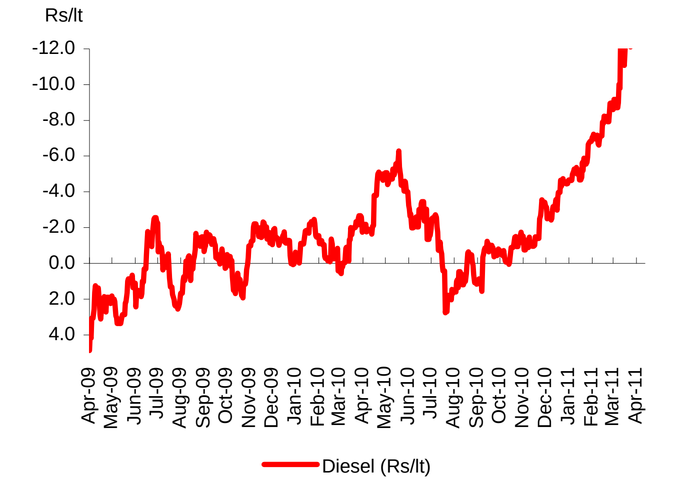
**Fig 38 Captive power plants – ICEM is increasing capacity and can see an upside**




Source: Company data, Macquarie Research, June 2011

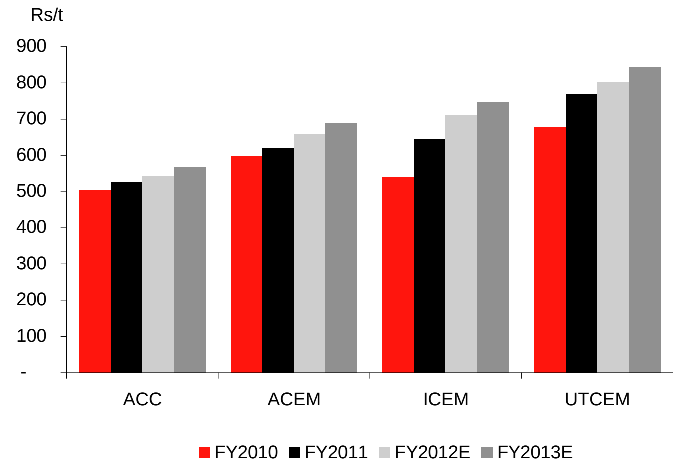
- **Transport costs** have been on increase, though full impact has not yet been felt as diesel prices are still subsidised.

**Fig 39 Diesel subsidies are at an all time high**




Source: Company data, Macquarie Research, June 2011

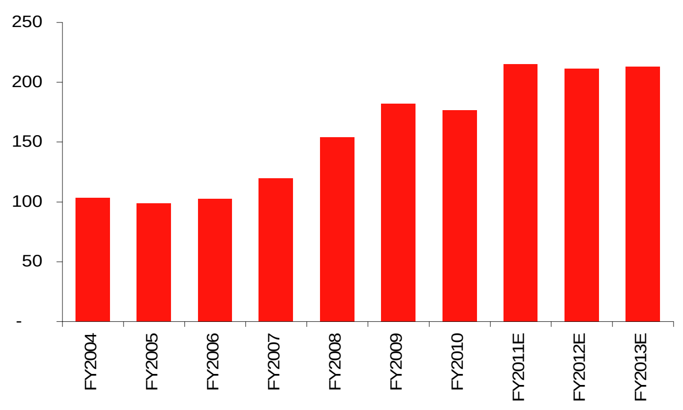
**Fig 40 Freight cost/tonne will continue to increase as fuel prices increase**




Source: Company data, Macquarie Research, June 2011

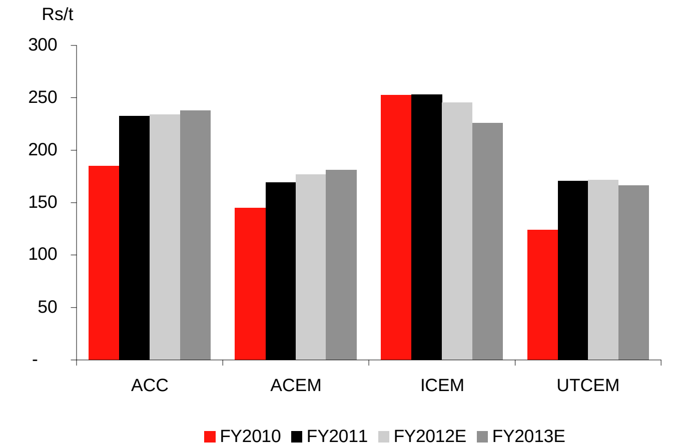
- **Staff costs** have been rising in double digits much higher than volume growth of 9-10% and eating into the margins. We do expect these to remain flat on per ton basis, but will be higher by 43% from FY11 level by FY14.

**Fig 41 Average staff cost per ton has seen an increase of 72% in FY2004-2010**




Source: Company data, Macquarie Research, June 2011

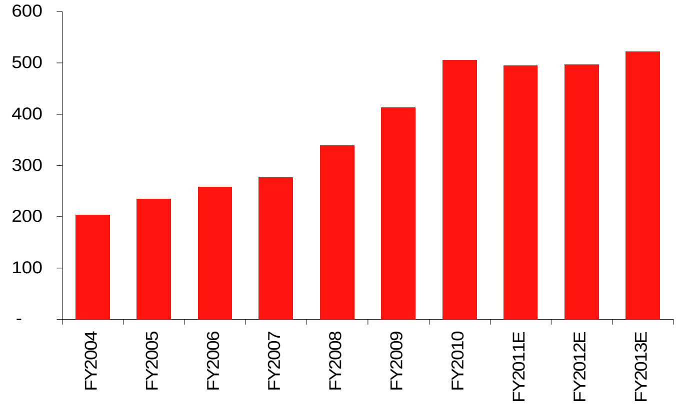
**Fig 42 We expect continued increase in staff costs in the next 3-4 years**




Source: Company data, Macquarie Research, June 2011

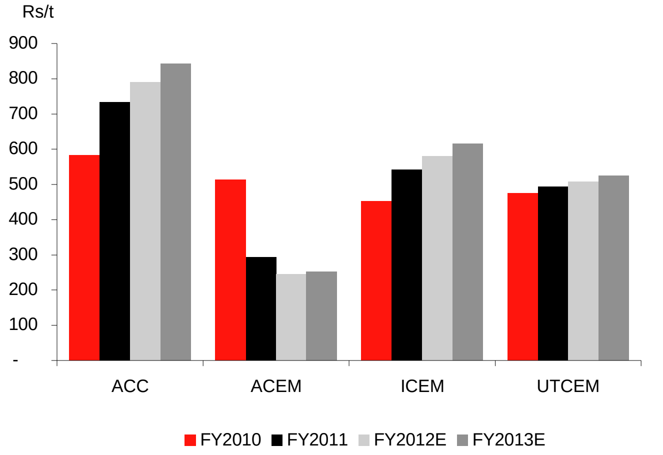
- **Raw material costs** have also witnessed a sharp increase as most companies are now forced to pay for fly-ash. We don't see any major easy cost saving potentials.

**Fig 43 There has been an escalation of 148% in raw material costs from FY04-10**




Source: Company data, Macquarie Research, June 2011

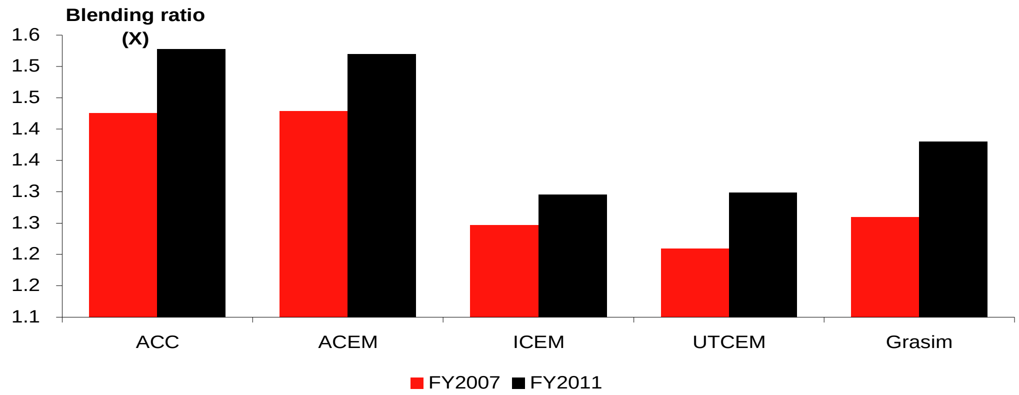
**Fig 44 We expect an increase of another 3-5% going forward**




Source: Company data, Macquarie Research, June 2011

- **The scope to reduce costs is limited**: Captive power plants and blending ratios which were the main source of cost reduction in the last decade have been exhausted. The next big potential to reduce costs is a captive coal mine which we think is at least 3yrs away.

**Fig 45 Companies have hit a cap on increase in conversion ratio**




Source: Macquarie Research, June 2011

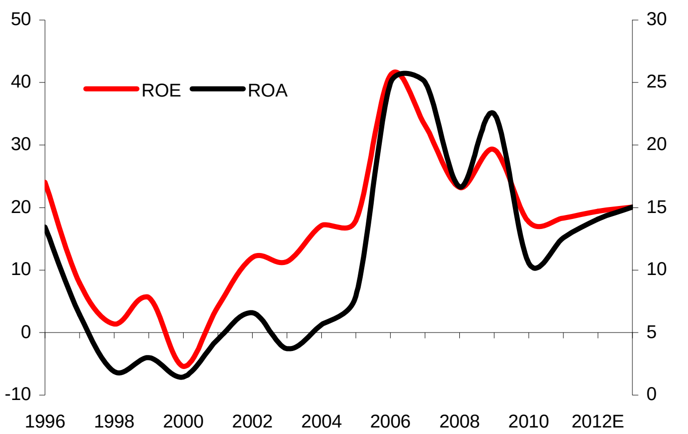
# Valuations to see a de-rating

- **Introducing 15% discount to DCF values to adjust our target prices:** We think that risks to earnings remain on the downside, and also think that government agencies are closing in to the cement companies and an adverse possibility seems to have high probability.

