11 January, 2012

SECTOR REPORT

NON FERROUS METALS

Fishing in turbulent waters

Bikash Bhalotia
+91-22-6618 6387
bikash.bhalotia@pinc.co.in

Harleen Babber
+91-22-6618 6389
harleen.babber@pinc.co.in

Dipti Vijaywargi
+91-22-6618 6393
dipti.vijaywargi@pinc.co.in

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Sector View - Negative

NON FERROUS SECTOR

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Fishing in turbulent waters

Despite 20-25% decline in LME prices since Jul'11, we believe it is still early to turn positive on the non-ferrous sector & recommend caution as:

- EU debt uncertainty and growth slowdown concerns in China would continue to exert downward pressure on LME prices
- In India, weak demand for metals on high interest rate and policy inaction
- OPM contraction on sticky cost, mainly energy (23-40% of operating cost)
- Project concerns: cost and time over-run, uncertainty on clearances for captive resources, likely lower utilisation levels and higher cost during stabilisation.

However, owing to 10-50% decline in non-ferrous stocks in India in 2011, we reckon selective pickings have emerged in the sector.

We initiate coverage on Hindalco (REDUCE, TP Rs122) & Sterlite (BUY, TP Rs114). We maintain ACCUMULATE on Hindustan Zinc (TP Rs132) and downgrade NALCO to SELL (TP Rs42).

Hindalco Industries: LME volatility, project concerns

CMP Rs118, TP Rs122 (SOTP-based), ***REDUCE***

We are cautious on Hindalco's prospects and estimate EPS to decline at a 18% CAGR over FY12E-FY14E on lower LME prices, rising energy cost, project concerns with delays in captive bauxite, alumina & coal, and high financial leverage (1.3x FY13E net D/E). Despite 53% decline in 2011, we believe it is still early to turn +ve on Hindalco and initiate coverage with REDUCE.

Sterlite Industries: Concerns on stake increase in associate VAL overdone

CMP Rs94, TP Rs114 (SOTP-based), ***BUY***

We believe the concerns on stake increase in loss-making associate VAL are unfounded and overdone as Sterlite has clarified that equity infusion in VAL would be in proportion to their 29.5% stake. Further, CMP is underplaying 13.8% EPS CAGR over FY12E-FY14E led by highly cost efficient zinc business (50%+ OPM), 107% volume CAGR in energy biz and strong balance sheet (despite excluding Rs89bn of loan given to VAL). Initiate coverage with BUY.

Hindustan Zinc: Defensive amongst metal stocks

CMP Rs124, TP Rs132 (6.0x FY13E EV/EBITDA), ***ACCUMULATE***

Earnings to be supported by volume growth on recently expanded capacity, >30years mine life, rising share of silver profit, highly cost efficient operations, and strong balance sheet despite volatile LME. To factor-in low return on surplus cash, we value surplus cash at 20% disc. to book value & maintain ACCUMULATE.

National Aluminium (NALCO): Multiple headwinds

CMP Rs56, TP Rs42 (5.0x FY13E EV/EBITDA), ***SELL***

We estimate NALCO's EBITDA to decline at 8% CAGR and EPS at 10% CAGR over FY12E-FY14E on lower LME prices and higher energy & labor cost. Further, we are concerned about its foray in unrelated businesses (wind, nuclear power) & geography (Indonesia). We value cash at 20% disc to BV; downgrade to SELL.

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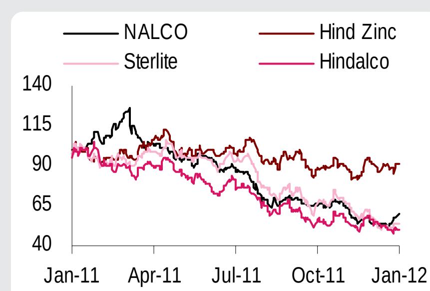
FY13E SENSITIVITY ANALYSIS

% impact on	EBITDA	EPS	TP
1% change in		Hindalco	
LME Aluminium	1.0	2.2	2.0
LME Copper	0.2	0.3	0.1
Copper TcRc	0.1	0.2	0.2
Coal	(1.1)	(2.3)	(2.0)
USD/INR*	1.7	4.1	2.8
		Sterlite Inds.	
LME Aluminium	0.2	0.4	0.1
LME Copper	0.1	0.2	0.1
Copper TcRc	0.1	0.1	0.1
LME Zinc/lead	1.1	1.5	0.9
Coal	(0.7)	(1.1)	(0.4)
USD/INR*	1.2	1.4	1.0
		Hindustan Zinc	
LME Zinc	1.0	0.9	0.7
LME Lead	0.2	0.2	0.1
Silver	0.3	0.2	0.2
USD/INR*	1.5	1.3	1.1
		NALCO	
LME Aluminium	5.3	5.5	3.0
Coal	(1.5)	(1.5)	(0.8)
USD/INR*	5.3	5.5	3.0

