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Cement

THEMATIC | **March 04, 2022**

Game of limestone

Leases accounting for 10% of limestone reserves will expire in 2030 and another 14% in 2030-35. JK Cement (NR), JK Lakshmi (NR), ACC and smaller players are most exposed to expiration risk. Risk for Dalmia, Birla (NR) and even ACC is not as much lease expiration as size of reserves. Ramco/Shree/UTCEM may benefit from industry disruption. There are 2 possibilities post 2030: 1) more consolidation and 2) higher cost structure for existing lessees as they exercise right of first refusal (RoFR). The latter is a stronger possibility. Some companies may strategically decide to expand capacity through 2030 to accelerate value realization ahead of expiry. Given reserve risk, we cut our target multiple for ACC & Dalmia and raise it for Ramco. Current prices imply 7% volume CAGR and ₹1,150-1,200/t EBITDA for UTCEM (proxy) –not extremely conservative yet. Valuations are getting somewhat interesting; we need some more moderation in EV/t to get constructive.

Limestone – The prized resource

Cement companies are inherently in a mining business. We have analyzed publicly available data on >250 mines accounting for >20 billion tonnes of proved+probable limestone reserves. Our findings reveal there is no dearth of limestone, although companies will have to contend with degradation and higher exploration and mining cost over time.

ACC, JK Lakshmi, JK cement, Dalmia and Birla carry higher reserve risk

Most JK Cement (JKC) and JK Lakshmi mining leases in Rajasthan will expire in 2030. But, JKC has a competitive advantage in MP. ACC has to deal with both lease expiration and lower reserve base, although Ambuja may come to the rescue in certain locations. Dalmia needs to boost its proved reserves in Odisha, Bihar and TN to sustain production beyond 10 years (much lower in TN). Birla Corp needs to boost proved reserves as well in multiple locations.

Decision tree for strategic planning

Competition for limestone will be a function of attractiveness of deposit, which is a function of reserve size left. Existing lessees will retain expiring leases at just 5-10% reserve price, but attractive deposits will face competition. Existing lessees may exercise right of first refusal (RoFR) to match competing bids, or let lease go. Either way, there is margin/earnings risk. In certain cases, existing lessees may strategize to build capacity or sell limestone to others, ahead of expiry. That raises risk of additional capacity, in addition to capacity onslaught stemming from excess cash on B/S, MMDR Amendment Act (2+1 years rule).

Valuation –getting interesting, need some more moderation

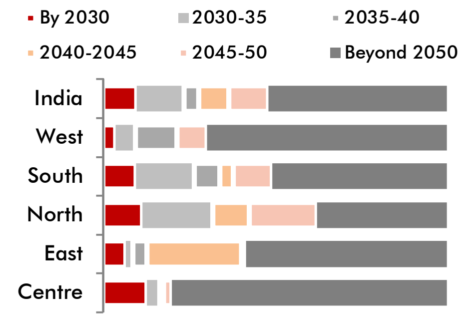
Cement is staring at multiple headwinds in the near-medium term. When we initiated in Mar'21, we stated peak earnings+peak multiple=high risk. Optimism has faded, pessimism may peak in the monsoon quarter. There's downgrade risk to our estimates, but that could be offset to some extent by increase in EV/EBITDA, cushioning impact on EV/t to some extent. We need some more moderation in EV/t to get constructive. Cement trades like consumer, but mine life/reserve size could put duration risk on certain company earnings; which is why it's important to analyze long-term earnings risk. We believe risk is highest for ACC & Dalmia in our coverage and lowest for UTCEM, Shree and Ramco. Companies exposed to East (Dalmia, Nuvoco) and/or higher leverage (Nuvoco, Ramco) are exposed to higher risk in the near-medium term. Our pecking order is UTCEM>Shree=Ambuja>ACC among large-caps.

Summary of recommendations

Company	Rating	TP	Change (%)	EV/ EBITDA (FY23)
UTCEM	SELL	6,400	7%	12.0
ACC	SELL	1,850	-6%	8.0
ACEM	SELL	290	0%	10.0
SRCM	SELL	22,900	0%	13.5
NUVOCO	SELL	400	8%	8.5
DALBHARA	SELL	1,300	-9%	8.0
TRCL	SELL	600	-18%	10.0

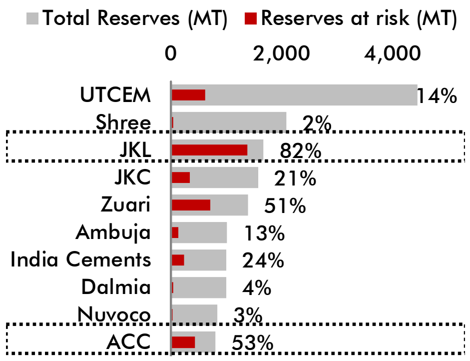
Source: Company Ambit Capital research

Region specific lease expiration risk



Source: IBM, Ambit Capital research

Company specific expiration risk



Source: IBM, Ambit Capital research

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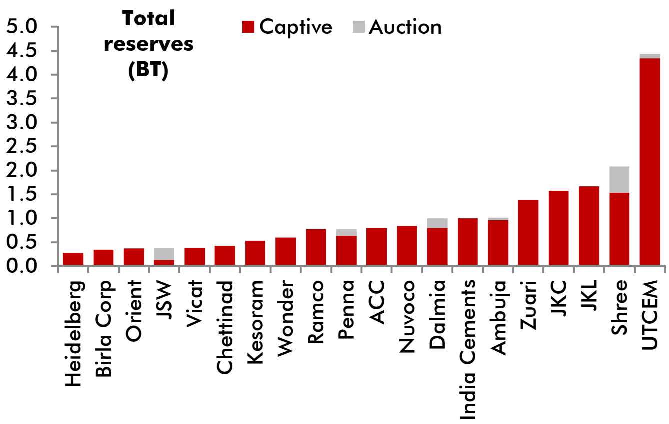
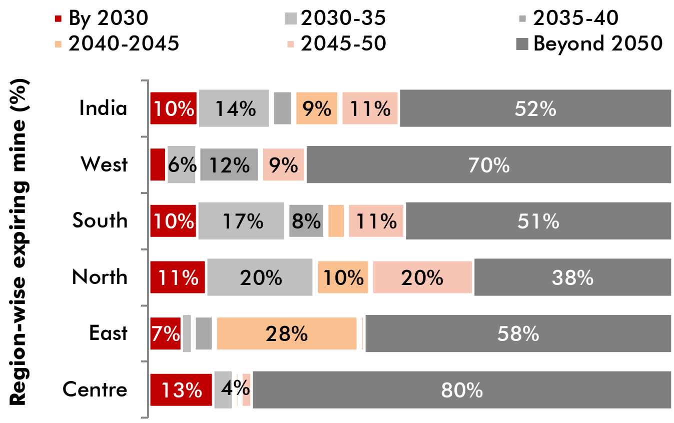


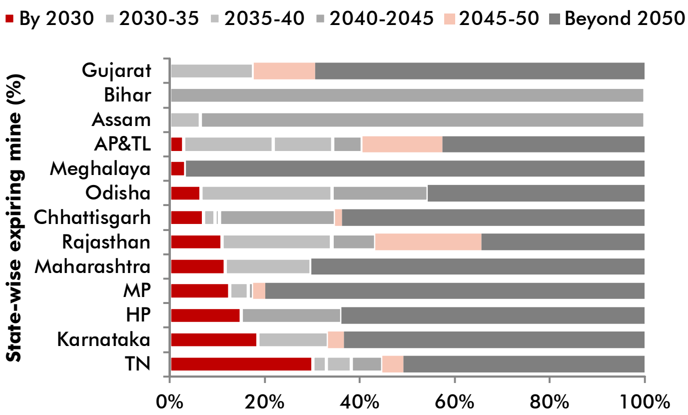
Source: Indian Bureau of Mines (IBM), ministry of Mines, Ministry of Environment Forest and Climate Change (MoEFCC), Ambit Capital

Exhibit 2: North and South will see greater lease expiration compared to other regions



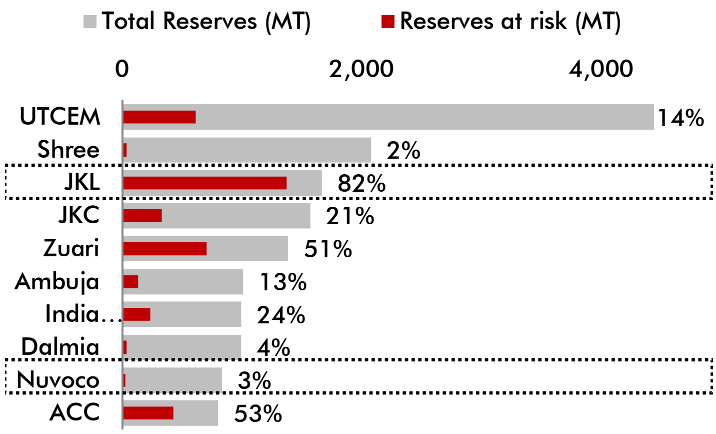
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 3: Certain states, such as TN, HP, Rajasthan and Karnataka are more exposed to lease expiration risk



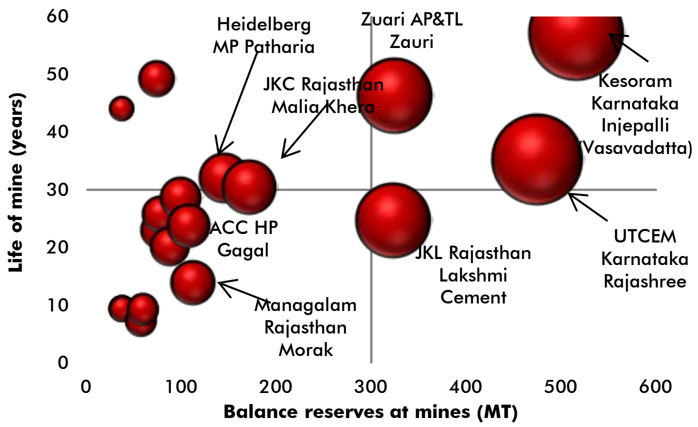
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 4: ACC, JK Lakshmi, JK Cement (Rajasthan), ACC and Zuari are most exposed to lease expiration risk



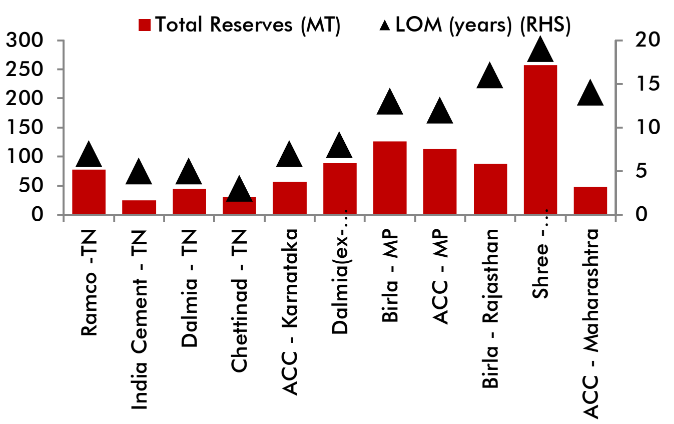
Source: IBM, MoEFCC, Companies, Ambit Capital research. Note: Reserves expiring by 2035 = Reserves at risk; The percentage shows the % of reserves at risk out of total reserves

Exhibit 5: Certain UltraTech, JK Lakshmi and JK Cement deposits could garner lot of interest when they come up for auction



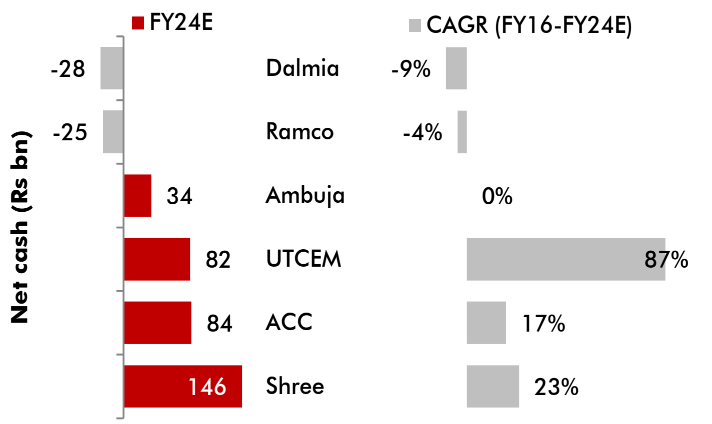
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 6: Birla and Dalmia will need to boost reserves in certain locations to support long-term production



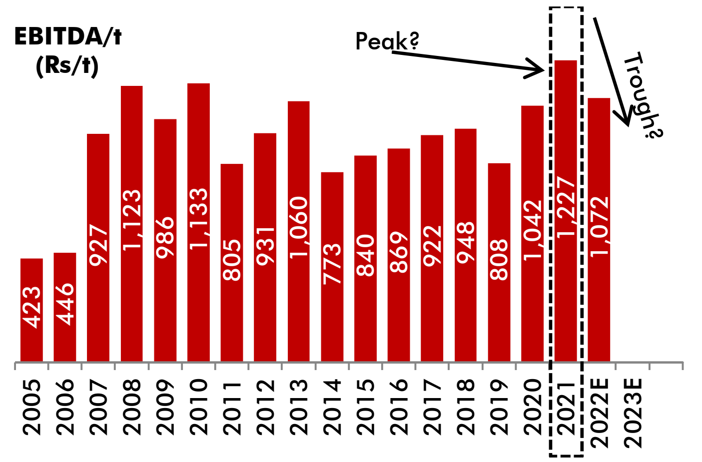
Source: IBM, MoEFCC, Companies, Ambit Capital research Life of mine (LOM)=reserves/limestone requirement based on FY24 clinker capacity

Exhibit 7: Cement companies will see cash swell on B/S-UltraTech would also likely pull the trigger on capex soon



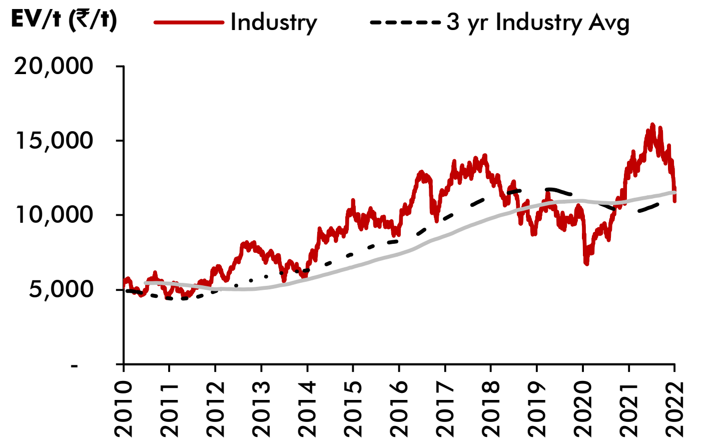
Source: Companies, Bloomberg, Ambit Capital research

Exhibit 8: Industry achieved peak EBITDA levels in FY21, but it is not the new normal



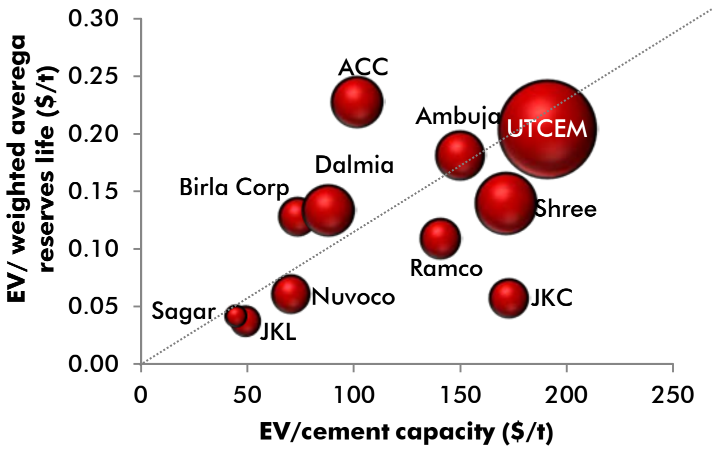
Source: Companies, Bloomberg, Ambit Capital research Note: we have taken average of top 15 companies for this exhibit

Exhibit 9: EV/t is now below 3-year average-we will need some more moderation to get selectively constructive



Source: Companies, Bloomberg, Ambit Capital research. Note: Bubble size is FY24E clinker capacity (MT)

Exhibit 10: Adjusted for lease duration and auction premiums, ACC, Dalmia & Birla Corp appear expensive vs peers (risk for JKL and JKC can't be captured here)



Source: IBM, MoEFCC, Companies, Bloomberg, Ambit Capital research Note: In this one we have taken weighted average reserve life for remaining duration and auction premiums (we have discounted reserves that have auction premiums); Bubble size is FY24E clinker capacity (MT)

Coverage summary

Exhibit 11: We have not updated earnings estimates (barring post 4QCY21 for Ambuja) in this note-only changed multiples based on long-term assumptions

	Rating	MCap	MCap	CMP	Revised TP	Previous TP	Upside	Revision	EV/Tonne (₹)			Target EV/FY23 EBITDA (X)		
		(₹ bn)	(US$ mn)	(₹)	(₹)	(₹)	(%)	(%)	Revised	Old	%	Revised	Old	%
UltraTech	SELL	1,728	22,760	5,970	6,400	6,400	7%	0%	14,066	14,066	0%	12.0	12.0	0%
Shree	SELL	824	10,858	22,860	22,900	22,900	0%	0%	11,133	11,133	0%	13.5	13.5	0%
Ambuja	SELL	577	7,597	290	290	335	0%	-13%	11,030	13,653	-19%	10.0	9.8	2%
ACC	SELL	368	4,842	1,963	1,850	2,000	-6%	-8%	7,017	7,716	-9%	8.0	9.0	-11%
Dalmia	SELL	268	3,524	1,429	1,300	1,380	-9%	-6%	5,143	5,450	-6%	8.0	8.5	-6%
Ramco	SELL	173	2,275	732	600	575	-18%	4%	8,642	8,304	4%	10.0	9.0	11%
Nuvoco	SELL	135	1,773	370	400	400	8%	0%	7,168	7,168	0%	8.5	8.5	0%

Source: Ambit Capital research, Company, Bloomberg Note: For ACC and Ambuja FY22=CY21

Exhibit 12: Operational assumptions summary

	Clinker Capacity (MT)			Cement Capacity (MT)			Cement Utilization (%)			C2C (x)			Cement volumes (MT)		
	FY22	FY23	FY24	FY22	FY23	FY24	FY22	FY23	FY24	FY22	FY23	FY24	FY22	FY23	FY24
UltraTech	72	83	83	114	131	131	75%	71%	77%	1.5	1.5	1.5	86	93	101
Shree	26	30	33	46	46	63	58%	66%	53%	1.4	1.4	1.4	27	30	33
Ambuja	21	21	21	31	31	33	86%	92%	94%	1.6	1.6	1.6	27	29	31
ACC	21	23	23	35	40	40	83%	78%	83%	1.7	1.7	1.7	29	31	33
Dalmia	19	19	23	36	40	49	61%	61%	55%	1.6	1.6	1.6	22	25	27
Ramco	14	14	14	19	20	20	57%	58%	63%	1.3	1.3	1.3	11	12	13
Nuvoco	12	13	13	24	25	26	80%	82%	87%	1.7	1.8	1.8	17	18	20

Source: Ambit Capital research, Company, Bloomberg Note: For ACC and Ambuja FY22=CY21

Exhibit 13: Financial summary

	Revenues (₹ bn)			EBITDA/t (₹/t)			EBITDA (₹ bn)			FCF (₹ bn)			Net Debt (₹ bn)		
	FY22	FY23	FY24	FY22	FY23	FY24	FY22	FY23	FY24	FY22	FY23	FY24	FY22	FY23	FY24
UltraTech	518	559	605	1,196	1,359	1,440	116	139	158	37	74	89	43	-13	-82
Shree	139	158	174	1,393	1,511	1,545	38	46	51	16	26	22	-104	-127	-146
Ambuja	140	152	164	1,193	1,178	1,200	32	34	37	12	4	6	-41	-36	-34
ACC	162	176	191	994	972	1,001	30	31	35	16	7	19	-74	-68	-84
Dalmia	109	123	136	984	1,197	1,192	22	29	32	-3	-14	-12	-9	10	28
Ramco	59	65	70	1,134	1,371	1,371	13	17	18	7	-5	-11	39	33	25
Nuvoco	90	96	108	878	1,004	1,069	15	18	22	0	6	5	52	46	41

Source: Ambit Capital research, Company, Bloomberg Note: For ACC and Ambuja FY22=CY21

Exhibit 14: There is downgrade risk to our and consensus estimates-although stocks have already front run those downgrades

EBITDA (₹ bn)	Ambit			Consensus			%		
	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E	FY22E	FY23E	FY24E
UltraTech	116	139	158	121	143	163	-5%	-3%	-3%
Shree	38	46	51	40	47	54	-5%	-2%	-5%
Ambuja	32	34	37	34	39	41	-7%	-12%	-9%
ACC	30	31	35	33	37	40	-9%	-16%	-13%
Dalmia	22	29	32	25	31	36	-13%	-5%	-11%
Ramco	13	17	18	14	18	20	-9%	-6%	-12%
Nuvoco	15	18	22	16	20	23	-7%	-9%	-8%

Source: Company, Ambit Capital research

Sizing up limestone risk for industry

Cement companies are inherently in a mining business. Limestone is the prized resource. Contrary to popular perception, we believe risk of limestone shortage is remote in foreseeable future; companies may need to spend more on exploration though. Reserve degradation, deeper mining would likely raise mining/RM cost for industry over time. There are multiple mine leases that will expire over 2030-35. We have analyzed publicly available data for >250 limestone mines cumulating to >20 billion tonnes of reserves, and estimate: 1) 10% of reserves will expire in 2030; and 2) additional 14% will expire over 2030-35. ACC, JK Cement, JK Lakshmi, Indian Cement, Zuari, Kesoram, KJS are most exposed to such expirations, while Ramco, UltraTech & Shree appear relatively less exposed. Birla Corp and Dalmia Cement have low reserves/low mine life in certain key plants, based on current reserves. North & South would witness the most disruption that could mean either more consolidation or higher cost structure for existing lessees.

Is there a shortage of limestone in the country? We don't think so

Reserves at current deposits could increase over time through drilling/exploration, although reserves will see degradation, which means lower cement grade-limestone and higher mining/operating cost

We peg current limestone reserves (proved + probable) at almost 21 billion tonnes. Current cement production would require 300MT of limestone, implying mine life of 70 years. But subsequent brownfield expansions would logically reduce remaining life of mine (LoM) of these reserves. So, let us say Indian cement industry reaches 500MT size in the next 10 years. Indian reserves would have witnessed depletion of almost 4bn tonnes; so remaining 17bn tonnes of reserves and 500MT of requirement would suggest LoM of <35 years. So, on and so forth. But proved reserve is a function of: 1) drilling space/width; and 2) economic viability of reserves. Companies can convert some of their probable reserves and inferred resources into reserves by: 1) increased drilling, reducing the gap between drill holes, which leads to greater confidence interval; and 2) by lowering cut-off grade, which means resources which were earlier unviable become viable because let's say everyone has to dig deeper (mining benches trend down from 50m to 100m, raising mining cost) and that results in higher limestone/cement prices. So, reserves at just the current deposits would increase over time, although reserves will see degradation, which means lower cement grade-limestone and higher mining cost. Next phase would be expansion in newer, currently uneconomic regions, such as Jaisalmer.

The MMDR Amendment Act explained

The MMDR Amendment Act (2015) set a cap on lease term for legacy captive mines. The Act specifies that any lease granted before the commencement of the Amendment Act, shall be extended: (i) up to March 31, 2030 for minerals used for captive purpose (specific end-use), or (ii) till completion of renewal period, or (iii) for a period of 50 years from the date of grant of such lease, whichever is later. This means leases which were granted before 1980 and/or will complete renewal period by 2030, will lapse by 31st Mar'30.

What will happen to the leases once they expire?

Law provides right of first refusal (RoFR) to existing lessee. Even if existing lessee wins the mine back, it will entail higher cost vs past, therefore generating lower EBITDA

Once captive leases expire, state government will put these back into auction as per requirement of the MMDR Amendment Act'21. Depending on reserve base (all categories) left, there would be bidding interest. Limestone has a very low value to weight ratio – ₹450/t vs >₹5,000/t for cement. So limestone's value to weight is less than 10th of cement's. Limestone transportation via trucks therefore becomes prohibitive even beyond 50-75kms in most cases. Legacy lessee will see the best value in this re-auctioned deposit – in order to support existing infrastructure and lower freight cost. But limestone is found in clusters. There will likely be other cement plants in the vicinity. The law provides right of first refusal (RoFR) to existing lessee; so for instance, if UltraTech bids for JK Cement's lease in 2030, JK Cement has the right to match that offer. Even if existing lessee wins the mine back, it will entail higher cost vs past, therefore generating lower EBITDA. If the existing lessee fails to win the mine back, it may have to look for an alternative deposit, which may mean high auction premium + higher freight cost/t. In a worst-case scenario, the plant may have to shut down temporarily or maybe permanently for want of limestone mine lease.

Would the transition be orderly? Unlikely

The process of expiration of mining lease and handover to a new winner is unlikely to be orderly, if Mar'20 is a guidepost. Lessees will build limestone inventory in the last year of mine lease expiration. The existing lessee would also probably try to derail the process by delaying the lifting of inventory, equipment from the plant.

Would cement prices increase in order to offset higher auction premiums?

High-cost players are at greater risk of lease expiration; so industry cost curve could steepen. But any pricing power would still put margins at risk for companies with greater exposure to lease expiration.

That logic would suffice if everyone is almost equally exposed to the risk of mine lease expiration. But that's not the case here. Although some high-cost players are at greater risk of lease expiration; so industry cost curve which is flat now, could steepen, providing some pricing power. But that pricing would likely not offset the higher cost for players exposed to lease expiration, threatening their current margin profile.