***We recommend ICEM and Grasim***

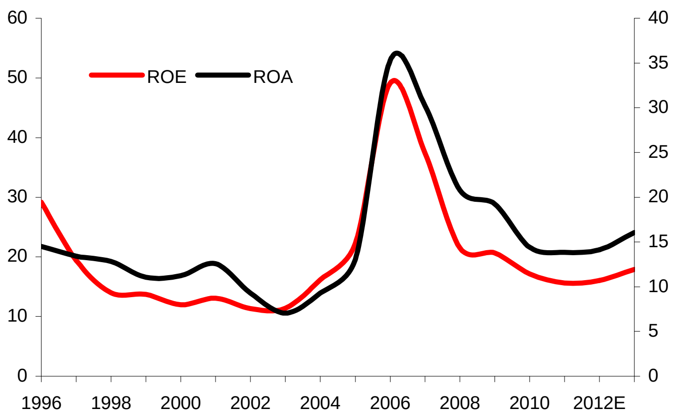
- In any case we do think that it might be too early to buy for a structural tightness, as oversupply issues will not likely be resolved at least till 2013. And recent weakness in demand outlook has actually inflated the near term risks.
- Asset valuations do look reasonable, but not without reason as ROEs have also collapsed.

**Fig 46 ACC**



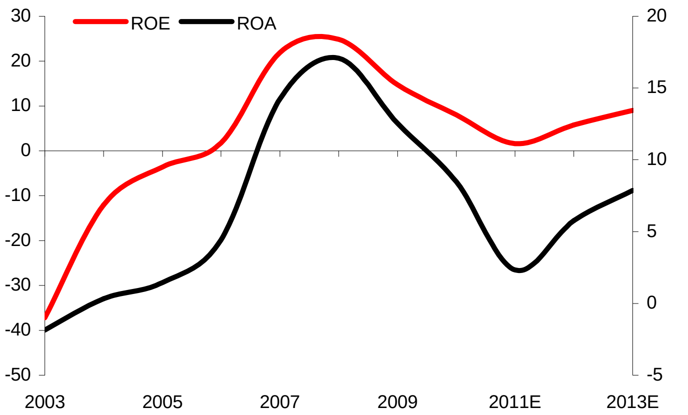

Source: Bloomberg, Macquarie Research, June 2011

**Fig 47 ACEM**



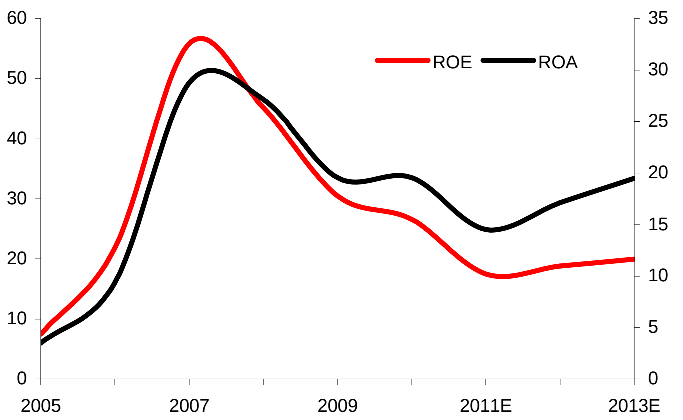

Source: Bloomberg, Macquarie Research, June 2011

**Fig 48 ICEM**




Source: Bloomberg, Macquarie Research, June 2011

**Fig 49 UTCEM**




Source: Bloomberg, Macquarie Research, June 2011

- **Valuations expensive compared to historical averages –** At the current levels, the companies are trading at 21% and 5% above historical averages on PER and EV/EBITDA for FY12E. These multiples are stretched especially for ACC and Ambuja which we believe is due to investor's expectation of a merger, which we believe will still take some time to reap benefits.

## Fig 50 India Cement companies valuation snapshot

| | Reco | Current Price (Rs) | Target price (Rs) | Upside (%) | PER FY2011 | PER FY2012 | PER FY2013 | EV/EBITDA FY2011 | EV/EBITDA FY2012 | EV/EBITDA FY2013 | EV/t (US$) FY2011 | EV/t (US$) FY2012 | EV/t (US$) FY2013 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACC | UP | 952 | 799 | -16% | 16.7x | 14.7x | 12.2x | 10.4x | 8.0x | 6.0x | 119 | 115 | 104 |
| Ambuja | UP | 132 | 110 | -17% | 16.0x | 16.8x | 14.7x | 9.8x | 8.1x | 6.8x | 150 | 144 | 131 |
| Grasim | OP | 2,071 | 2,528 | 22% | 8.8x | 7.2x | 6.8x | 3.9x | 2.5x | 2.4x | 83 | 45 | 59 |
| India Cement | OP | 75 | 93 | 24% | 35.4x | 9.5x | 5.8x | 10.9x | 5.7x | 3.8x | 67 | 61 | 54 |
| Ultratech | UP | 965 | 740 | -23% | 19.4x | 11.8x | 9.2x | 9.8x | 6.6x | 5.4x | 135 | 121 | 117 |

Source: Bloomberg, Macquarie Research, June 2011, Prices as of 21 June 2011

- **Margin required to justify current EV/t is Rs1100 on ROE of 15%**? Though we have not heard of many new capacities being put up, we have tried to put in reference the kind of return that a new project has to generate to maintain a 15% return.

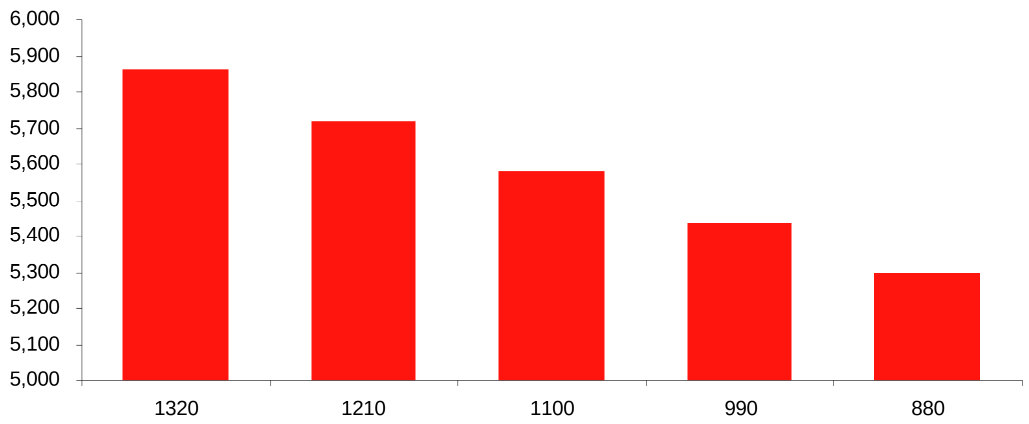
## Fig 51 A new project has to generate EBITDA of Rs1100 to maintain a15% ROE

| | Project cost ($/t) | | | | |
|---|---|---|---|---|---|
| **ROE (%)** | **70** | **95** | **120** | **145** | **170** |
| **11%** | 563 | 763 | 964 | 1,165 | 1,366 |
| **13%** | 608 | 824 | 1,041 | 1,258 | 1,475 |
| **15%** | **653** | **886** | **1,119** | **1,352** | **1,585** |
| **17%** | 698 | 947 | 1,196 | 1,445 | 1,694 |
| **19%** | 743 | 1,008 | 1,273 | 1,538 | 1,803 |

Source: Macquarie Research, June 2011

- **Retail price of Rs5602/t required for Rs1100/t EBITDA:** At the current cost base, cement companies would require a price of Rs5602/t or Rs280/bag to generate a 15% ROE on a new project.

## Fig 52 At current costs, cement companies need Rs280/bag to make Rs1100/t of EBITDA or 15% ROE




Source: Macquarie Research, June 2011

- **New capacities being set up – what's the return?** We are using an assumption of $120/t capex for new capacity, though recent announcements point towards $180/t of cement capacity capex. This kind of capex would mean cement prices in excess of Rs316 to achieve a 15% ROE and will only generate close to 5% ROE on current prices.

*Bringing in supply in an over supplied market.*

# ACC- High operating leverage

- **Maintain Underperform**: ACC has performed well on back of buying from the parent company, Holcim as well as on reports of a possible merger with ACEM. We think that ACC will find difficult to grow organically and given its higher dependence on Coal India's subsidised coal, will see sharper increase in costs. ACC has done well to grow volumes recently and we think better results in Q2 CY11 may be a good opportunity to exit. Valuations do look a bit stretched, more so given that risks to earnings are on downside in our opinion.
- **Reducing Target Price to Rs799** from Rs940, as we add a discount for the risk factors in the near term.