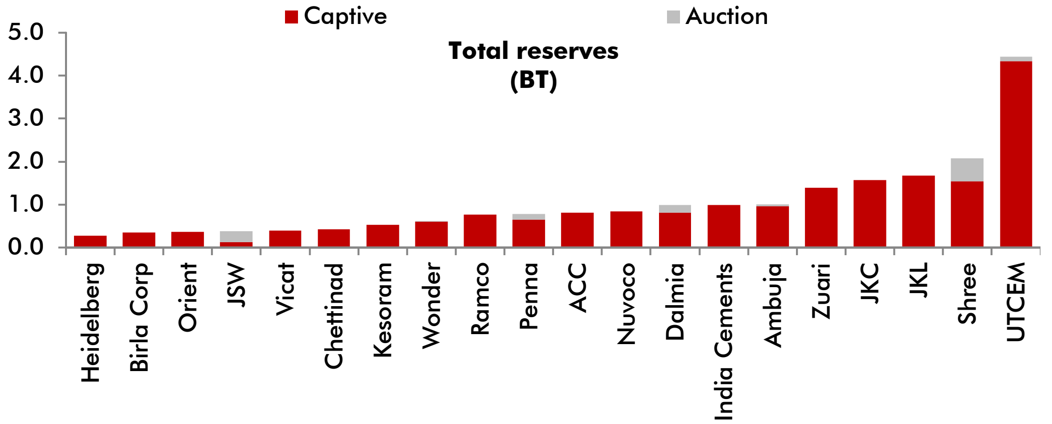
Why is such long-term analysis important?

This is important for two reasons:

This is not HDFC or Asian Paints, where companies compound consistently over 30-40-50 years. There is a hard cap on mining lease validity

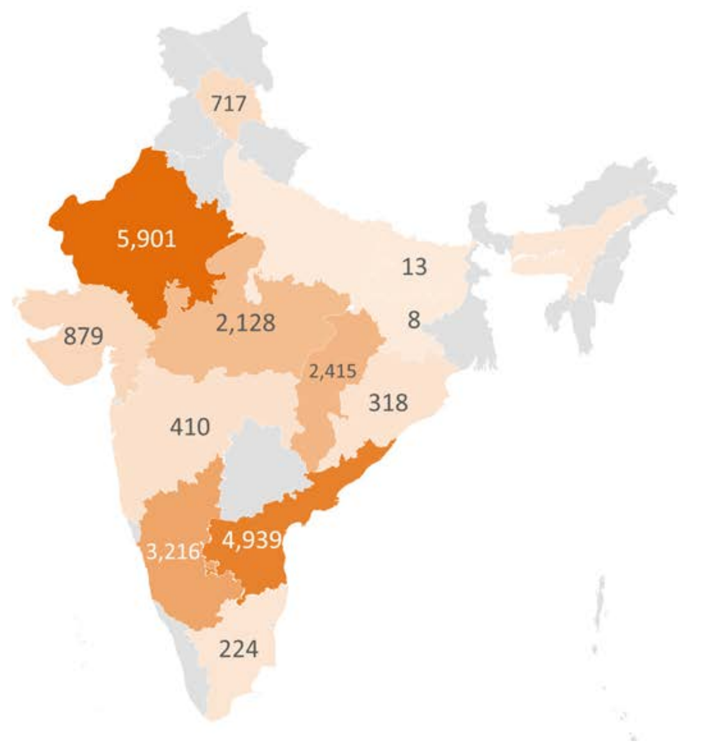
- **Cement gets high valuation multiples**: Part of this is predicated on consumer like characteristic, long-term consolidation potential, etc. So it's the long-term thesis that's underpinning some of these current valuation multiples. But cement is not consumer. It's inherently a mining business to a large extent. This is not HDFC or Asian Paints, where companies compound consistently over 30-40-50 years. There is a hard cap on mining lease validity; so, if your key mines are expiring in 2030-35, that raises risk on the company's current production/earnings profile; growth is a different matter altogether.
- **It's important to gauge the possible capacity response from players ahead of their lease expirations**. If companies have leases expiring in 2030-35, they would already have been strategizing for it; it will get reflected in their capital allocation decisions.

Exhibit 15: Limestone reserve size across the cement industry



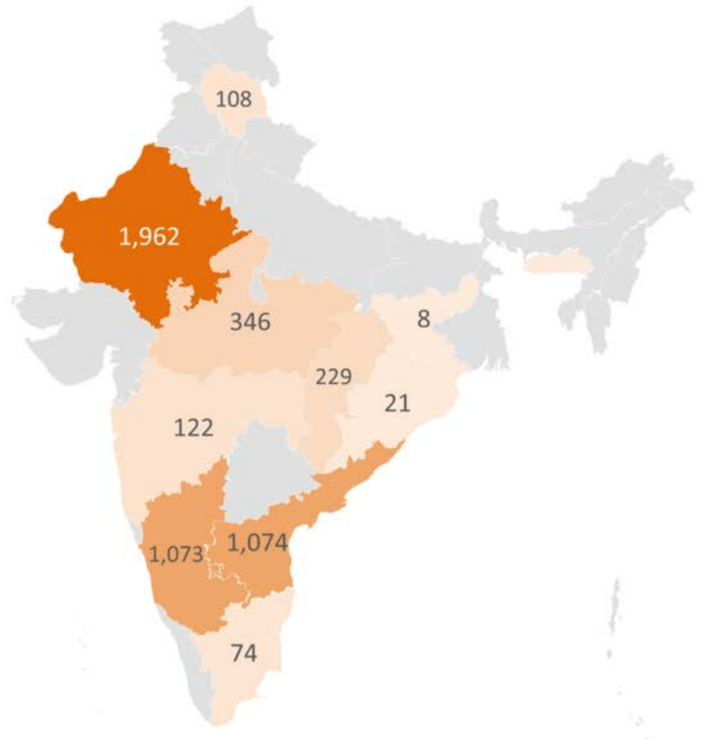
Source: Indian Bureau of Mines (IBM), Ministry of Mines, Ministry of Environment Forest and Climate Change (MoEFCC), Companies, Ambit Capital research

Exhibit 16: Limestone reserves are concentrated in certain states/clusters (MT)



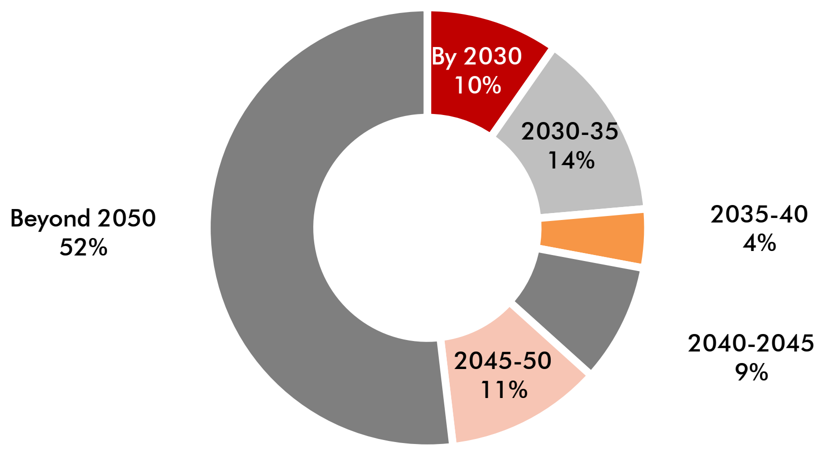
Source: Indian Bureau of Mines (IBM), Ministry of Environment Forest and Climate Change (MoEFCC), Companies, Ambit Capital research

Exhibit 17: Certain states are relatively more exposed to mine expiration risk (MT)-lease expiry by 2035



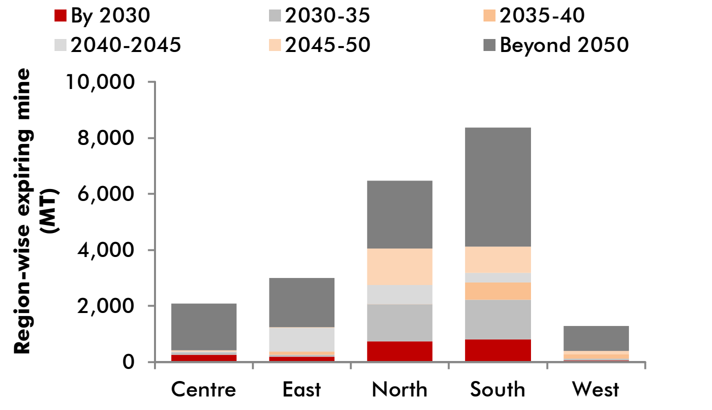
Source: Indian Bureau of Mines (IBM), Ministry of Environment Forest and Climate Change (MoEFCC), Companies, Ambit Capital research

Exhibit 18: The industry will witness leases accounting for >1/4th of industry limestone reserves expire by 2035



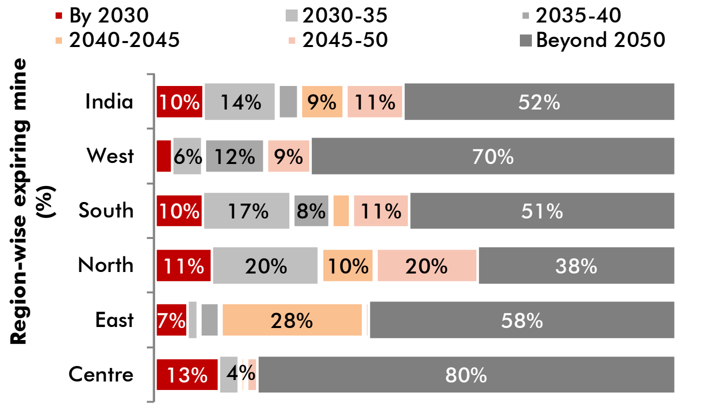
Source: Indian Bureau of Mines (IBM), Ministry of Mines, Ministry of Environment Forest and Climate Change (MoEFCC), Companies, Ambit Capital research

Exhibit 19: Lease expiration will encompass all regions, though magnitude will be greater in North and South



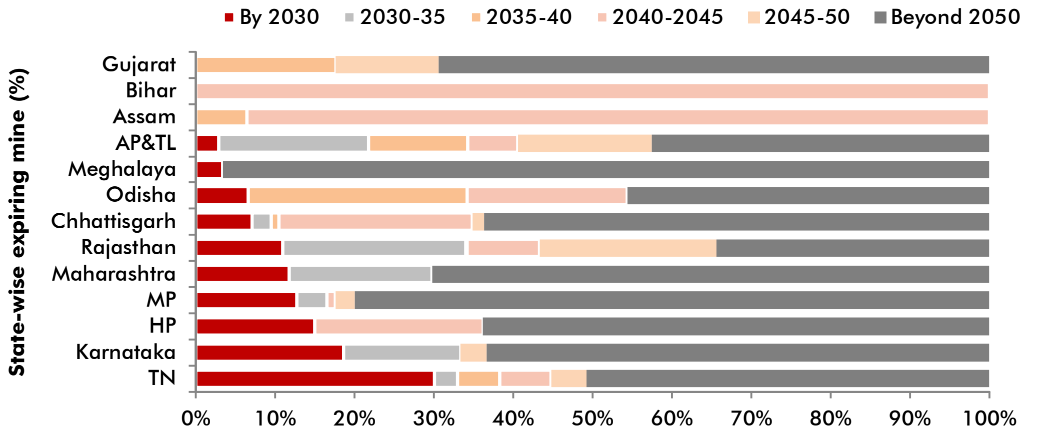
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 20: North and South will see greater lease expiration compared to other regions



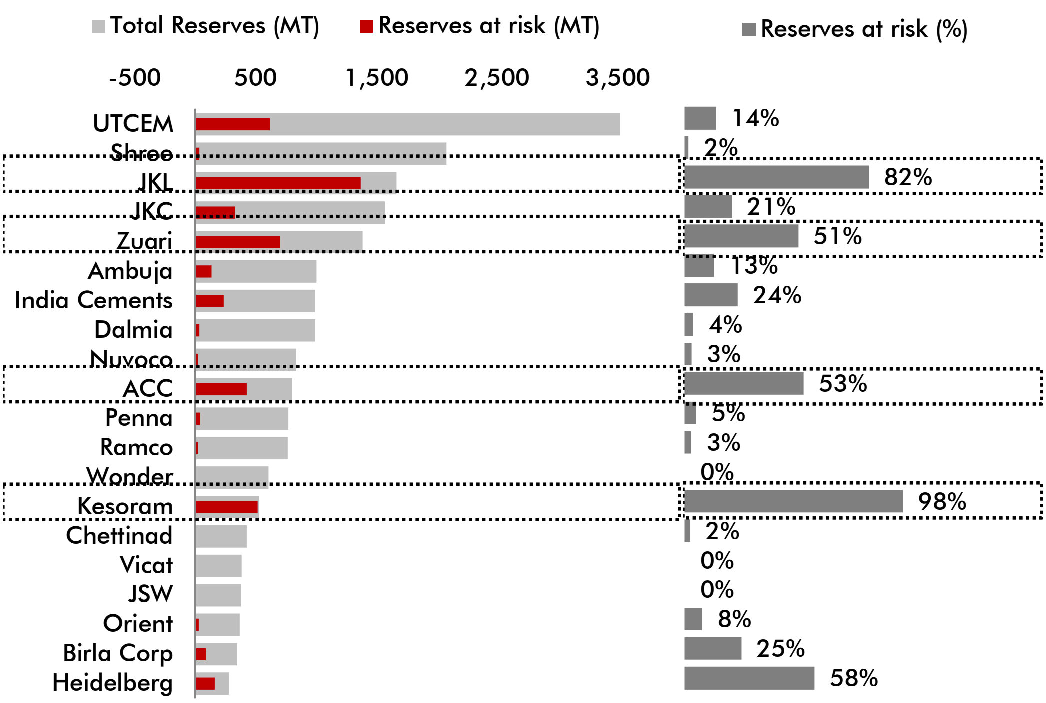
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 21: Certain states, such as TN, HP, Rajasthan and Karnataka are more exposed to lease expiration risk



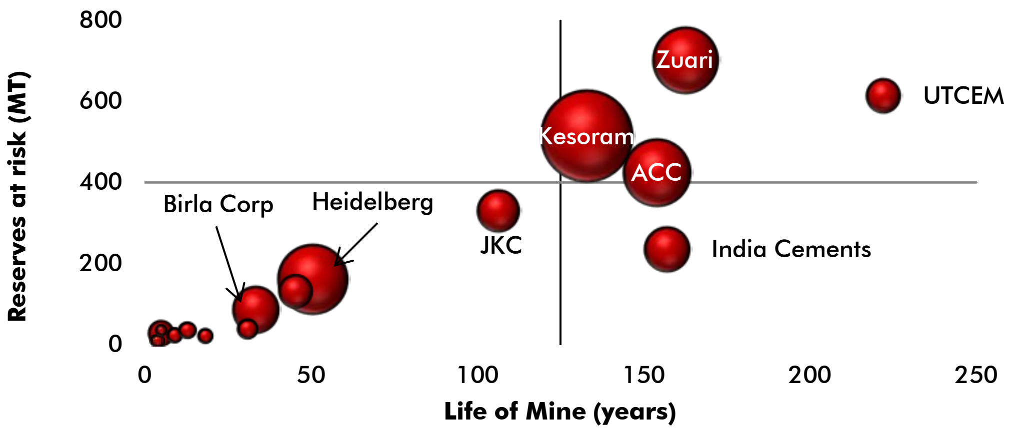
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 22: ACC, JK Lakshmi, JK Cement (Rajasthan), India Cement and Zuari are most exposed to lease expiration risk



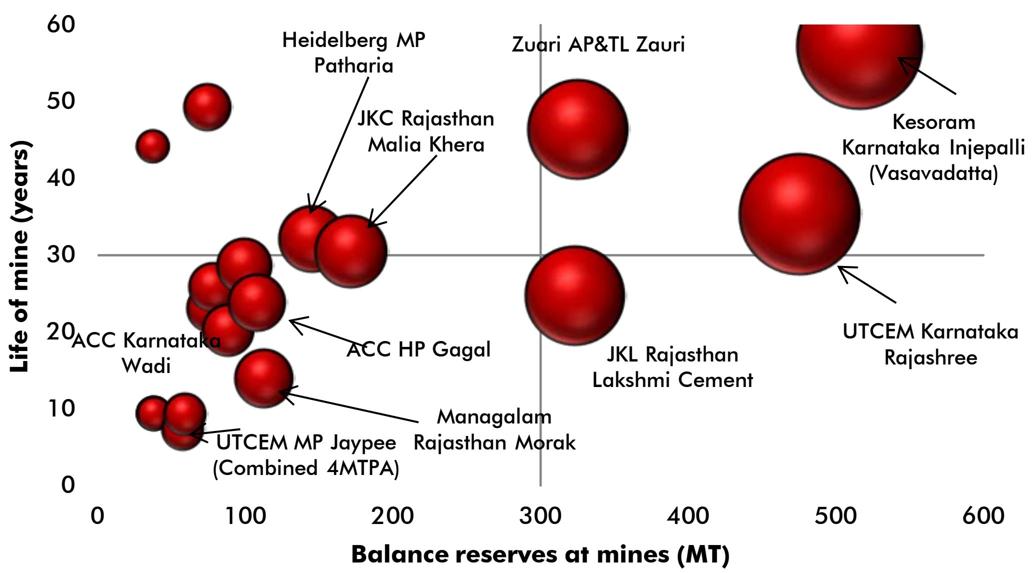
Source: : IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 23: Attractiveness of deposits – UltraTech, JK Cement and smaller producers most exposed to risk on overall basis



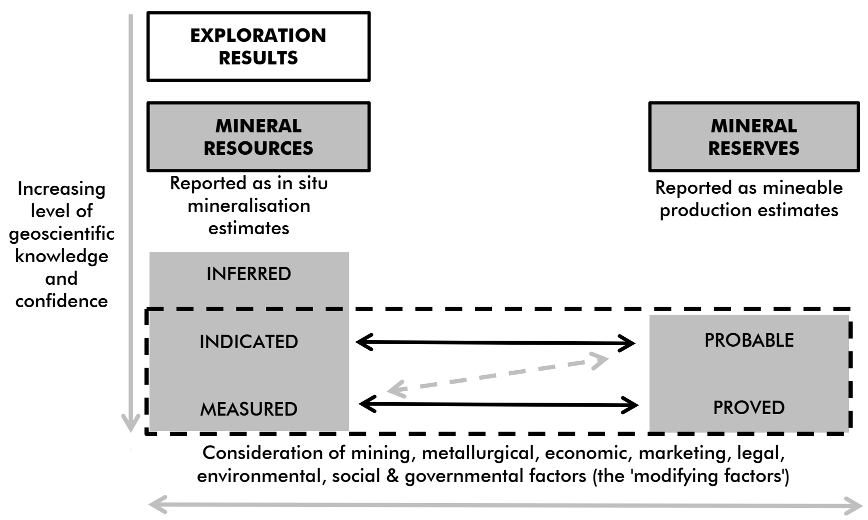
Source: IBM, MoEFCC, Companies, Ambit Capital research. Note size of the bubble is % reserves expiring by 2035 whereas life of Mine (LoM) is reserve size/FY24 clinker capacity

Exhibit 24: Certain UltraTech, JK Lakshmi, JK Cement, Kesoram and Zuari deposits could garner a lot of interest when they come up for auction



Source: IBM, MoEFCC, Companies, Ambit Capital research Note: for this exhibit, Reserves at risk=mine leases expiring by 2035

Exhibit 25: Reserve scale – proved reserves are most valuable, while indicated resource lease- though one can move from one to other based on drilling/exploration, cut-off grades, etc.



Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 26: Mine lease expiration and reserve size: Players, such as JK Cement and JK Lakshmi are most exposed to lease expiration, while Dalmia and Birla Corp to low reserves, while Shree, UltraTech and Ramco are better positioned

Company	Risk	Opportunity	Comments
ACC	●	◔	ACC exhibits probably the highest risk amongst companies. It has multiple mines expiring in 2030, across all the regions. Though most of these mines may be unattractive to others. Greater risk for ACC is not lease expiration, but reserve depletion. Older plant infrastructure, high auction premiums/loss of some mines is a significant risk to cost structure.
Ambuja	◑	◑	Ambuja has lower risk compared to ACC. It has some lease expirations in East and West and one key risk in HP (2042). But there are also many mines with long lease life.
Shree	◑	◕	Key Ras lease expires in 2046. While it still has 24 years of life left, and the company is already taking a lead on Nawalgarh, how does it protect value of its massive infrastructure in Ras/Beawar post 2046? It will have to exercise RoFR here. Nevertheless, Shree is primed to benefit from possible consolidation/challenges for mid-cap players in North in 2030-45. East lease has long validity, but further brownfield potential may be limited.
UTCEM	◔	●	It has some key expirations in Gulbarga (Karnataka) and Central India, but overall it is better off vs others and stands to be one of the biggest beneficiaries of possible consolidation post challenges with MNCs/other smaller and mid-cap players.
JK Cement	●	◑	By 2030-34, JK Cement will lose 70%/75% of its reserves/EC capacity (ex-Jaisalmer) that support its Rajasthan cement plants. It is looking at Jaisalmer for next leg of growth, though that would have its own challenges. The company does have massive reserve in Panna with long lease validity; so it will have to possibly look at MP for growth at risk of Rajasthan. Karnataka reserves are also adequate. A key white cement mine lease is also expiring in 2030.
JK Lakshmi	●	◔	JK Lakshmi will lose its key Sirohi mine in 2030, and UCWL's Daroli II mine in 2032. Remaining Daroli I mine would still be able to serve UCWL's clinker plant through 2043, but may struggle to service the larger Jaykaypuram plant 135kms away. It may have to bid aggressively to protect its reserves. The challenge for JK Lakshmi in East is not reserves, it's the location/rail evacuation.
Ramco	◔	◑	Ramco has a massive reserve base in Kurnool, with long mine life. That means a lot of brownfield potential (subject to EC as land is there), but also a handicap as Ramco is reluctant to venture outside (recent bid for North leases was welcome). TN reserves are depleting, although it has 60-70% higher reserves and longer validity vs Dalmia in TN.
Dalmia	●	◔	Dalmia/OCL's key mine in Odisha expires in 2040, but its reserves may not support production for >10 years. New Kottametta mine (Odisha) doesn't have proved reserves yet, and surprisingly low auction premium. TN reserves have 5-7 years life left even at 50% clinker utilization (if there is volume growth in TN, life is shorter than that).
India Cement	●	◔	India Cement has some key lime leases expiring in 2030-35. Would it remain a viable acquisition candidate?
Birla Corp	◕	◔	One key mine in North will expire in 2030, while Central and West have low reserves. The challenge with Birla is not as much lease expiration as low reserves; it will need resource to reserve conversion.
Nuvoco	◔	◔	Nuvoco is one of the best-placed companies in East, in terms of mine reserve size and validity. However, it doesn't have the balance sheet strength to capitalize on it for now.

Source: IBM, MoEFCC, Companies, Ambit Capital research; Note: ● - Strong; ◕- Relatively Strong; ◑- Average; ◔- Relatively weak.

North & South to witness greatest disruption

North and South would witness the greatest disruption amongst all the regions. In North, mid-cap players, such as JK Cement, JK Lakshmi and even Birla Corp to some extent are the most exposed. There is a possibility of either consolidation and/or higher cost curve for some of these players. In South, Gulbaraga would witness the greatest disruption, while TN actually needs new mine lease auctions to support depleting reserves. If those auctions get delayed, Ramco may stand to benefit by taking market share from Dalmia. East has the least possibility of further consolidation, although Dalmia may need success at Kottametta mine to support Rajgangpur plant. Otherwise a plant in Chattisgarh would be significantly lower on margin curve. In central India, UltraTech will need to protect its Jaypee reserves, but Heidelberg/KGS expirations could provide consolidation potential. In West, new entrants, such as Birla and Dalmia may need to boost their reserves/cost position.

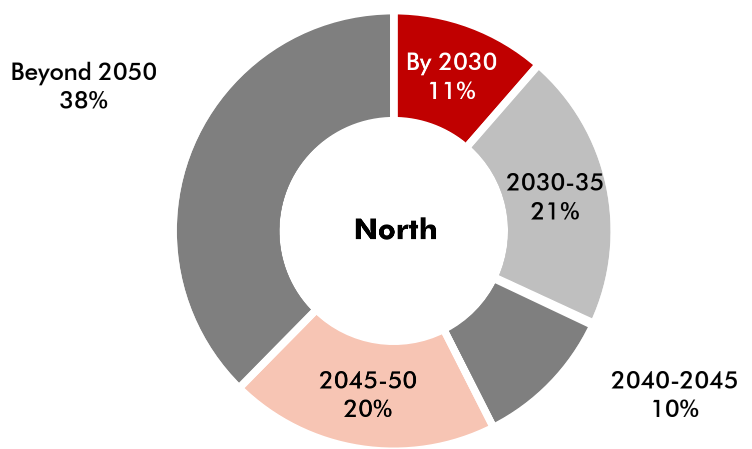
North – What's the game plan of mid-cap players?

North India will likely see the greatest disruption emanating from the MMDR Act and resultant cap on lease validity. Mid-sized players, such as JK Cement, JK Lakshmi and even Birla Corp to some extent are most exposed to such mining lease expirations. This region could thus witness greater consolidation/higher cost curve for mid-sized players post 2030-35, with Shree, UltraTech and Wonder holding even greater sway thereafter. Shree Cement's massive Nimbeti mine is set to expire in 2046, so are 65-70% of UltraTech's mining leases over 2045-46. Wonder Cement has the longest runway. South Rajasthan (Chittorgarh/Nimbahera/Mangrol) will witness the greatest disruption; Wonder and UltraTech could be the predators there. Most players will look at alternative/upcoming districts – Nawalgarh and Jaisalmer (possibly even Kotputli later) for growth. But Jaisalmer has geographic/locational disadvantage. Nawalgarh has very good quality limestone grade, seam thickness and lower lead distance to major end-market, but companies will need to navigate through high auction premium, expensive/long-drawn land acquisition process, water reservoirs ("johad") and intersection of water table in mining seams.

Mid-sized players, such as JK Cement, JK Lakshmi and even Birla Corp to some extent are most exposed to such mining lease expirations

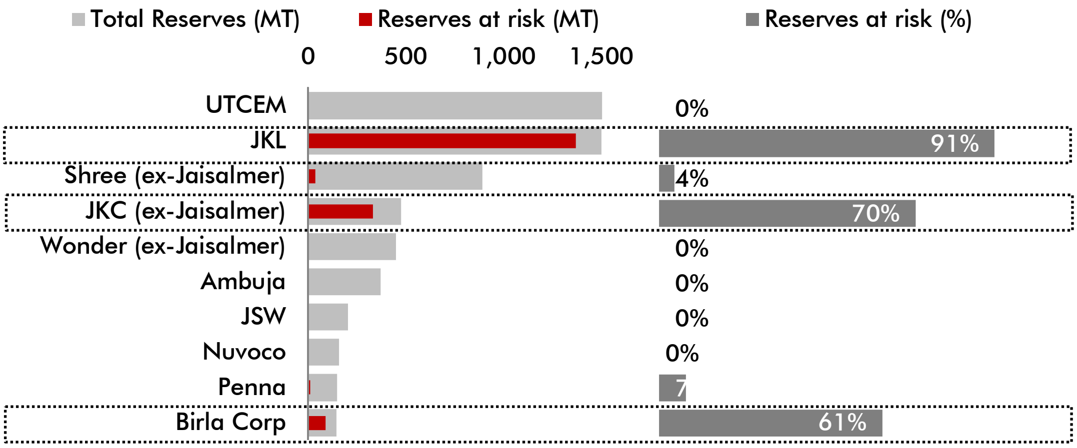
South Rajasthan (Chittorgarh/Nimbahera/Mangrol) will witness the greatest disruption; Wonder and UltraTech could be predators there

Exhibit 27: North will witness the greatest disruption, with mid-cap players most exposed- UltraTech, Shree and Wonder could possibly capitalize



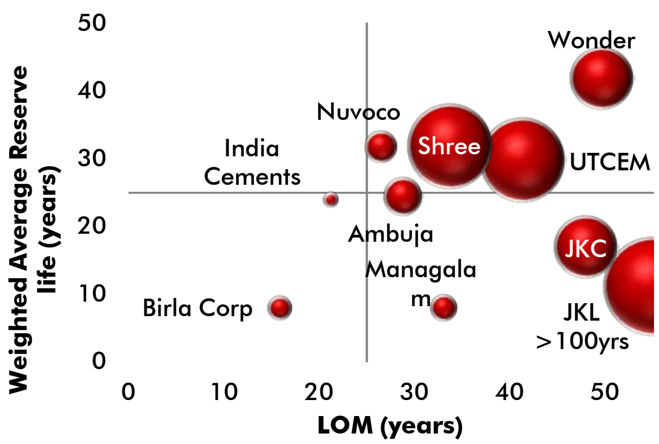
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 28: In North, JK Lakshmi, ACC, JK Cement and Birla Corp carry the highest lease expiration risk



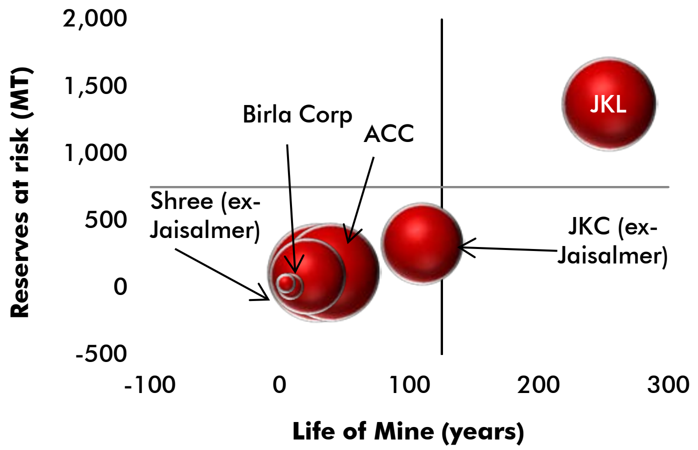
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 29: Birla Corp is exposed to the risk of both short life and low reserves, JK Cement and JKL have large reserves but are exposed to lease expiration risk



Source: IBM, MoEFCC, Companies, Ambit Capital research LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity); Bubble size is total reserves, Weighted average reserve life for remaining duration of mining leases

Exhibit 30: JK Lakshmi and JK Cement leases will be seen as attractive by others, especially by Wonder and UltraTech in South Rajasthan



Source: IBM, MoEFCC, Companies, Ambit Capital research; Note size of the bubble is % reserves expiring by 2035; reserves at risk signifies leases expiring by 2035

Exhibit 31: North will likely see the greatest disruption emanating from the MMDR Act – with players, such as JK Cement and JK Lakshmi being the most impacted

Company	Risk	Opportunity	Comments
JK Cement	●	◔	Mangrol Tilakhera and Nimbahera mines are slated to expire in 2030, while Malia Khera and Karuna in 2034. Based on our dataset, these mines account for 70%/75% of JK Cement's reserves/EC limit in Rajasthan (ex-Jaisalmer). One of the remaining mines in Neemuch (MP) that serves Chittorgarh/Mangrol has lot of sub-grade material. Management is looking at alternative sources of growth, including Jaisalmer. However, Jaisalmer is landlocked, has greater lead distance to major end-markets. The company may need to bid aggressively/pay high auction premiums to support its current clinker plants, which raises risk of higher cost/lower margins post mining lease expirations. A key white cement mine is also expiring in 2030.
JK Lakshmi	●	◔	JK Lakshmi will lose its key Sirohi mine in 2030, and UCWL's Daroli II mine in 2032. Remaining Daroli I mine would still be able to serve UCWL's clinker plant through 2043, but may struggle to service larger Jaykaypuram plant 135kms away. It may have to bid aggressively to support its reserves.
Shree	◑	◕	Nimbeti is the largest mine in India in terms of EC capacity (25MT). It has 25 years mine life based on current reserves. Mine lease will expire in 2046, implying lease validity for another 24 years. The company is looking at Nawalgarh for next leg of growth; it already has a leg-up there, with upcoming capacity expansion well ahead of anyone else in industry. Shree would contemplate brownfield expansions at Nawalgarh in future. But how does it capitalize on its existing investment in its massive Ras/Beawar set up? It may have to exercise RoFR to protect its Ras/Beawar infrastructure post 2046. Nevertheless, Shree is primed to benefit from possible consolidation/higher cost curve for others in region post 2030-35.
Ambuja	◑	◑	Kashlog mine in HP has lease validity through 2042. Brownfield optionality looks remote in HP. Mines in Rajasthan have a slightly longer runway through 2045. HP is a difficult place to operate/get EC, but UltraTech does have a clinker plant in the same location. Could UltraTech get into abiding war in 2042, in which case, Ambuja either loses this mine or exercises RoFR that leads to higher costs.
UTCEM	◑	●	UltraTech will lose 65-70% of its reserves in Rajasthan (ex-Nawalgarh) by 2045, but it does have couple of large mine leases whose validity stretches to well beyond 2050. UltraTech has a large land package/lease in Nawalgarh as well. It could be one of the biggest beneficiaries of lease crisis in North.
Wonder Cement	◔	●	Best-positioned player in North. Has large reserve base, with validity of both large mines well into 2050/60s.
Birla Corp	◑	◔	It will lose its key Jai Surjana mine in 2030. It does have a couple of other leases in same Chittorgarh region, sustenance of production would therefore require higher EC limit for these mines to offset expiration of Jai Surjana.
ACC	●	◔	ACC will lose its key mine Gagal in HP in 2030, also its smaller Lakheri mine in Rajasthan (ACC has a smaller footprint in Rajasthan). ACC has won Nawalgarh mine at 192% premium, so it is likely to continue to look at India as a high-growth market, but generating >10% RoCE at Nawalgarh may not be easy.

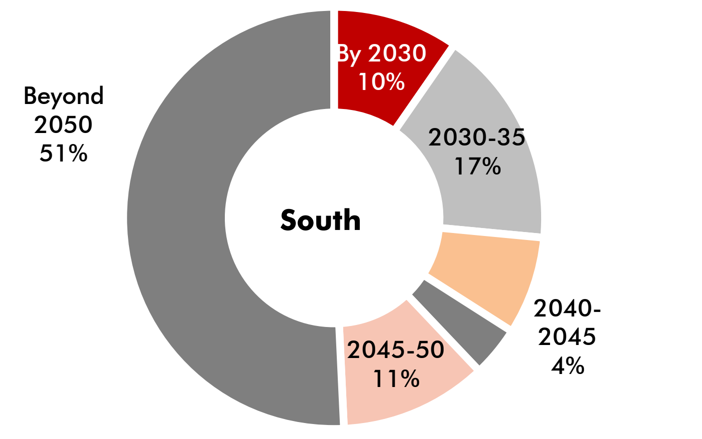
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: ● - Strong; ◕- Relatively Strong; ◑- Average; ◔- Relatively weak.

South-TN needs auctions, soon

Gulbarga region in Karnataka is the most exposed to lease expirations, while Tamil Nadu the least. UltraTech will lose a key mine in Gulbarga in 2030, while India Cement in AP + Telangana through 2030-35. But given they are operating at lower utilizations, possibility of brownfield expansion/capacity onslaught in order to maximize value of remaining life appear remote. Zuari, Vicat, Chettinad and Kesoram will also lose some key mines in Gulbarga/AP+Telangana. That means possibly some consolidation and higher cost curve post 2030-35. The challenge with Tamil Nadu is depletion, and not lease expiration as much. Dalmia has a couple of lease expirations in TN in 2030, but that's still far off as reserves will deplete much before that. Ramco has limited reserves in TN as well, but it may gain market share if there is delay in eventual auctions. Ramco has significant brownfield potential in both Kurnool and Jayanthipuram.

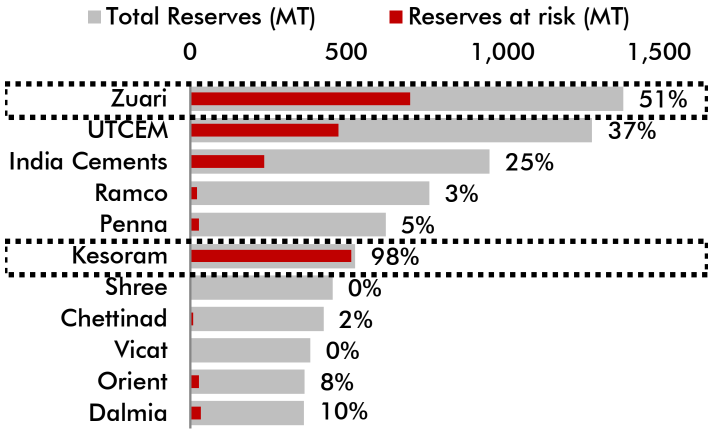
The challenge with Tamil Nadu is depletion though, not as much lease expiration. Dalmia has a couple of lease expirations in TN in 2030, but that's still far off as reserves will deplete much before that

Exhibit 32: Within South, Gulbarga region will see the greatest expiration



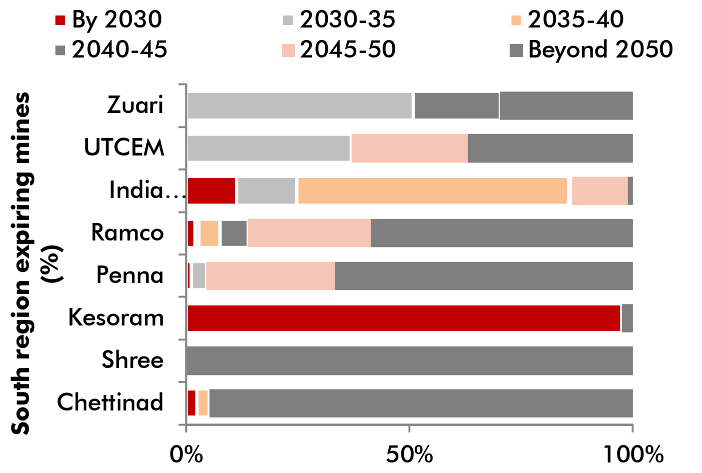
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 33: Zuari, Keosram, UltraTech will witness lease expiration in Gulbarga, India Cement in AP+Telangana



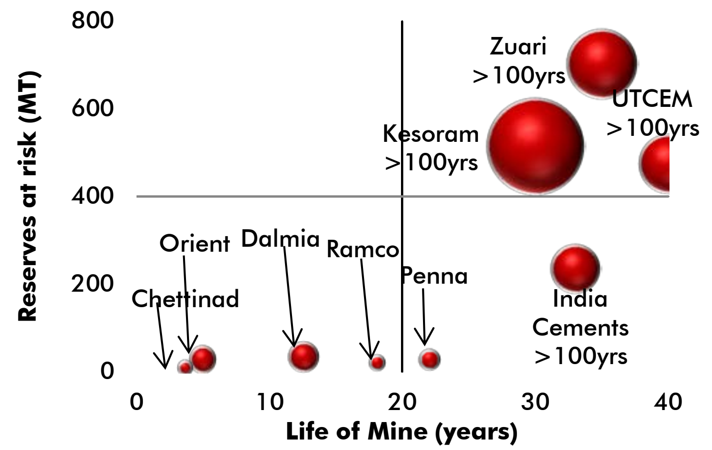
Source: IBM, MoEFCC, Companies, Ambit Capital research. Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 34: Zuari, India Cement, Kesoram and even UltraTech carry higher mine expiration risk here



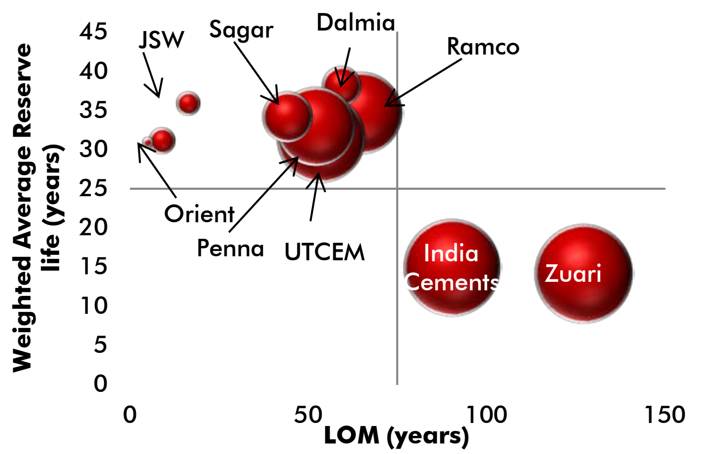
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 35: Would India Cement (already high-cost player) bid aggressively to protect its mine – would discipline hold?



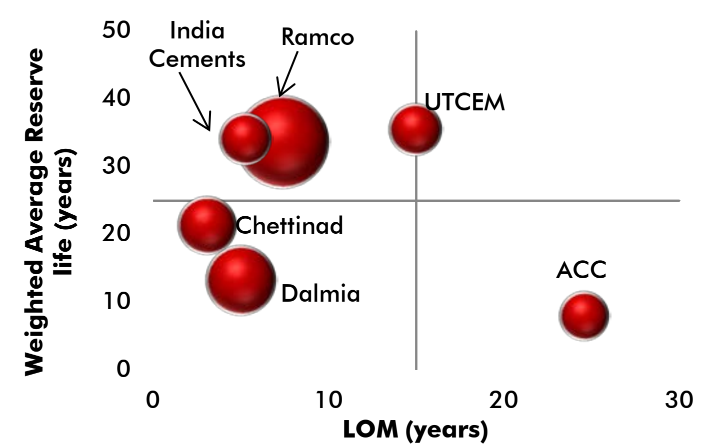
Source: IBM, MoEFCC, Companies, Ambit Capital research; Note size of the bubble is % reserves expiring by 2035; reserves at risk signifies leases expiring by 2035

Exhibit 36: AP+Telangana – Orient will need support from Telangana State Mineral Development Corporation (TSMDC) in boosting its Devapur reserves



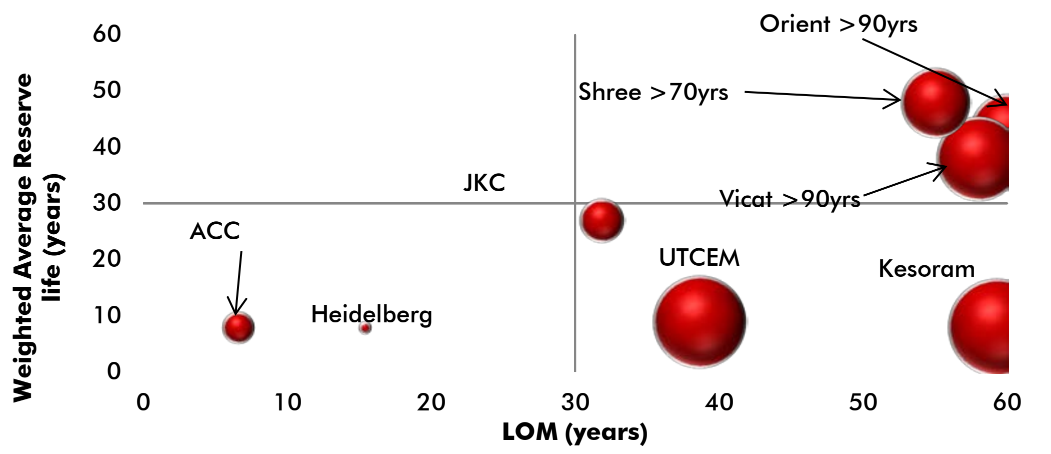
Source: IBM, MoEFCC, Company, Ambit Capital research LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity) ; Bubble size is total reserves; Weighted average reserve life for remaining duration of mining leases

Exhibit 37: Tamil Nadu – Players generally have low reserves here, need auctions soon



Source: IBM, MoEFCC, Company, Ambit Capital research LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity) ; Bubble size is total reserves; Weighted average reserve life for remaining duration of mining leases

Exhibit 38: Gulbarga (Karnataka) –this region has large reserves, but Kesoram and UTCEM are staring at lease expiration



Source: IBM, MoEFCC, Company, Ambit Capital research LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity) ; Bubble size is total reserves; Weighted average reserve life for remaining duration of mining leases

Exhibit 39: South-Gulbarga to witness the greatest disruption, challenge in TN is not lease expiration but reserve depletion

Company	Risk	Opportunity	Comments
ACC	●	◔	Reserves in Madukarrai are already depleting. It will lose its Wadi mine in Karnataka and Walayar in TN in 2030. ACC has won a new mine in Wadi to possibly support its plant beyond 2030, though at a higher cost curve.
India Cement	●	◔	Will lose most of its leases in AP+Telangana by 2032. It does have a couple of leases in Sangamkalan (Telangana) whose validity runs to 2048. TN reserves are not expiring soon, but have low reserves. India Cement's plants are older/less efficient, and multiple leases are expiring in 2032. Would it remain a viable acquisition candidate?
Ramco	◔	◕	Ramco has massive reserve base in Kurnool, whose validity stretches into 2050s/2060s. It has large brownfield optionality in Kurnool, but that's also a handicap as Ramco is hesitant to venture into other regions (although it did bid aggressively for certain deposits in North). Jayanthipuram also has large reserve base, lease validity at Budawada mine. TN reserves are depleting, although these are 60-70% higher vs Dalmia's with longer lease validity. If there is a delay in the eventual actions, Ramco may actually benefit from market-share gain.
Dalmia Bharat	◕	◔	Will lose a couple of its key TN mines in 2030. But total TN reserves anyways can't support production beyond 5-7 years. So Dalmia will need to augment its leases in TN well before lease expiration. Government will eventually auction leases, but delay may mean lost production. Reserves in Karnataka, AP+Telangana are adequate.
UTCEM	◑	◑	UltraTech will lose its large Rajashree mine in Gulbarga in 2030. That's the biggest hit for UltraTech anywhere in India. It may have to bid aggressively for this deposit when it comes for re-auction. AP+Telangana reserves are large, with long validity.
Chettinad	◕	◔	Will lose its key mine in Gulbarga in 2040, some TN reserves as early as 2030-32.
Others	●	◔	Zuari and Vicat will lose some key mines in Gulbarga and Telangana by 2032.

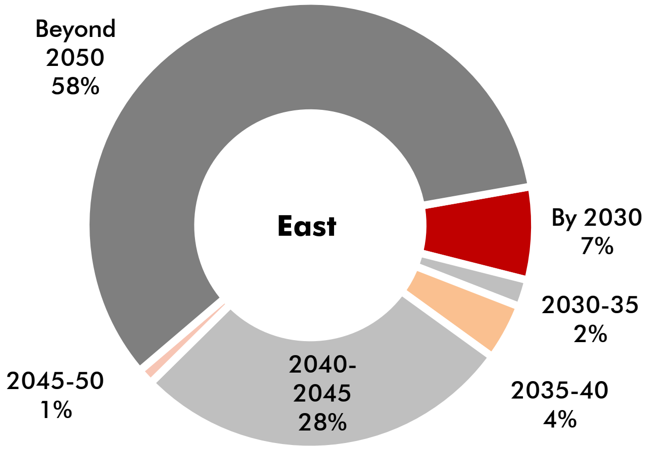
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: ● *- Strong;* ◕*- Relatively Strong;* ◑*- Average;* ◔*- Relatively weak.*

East – What is Dalmia's game plan here?

East would likely witness less disruption relative to North and South, therefore possibility of consolidation looks relatively remote

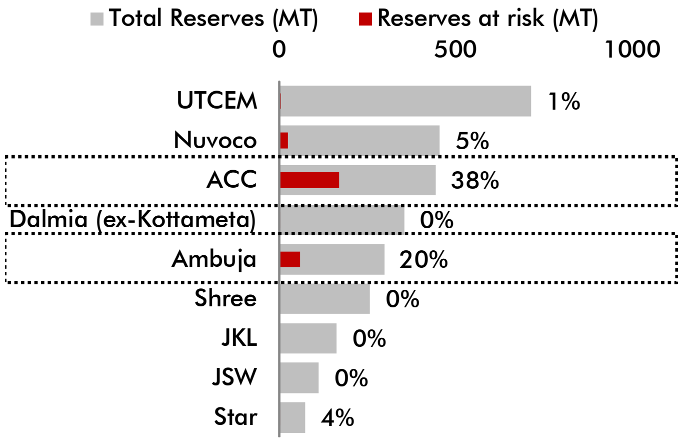
East would likely witness less disruption relative to North and South, therefore possibility of consolidation looks relatively remote, considering Ramco also has a large reserve base and long lease life in Jayanthipuram. Dalmia (OCL) reserves in Odisha wouldn't support Rajgangpur production beyond 10 years, it will need exploration success at new Kottametta lease to support its Eastern production/growth. Dalmia won Kesla II block in Chhattisgarh at high premium – unless it surrenders this mine lease, Dalmia may need to commission a clinker plant in Chhattisgarh by 2026; this will be significantly lower on margin curve vs current Rajgangpur plant. Nuvoco is one of the better positioned players here, but doesn't have balance sheet strength to capitalize on any opportunity here. Given long lease validity and reserve size, it can actually exercise discipline and look at other regions for growth, provided it gets balance sheet room.