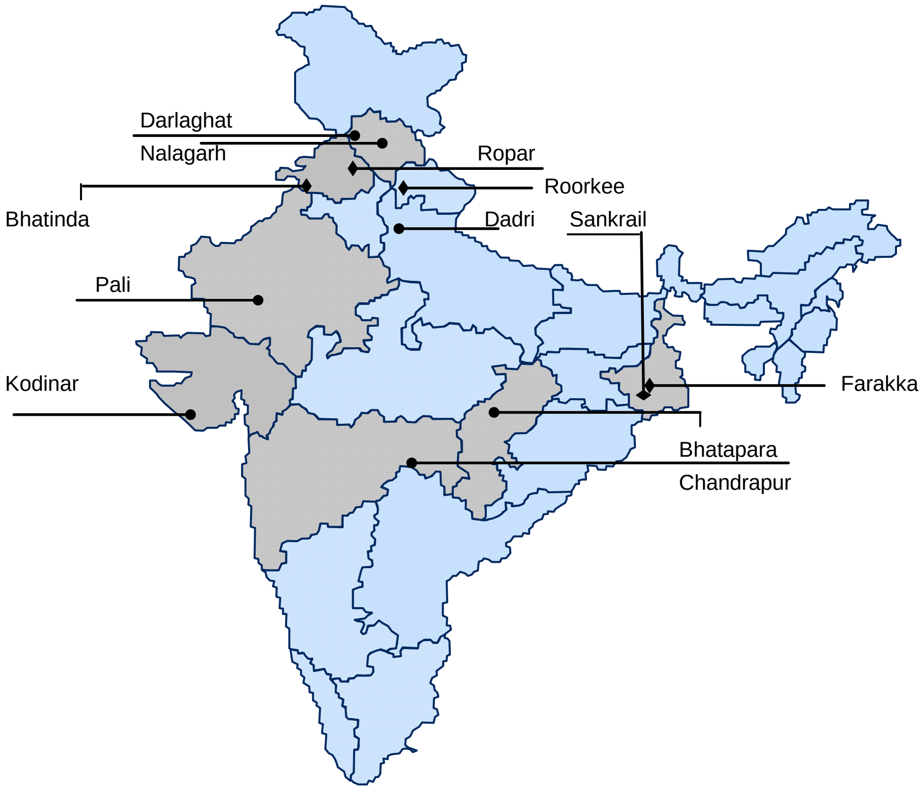
**Fig 53 Our estimates**

| | 2007 | 2008 | 2009 | 2010 | 2011E | 2012E | 2013E |
|---|---|---|---|---|---|---|---|
| Volume (m tonne) | 19.9 | 21.1 | 21.7 | 21.4 | 23.8 | 26.3 | 28.0 |
| % change | *6%* | *6%* | *3%* | *-1%* | *11%* | *10%* | *6%* |
| Realization (Rs./T) | 3,254 | 3,334 | 3,600 | 3,501 | 3,672 | 3,783 | 3,972 |
| % change | *13%* | *2%* | *8%* | *-3%* | *5%* | *3%* | *5%* |
| Power & Fuel Cost (Rs./T) | 627 | 764 | 714 | 752 | 817 | 859 | 912 |
| % change | *15%* | *22%* | *-7%* | *5%* | *9%* | *5%* | *6%* |
| Transport Cost (Rs./T) | 479 | 484 | 495 | 518 | 543 | 571 | 599 |
| % change | *5%* | *1%* | *2%* | *5%* | *5%* | *5%* | *5%* |
| **EBITDA/ tonne (Rs/t)** | **972** | **789** | **1,134** | **720** | **815** | **891** | **1,004** |
| **% change** | ***11%*** | ***-19%*** | ***44%*** | ***-36%*** | ***13%*** | ***9%*** | ***13%*** |
| Cost/t | 2,282 | 2,545 | 2,466 | 2,781 | 2,857 | 2,891 | 2,968 |
| % change | | *12%* | *-3%* | *13%* | *3%* | *1%* | *3%* |

Source: Company data, Macquarie Research, June 2011

**Regional exposure**

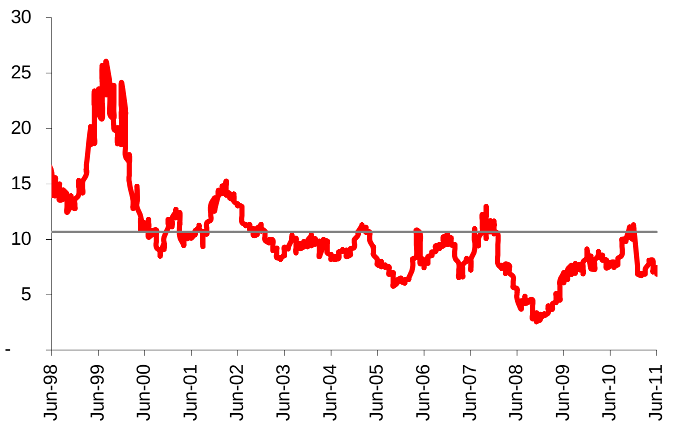
**Fig 54 Pan India presence for ACC**




Source: Maps of India, Macquarie Research, June 2011

## Valuations

**Fig 55 ACC - 1 yr fwd EV/EBITDA**

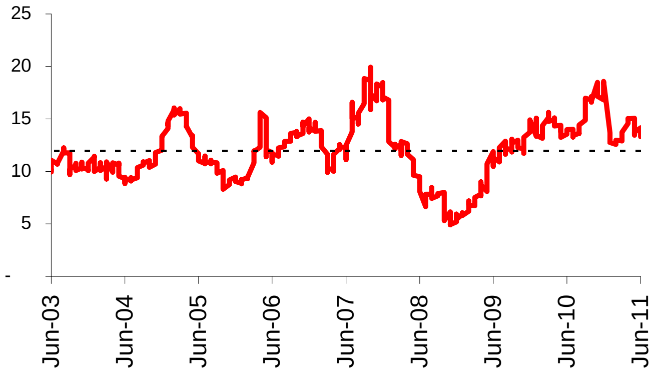



Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 56 ACC - EV/ton of capacity**

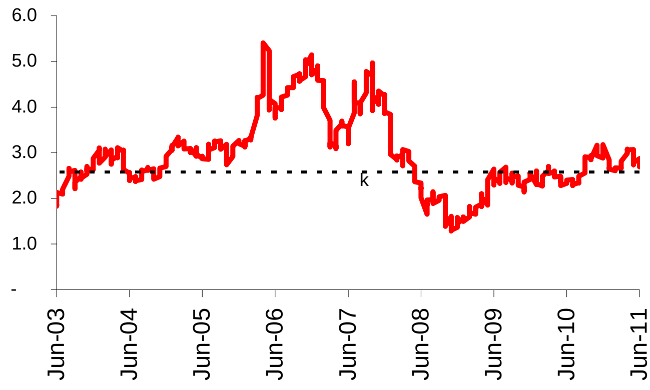

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 57 ACC - 1 yr fwd PER**



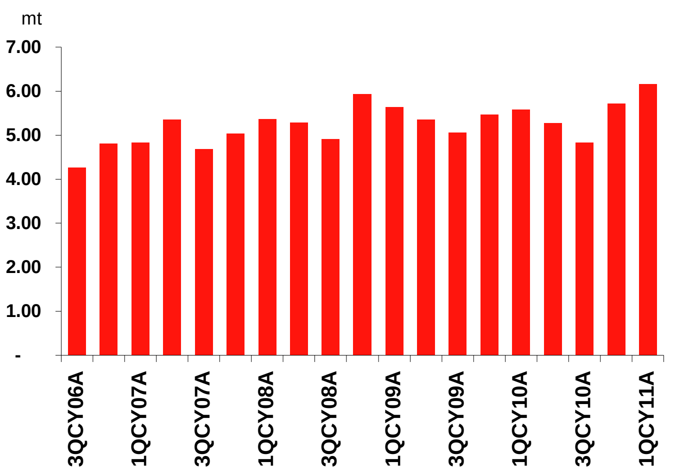

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 58 ACC - 1 yr fwd P/BV**



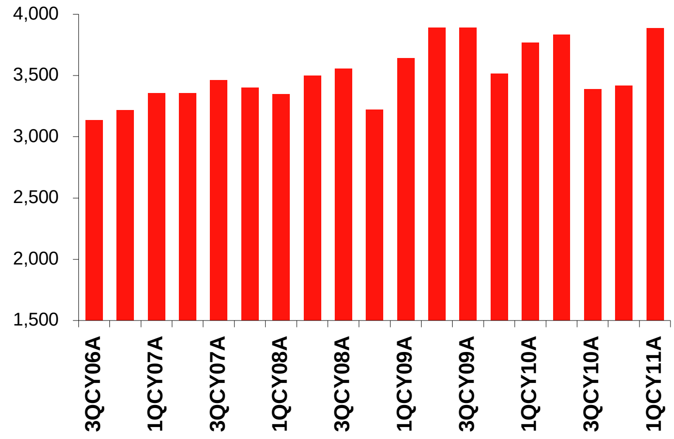

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 59 ACC - quarterly volume (mt)**