Exhibit 40: East is exposed to relatively lower mine expiration risk



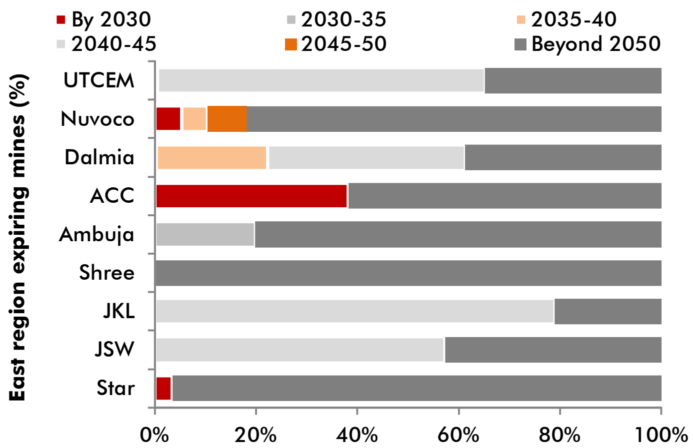
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 41: Holcim group will witness highest % of lease expiration in East India



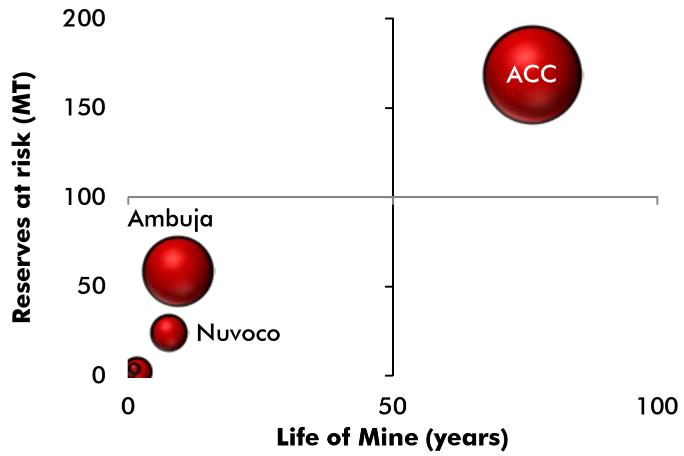
Source: IBM, MoEFCC, Companies, Ambit Capital research Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 42: Like other regions, ACC is the most exposed here to expiration risk



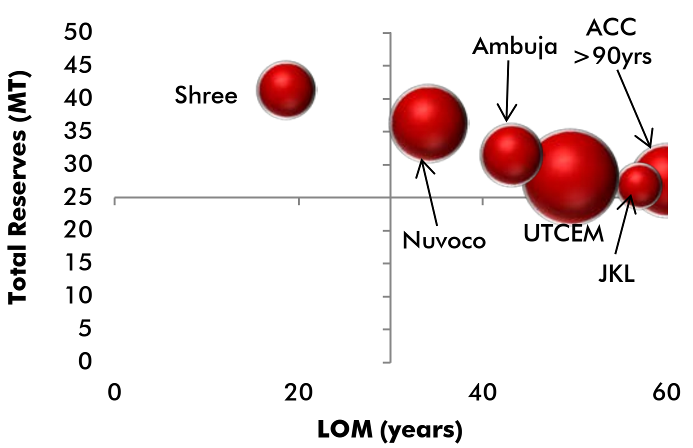
Source: IBM, MoEFCC, Companies, Ambit Capital research. Note: The above data includes North East

Exhibit 43: ACC reserves base here would be attractive to others



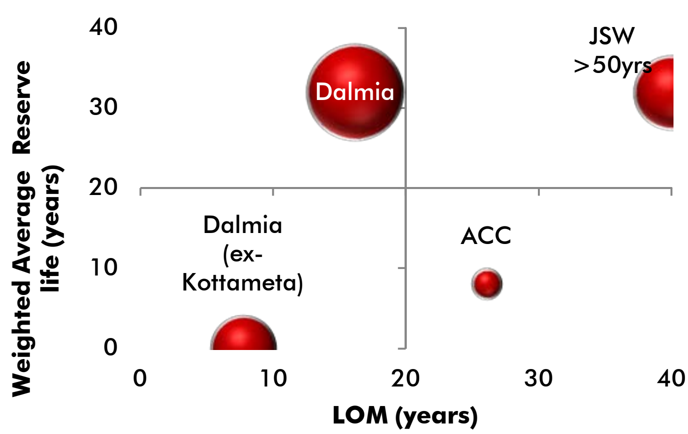
Source: IBM, MoEFCC, Companies, Ambit Capital research. Note size of the bubble is % reserves expiring by 2035 LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity)

Exhibit 44: Chhattisgarh- Shree may not have brownfield potential beyond upcoming expansion



Source: Company, Ambit Capital research LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity) ; Bubble size is total reserves; Adj reserve life=weighted average remaining duration of mining leases

Exhibit 45: Odisha – Dalmia will need exploration success at Kottametta to support production beyond 10 years



Source: Companies, Ambit Capital research LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity) ; Bubble size is total reserves; Weighted average reserve life for remaining duration of mining leases

Exhibit 46: East India – Dalmia's OCL mine has low reserves, Kottametta holds the key

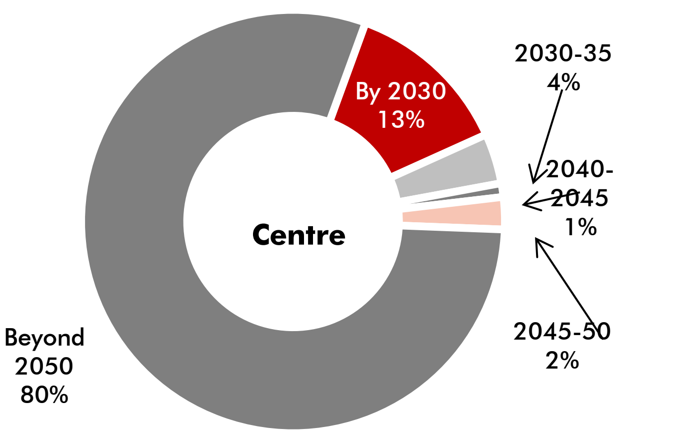
Company	Risk	Opportunity	Comments
ACC	●	◔	It will lose 4 key mines in Chhattisgarh in 2030, although will have a couple of mines whose lease expires in 2050s. This is the region where ACC still has the most comfort on lease expiration.
Ambuja	◑	◑	Ambuja has two mines in Bhatapara. The significantly larger one runs through 2059, smaller one expires in 2031.
Dalmia Bharat	●	◔	OCL's Lanjiberna mine in Odisha is key mine that supports Dalmia's Rajgangpur clinker plant, its competitive advantage in region. However, that mine expires in 2040, more importantly it has just 88MT of mineable reserves. How long can it support its 7.7MT clinker (post expansion), assuming 80% utilization? >10 years life may appear difficult. Dalmia won large land package in auction in 2017 with probable reserve of 98MT at Kottametta (Odisha), but given low auction premium (10%) and lack of proved reserves, is there a risk? It paid a high premium to acquire Kesla II block in Chhattisgarh; any future plant there will be much lower on regional margin curve vs Rajgangpur.
Nuvoco	◔	◑	It is one of the best positioned. Most of its leases expire well into 2050s. Also, given LoM of almost 30 years, it does have brownfield potential. But it may not be able to capitalize on that for a long time, given stretched balance sheet and focus on other regions.
UTCEM	◔	●	Best-positioned player in the region. Its large mine will expire in 2043, but others have runway into 2050s/2060s. It has both brownfield potential and balance sheet strength to capitalize on any opportunities.
Shree	◑	◑	Bhatapara lease validity runs into 2050/2060s. However, post 10MT clinker, brownfield optionality will be limited with LoM of 20 years based on current reserves. It will need resource to reserve conversion and EC limit approval for any further expansion.
JK Lakshmi	◔	◔	JK Lakshmi's challenge in East is not its east reserves, but its plant set-up in Chhattisgarh and lack of rail evacuation.

Source: IBM, MoEFCC, Companies, Ambit Capital research Note: ● - Strong; ◕- Relatively Strong; ◑- Average; ◔- Relatively weak.

Central – Can there be more consolidation?

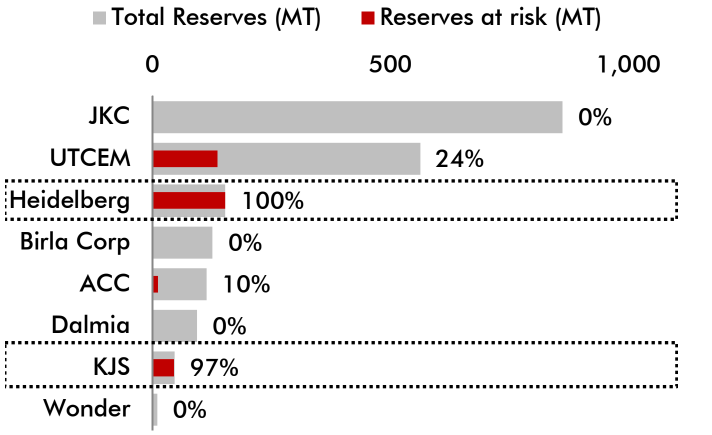
UltraTech will see some legacy Jaypee leases expire here in Central India, especially the ones in Secundrabad (UP) that support its Dalla plant. However, lease expirations for Heidelberg and KJS could provide opportunity for more consolidation. Unlike some other regions, Ambuja wouldn't be able to come to the rescue of ACC here.

Exhibit 47: Central India – Most leases have long tenure



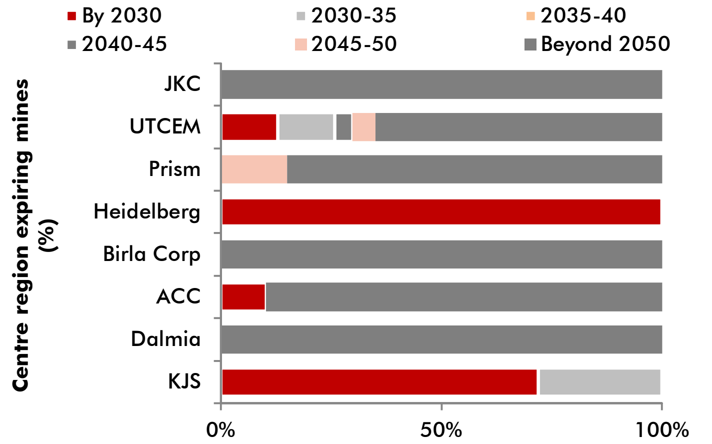
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 48: Heidelberg and KJS appear to be more exposed, while UTCEM as well (especially in UP)



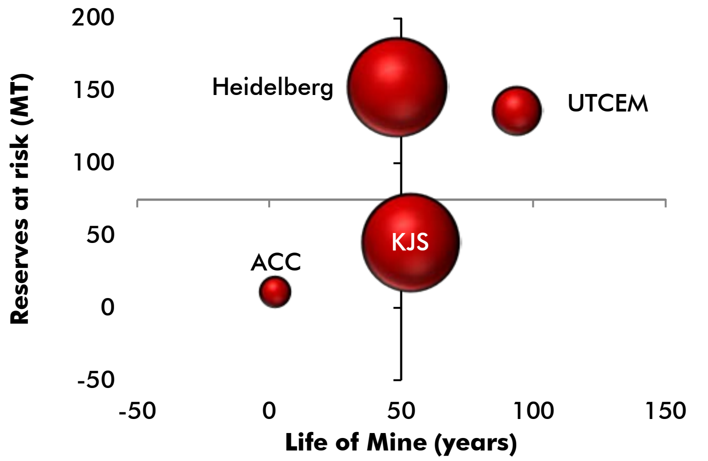
Source: IBM, MoEFCC, Companies, Ambit Capital research. Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 49: UltraTech, Birla Corp, Heidelberg and ACC are most exposed



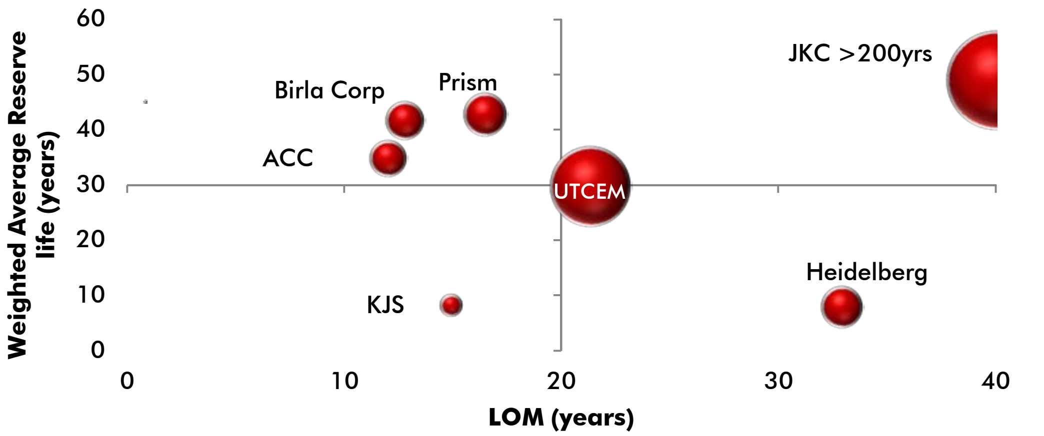
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 50: ACC & Birla Corp leases expiring in 2030 are small, but Heidelberg and KJS may witness competition



Source: IBM, MoEFCC, Companies, Ambit Capital research Note size of the bubble is % reserves expiring by 2035 LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity)

Exhibit 51: MP and UP – ACC doesn't have lease expiration risk here, but has low reserves, same for Birla Corp (JK cement is in strong position here)



Source: Companies, Ambit Capital Research, IBM, MoEFCC, Note- LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity) ; Bubble size is total reserves; Weighted average reserve life for remaining duration of mining leases

Exhibit 52: Central India – Could there be more consolidation?

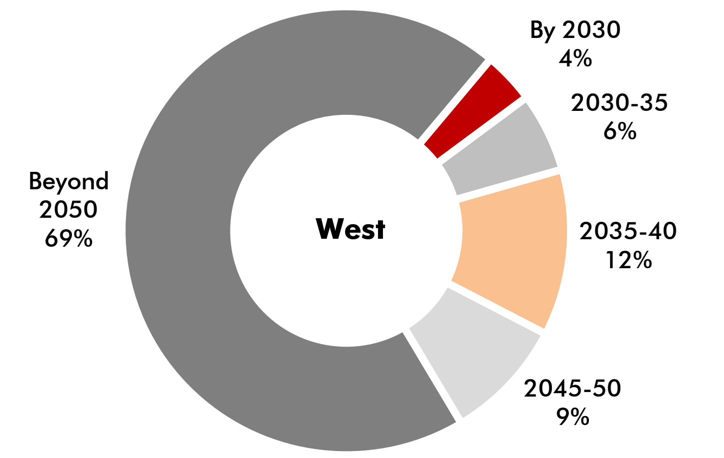
Company	Risk	Opportunity	Comments
ACC	●	◔	It will lose some key mines in Katni, MP in 2030. The larger one in Ametha has longer validity, though it doesn't have reserves to support >10 years life. Ambuja can't come to the rescue here.
Heidelberg	●	◔	Heidelberg has two main mine leases in MP. One is smaller and has only few years of mine life left (not enough resources as well). The larger Patharia mine lease expired in 2012; we couldn't ascertain it has been renewed or what is the expiry of the mine lease. Although it does have a large reserve base, we suspect it will likely expire in 2030.
UTCEM	◑	◑	UltraTech will lose 40% of its mine leases by 2035, including all its UP (jaypee) mines that support Dalla.
JK Cement	◔	●	Its mine that supports its upcoming Panna plant has long lease validity, and allows significant brownfield potential, subject to EC approval.
Dalmia	◑	◑	Dalmia has two key mines in Satna to provide growth for next phase. Both expire well into 2060s. However, the current reserve base is small. It does have large resource potential, so will need resource to reserve conversion.
Birla Corp	◕	◔	Birla Corp's mine leases expire well into 2050s/2060s, but reserve base is relatively small, allowing for mine life of <20 years. That means it may need resource to reserve conversion to support life beyond that.

Source: IBM, MoEFCC, Companies, Ambit Capital research Note: ● - Strong; ◕- Relatively Strong; ◑- Average; ◔- Relatively weak.

West India – New entrants need to boost reserves

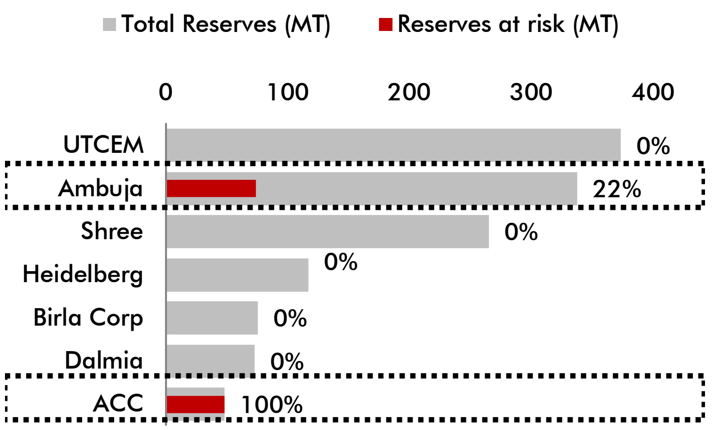
UltraTech's Chandrapur mine leases which command >10MT EC and support UltraTech's clinker in Maharashtra will expire by 2031. The challenge with West is not as much lease expiration, as is the need for new entrants, such as Birla Corp and Dalmia to boost their reserves, exploration, additional mines through auctions.

Exhibit 53: Lowest reserves in India anyway-this region gets fed to a large extent from Gulbarga



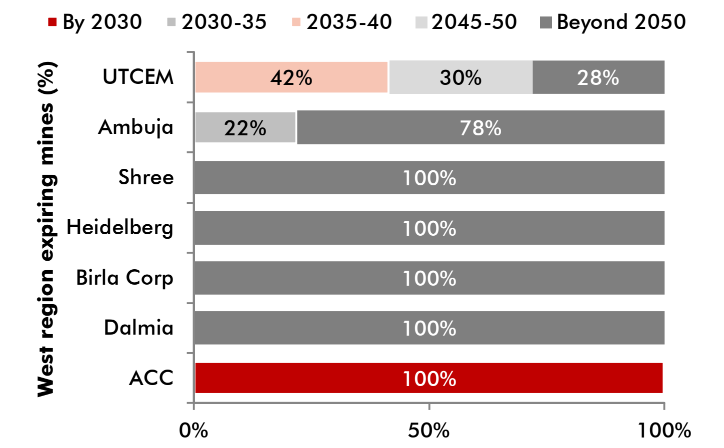
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 54: New entrants like Birla and Dalmia have long lease validity, but need to boost reserve base



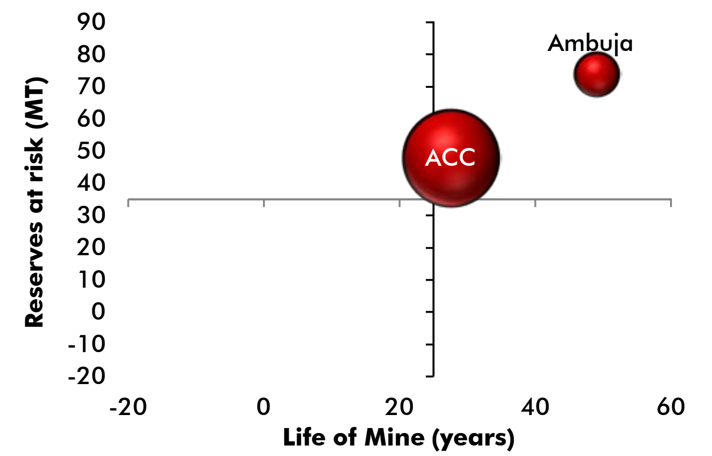
Source: IBM, MoEFCC, Companies, Ambit Capital research Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 55: ACC and Ambuja carry higher lease expiration risk here



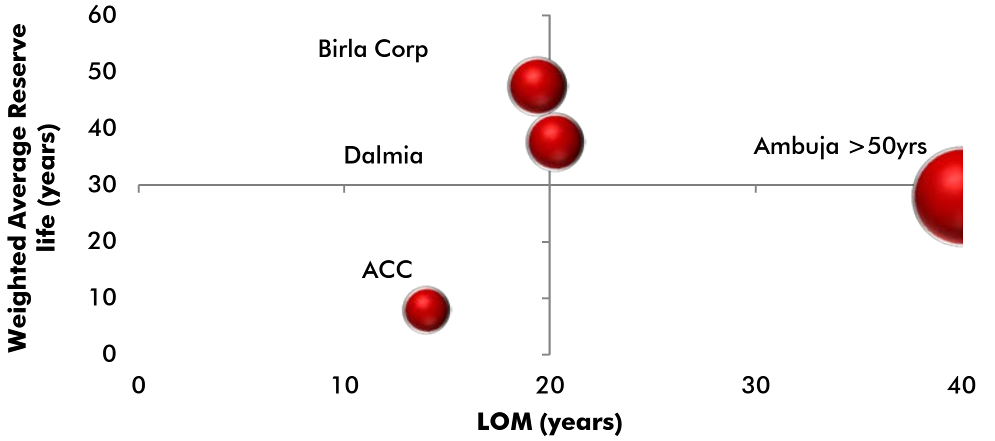
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 56: Competition may find Ambuja's Maratha lease attractive when it expires in 2034



Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 57: Maharashtra – Both Birla and Dalmia need to boost reserves here



Source: Companies, Ambit Capital Research, IBM, MoEFCC, Note- LOM= Reserve size/(limestone requirement assuming 100% utilization for FY24 clinker capacity) ; Bubble size is total reserves; Weighted average reserve life for remaining duration of mining leases

Exhibit 58: West India – the challenge is not as much lease expiration as it is the need for some players to boost reserves

Company	Risk	Opportunity	Comments
ACC			It will lose its Sindola and Govari mines in 2030.
Ambuja			Ambuja will lose its Maratha mine in Chandrapur in 2034, but other mines in Maharashtra have longevity. Ambuja can support brownfield expansion in Maharashtra even without expiring Maratha mine, subject to EC approval at other mines. Its mines in Gujarat have longevity, though we couldn't truly ascertain the size of reserves.
Birla Corp			Birla Corp has reserves in Mukutbun and Chandrapur, but Chandrapur is 67kms distance from Mukutban. Mukutban doesn't have proved reserves yet (only 122), while both have combined reserves (proved + probable) of just 74MT right now, whereas annual limestone requirement at 100% utilization could be >4MT. So, even after including proved reserves, LoM is <20 years.
Ultratech			The biggest risk for UltraTech is in Chandrapur (Maharashtra) – mines supporting its Maharashtra clinker will expire by 2031.
Dalmia Bharat			Dalmia has 3 limestone mines that support its Murli plant; the mines have geological reserves of almost 50 million tonnes, supporting LOM of >25 years, but geological reserves include probably reserves and resources; so it will need conversion. It has won a new lease with 43MT of geological reserves, but this mine is 85kms from the plant, resulting in high transportation cost.

Source: IBM, MoEFCC, Companies, Ambit Capital research Note: - Strong; - Relatively Strong; - Average; - Relatively weak.

Decision tree for strategic planning

Companies will see multiple leases expire over 2030-35. Possible strategy for these companies would depend on attractiveness of deposit – quality and size of reserves left post expiration. For certain deposits, companies may try to accelerate net realizable value of inventory ahead of lease expiry, which may mean higher capacity addition through FY30-35. When leases expire and come for auction, existing lessee can exercise right of first refusal (RoFR) to protect its plant. That would mean higher cost structure, but letting the mine go would raise risk around sustenance of plant operations. There is possibility of greater consolidation post 2030-35, but what is even more likely is higher cost structure for companies that have greater exposure to lease expirations, especially for mines that may be attractive to others. Holcim may work differently – Ambuja can sell surplus limestone to ACC in certain locations by paying ₹15-20/t additional royalty, but that may raise questions from Ambuja shareholders.

Attractiveness of deposit would dictate strategic actions

An existing lessee wouldn't be worried about unattractive deposit – it may actually take this block back at 5-10% reserve price. But what if deposit is attractive?

The most important variable in this game of limestone is attractiveness of deposit – both to the current and potential lessee. Imagine two deposits – one with only 10-15MT reserves left, low upside from conversion of resources to reserves and dearth of competing clinker capacity within 40-50kms radius. There is another deposit that has >100MT of reserves left, maybe additional upside from exploration and there are multiple clinker plants within 20-30kms radius. The former is unattractive to others, latter is attractive. Both existing and neighboring plants are aware of this as government would share data with all prospective bidders once deposit comes up for auction. An existing lessee wouldn't be worried about unattractive deposit – it may actually take this block back at 5-10% reserve price. But what if deposit is attractive? Existing lessee may try to accelerate net realizable value of the inventory ahead of expiration.

Risk of brownfield expansion ahead of mining lease expiration

Certain companies may look to maximize net realizable value of limestone reserves- so that raises risk of higher capacity addition in run up to such lease expirations

Imagine a cement company has limestone lease coming up for expiration in 2030-2035. In normal course of business, it would like to maintain a >20-year mine life and evaluate its annual production/EC limit based on that. But in this case, such considerations don't hold sway. Certain companies may look to maximize net realizable value of limestone reserves; so that raises risk of higher capacity addition in run-up to such lease expirations. Would it make sense to add capacities though if you are already operating at just 50% utilization? Possibly, not. Which is why risk of UltraTech disrupting market in Gulbarga or India Cement in AP+Telangana looks remote. That risk is higher for companies operating at higher utilization – Holcim, Heidelberg, JK Cement, JK Lakshmi, etc. Brownfield optionality would also be a function of grant of EC approval, availability of land, etc. – so disruptive potential from such capacity additions would really vary on case-to-case basis. But would companies generate adequate IRR on these investments, in case they lose the mine in 2030-35? That's also why investors should give greater weightage to DCF/IRR over incremental RoCE.

Does existing lessee exercise right of first refusal (RoFR)?

The Act provides right of first refusal (RoFR) to existing captive lessees, similar to right to match card in previous IPL editions

The Act provides right of first refusal (RoFR) to an existing lessee. For instance, let's consider a company A that has an attractive deposit that comes up for auction post lease expiry. There might be a bidding war if that deposit comes up for auction. Existing lessee can match that offer (yes it's similar to right to match card with IPL teams in previous editions; for instance, Mumbai Indians used the right to match card to retain Pollard and Pandya in 2018). In that case, existing lessee's cost structure will increase considerably relative to current structure. If it doesn't exercise the right though, there might be a risk to sustenance of plant operations or growth optionality.

Competition is also studying the decisions taken by existing lessees

A company that will see lease of an attractive deposit expire in 2030 has 2 options – expand capacity or wait till 2030. If it decides to expand, it has even greater stakes in protecting this asset. Competition can raise bidding for the reserve just to hurt cost structure of existing lessee. If existing lessee decides to wait, it may send a signal that the lessee is itself worried about losing the asset.

A company that will see lease of an attractive deposit expire in 2030 has 2 options –expand capacity or wait till 2030. Competition is studying these strategic choices

Holcim's decision tree

There are multiple MNCs that are most exposed to the risk of lease expiration; ACC, Ambuja, Zuari, Heidelberg, Vicat. Do they remain steadfast on decarbonization, adhering to parent company standards in such a case when there is a tail risk of production loss post 2030? That may not seem prudent. That would apply to Holcim as well, though its situation is somewhat unique. ACC is a subsidiary of Ambuja. The MMDR Amendment Act allows a company to sell upto 50% of its captive mineral production in open market, provided it pays state an additional charge. That additional charge is just ₹15-20/t for limestone. ACC has adequate reserves in East even post expiration, while Ambuja is not present in Central and South India. Places of interest could be Himachal Pradesh (HP) and West India. In case ACC loses its mines here, Ambuja could possibly come to the rescue and sell some limestone to ACC at arms-length? Limestone is more valuable as clinker than as mineral. Would such subsidy to ACC be acceptable to Ambuja shareholders, even if Ambuja contends that it still has large exploration potential at these deposits?