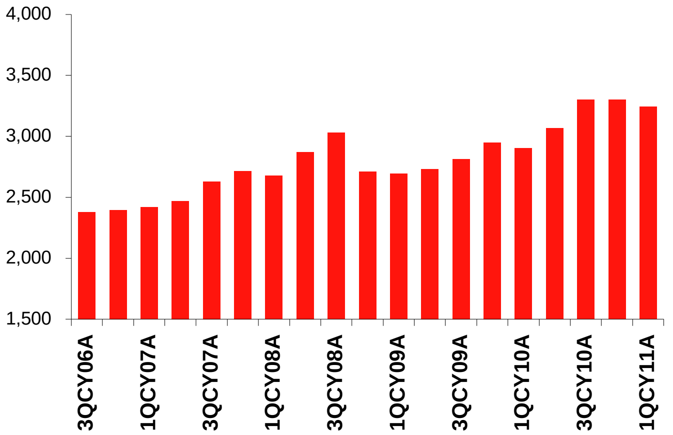

Source: Company Data, Macquarie Research, June 2011

**Fig 60 ACC - quarterly realisation (Rs/t)**



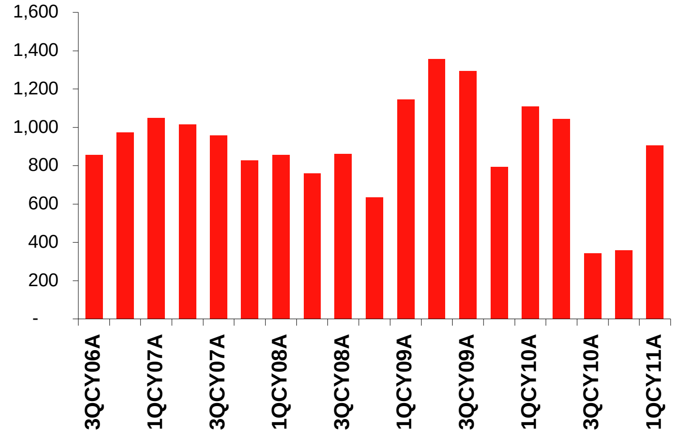

Source: Company Data, Macquarie Research, June 2011

**Fig 61 ACC - quarterly costs (Rs/t)**




Source: Company Data, Macquarie Research, June 2011

**Fig 62 ACC - quarterly EBITDA (Rs/t)**




Source: Company Data, Macquarie Research, June 2011

***Cost reduction has played out - expensive***

# ACEM- losing the competitive advantage

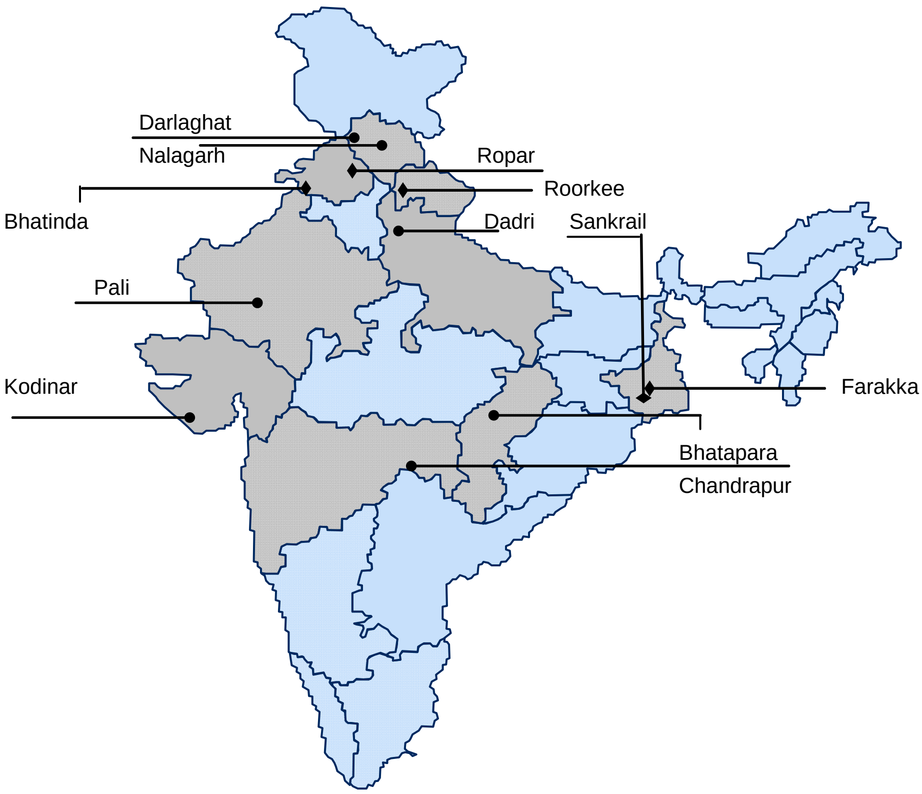
- **Maintain Underperform:** Ambuja is also one of the most expensive stocks in our coverage. It has been holding up well driven by buying in the stock by the parent company Holcim and its possible merger with ACC. Ambuja has historically traded at a premium to its peers given its significant competitive advantage due to fiscal benefits and coastal infrastructure which gave it higher margins. Bulk of these cost advantages is now disappearing and we expect a de-rating.
- **Reducing Target Price to Rs110** from Rs129, as we add a discount for the risk factors in the near term.

**Fig 63 Our estimates**

| | 2007 | 2008 | 2009 | 2010 | 2011E | 2012E | 2013E |
|---|---|---|---|---|---|---|---|
| Volume (m tonne) | 17.4 | 17.8 | 18.8 | 20.3 | 21.7 | 23.8 | 26.3 |
| % change | | *2%* | *6%* | *8%* | *7%* | *9%* | *10%* |
| Realization (Rs./T) | 3,271 | 3,507 | 3,757 | 3,640 | 3,868 | 3,988 | 4,190 |
| % change | | *7%* | *7%* | *-3%* | *6%* | *3%* | *5%* |
| Power & Fuel Cost (Rs./T) | 576 | 746 | 757 | 836 | 969 | 999 | 1,039 |
| % change | | *30%* | *1%* | *10%* | *16%* | *3%* | *4%* |
| Freight Cost (Rs./T) | 548 | 569 | 597 | 620 | 658 | 688 | 717 |
| % change | | *4%* | *5%* | *4%* | *6%* | *5%* | *4%* |
| EBITDA/ tonne (Rs/t) | 1,173 | 1,000 | 985 | 898 | 970 | 1,001 | 1,117 |
| % change | | *-15%* | *-1%* | *-9%* | *8%* | *3%* | *12%* |
| Cost/t | 2,099 | 2,507 | 2,746 | 2,770 | 2,898 | 2,987 | 3,073 |
| | | *19%* | *10%* | *1%* | *5%* | *3%* | *3%* |

Source: Company data, Macquarie Research, June 2011

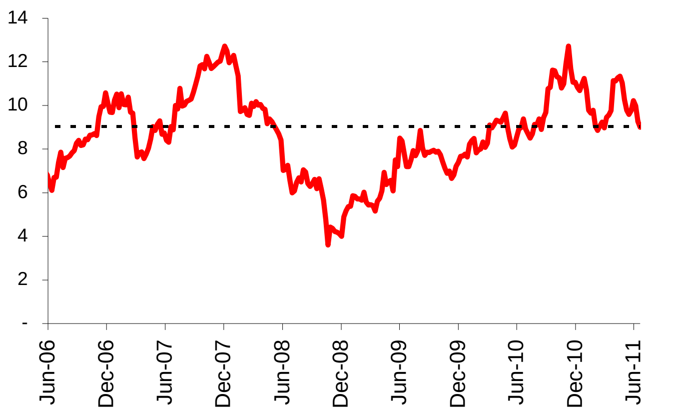
**Fig 64 Strong presence in North, East and Western markets**