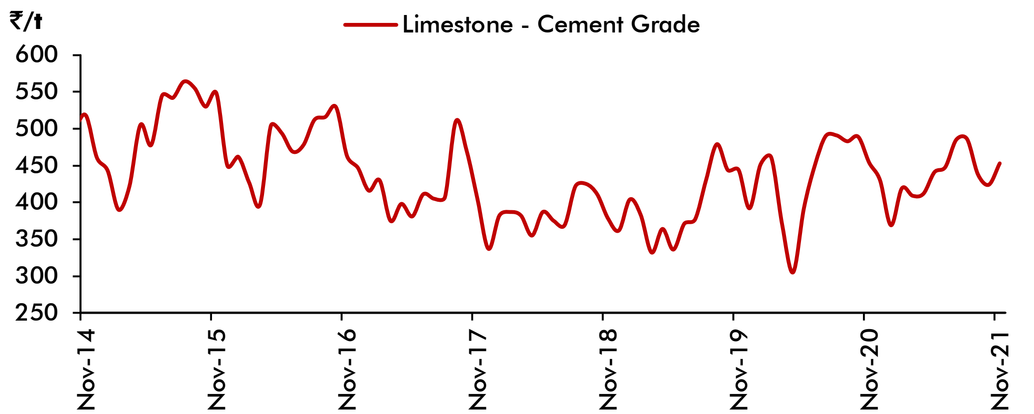
ACC is a subsidiary of Ambuja. The MMDR Amendment Act allows a company to sell upto 50% of its captive mineral production in open market, provided it pays state an additional charge. That additional charge is just ₹15-20/t for limestone.

Could cement companies manipulate IBM limestone price in future?

Limestone auction premium is actually paid on monthly IBM price published on IBM website. For instance, current IBM price is around ₹450/t. If someone won an auction block @100% premium, that company is committing to pay a premium of ₹450/t to the state government on a monthly basis. But IBM price is actually an average of top-10 merchant companies in the state. Unlike iron ore, merchant market for limestone is extremely small. Large cement companies don't sell limestone in merchant market, it's the smaller players (such as small producers in Kotputli, Rajasthan) that capture that market by selling sweeteners (limestone CaO of >45% typically) to cement companies. So, IBM price is based on the prices realized by these players. Could larger players step up into this market in order to drive IBM price and hence their costs down? That can't be ruled out, although it would likely be fraught with legislative risk as it means lower revenue to states.

IBM price is based on prices realized by small players. Could larger players step up into this market in order to drive IBM price and hence their costs down? That can't be ruled out, although it would likely be fraught with legislative risk

Exhibit 59: IBM price is actually an average of top-10 merchant companies in the state



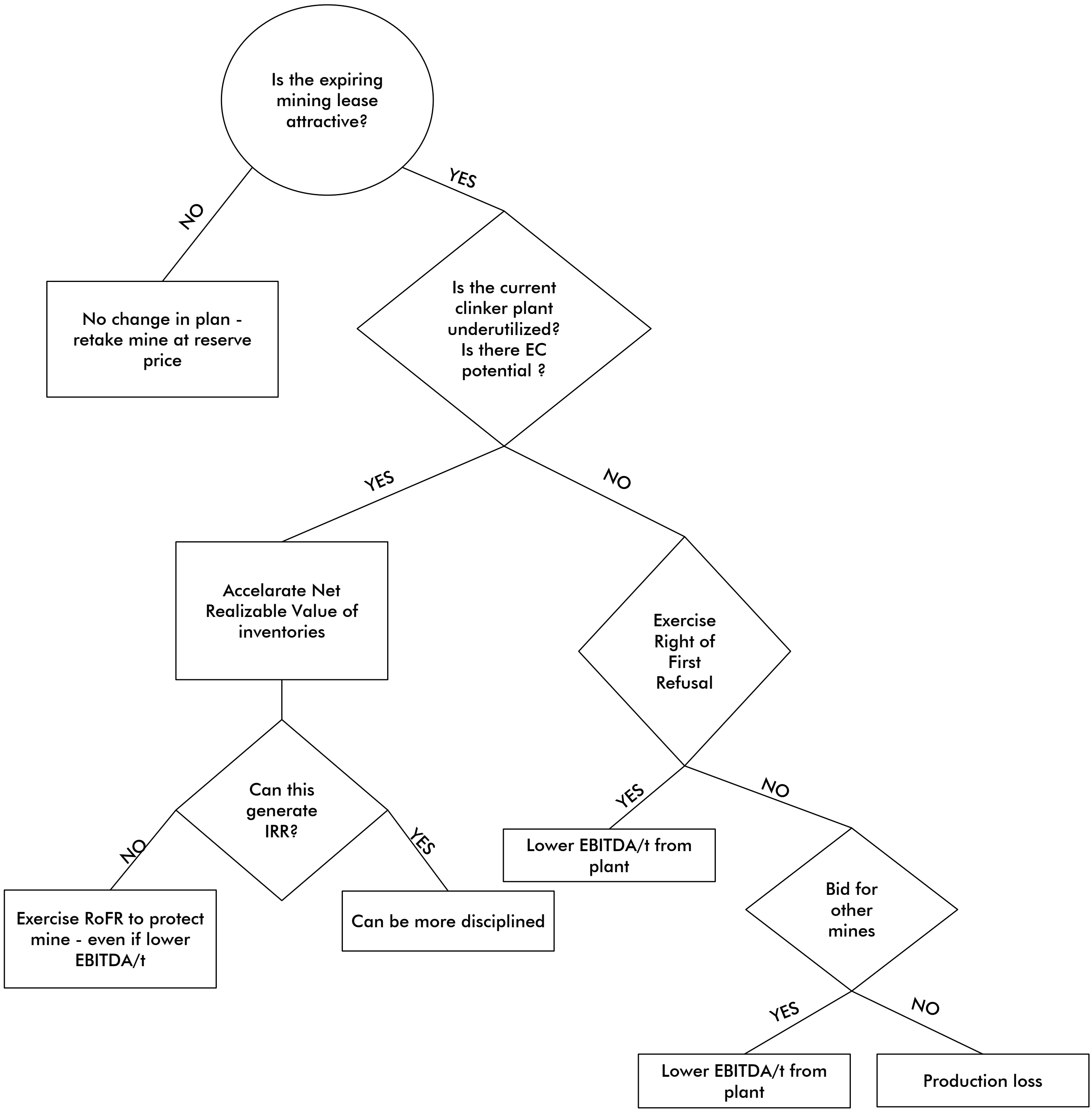
Source: Company, Ambit Capital research

How is this situation different from what's happening to Tata Steel?

The MMDR Amendment Act encompasses all minerals, and is not limited to limestone. Iron ore is one of the most important revenue generating minerals for states, such as Odisha, Chhattisgarh, Karnataka, etc. Tata Steel, the only privately held integrated steel producer with iron ore captive mines and also the highest EBITDA/t steel in India, will see its captive mine leases expire in 2030. Tata Steel earnings have two components – iron ore EBITDA and convertor EBITDA. Investors accord lower multiple to Tata Steel's iron ore EBITDA, given it doesn't have that longevity. Tata Steel knows it has captive leases till 2030 only; so it is strategizing to maximize net realizable value of its iron ore leases. That is why TSL has greater appetite for acquisitions and/or organic growth. But what's happening to TSL is not an all industry encompassing situation. TSL is an outlier in steel for having captive leases. Also, there is a large merchant market for iron ore. Even if TSL loses its captive mines in 2030, it can buy iron ore from merchant market. That's not the case with limestone.

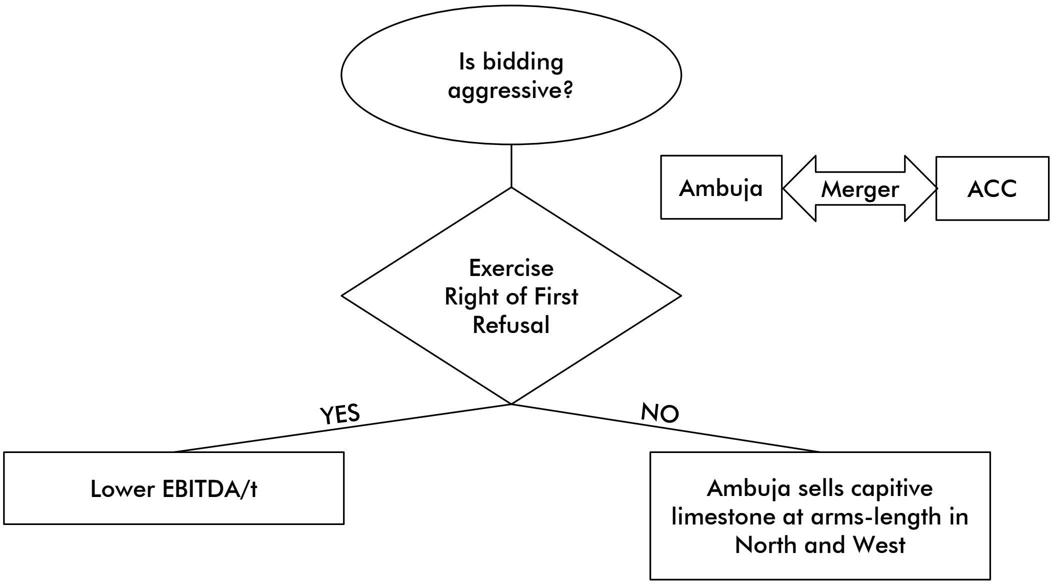
Tata Steel knows it has captive leases till 2030 only. That is why TSL has greater appetite for acquisitions and/or organic growth. But there is a large merchant market for iron ore. Even if it loses its captive mines in 2030, it can buy iron ore from merchant market. That's not the case with limestone

Exhibit 60: Attractiveness of deposit would dictate strategic actions



Source: Company, Ambit Capital research

Exhibit 61: Holcim's decision tree



Source: Company, Ambit Capital research

Sizing up near/medium/long-term outlook

Indian cement industry is at a crossroad; it is staring at both opportunities and threats over near-, medium- and long-term outlook. However, we believe threats outsize opportunities from where we stand today. Keeping energy crisis aside for a moment, one of the most glaring threats is incessant capacity addition – stemming from: 1) excess cash that needs to be deployed; 2) the MMDR Amendment Act that now forces companies to act on their mining leases; 3) strategic actions by management teams ahead of certain lease expirations. Longer term, there is possibility of more consolidation, but a more likely outcome could be higher cost structure for some of the mid-cap players. However, while we believe valuations are relatively more attractive now, we just need some more correction to catalyze a change in our SELL stance on sector.

Exhibit 62: Indian cement industry is at a crossroad, but threats outnumber possible opportunities for now

Particulars	Opportunities	Threats
Near-term		
	▪ Budgetary firepower with government for 4QFY22 leads to revival in demand in Mar-Jun'22.	▪ Russia-Ukraine crisis lingers on, Chinese demand picks up cyclically in 2HFY23, while European gas inventories remain below previous 5-year average levels; any significant moderation in fuel prices may be short-lived.
	▪ Smaller cement players struggle to procure imported coal (WC financing, weaker relationships), leading to supply disruption & thus more pricing power.	▪ Window for moderation in P&f/t shrinking; if fuel costs moderate in May'22, cement companies may pass all of that to consumers in 2QFY22, a monsoon quarter.
	▪ China steps in to increase coal production in order to counter runaway inflation, delaying decarbonisation goals.	▪ Because of global energy tightness, there is increased demand for Indian domestic coal. There is slower build heading into summer, which could result in domestic coal shortage post summer (similar to last year), driving not just higher fuel but power costs as well.
		▪ Diesel prices, truck freight increase in Mar'22 post state elections.
		▪ Rural distress, lower allocation to PMAY, roads, etc.
		▪ No respite on WC investment – lower EBITDA-to-CFO conversion, even more challenging for over-levered players.
Medium-term		
	▪ Companies witness improvement in RoCE from capital allocation to WHRS, solar power, AFR projects.	▪ Lack of investment in fossil fuels globally leads to higher than historical energy prices, where coal/petcoke prices, even if they moderate from here, stay at well above historical prices. Cement companies struggle to pass entire cost to consumers.
	▪ Higher share of brownfield capex in total spend aids incremental RoCE.	▪ Truck freights increase as supply additions don't match demand, unorganized truckers lose market share.
	▪ Capex cycle-companies and banks have strong balance sheet now (opposite of twin balance sheet situation historically). Both public and private capex leads to strong capex cycle.	▪ Public/government capex crowds out private capex as higher deficit/borrowing costs lead to lower end-user demand/higher costs for companies.
		▪ Capacity onslaught – 1) excess cash with companies needs to be deployed, 2) the MMDR Amendment Act now forcing companies to act on auctioned leases (2+1 years for limestone dispatch, 1-2 years of inventory holding adidtional), 3) companies losing deposits in 2030-35 decide to accelerate realization of their remaining inventory value.
Long-term		
	▪ Limestone lease expiration drives more consolidation in the industry.	▪ Certain companies either lose their key mine leases or entail higher costs to save them through right of first refusal (RoFR) for captive mines.
		▪ India gets stuck in middle income trap (like Brazil, Russia, etc.), doesn't achieve 500kg/capita, cement loses share to steel (following typical development path pattern).

Source: Ambit Capital research

Capacity expansion onslaught forthcoming

One of the most glaring threats is incessant capacity addition, stemming from: 1) excess cash that needs to be deployed; 2) the MMDR Amendment Act that now forces companies to act on their mining leases; and 3) strategic actions by management teams ahead of certain lease expirations.

Realization of remaining inventory value ahead of lease expiry

Imagine a small producer whose lease term ends in 2030. Would this player invest in capacity expansion in order to maximize net realizable value of its limestone inventory or wait till auctions?

New limestone block winners can't keep sitting on deposit anymore

The MMDR Amendment Act states that a winner of auctioned lease has to start dispatch of limestone within 2+1 years of mining lease (ML) execution. Even though cement companies can store limestone upto 18-24 months, the MMDR Act is now forcing companies to act and set up clinker (possibly upto 5 years from ML execution), rather than keep sitting on mining lease. For instance, we believe the MMDR Amendment Act has in a way forced Nuvoco's hand on Gulbarga expansion; a lease it has held for almost 10 years.

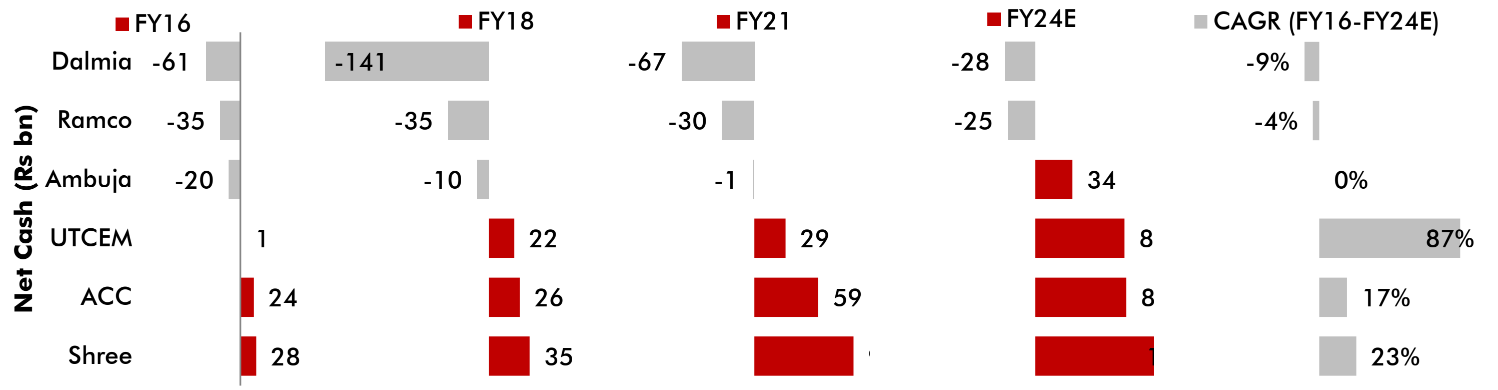
We believe the MMDR Amendment Act has in a way forced Nuvoco's hand on Gulbarga expansion; a lease it has held for almost 10 years

How to deploy excess cash?

Companies have a lot of excess cash to be deployed and capital return is not plausible as: 1) dividends are not tax-efficient for promoters post removal of DDT, and 2) capital return signals lack of growth, thus promoters/management fear signaling effect. Would companies keep sitting on cash and not deploy that cash on capacity expansions? True consolidation would ultimately require capital return, but that doesn't appear likely. How long would capacity expansions be limited to just East and Central? The industry consolidation thesis would be tested as capacity expansions engulf every region.

Would companies keep sitting on cash and not deploy that on expansions? How long would capacity expansions be limited to East and Central? Consolidation thesis would be tested as capacity expansions engulf every region.

Exhibit 63: Cement companies will see cash swell on balance sheet – UltraTech would also likely pull the trigger on capex soon



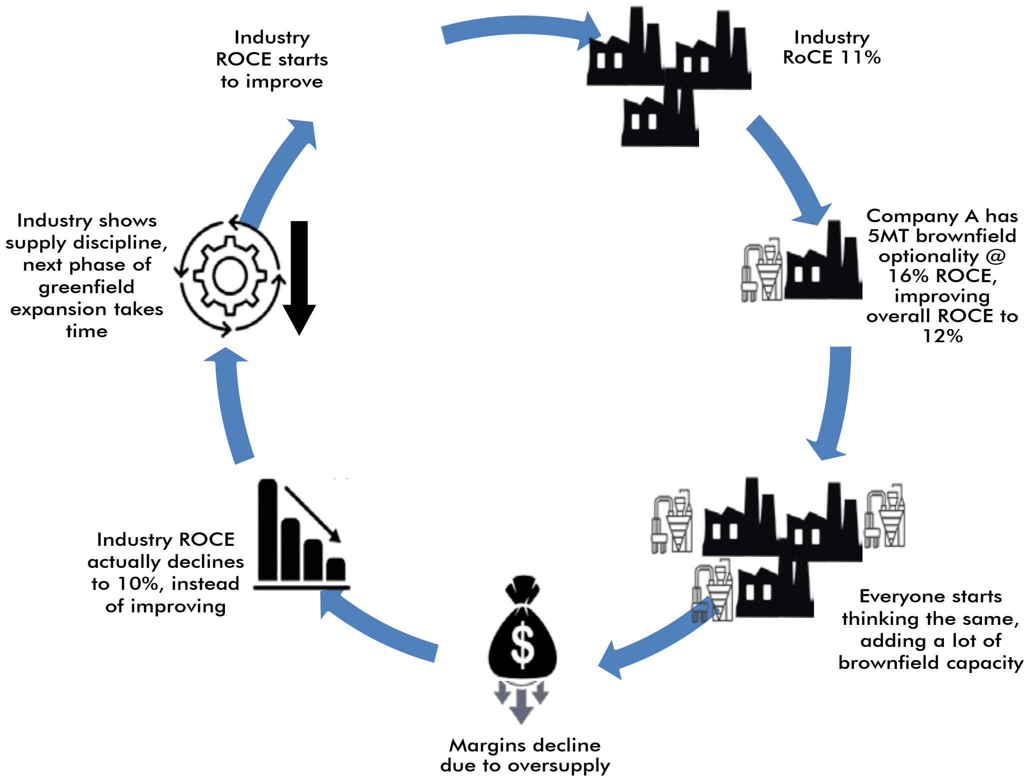
Source: Company, Ambit Capital research

The lure of brownfield optionality

There is industry capital cost inflation of >10% even after accounting for higher WHRS, AFR optionality in new projects. But cement industry has a lot of brownfield optionality at this stage. Incremental RoCE looks attractive on brownfield projects vs greenfield. Assume a cement company has 11% RoCE on existing 20MT base, but 16-17% RoCE on incremental 5MT brownfield projects; its total RoCE can improve to 12% post brownfield projects. But what if every company starts looking at it in the same way, and expands capacity at the same time? That's called prisoner's dilemma in game theory. Total RoCE may actually not increase to 12%, but may drop even below 11%.

Brownfield optionality is attractive as it lifts total RoCE. But what if every company starts looking at it in the same way, and expands capacity at same time? That's called prisoner's dilemma in game theory.

Exhibit 64: Prisoner's dilemma – The lure of brownfield RoCE engulfs everyone, evaporating the benefit



Source: Companies, Ambit Capital research

Build first, margins will come later?

Cement bulls believe cement companies will exercise pricing discipline in order to support RoCE on greenfield investments. But that's not how industry functions. Ideally, industry should wait to see market tighten, margin/RoCE to improve for them to justify capital investment. That happens when cement companies decide they wouldn't commit to capacity expansion unless clinker utilization reaches a certain level, which drives EBITDA/t and RoCE higher. But that rarely happens. So, where is the consolidation in this industry? Discipline is required before capex commitment, not after. Capital already committed is sunk cost.

Discipline is required before capex commitment, not after. Capital already committed is sunk cost.

Capacity onslaught coming in FY24-26, but what about next 12-18 months?

This is a cyclical industry. Companies will invest in capacity expansion, there will be bunching up of capacities. But any new capacity commitment wouldn't result in on-ground capacity commissioning within next 12-18 months. Industry is slated to add 70MT of capacity by FY24, but most of these capacities are in East and Central India, and even West now. Clinker utilizations should actually improve in North over next 12-18 months. Companies operating in these regions may possibly exhibit better pricing power compared to Central, Eastern players over next 12-18 months.

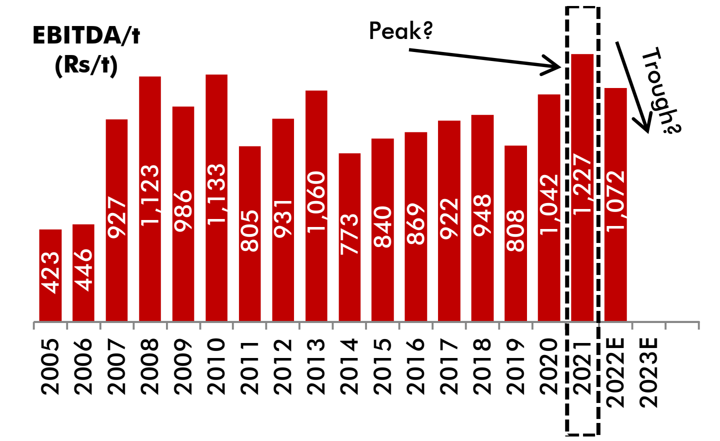
Companies operating in North may possibly exhibit better pricing power compared to other regions over next 12-18 months.

Exhibit 65: Industry is slated to add 70MT of capacity by FY24, but most of these capacities are in East and Central India, and even West now

Expansion (MT)	FY22E	FY23E	FY24E	Growth Rate (%)	FY22E	FY23E	FY24E
Clinker				**Clinker**			
North	4.2	3.3	3.8	North	5%	4%	4%
South	3.8	0.3	3.6	South	3%	0%	3%
East	1.4	9.8	2.7	East	3%	20%	5%
Central	0.7	9.9	2.8	Central	2%	27%	6%
West	4.6	0.0	0.4	West	13%	0%	1%
Total	**14.6**	**23.3**	**13.3**	**Total**	**4%**	**7%**	**4%**
Cement				**Cement**			
North	4.9	1.9	10.7	North	5%	2%	9%
South	0.5	2.8	4.0	South	0%	1%	2%
East	10.2	10.0	10.8	East	9%	8%	8%
Central	3.0	15.7	11.0	Central	5%	24%	14%
West	14.3	1.0	2.0	West	19%	1%	2%
Total	**32.9**	**31.4**	**38.5**	**Total**	**6%**	**5%**	**6%**

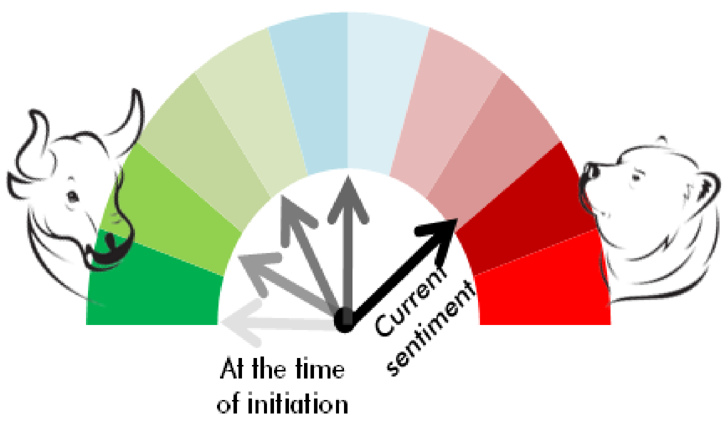
Source: Company, Ambit Capital research

Exhibit 66: Industry achieved peak EBITDA levels in FY21, trending towards trough in FY23



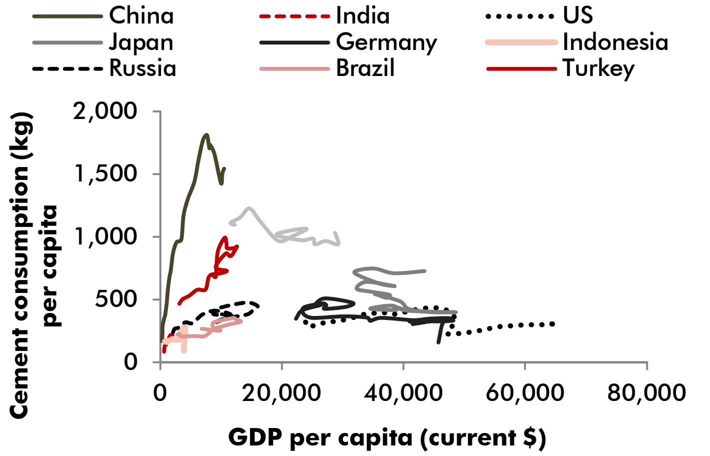
Source: Company, Ambit Capital research

Exhibit 67: Sentiment indicator – sentiment turning increasingly pessimistic, which may provide opportunity to get constructive



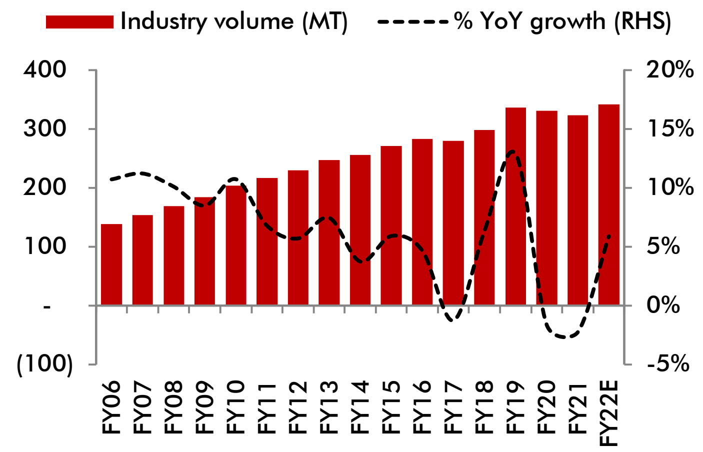
Source: Company, Ambit Capital research

Exhibit 68: Brazil and Russia have hit a wall over the years; cement consumption has remained stagnant, below 500kg/capita



Source: Company, Bloomberg, Ambit Capital research

Exhibit 69: Indian cement demand growth has remained muted past 3 years; is there a risk to strong volume growth built in Indian cement valuations



Source: Company, Ambit Capital research

Valuations – need some more comfort

UltraTech's (proxy for industry) current price implies 7% volume CAGR and ₹1,150-1,200/t EBITDA through FY24. Investment return would require EBITDA growth higher than that. That would be predicated on multiple assumptions: 1) EBITDA/t growth in FY20-21 was structural, not cyclical; 2) rural demand will lift on higher infrastructure investment; 3) both strong volume and margin growth would pan out at same time, something that has barely happened historically; 4) energy costs would drop sharply. We see risk to these assumptions. Industry is staring at trough earnings in FY23; we will raise our valuation multiples with each subsequent earnings downgrade. But need some more moderation in EV/t to get constructive. We cut our valuation multiples for ACC and Dalmia to reflect higher long-term earnings risk. In the near to medium term, companies exposed to East (Nuvoco, Dalmia) and high leverage (Nuvoco, Ramco) may underperform. Our pecking order is Ultratech>Ambuja=Shree>ACC.