Source: Maps of India, Macquarie Research, June 2011

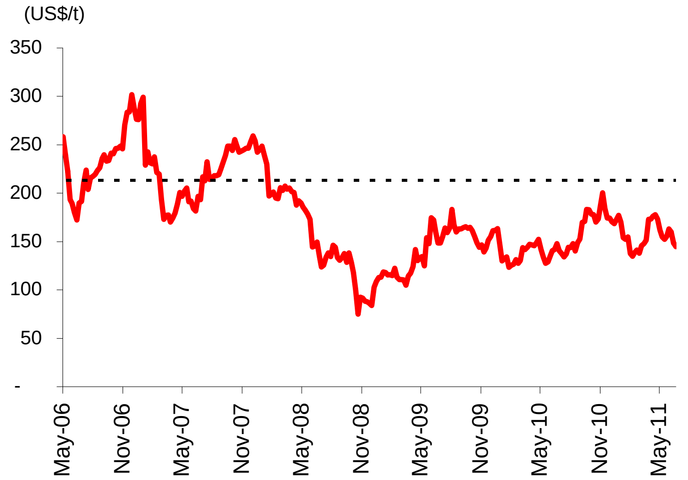
## Valuations

### Fig 65 ACEM - 1 yr fwd EV/EBITDA



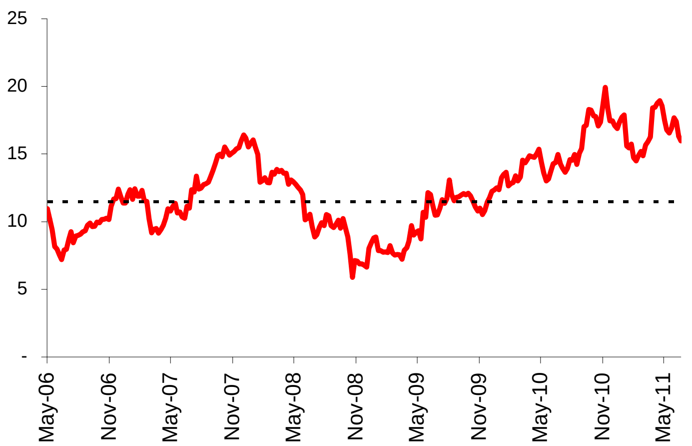

Source: Bloomberg, Company data, Macquarie Research, June 2011

### Fig 66 ACEM - EV/ton of capacity



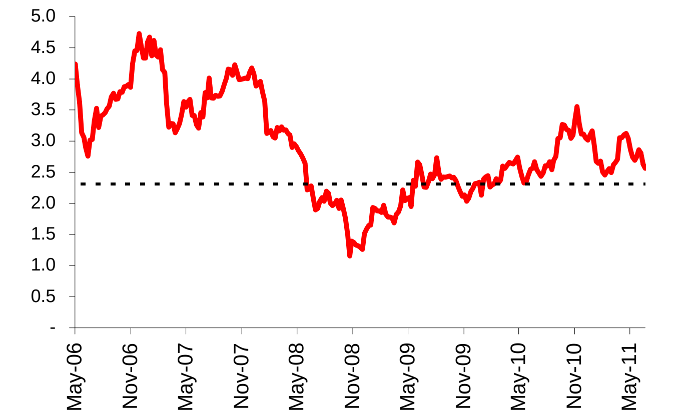

Source: Bloomberg, Company data, Macquarie Research, June 2011

### Fig 67 ACEM - 1 yr fwd PER



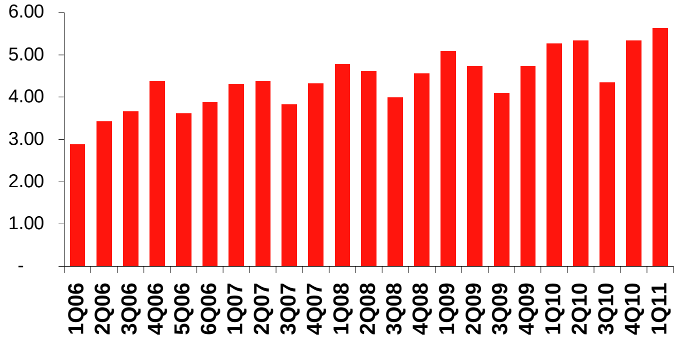

Source: Bloomberg, Company data, Macquarie Research, June 2011

### Fig 68 ACEM - 1 yr fwd P/BV



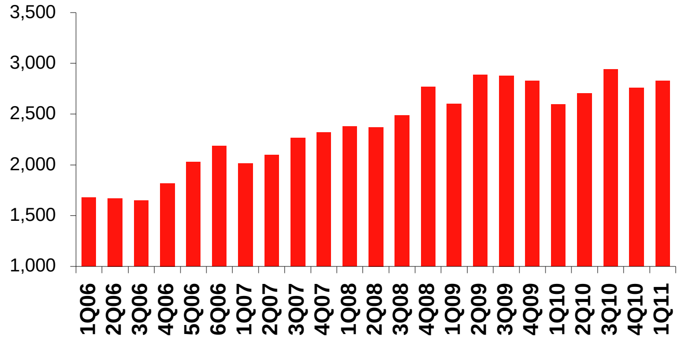

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 69 ACEM - quarterly volume (mt)**



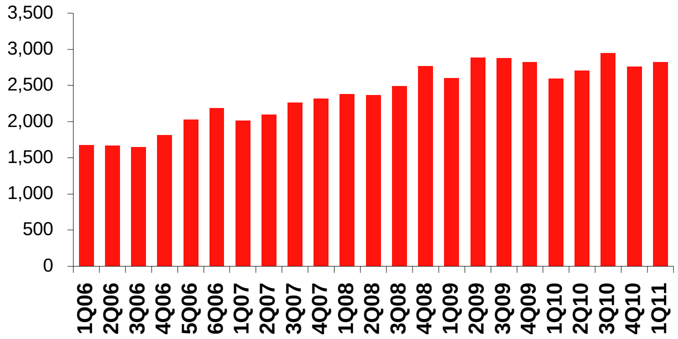

Source: Company Data, Macquarie Research, June 2011

**Fig 70 ACEM - quarterly realisation (Rs/t)**



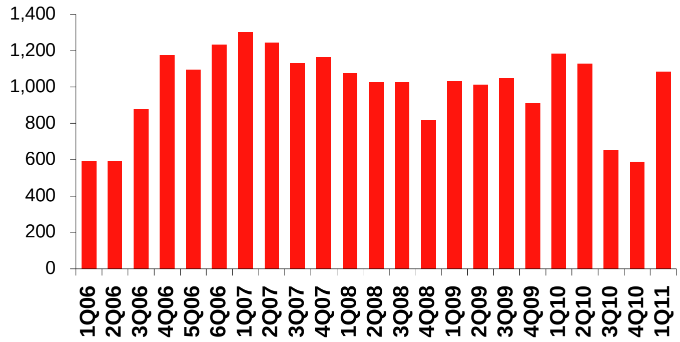

Source: Company Data, Macquarie Research, June 2011

**Fig 71 ACEM - quarterly costs (Rs/t)**




Source: Company Data, Macquarie Research, June 2011

**Fig 72 ACEM- quarterly EBITDA (Rs/t)**




Source: Company Data, Macquarie Research, June 2011

***Recovery in Southern markets to help***

# ICEM- can see better times ahead

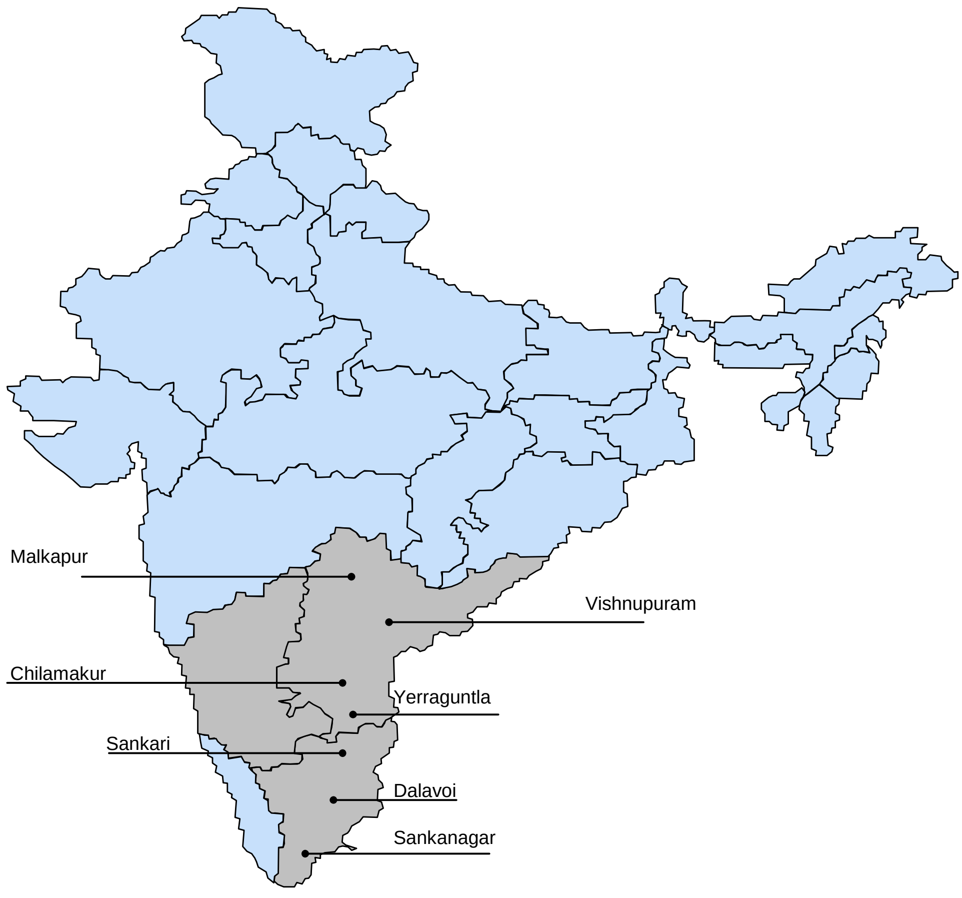
- **Maintain Outperform:** The company is set to see an increase in consensus estimates as prices in southern markets hold up better than in other regions. On valuations, the shares are trading at just 11x PER and EV/t of just US$78 (without reducing for value of CSK) on FY12E. Maintain Outperform.
- **Reducing Target Price to Rs93** from Rs109, as we add a discount for the risk factors in the near term.
- **Right initiatives:** The Company is in the process of adding captive power plants and has indicated it has secured a coal block in Indonesia which is expected to start in a year's time. We believe these are sound decisions that will improve the competitive strength of the company in the medium term.

**Fig 73 Our estimates**

| | 2009 | 2010 | 2011 | 2012E | 2013E | 2014E |
|---|---|---|---|---|---|---|
| Volume (m tonne) | 9.11 | 10.49 | 10.29 | 11.45 | 13.44 | 14.11 |
| % change | *-1%* | *15%* | *-2%* | *11%* | *17%* | *5%* |
| Realization (Rs./t) | 3,814 | 3,478 | 3,520 | 3,876 | 3,949 | 4,140 |
| % change | *14%* | *-9%* | *1%* | *10%* | *2%* | *5%* |
| Power & Fuel Cost (Rs./t) | 990 | 962 | 1,014 | 1,037 | 1,000 | 1,032 |
| % change | *31%* | *-3%* | *5%* | *2%* | *-4%* | *3%* |
| Transport Cost (Rs./t) | 495 | 569 | 646 | 711 | 746 | 784 |
| % change | *6%* | *15%* | *14%* | *10%* | *5%* | *5%* |
| EBITDA/ tonne (Rs/t) | 1,145 | 789 | 422 | 670 | 765 | 818 |
| % change | *-6%* | *-31%* | *-46%* | *59%* | *14%* | *7%* |
| Cost/ tonne (Rs/t) | 2,669 | 2,689 | 3,098 | 3,206 | 3,184 | 3,321 |
| % change | *25%* | *1%* | *15%* | *3%* | *-1%* | *4%* |

Source: Company data, Macquarie Research, June 2011

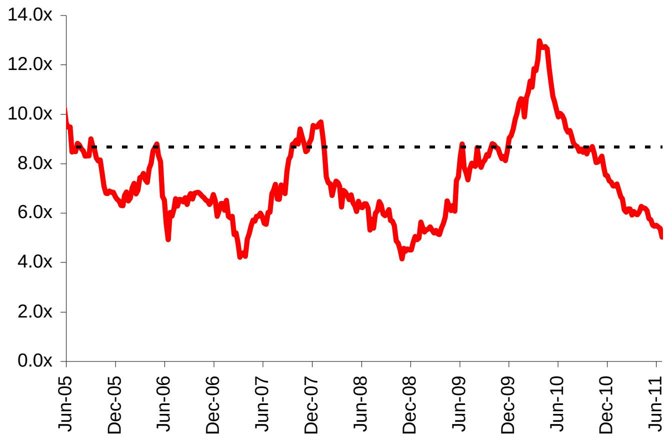
**Fig 74 Southern exposure – a blessing or bane?**




Source: Maps of India, Macquarie Research, June 2011

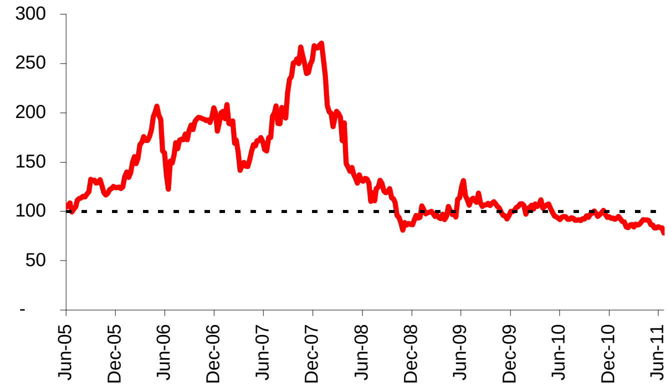
## Valuations

**Fig 75 ICEM - 1 yr fwd EV/EBITDA**



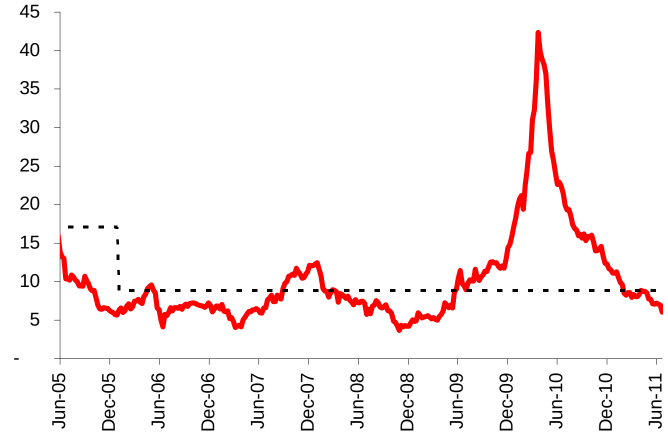

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 76 ICEM - EV/ton of capacity**



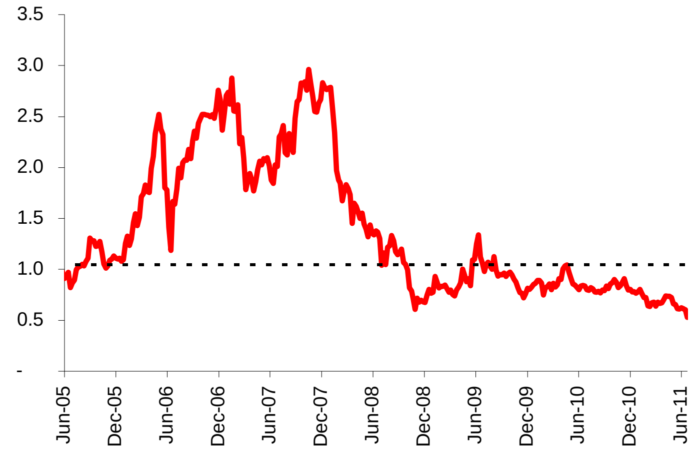

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 77 ICEM - 1 yr fwd PER**



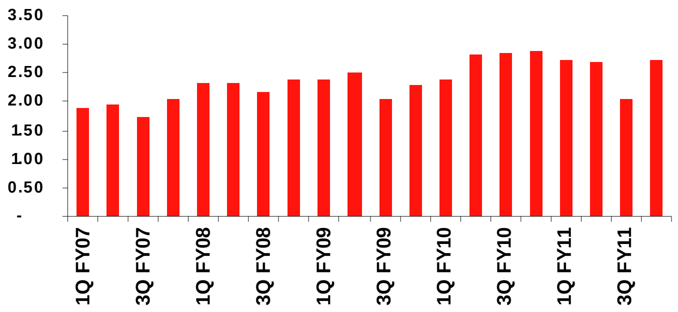

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 78 ICEM - 1 yr fwd P/BV**



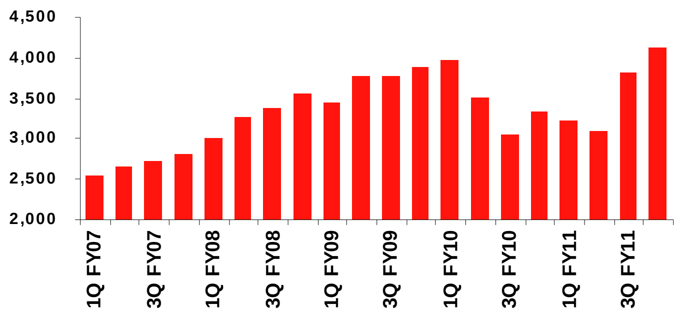

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 79 ICEM - quarterly volume (mt)**



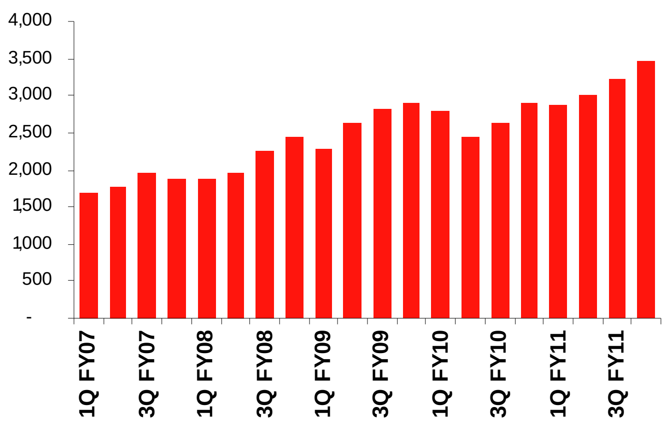

Source: Company Data, Macquarie Research, June 2011

**Fig 80 ICEM - quarterly realisation (Rs/t)**



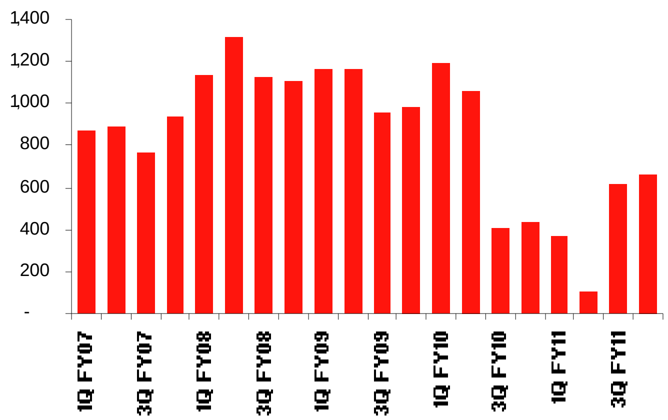

Source: Company Data, Macquarie Research, June 2011

**Fig 81 ICEM - quarterly costs (Rs/t)**




Source: Company Data, Macquarie Research, June 2011

**Fig 82 ICEM- quarterly EBITDA (Rs/t)**




Source: Company Data, Macquarie Research, June 2011

***UTCEM can see earnings upgrades***

# UTCEM- best long term play

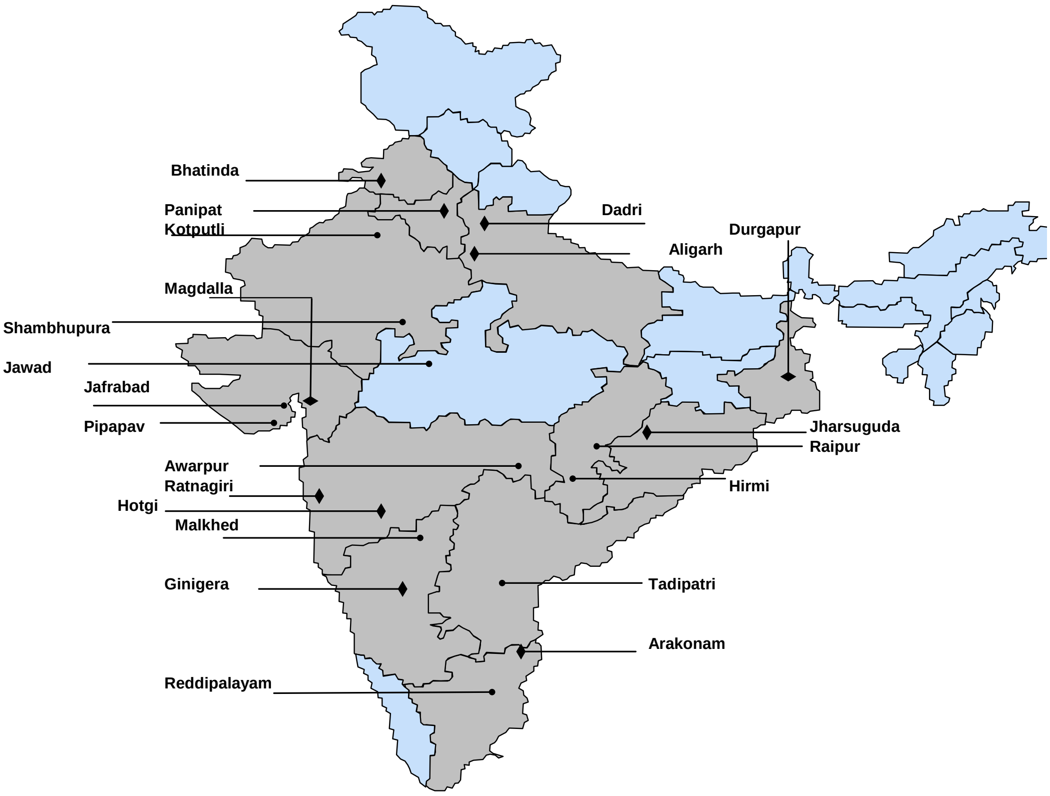
- **Maintain Underperform:** Among large cement companies, Ultratech seems best placed to grow organically and should be able to beat industry growth rates. Ultratech is our preferred exposure for the cement sector, but we would wait for a correction in cement prices and consequently stock price to enter here.
- **Reducing Target Price to Rs740** from Rs870, as we add a discount for the risk factors in the near term.