Pricing long-term risk

Cement gets high valuation multiples - part of this is predicated on consumer like characteristic, long-term consolidation potential etc. But cement is not consumer. It's inherently a mining business to a large extent. This is not HDFC or Asian Paints, where companies compound consistently over 30-40-50 years. There is a hard cap on mining lease validity. Should companies exposed to high risk trade above replacement cost? Dalmia & ACC are exposed to higher risk, while UTCEM, Shree and Ramco lower. We lower our 2030-40 growth and terminal growth (2040 onwards) assumptions for ACC & Dalmia and raise for Ramco.

Should companies exposed to high risk trade above replacement cost? Dalmia & ACC are exposed to higher risk, while UTCEM, Shree & Ramco lower

East and or/ high leverage carry greater risk in the near-medium term

East will witness the brunt of capacity additions in FY23, with almost 10MT of clinker slated to commission in the region in FY23. Additionally, rural distress may limit demand potential. Companies that had had high debt were likely to be strong deleveraging candidates. However, lower earnings growth, WC tied up will likely keep leverage elevated. North continues to remain better placed in terms of capacity additions in next 12-18 months.

East and or/ high leverage carry greater risk in near-medium term. All mid-cap stocks in our universe - Ramco, Dalmia & Nuvoco fit in this category

Cyclicality of earnings-peak vs trough - where is new normal?

Cement earnings continue to exhibit cyclical traits, even though valuation multiples don't. After a tumultuous multi-year period, cement EBITDA/t and thus EV/t re-rated sharply higher in FY20-21. That was likely driven by a multitude of factors: 1) consolidation in industry post UTCEM's acquisition of Binani, Jaypee and achievement of desired utilization levels which led to front-loading of price hikes; 2) strong pent-up demand in the rural market post Covid-19, 3) loss of market share of smaller producers post Covid-19 and 4) low fuel pries given commodity downcycle through most of this period. But most of these factors (except consolidation) are not structural. We believe FY20-21 earnings may likely have been peak earnings for sector, not the new base for growth. Industry is likely staring at trough earnings in Fy23.

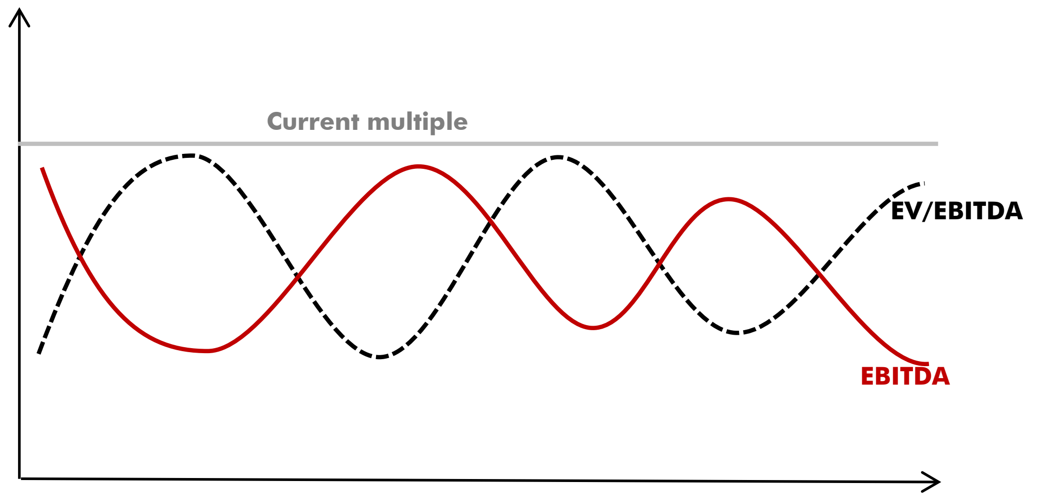
We believe FY20-21 earnings may likely have been peak earnings for sector, not the new base for growth. ₹1,000/t EBITDA in 3Q was trough, but what if new normal for FY23-24 is ₹1,200/t EBITDA (even after including ₹50/t savings from WHRS, solar, AFR etc?

Art and science of "cyclicals" valuation

In cyclical sectors, EV/EBITDA multiple should trend in the opposite direction of earnings. When earnings hit peak multiples contract, when earnings hit trough multiples expand. However, cement doesn't trade like cyclicals, with same 13-15x EV/EBITDA for UTCEM through cycles. Notwithstanding that consumer-type misnomer, when we initiated in Mar'21, we stated peak earnings + peak multiple = high risk. At that time, 14-15x multiple on >₹1,400/t implied EBITDA/t CAGR of 2% growth on a high base. However, in the recent earnings season, when we downgraded estimates, we raised our valuation multiples by 5-10% throughout our universe. Our estimates still look aggressive (higher than what's implied in current stock price), raising the risk of further downgrades but we will continue to raise our valuation multiples with these earnings downgrades. Industry may be staring at trough earnings in FY23, in which case we will apply peak multiple on those earnings. As a result, our EV/t will not drop to the same extent as any earnings downgrades. At some point in future when the worst is priced in, we may decide to get constructive on certain stocks.

When we initiated in Mar'21, we stated peak earnings + peak multiple = high risk. However, in recent earnings season, when we downgraded estimates, we raised our valuation multiples by 5-10% throughout universe. There is limited downside in our TP for stocks now, but EV/t needs to contract more for us to get constructive

Exhibit 70: Cement doesn't trade like cyclicals, with same 13-15x EV/EBITDA for UTCEM through cycles-but we value this sector somewhat like cyclicals

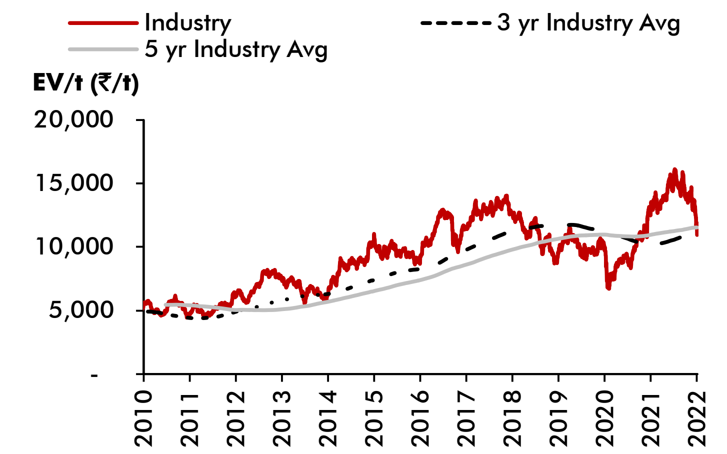


Source: Company, Ambit Capital research

EV/t of cement capacity vs EV/t in reserves

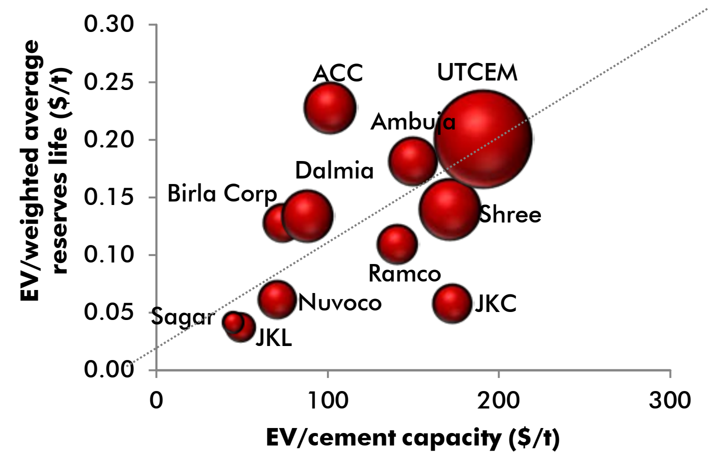
A bird in hand is worth two in the bush. There is hard cash outflow entailed in putting up capacity, as well as a gestation period. Therefore cement capacity is one of the most important metrics, actual output even more important (what is the use of having sizeable capacity in South if one can't operate at >50% utilization). But if one doesn't have either sufficient reserves or long lease validity to back that cement capacity (or grow), that raises risk around long-term earnings power of the company. So both EV/capacity and EV/t of reserves have to be looked at in tandem.

Exhibit 71: EV/t is now slightly below 3-yr and 5-yr averages- we need some more moderation to get selectively constructive



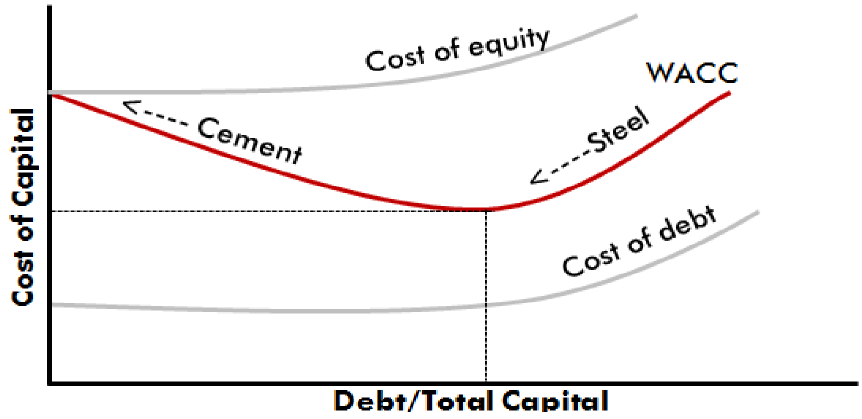
Source: Company, Ambit Capital research Note:

Exhibit 72: Adjusted for lease duration and auction premiums, ACC, Dalmia and Birla Corp appear expensive vs peers (risk for JKL and JKC can't be captured here)



Source: Company, Ambit Capital research Note: Bubble size is FY24E clinker capacity Note- In this one we have taken weighted average reserves life for remaining lease duration and auction premiums (we have discounted reserves that have auction premiums)

Exhibit 73: Optimal capital structure is one where WACC is lowest – metals moving to optimal structure, while cement has moved to under-levered



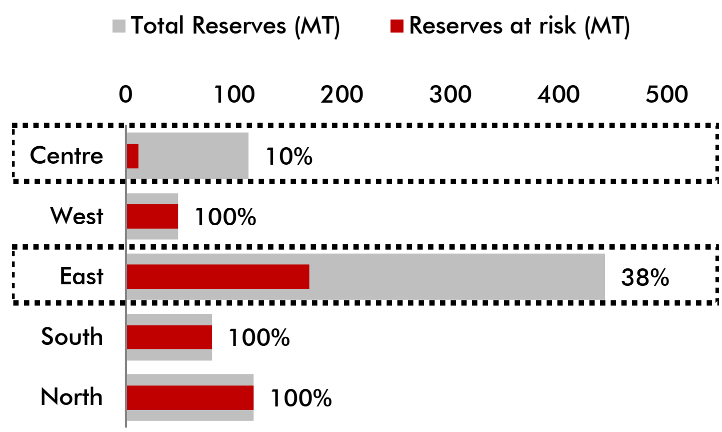
Source: Company, Ambit Capital research

ACC (SELL)

Should it get replacement cost?

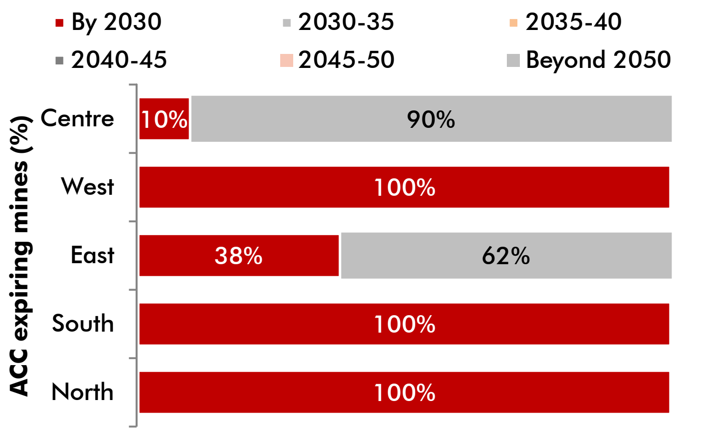
ACC has the oldest infrastructure in the country. That also means its limestone mines are also one of the oldest. MMDR Amendment Act has put a cap on captive lease tenure, which hits ACC the most as it has multiple mines whose mining lease (ML) was executed in mid to late 1900s. The challenge with ACC is as much reserve depletion, if not more, as lease expiration ACC may also consider greenfield expansions (as it has at Nawalgarh), but it may struggle to generate ROCE > WACC there. ACC has surprised positively on green power/WHRS targets through 2025, closing the gap with peers, and has strong brand positioning throughout the country. But valuation should also reflect its high cost structure, lower longevity of any brownfield potential, and volumes/earnings risk beyond 2030. We lower our terminal growth (post 2040) to 0% (from 2%), cut our TP by 8% to ₹1,850, implying 8x FY24 EBITDA (vs 9x earlier) and $95 (below replacement cost).

Exhibit 74: Except Centre, ACC carries high expiration risk in each of its regions



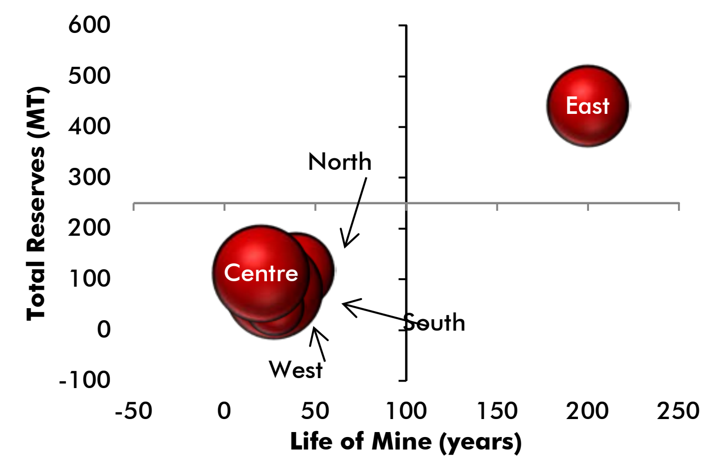
Source: IBM, MoEFCC, Companies, Ambit Capital research Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 75: Very few ACC mines have longevity beyond 2040



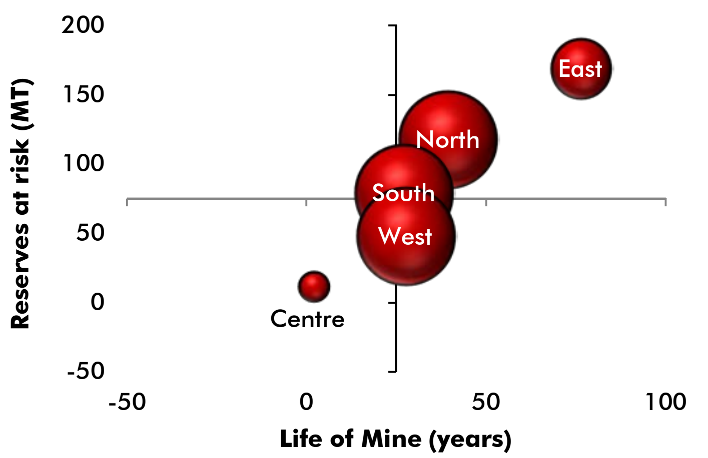
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 76: East is the only region for ACC which has large life of mine (LOM)



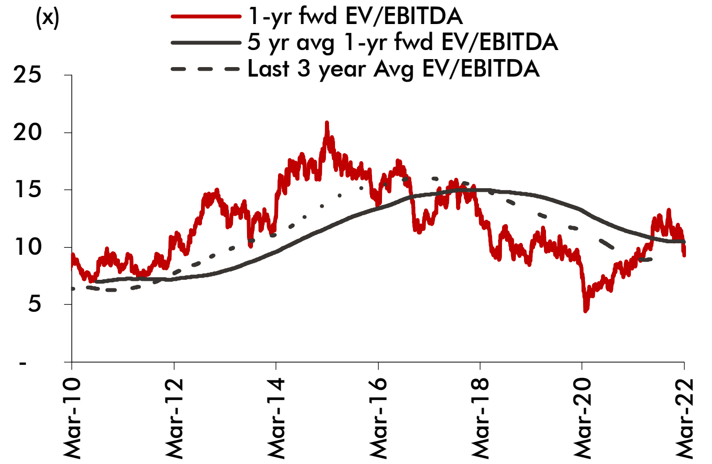
Source: IBM, MoEFCC, Companies, Ambit Capital research LoM = reserves/FY24 clinker capacity

Exhibit 77: Competition may find certain expiring ACC leases as attractive; its South and West leases may not attract much competition



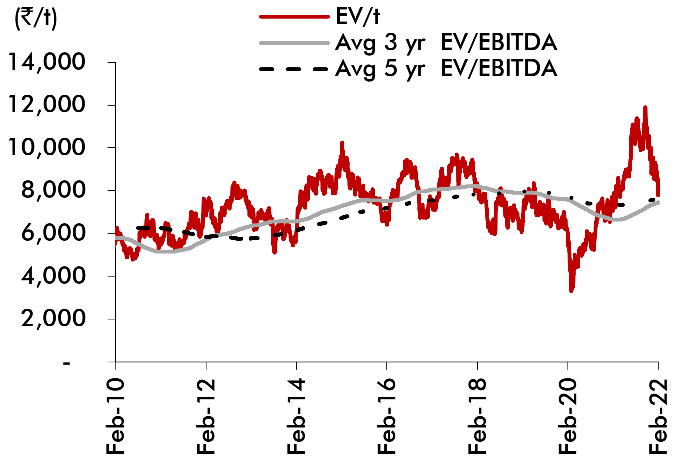
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is % of reserves at risk

Exhibit 78: ACC currently trades in line to its 3-year average EV/one-year forward EBITDA



Source: Company, Ambit Capital research

Exhibit 79: ACC currently trades in line to its 3-year average EV/tonne



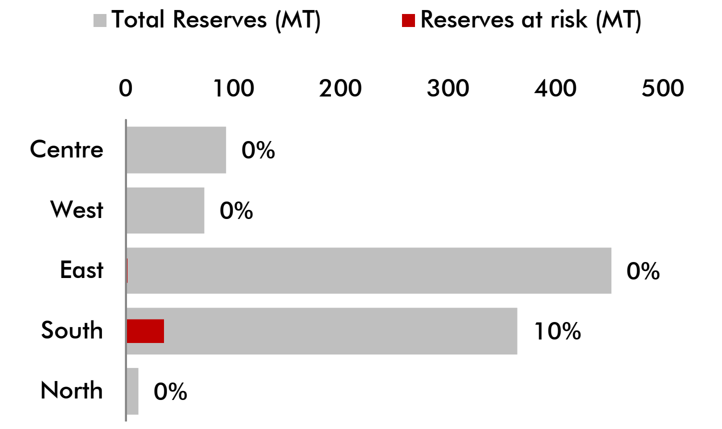
Source: Company, Ambit Capital research

Dalmia Bharat (SELL)

High reserve risk

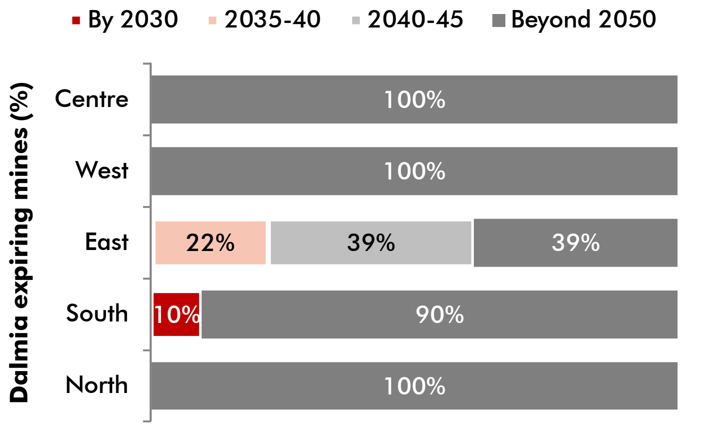
Bigger risk for Dalmia is not lease expiration, but size of reserves. OCL mine in Odisha has <10 years life (assuming 100% utilization), while new Kottametta mine in Odisha doesn't have proved reserves yet. Chhattisgarh would reduce competitive advantage for Dalmia in the East given high auction premiums and long lead distance. Certain TN leases are expiring in 2030, but current reserves in TN may not sustain production for >5-7 years even at 50% clinker utilization. It will look at greenfield plants in Satna and Nawalgarh, but ROCE>WACC in Nawalgarh will require higher cement prices given 190% auction premiums. Shree has an advantage there. New Murli mine won in auction has a higher cost structure given almost 100km distance from the plant. While Dalmia has ambitious growth targets, it actually has higher risk of reserve depletion vs others. The company will need to augment its reserves through exploration/auctions. We cut our TP by 6% to ₹1,300, implying 8x EV/FY24 EBITDA (vs 8.5x earlier) and EV of $70/t.