**Fig 83 Our estimates**

| **Assumptions** | **FY09A** | **FY10A** | **FY11A** | **FY12E** | **FY13E** | **FY14E** |
|---|---|---|---|---|---|---|
| Volume (m tonne) | 18.3 | 20.2 | 35.3 | 45.3 | 51.1 | 55.4 |
| % change | *6%* | *11%* | *75%* | *28%* | *13%* | *8%* |
| Realization (Rs./T) | 3,498 | 3,486 | 3,656 | 3,897 | 4,086 | 4,269 |
| % change | *10%* | *0%* | *5%* | *7%* | *5%* | *4%* |
| Energy Cost (Rs./T) | 939 | 708 | 836 | 847 | 876 | 914 |
| % change | *29%* | *-25%* | *18%* | *1%* | *3%* | *%* |
| Transport Cost (Rs./T) | 676 | 679 | 767 | 802 | 843 | 875 |
| % change | *6%* | *0%* | *13%* | *5%* | *5%* | *4%* |
| EBITDA/ tonne (Rs/t) | 927 | 975 | 724 | 868 | 963 | 1,045 |
| % change | *-7%* | *5%* | *-26%* | *20%* | *11%* | *9%* |
| Cost/t | 2,571 | 2,511 | 2,932 | 3,028 | 3,122 | 3,224 |
| % change | *17%* | *-2%* | *17%* | *3%* | *3%* | *3%* |

Source: Company data, Macquarie Research, June 2011

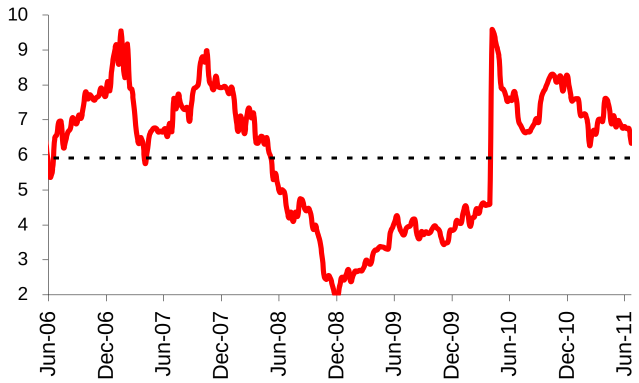
**Fig 84 Pan India presence after merger with Samruddhi**




Source: Maps of India, Macquarie Research, June 2011

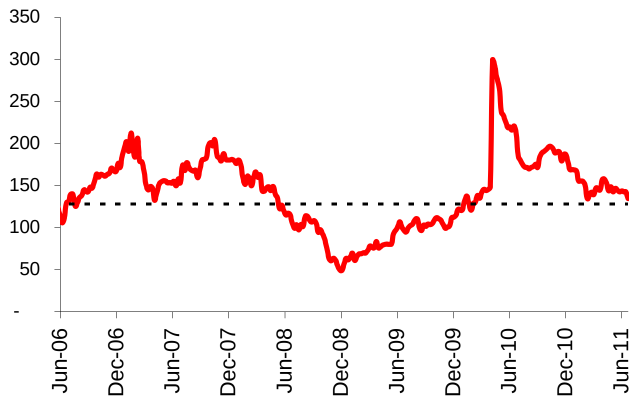
## Valuations

**Fig 85 UTCEM - 1 yr fwd EV/EBITDA**



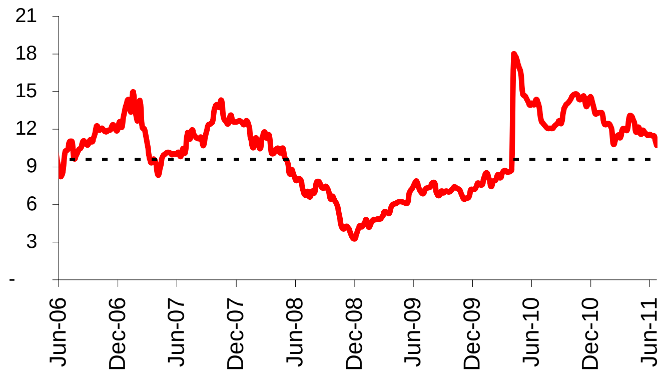

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 86 UTCEM - EV/ton of capacity**



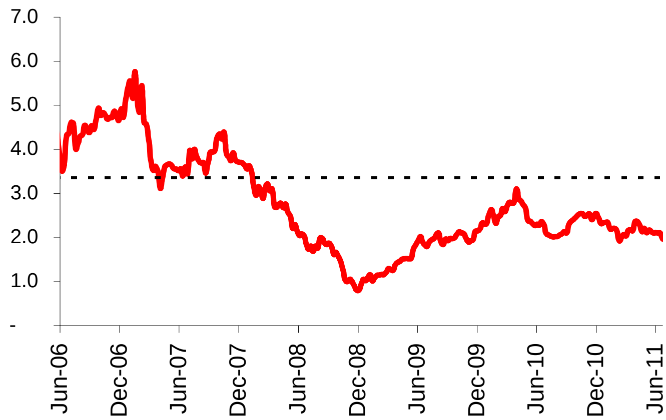

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 87 UTCEM - 1 yr fwd PER**



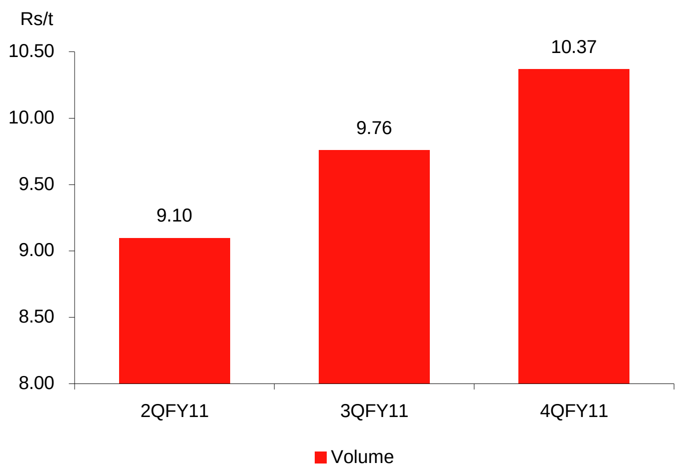

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 88 UTCEM - 1 yr fwd P/BV**



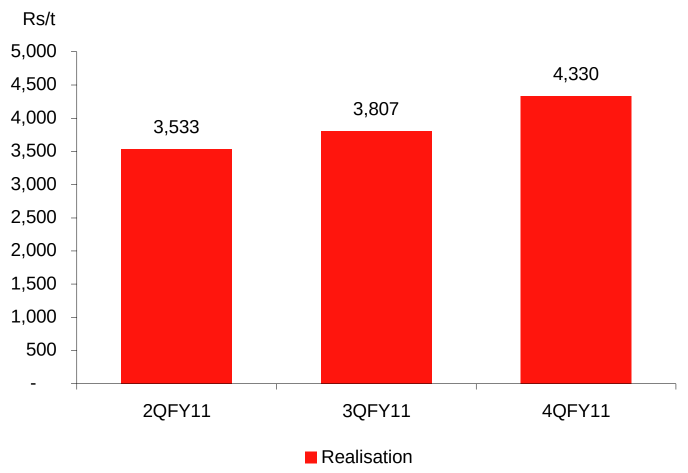

Source: Bloomberg, Company data, Macquarie Research, June 2011

**Fig 89 UTCEM - quarterly volume**



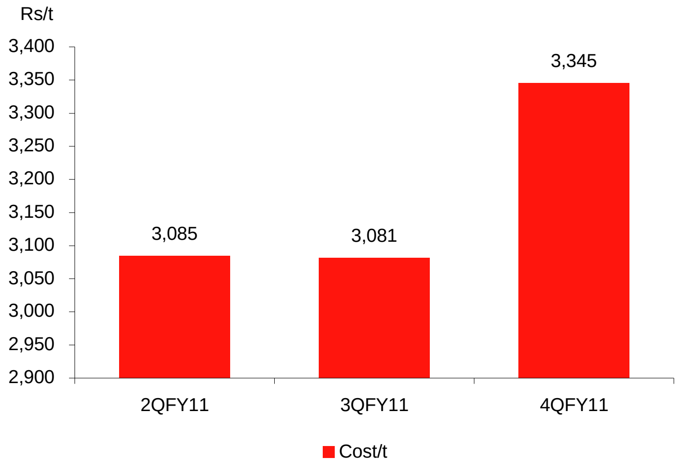

Source: Company Data, Macquarie Research, June 2011

**Fig 90 UTCEM - quarterly realisation**



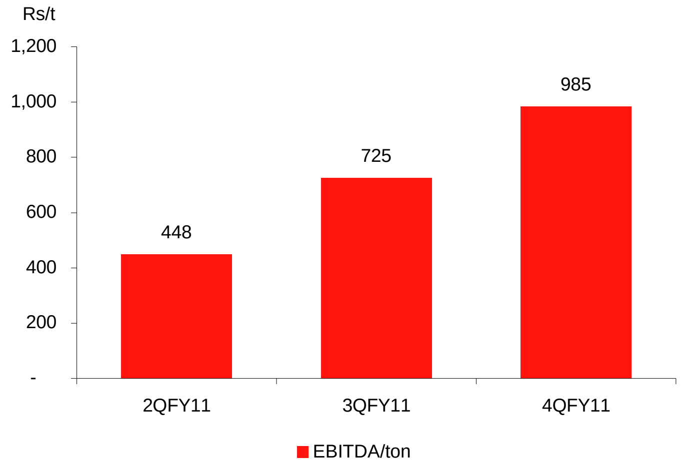

Source: Company Data, Macquarie Research, June 2011

**Fig 91 UTCEM - quarterly costs**




Source: Company Data, Macquarie Research, June 2011

**Fig 92 UTCEM- quarterly EBITDA**




Source: Company Data, Macquarie Research, June 2011

## Important disclosures:

### Recommendation definitions

**Macquarie - Australia/New Zealand**
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

**Macquarie – Asia/Europe**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie First South - South Africa**
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

**Macquarie - Canada**
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

**Macquarie - USA**
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

### Volatility index definition*

This is calculated from the volatility of historical price movements.