Exhibit 80: Size of reserves in a bigger risk for Dalmia than lease expiration



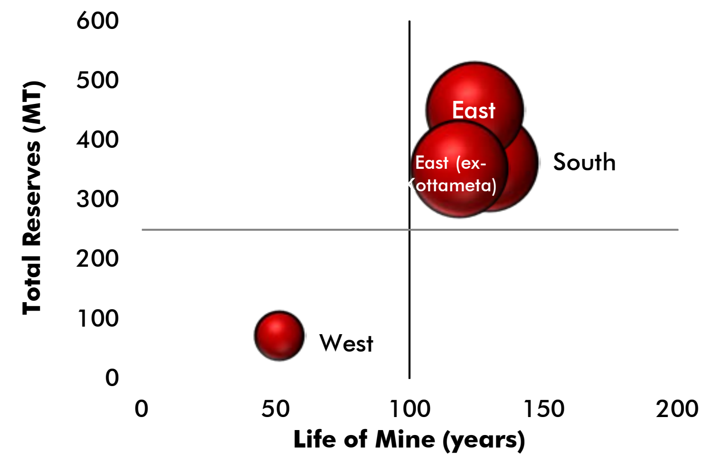
Source: IBM, MoEFCC, Companies, Ambit Capital research Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 81: The risk with Dalmia is not lease expiration, but low life of mine based on current reserves



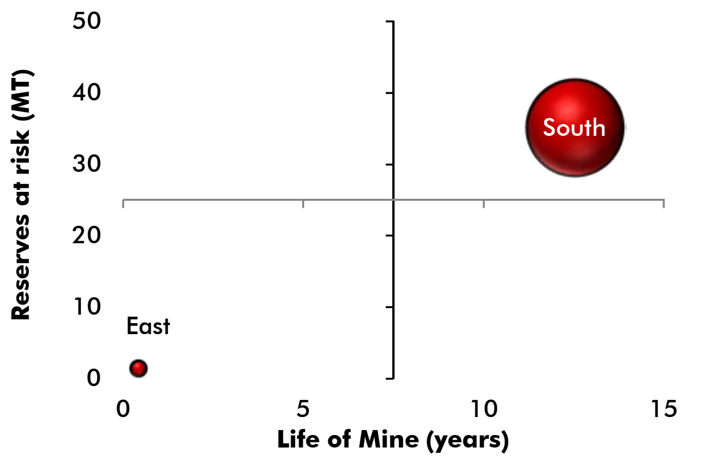
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 82: Dalmia has short LoM in Tamil Nadu, Odisha (ex Kottametta) and Bihar



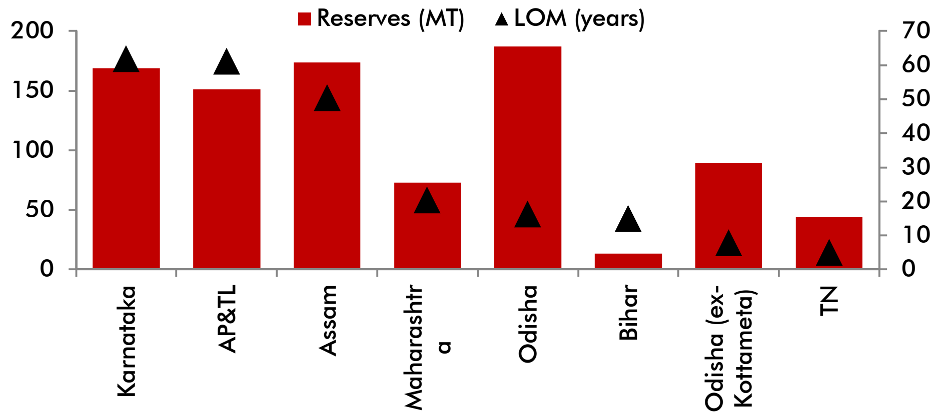
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is FY24E clinker capacity

Exhibit 83: Competition may not find its expiring leases attractive as Dalmia will likely exhaust these reserves before expiry



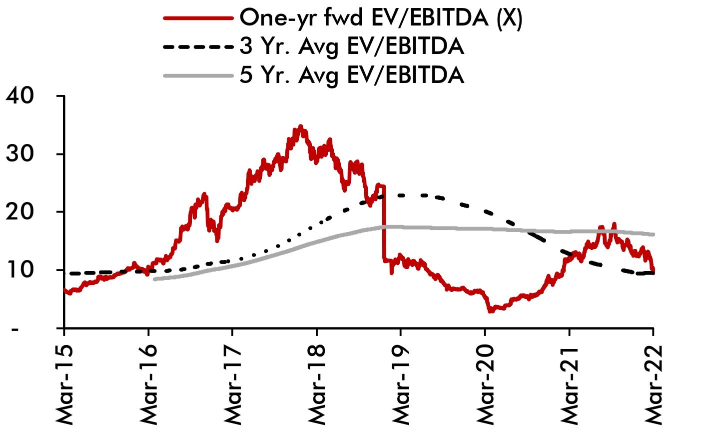
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is % of reserves at risk

Exhibit 84: Dalmia has low reserve base in Tamil Nadu, Odisha, Bihar and Maharashtra



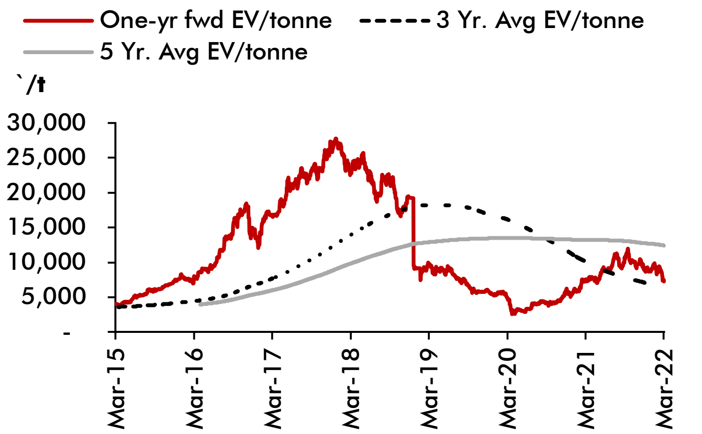
Source: Company, Ambit Capital research Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is % of reserves at risk

Exhibit 85: Dalmia currently trades in line to its 3-year average EV/one-year forward EBITDA



Source: Company, Ambit Capital research

Exhibit 86: Dalmia currently trades at a 5% premium to its 3-year average EV/tonne



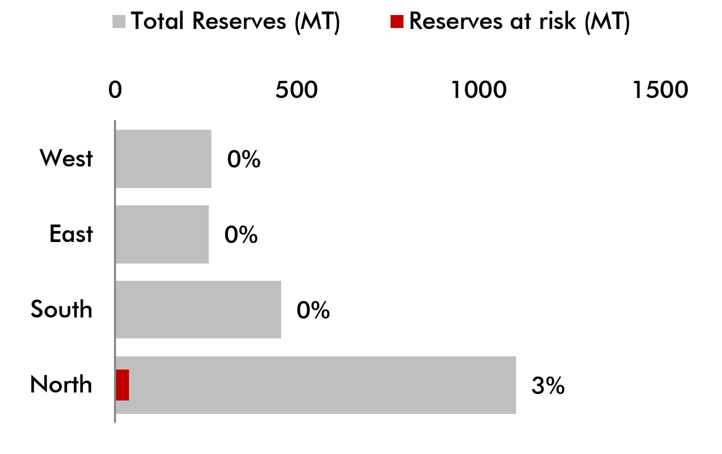
Source: Company, Ambit Capital research

Shree Cement (SELL)

Primed to benefit in North through 2046

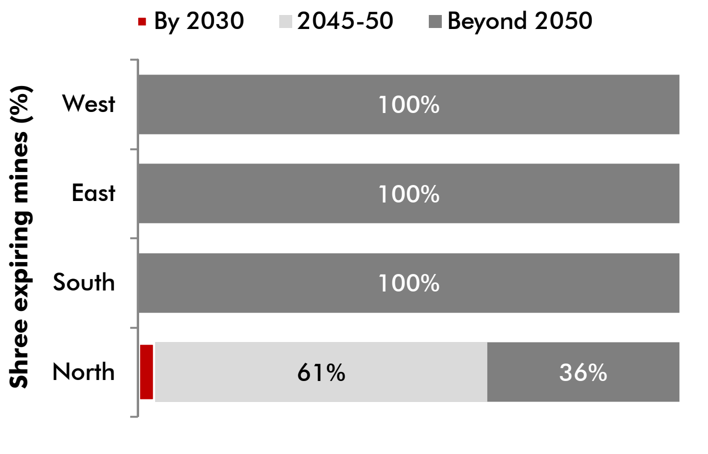
Shree will likely be one of the biggest beneficiaries of disruption in North post 2030. Mid-cap players such as JK Cement, JK Lakshmi and even Birla Corp will lose some of their key mines in south Rajasthan over 2030-35. They may try to win them back at high premiums, or Shree/UTCEM/Wonder may outbid them. Either way, there is a risk of volume/margin loss for mid-cap players in North. Most players are looking at Nawalgarh for next leg of growth but they will have to navigate through difficult land acquisition and high premiums. Shree will have a leg-up in Nawalgarh as well with its upcoming expansions. Shree will lose its key Nimbeti mine in 2046 though it will exercise RoFR to protect its existing Ras/Beawar infrastructure. But it is primed to benefit from industry disruption through 2046. But ultimately, ex-North will need to grow in the portfolio, which would likely generate lower RoCE. Remain SELLers.

Exhibit 87: Shree will likely be one of the biggest beneficiaries of disruption in the North post 2030



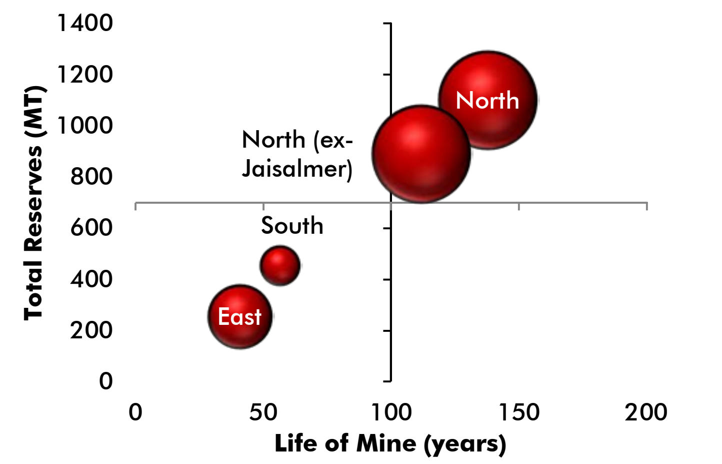
Source: IBM, MoEFCC, Companies, Ambit Capital research Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 88: Shree's key mine lease Nimbeti is slated to expire in 2046 but still >20 years away



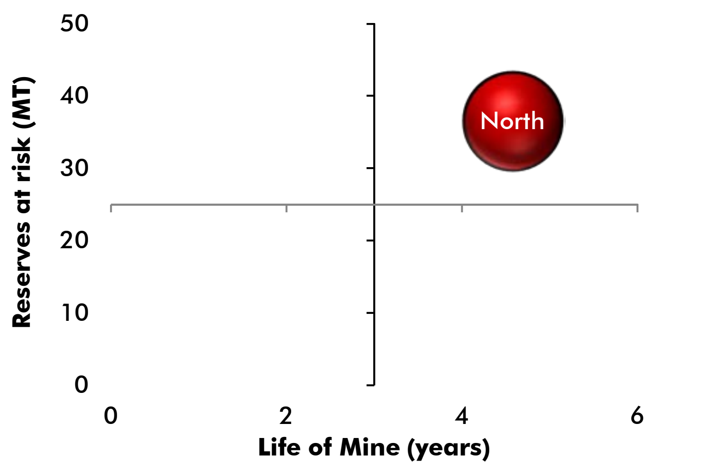
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 89: Shree doesn't have any shortage of reserves across its portfolio (even if exclude Jaisalmer)



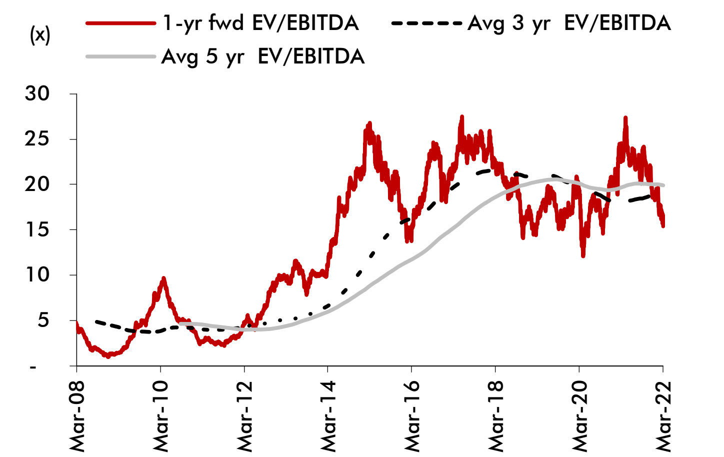
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is FY24E clinker capacity

Exhibit 90: Shree has a small lease expiring in 2030-35, it will likely exhaust reserves before that



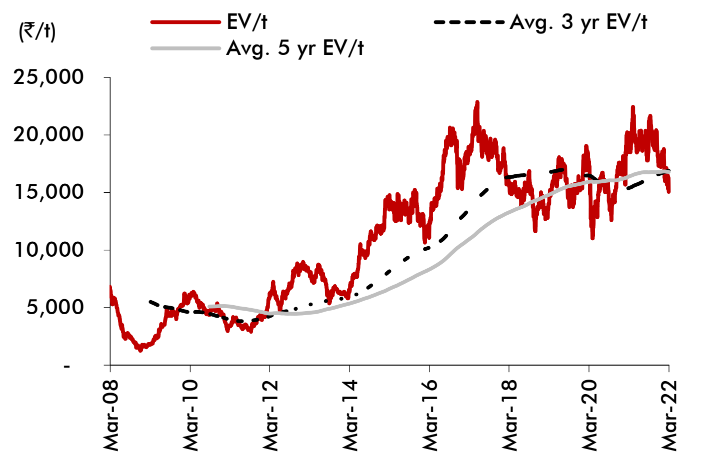
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is % of reserves at risk

Exhibit 91: Shree currently trades at a 19% discount to its 3-year average EV/one-year forward EBITDA



Source: Company, Ambit Capital research

Exhibit 92: Shree currently trades at a 11% discount to its 3-year average EV/tonne



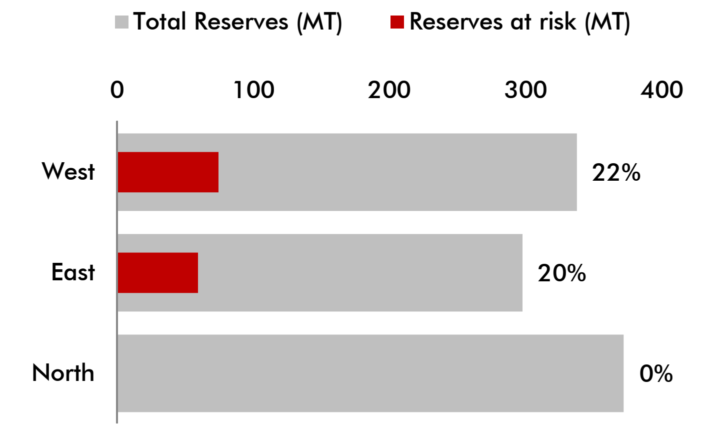
Source: Company, Ambit Capital research

Ambuja Cement (SELL)

It's not ACC

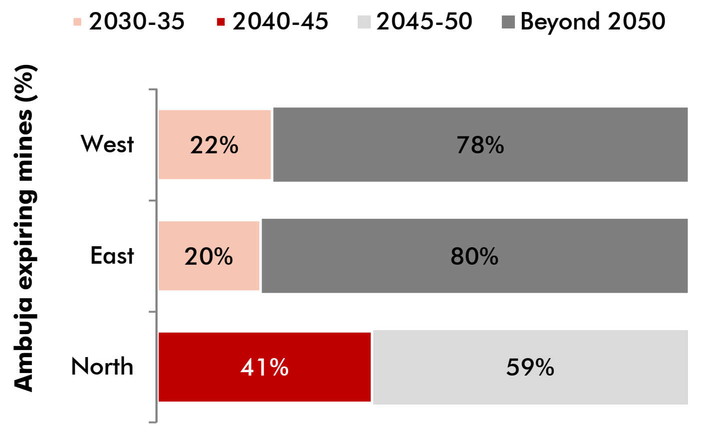
Ambuja has lower lease expiration risk relative to ACC, but higher vs UTCEM. Although some of Ambuja's key mines in the East and West will expire in 2030-35 and Solan (HP) in 2042, it does have multiple mines with large reserve base and long lease tenure. East will account for 35% of Ambuja's capacity by CY24. Post the results, we lower our FY23/FY24 estimates by 15%/19% and raise our TP multiple somewhat to 10x, with a TP of ₹290. Given higher lease expiration risk for ACC, we believe Ambuja should trade at higher than current 15% premium to ACC, therefore we now put Ambuja>ACC in our pecking order. Compared to UTCEM, Ambuja's valuation should also reflect lower EV/t for its subsidiary (ACC).

Exhibit 93: Ambuja has lower lease expiration risk relative to ACC, but higher vs UTCEM



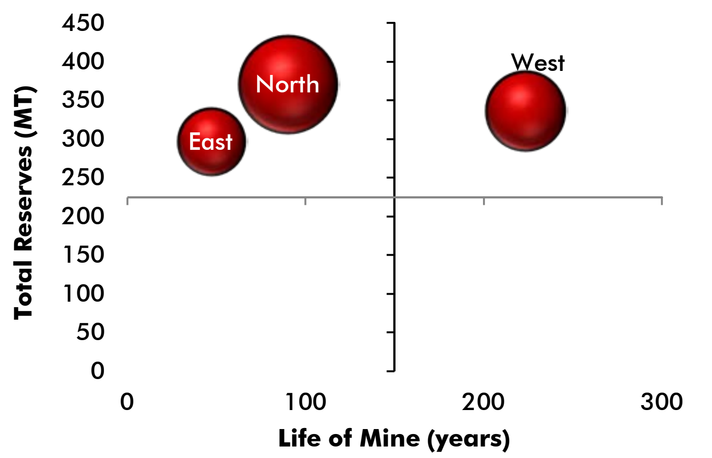
Source: IBM, MoEFCC, Companies, Ambit Capital research Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 94: Rawan lease (East) is slated to expire in 2031 and one Maratha (west) in 2034; the rest of the leases have longer validity



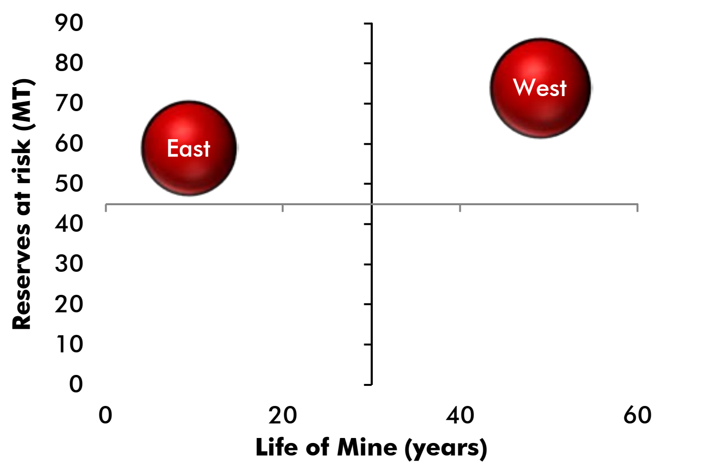
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 95: Unlike ACC, there is no shortage of reserves at Ambuja, but would that mean it uses some of them for ACC?



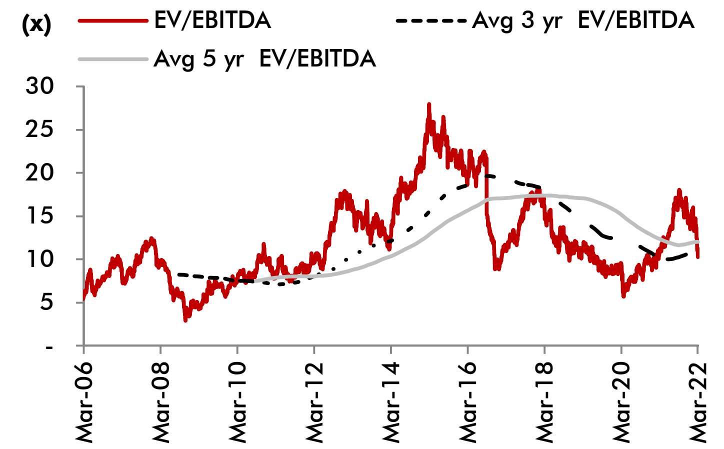
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is FY24E clinker capacity

Exhibit 96: Investors may find Ambuja's Maratha lease attractive when it expires in 2034 (even though Ambuja would try to exhaust as much as possible by then)



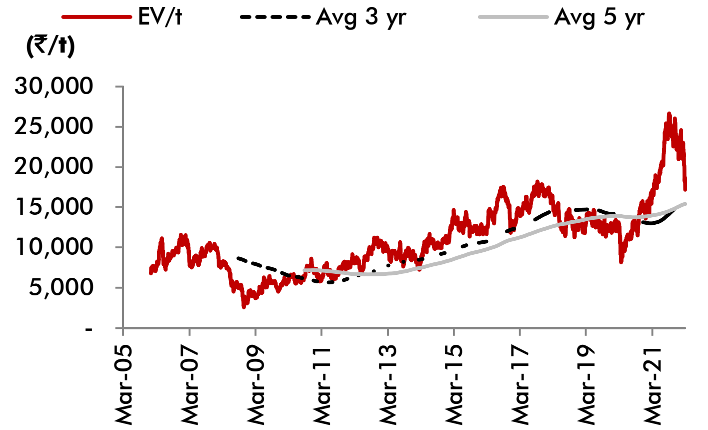
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is % of reserves at risk

Exhibit 97: Ambuja currently trades at a 6% discount to its 3-year average EV/one-year forward EBITDA



Source: Company, Ambit Capital research

Exhibit 98: Ambuja currently trades at a 8% premium to its 3-year average EV/tonne



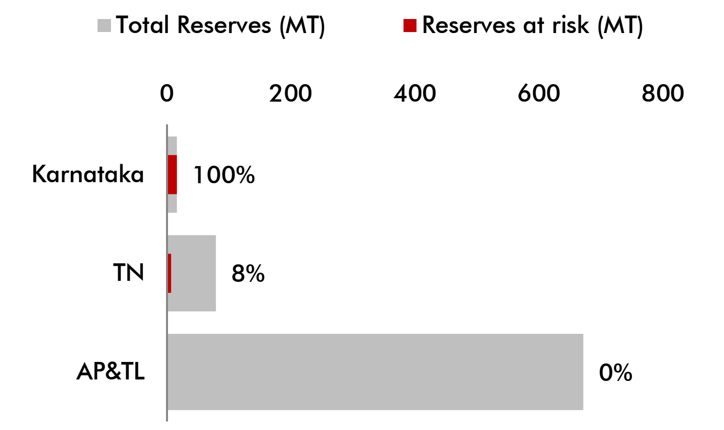
Source: Company, Ambit Capital research

Ramco Cement (SELL)

Among best-placed in South

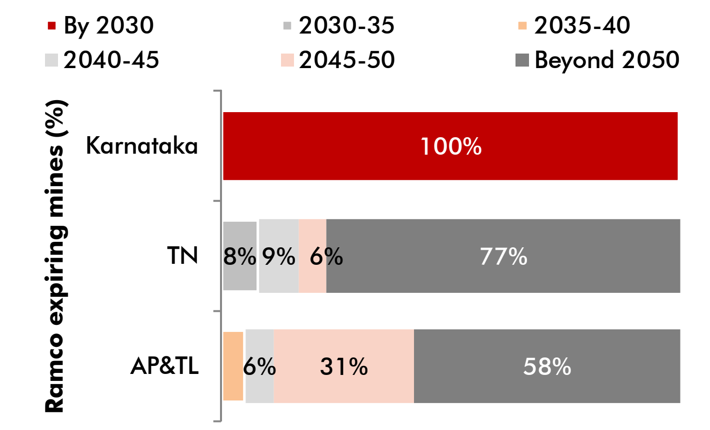
Ramco has a large land package, lease reserve size and validity in both Kurnool and Jayanthipuram, especially in Kurnool. That implies significant brownfield optionality in AP subject to EC approval. However, that's also a handicap as Ramco is reluctant to venture anywhere else given large brownfield optionality here (although recently it did bid somewhat aggressively for leases in North). Its TN reserves are depleting, however that's an industry-wide phenomena. At some point the TN government will have to step up and execute the much delayed auction process. However, if that process is delayed beyond 5-7 years Ramco may actually take market share from Dalmia, given Dalmia has a more precarious position here. We raise our TP somewhat – now valuing Ramco at 10x (vs 9x earlier) with a revised TP of ₹600. We still believe Ramco's valuation is excessive given the reasons outlined in our initiation report.

Exhibit 99: Ramco is exposed to limited lease expiration risk



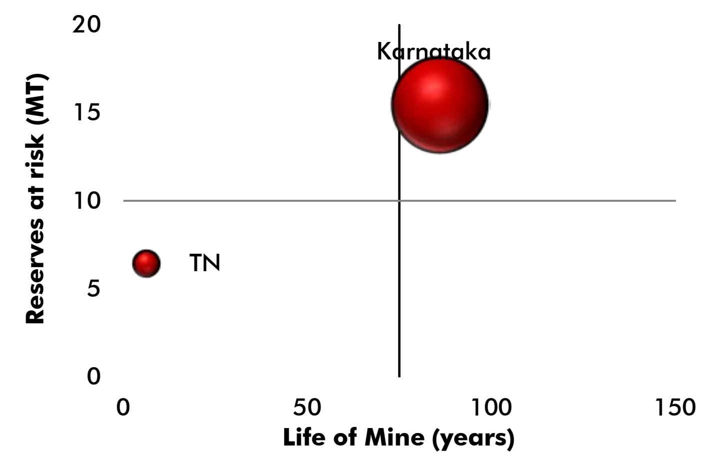
Source: IBM, MoEFCC, Companies, Ambit Capital research Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 100: Ramco has significant brownfield optionality in AP give large land package and reserves in Kurnool



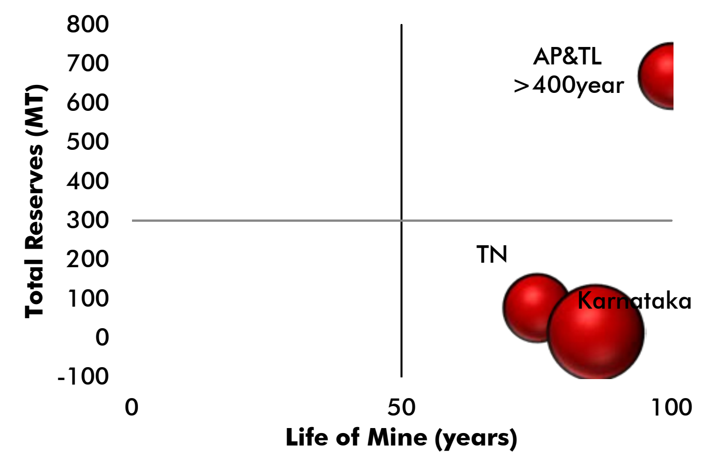
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 101: Ramco's TN reserves have <10 years LOM with 8% reserves at risk-but has an edge over Dalmia here



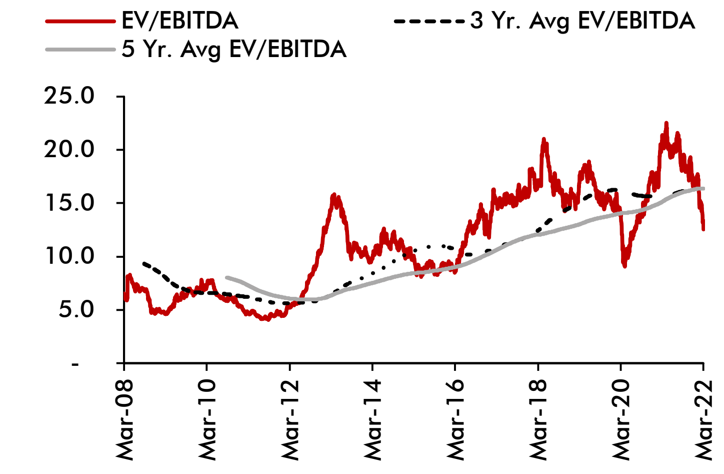
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is FY24E clinker capacity

Exhibit 102: Bulk of Ramco's limestone reserves are in AP&TL with just 12% reserves in other states



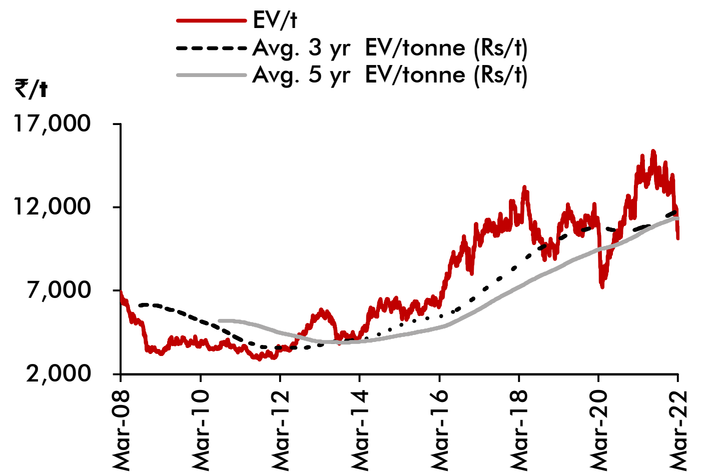
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is % of reserves at risk

Exhibit 103: Ramco currently trades at a 23% discount to its 3-year average EV/one-year forward EBITDA



Source: Company, Ambit Capital research

Exhibit 104: Ramco currently trades at a 14% discount to its 3-year average EV/tonne



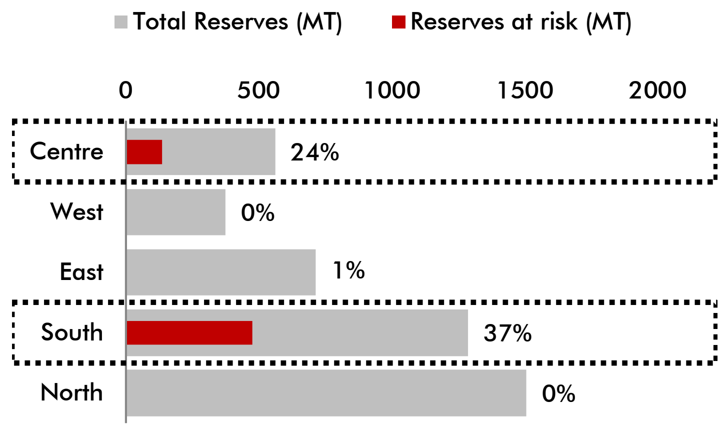
Source: Company, Ambit Capital research

Ultratech Cement (SELL)

Key beneficiary of industry disruption

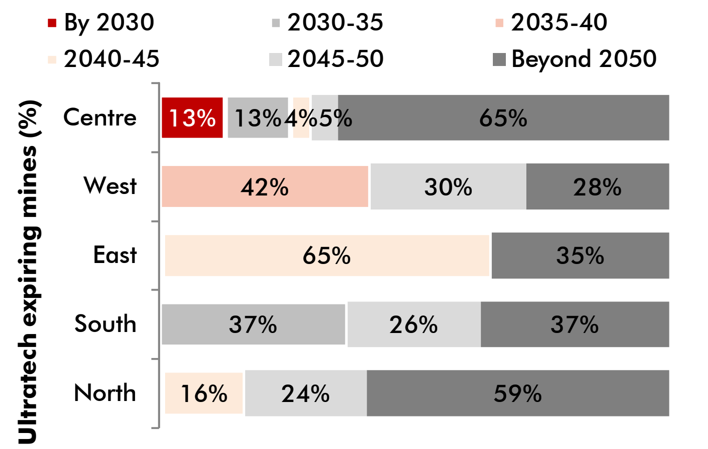
UTCEM's key mine lease in Gulbarga will expire in FY30, so will multiple mines in Central India (especially legacy Jaypee reserves, including a risk to its plant in Dalla, UP). But by and large, it is still relatively less exposed to expirations compared to peers. UTCEM has a massive reserve base, which can sustain current production over multiple years. This also highlights brownfield optionality in portfolio, subject to EC approval and land availability. UTCEM may actually be primed to benefit from industry disruption post FY30, especially in the North. We believe our current DCF implied EV/t of $190/t more than adequately captures this as we build market share gain through the next 30 years.

Exhibit 105: Ultratech is relatively less exposed to expirations compared to peers



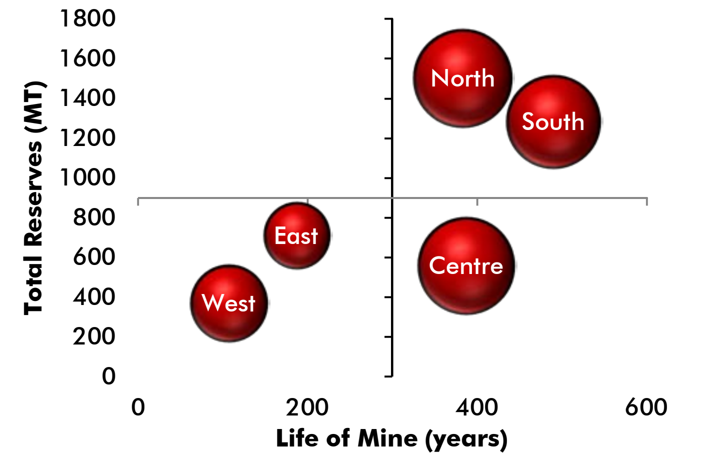
Source: IBM, MoEFCC, Companies, Ambit Capital research Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 106: UTCEM is more exposed to mine expiration risk in Central and Gulbarga region



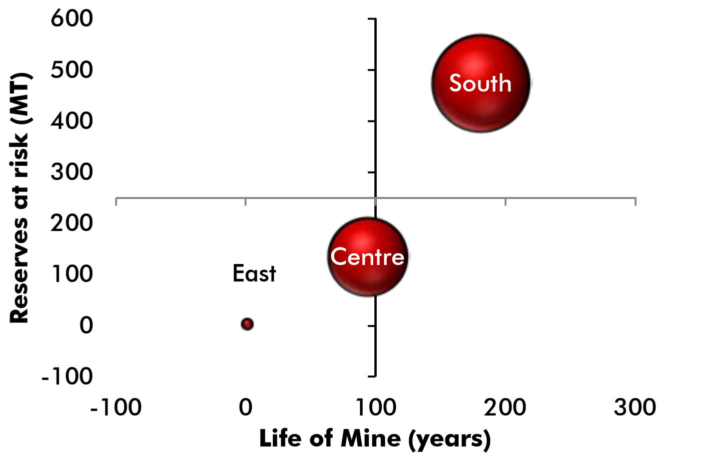
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 107: UTCEM has plenty of reserves in North and South; it wouldn't face any shortage in other regions either



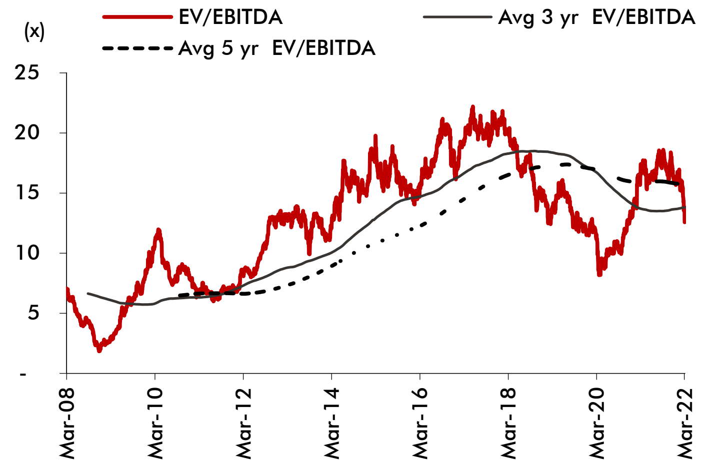
Source: IBM, MoEFCC, Companies, Ambit Capital research. Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is FY24E clinker capacity

Exhibit 108: UTCEM's mine in Gulbarga would find takers when the lease expires



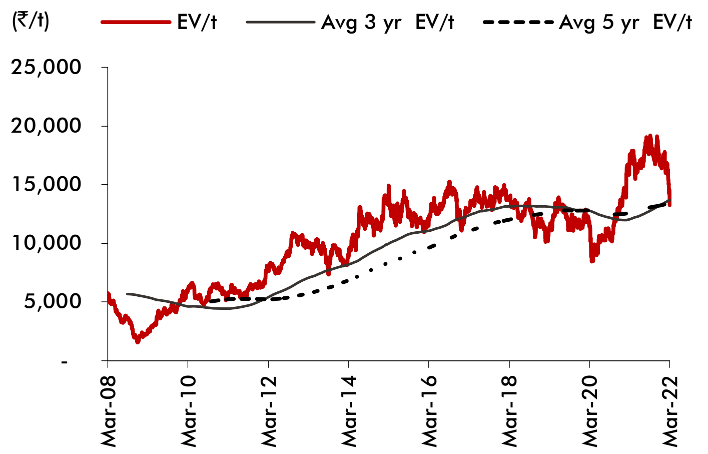
Source: IBM, MoEFCC, Companies, Ambit Capital research Note: (a) Life of Mine (LoM) = reserves/FY24 clinker capacity; (b) bubble size is % of reserves at risk

Exhibit 109: Ultratech currently trades at a 9% discount to its 3-year average EV/one-year forward EBITDA



Source: Company, Ambit Capital research

Exhibit 110: Ultratech currently trades at a 3% discount to its 3-year average EV/tonne



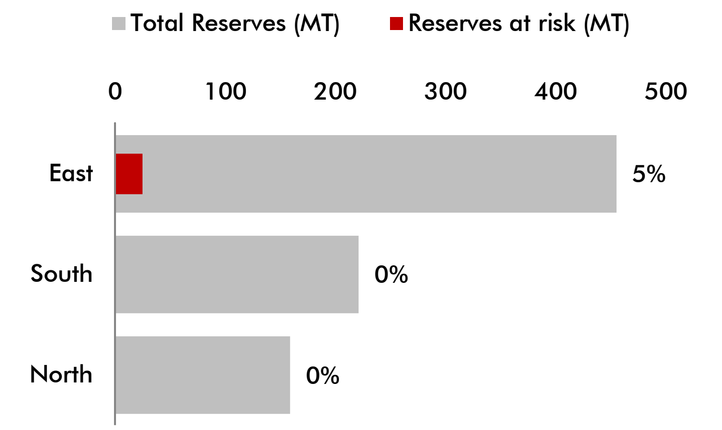
Source: Company, Ambit Capital research

Nuvoco Vistas Corp (SELL)

It's not Binani

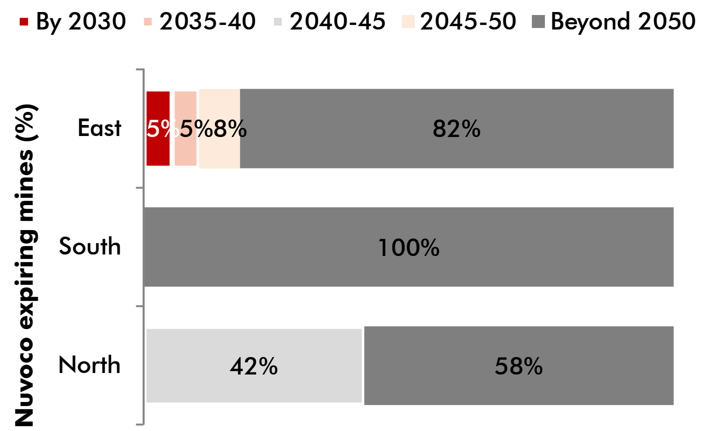
Nuvoco is one of better placed players, with relatively longer lease validity and larger reserve size. However, it will need to navigate through B/S distress to capitalize on opportunities. While parallels may be drawn with companies than ended up in IBC, Nuvoco is not Binani. It does have to navigate through multiple headwinds though over the next 12-18 months – rural distress, eastern overcapacity, high energy prices, possible domestic coal tightness in summer, and working capital squeeze. It will likely have to delay its Gulbarga capex even further in order to be FCF neutral. At some point East pricing discipline has to emerge, but that may not happen soon given all the capacities coming up. Stock has rallied 25% from lows, and we missed the opportunity to turn BUYers. It's now trading close to replacement cost, limiting any upside. In fact, given potentially low ROCE in the medium term, it might be a stretch to expect replacement cost valuation in the next 12-18 months.

Exhibit 111: One of the better placed players - relatively longer lease validity and larger reserve size



Source: IBM, MoEFCC, Companies, Ambit Capital research Note(a) Reserves at risk = mines expiring by 2035; (b) % at the end of grey bar represents % of reserves at risk

Exhibit 112: Nuvoco is less exposed to mine expiration risk vs other mid and small-cap players



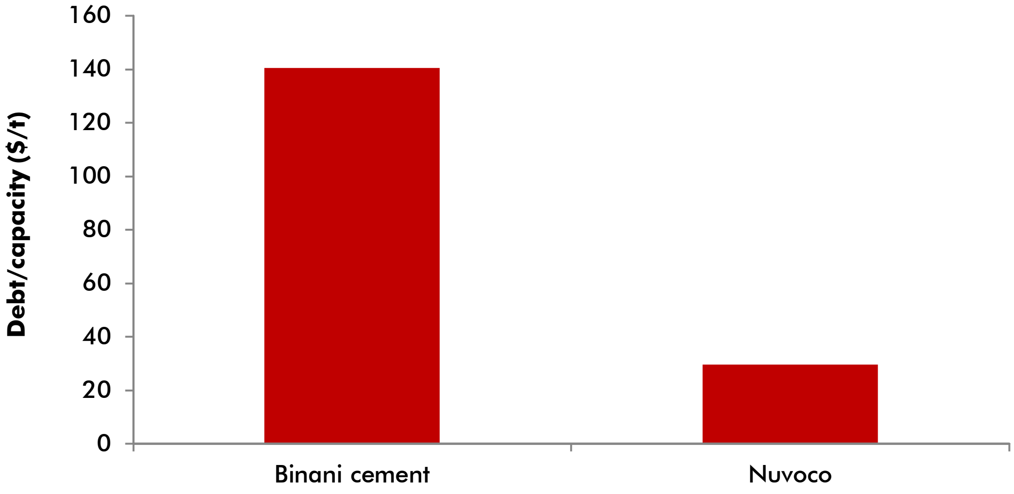
Source: IBM, MoEFCC, Companies, Ambit Capital research

Exhibit 113: Nuvoco is not Binani (that went into bankrupty); we highlight the differences between the two

Similarities	Differences
Both highly levered-Nuvoco has net debt of ₹50bn, while Binani had over ₹65bn	Binani became overzealous in extending reach to China and UAE. It was also hit because of consolidation in China. Nuvoco doesn't have such overseas assets in its kitty
Demand slowdown impact-Binani felt the impact of demand slowdown, Nuvoco is witnessing the same in East	Binani extended monies to related parties, and failed to receive the amount back. It was also hit by CCI investigation which led to net losses in P&L. We don't see such glaring ricks for Nuvoco, yet
	Binani had debt of ₹65bn for 6.25MT capacity in India (China, UAE capacities additional), while Nuvoco has ₹50bn debt for a >20 MT capacity. Binani had debt of $140/t (above replacement cost), while Nuvoco has $30/t (well below replacement cost)
	WC squeeze – Binani was hit by liquidity constraints as banks became reluctant to provide WC financing in the wake of B/S stress-this led to lower plant utilization, exacerbated the debt trap. Nuvoco is also feeling the pinch of higher WC financing requirement (because of energy crisis), but it's difficult to see banks withdraw WC financing given it doesn't have that level of B/S distress

Source: Companies, Bloomberg, Ambit Capital research

Exhibit 114: Binani had more debt on its B/S than its replacement cost; Nuvoco in comparison has significantly lower debt



Source: Companies, Bloomberg, Ambit Capital research

The Process

The data set

We have used publicly available filings (environmental clearance, monitoring/compliance, public hearing etc) to gather data on >250 limestone mines accounting for cumulative 21 billion tonnes of limestone reserves (proved+ probable) in India. We have excluded multiple small mines with <5 million tonnes reserves, as well as certain smaller producers. Nevertheless, we believe our dataset would easily capture >90% of total mineable reserves in India.

Our data collection methodology

- **Reserve classification** - Wherever specifically mentioned, we have tried to incorporate mineable reserves (proved +probable). Reserves can be classified into three categories – proved reserves, probable reserves and inferred resources. Proved reserve is the category with highest degree of confidence and economic viability. Probably reserves and inferred resources can ultimately be converted into proved reserves, but would require greater spend on exploration (reducing the gap between drilling holes) and reduction in cut-off grades (ultimately digging deeper, entailing higher cost). Sometimes mineable reserves and extractable reserves are specifically mentioned in filings, in which case we have used mineable reserves.
- **EC validity –** Wherever EC expiry/validity is specifically mentioned in filings, we have incorporated those exact dates. In certain limited cases where EC validity is not specifically mentioned, we have deployed guesstimates, often giving the benefit of doubt to the company (which means there is a risk in certain cases actual EC validity should be shorter than what we expect). For instance, there are cases where date of commencement of mining is mentioned, but not the date of mining lease (ML) execution. In those cases, we have assumed 50 years or 2030 or completion of renewal period, whichever is later, from the date of commencement of operation. However if there is a gap between date of ML execution and mining commencement (as is often the case), we may be overestimating lease period in certain limited cases.
- **Annual EC limit for mining-** In most EC filings, EC mining limit is explicitly stated. In certain cases where it is not, we have taken proposed RoM (run of mine) material adjusted for estimated mining rejects.

Limitations of the study

- **Missing data set-** while our data is pretty exhaustive, it doesn't capture 100% of mining leases in India, given data is not publicly available in certain cases. We have also excluded small mines, certain smaller producers from our study.
- **Use of guesstimates-** In certain cases, we have used guesstimates- therefore we might be over/underestimating reserves and EC validity in certain limited cases.

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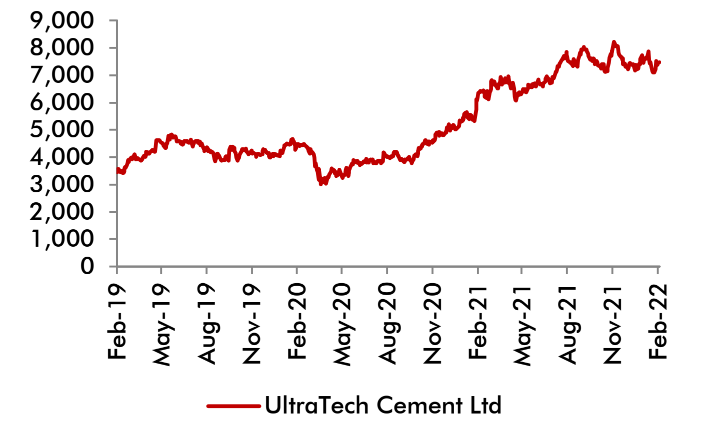
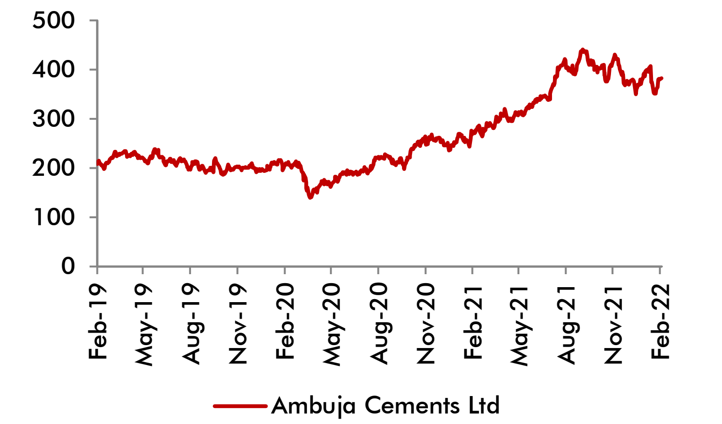
Stock price performance – Cement

Ultratech Cement Ltd (UTCEM IN, SELL)



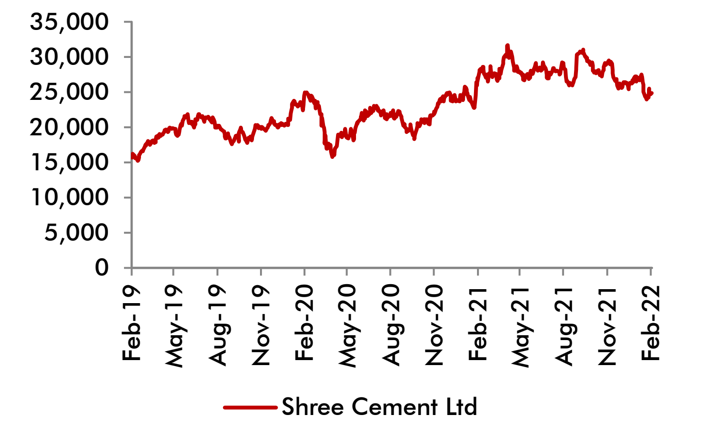
Source: Bloomberg, Ambit Capital research

Ambuja Cements Ltd (ACEM IN, SELL)



Source: Bloomberg, Ambit Capital research

Shree Cement Ltd (SRCM IN, SELL)



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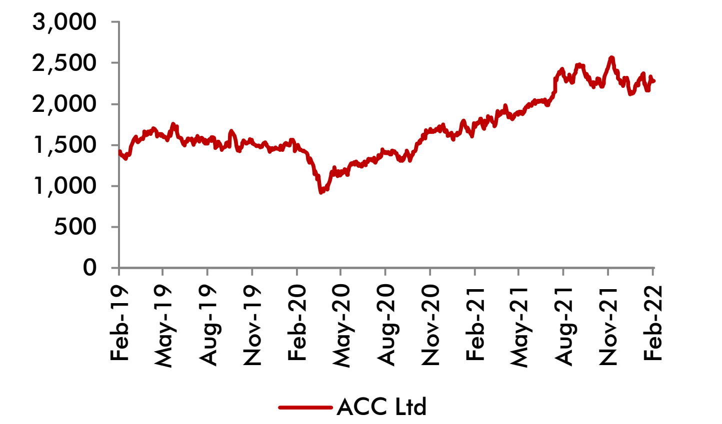
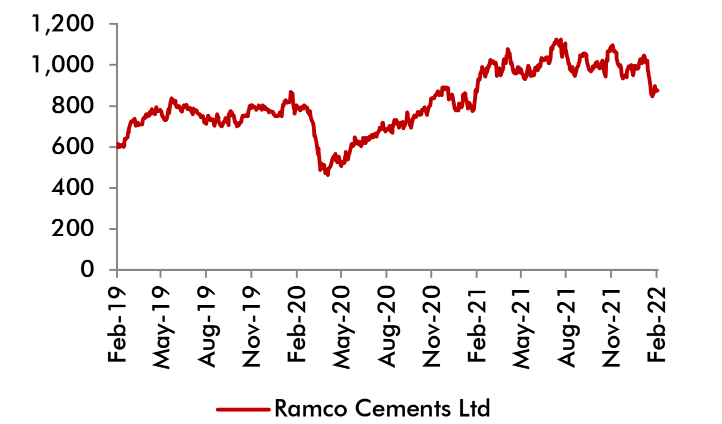
ACC Ltd (ACC IN, SELL)



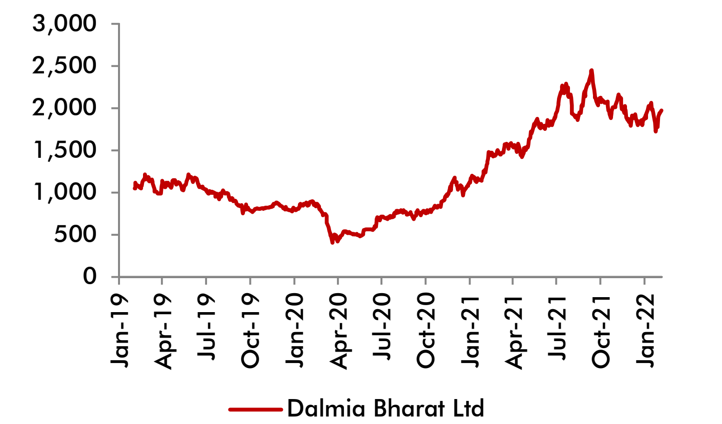
Source: Bloomberg, Ambit Capital research

Ramco Cements Ltd (TRCL IN, SELL)



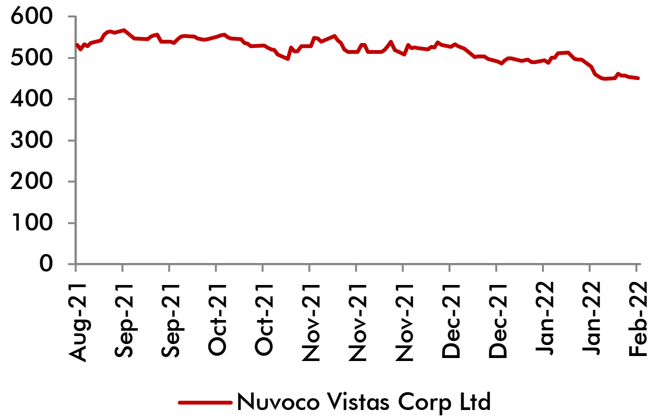
Source: Bloomberg, Ambit Capital research

Dalmia Bharat Ltd (DALBHARA IN, SELL)



Source: Bloomberg, Ambit Capital research

Nuvoco Vistas Corp Ltd (NUVOCO IN, SELL)



Source: Bloomberg, Ambit Capital research

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NOT RATED	We do not have any forward-looking estimates, valuation, or recommendation for the stock.
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NO STANCE	We have forward looking estimates for the stock but we refrain from assigning valuation and recommendation

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