**Very high–highest risk** – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low–medium** – stock should be expected to move up or down at least 25–30% in a year.

**Low** – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Australian/NZ/Canada stocks only

**Recommendations** – 12 months
**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

### Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

**EPS** = adjusted net profit / efpowa*
**ROA** = adjusted ebit / average total assets
**ROA Banks/Insurance** = adjusted net profit /average total assets
**ROE** = adjusted net profit / average shareholders funds
**Gross cashflow** = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

### Recommendation proportions – For quarter ending 31 March 2011

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|---|---|---|---|---|---|---|---|
| Outperform | 45.65% | 65.72% | 59.70% | 43.02% | 68.91% | 51.16% | (for US coverage by MCUSA, 14.36% of stocks covered are investment banking clients) |
| Neutral | 39.49% | 19.00% | 29.85% | 53.09% | 26.43% | 35.73% | (for US coverage by MCUSA, 17.55% of stocks covered are investment banking clients) |
| Underperform | 14.86% | 15.28% | 10.45% | 3.89% | 4.66% | 13.11% | (for US coverage by MCUSA, 0.00% of stocks covered are investment banking clients) |

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| Chris Hunt (Asia – Head) | (852) 3922 1119 |
| Tim Smart (Asia – Deputy Head) | (852) 3922 3565 |

### Automobiles/Auto Parts

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| Amit Mishra (India) | (9122) 6720 4084 |
| Clive Wiggins (Japan) | (813) 3512 7856 |
| Dan Lucas (Japan) | (813) 3512 6050 |
| Michael Sohn (Korea) | (82 2) 3705 8644 |

### Banks and Non-Bank Financials

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| Victor Wang (China) | (852) 3922 1479 |
| Alastair Macdonald (Japan) | (813) 3512 7476 |
| Mudit Painuly (India) | (9122) 6720 4083 |
| Suresh Ganapathy (India) | (9122) 6720 4078 |
| Chan Hwang (Korea) | (822) 3705 8643 |
| Alex Pomento (Philippines) | (632) 857 0899 |
| Matthew Smith (Malaysia, Singapore) | (65) 6601 0981 |
| Jemmy Huang (Taiwan) | (8862) 2734 7530 |
| Passakorn Linmaneechote (Thailand) | (662) 694 7728 |

### Conglomerates

| | |
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| Alex Pomento (Philippines) | (632) 857 0899 |

### Consumer and Gaming

| | |
|---|---|
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| Linda Huang (China, Hong Kong) | (852) 3922 4068 |
| Toby Williams (Japan) | (813) 3512 7392 |
| Lyall Taylor (Indonesia) | (6221) 2598 8489 |
| HongSuk Na (Korea) | (822) 3705 8678 |
| Amit Mishra (India) | (9122) 6720 4084 |
| Alex Pomento (Philippines) | (632) 857 0899 |
| Somesh Agarwal (Singapore) | (65) 6601 0840 |
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### Emerging Leaders

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| Jonathan Hsu (China, Hong Kong) | (852) 3922 4625 |
| Saiyi He (Hong Kong) | (852) 3922 3585 |
| Robert Burghart (Japan) | (813) 3512 7853 |
| Makoto Egami (Japan) | (813) 3512 7879 |

### Industrials

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| Juwon Lee (Korea) | (822) 3705 8661 |
| Sunaina Dhanuka (Malaysia) | (603) 2059 8993 |
| David Gambrill (Thailand) | (662) 694 7753 |

### Insurance

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| Chung Jun Yun (Korea) | (822) 2095 7222 |

### Media and Internet

| | |
|---|---|
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| Steve Zhang (China, Hong Kong) | (852) 3922 3578 |
| Nitin Mohta (India) | (9122) 6720 4090 |
| Prem Jearajasingam (Malaysia) | (603) 2059 8989 |
| Alex Pomento (Philippines) | (632) 857 0899 |

### Oil, Gas and Petrochemicals

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| Chinnarat Boonmahanark (Thailand) | (662) 694 7985 |

### Property

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| Eugene Cheung (Hong Kong) | (852) 3922 4627 |
| Unmesh Sharma (India) | (9122) 6720 4092 |
| Felicia Barus (Indonesia) | (6221) 2598 8480 |
| Hiroshi Okubo (Japan) | (813) 3512 7433 |
| Sunaina Dhanuka (Malaysia) | (603) 2059 8993 |
| Alex Pomento (Philippines) | (632) 857 0899 |
| Tuck Yin Soong (Singapore) | (65) 6601 0838 |
| Elaine Cheong (Singapore) | (65) 6601 0839 |
| Corinne Jian (Taiwan) | (8862) 2734 7522 |
| Brandon Chen (Taiwan) | (8862) 2734 7518 |
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### Resources / Metals and Mining

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| Pelen Ji (China, Hong Kong) | (852) 3922 4741 |
| Christina Lee (Hong Kong) | (852) 3922 3571 |
| Rakesh Arora (India) | (9122) 6720 4093 |
| Adam Worthington (Indonesia) | (852) 3922 4626 |
| Albert Saputro (Indonesia) | (6221) 515 7340 |
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| David Gibson (Japan) | (813) 3512 7880 |
| George Chang (Japan) | (813) 3512 7854 |
| Jeff Loff (Japan) | (813) 3512 7851 |
| Michiko Kakiya (Japan) | (813) 3512 7868 |
| Yukihiro Goto (Japan) | (813) 3512 5984 |
| Daniel Kim (Korea) | (822) 3705 8641 |
| Benjamin Ban (Korea) | (822) 3705 8659 |
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| Jimmy Hsu (Taiwan) | (8862) 2734 7533 |
| Kylie Huang (Taiwan) | (8862) 2734 7528 |

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| Alex Pomento (Philippines) | (632) 857 0899 |
| Joseph Quinn (Taiwan) | (8862) 2734 7519 |
| Best Waiyanont (Thailand) | (662) 694 7993 |

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| Alex Pomento (Philippines) | (632) 857 0899 |

### Commodities

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| Max Layton | (4420) 3037 4273 |
| Duncan Hobbs | (4420) 3037 4497 |
| Graeme Train | (8621) 2412 9035 |
| Rakesh Arora | (9122) 6720 4093 |

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| Eric Yeung | (852) 3922 4077 |

### Economics

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| Paul Cavey (China) | (852) 3922 3570 |
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### Quantitative / CPG

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| Simon Rigney (Japan) | (813) 3512 7872 |

### Strategy/Country

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| John Woods (Asia) | (852) 3922 4636 |
| Peter Eadon-Clarke (Asia, Japan) | (813) 3512 7850 |
| Jiong Shao (China, Hong Kong) | (852) 3922 3566 |
| Rakesh Arora (India) | (9122) 6720 4093 |
| David Gibson (Japan) | (813) 3512 7880 |
| Chan Hwang (Korea) | (822) 3705 8643 |
| Kieran Calder (Malaysia) | (603) 2059 8992 |
| Yeonzon Yeow (Malaysia) | (603) 2059 8982 |
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# Asia Sales

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| Peter Slater (Boston) | (1 617) 598 2502 |
| Jeffrey Shiu (China & Hong Kong) | (852) 3922 2061 |
| Thomas Renz (Geneva) | (41) 22 818 7712 |
| Andrew Mouat (India) | (9122) 6720 4100 |
| Kenneth Yap (Indonesia) | (6221) 515 1555 |
| JJ Kim (Korea) | (822) 3705 8799 |
| Jason Lee (Malaysia) | (603) 2059 8888 |
| Chris Gould (Malaysia) | (603) 2059 8888 |
| Gino C Rojas (Philippines) | (632) 857 0761 |
| Greg Norton-Kidd (New York) | (1 212) 231 2527 |
| Luke Sullivan (New York) | (1 212) 231 2507 |
| Eric Roles (New York) | (1 212) 231 2559 |
| Sheila Schroeder (San Francisco) | (1 415) 762 5001 |

### Regional Heads of Sales cont'd

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| Miki Edelman (Taiwan) | (8862) 2734 7580 |
| Angus Kent (Thailand) | (662) 694 7601 |
| Michael Newman (Tokyo) | (813) 3512 7920 |
| Angus Innes (UK/Europe) | (44) 20 3037 4841 |
| Rob Fabbro (UK/Europe) | (44) 20 3037 4865 |
| Sean Alexander (Generalist) | (852) 3922 2101 |

### Regional Head of Distribution

| | |
|---|---|
| Justin Crawford (Asia) | (852) 3922 2065 |

### Sales Trading

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| Yat Quan Tan (Hong Kong) | (852) 3922 2028 |
| Phil Sellaroli (Japan) | (813) 3512 7837 |
| Grace Lee (Korea) | (822) 3705 8601 |
| Matthew Ryan (Singapore) | (65) 6601 0288 |

### Sales Trading cont'd

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| Chris Reale (New York) | (1 212) 231 2555 |
| Marc Rosa (New York) | (1 212) 231 2555 |
| Stanley Dunda (Indonesia) | (6221) 515 1555 |
| Kenneth Cheung (Malaysia) | (603) 2059 8888 |
| Michael Santos (Philippines) | (632) 857 0813 |
| Isaac Huang (Taiwan) | (8862) 2734 7582 |
| Dominic Shore (Thailand) | (662) 694 7707 |

### Alternative Strategies

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| Depository Receipts – Seung-Jin Lee | (65) 6601 0203 |
| Derivatives – Mark Holland | (852) 3922 2081 |
| Structured Products - Andrew Terlich | (852) 3922 2013 |