*Note: * 1% Rupee depreciation*



SECTOR SUMMARY - KEY FINANCIALS

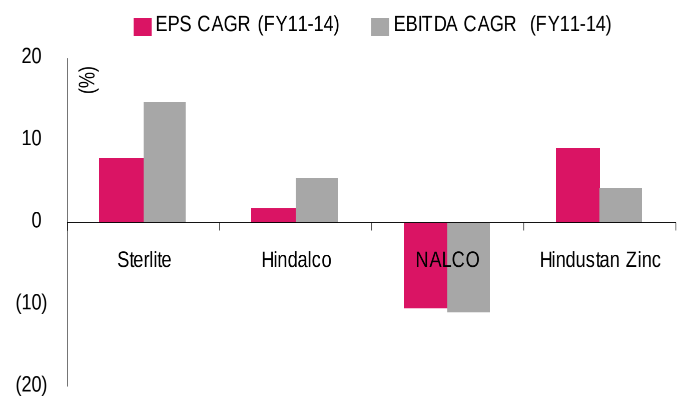
Company	CMP (Rs)	TP (Rs)	Upside (%)	Reco#	Mcap (Rs bn)	EPS (Rs)			EPS CAGR FY11-14E	OPM (%)		EV/EBITDA (x)		P/E (x)		P/BV (x)	
						FY12E	FY13E	FY14E		FY13E	FY14E	FY13E	FY14E	FY13E	FY14E	FY13E	FY14E
Hindalco*	118	122	3%	REDUCE	226	20.0	16.1	13.5	1.8	12.2	11.9	4.7	5.0	7.3	8.7	1.0	0.9
Sterlite*	94	114	21%	BUY	317	13.6	14.8	17.6	7.7	26.4	27.1	2.7	1.9	6.4	5.4	0.7	0.6
Hindustan Zinc	124	132	7%	ACCU.	522	12.6	13.3	14.3	9.0	52.0	52.1	5.4	4.6	9.3	8.6	1.7	1.5
NALCO	56	42	-26%	SELL	144	3.6	2.9	3.0	(10.5)	16.9	16.8	8.0	7.1	19.1	18.8	1.2	1.1

*Mote: CMP as on 9th Jan. 2012 # ACCU. - Accumulate; * EV/EBITDA based on proportionate consolidation & Equity value for P/BV adjusted for Goodwill*

PINC RESEARCH

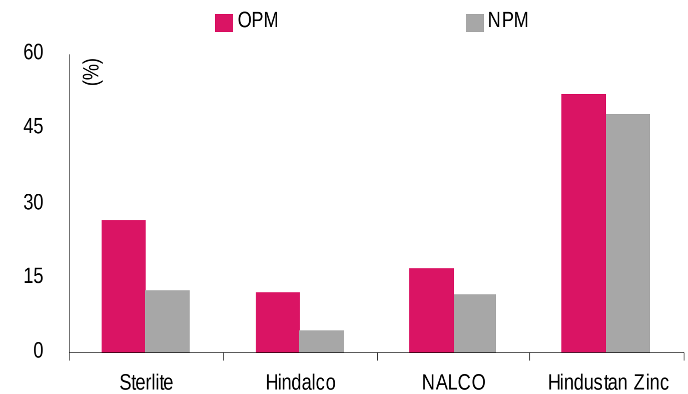
Non-ferrous sector: Comparative Fundamentals

Earnings growth



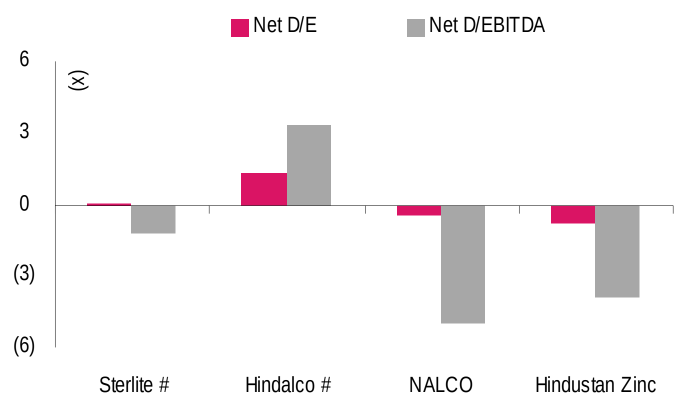
Source: Company, PINC Research

Margin comparison



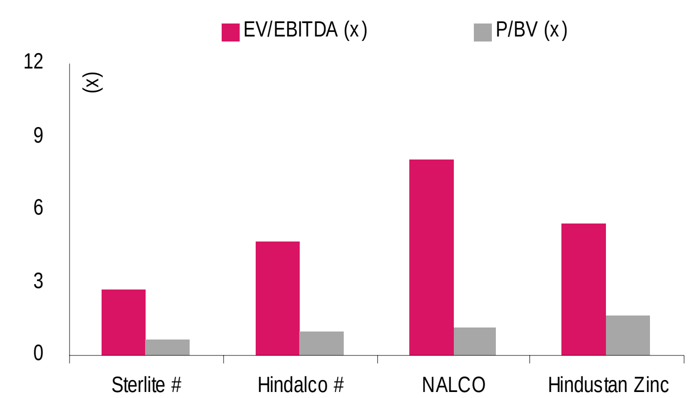
Source: Company, PINC Research

Financial leverage



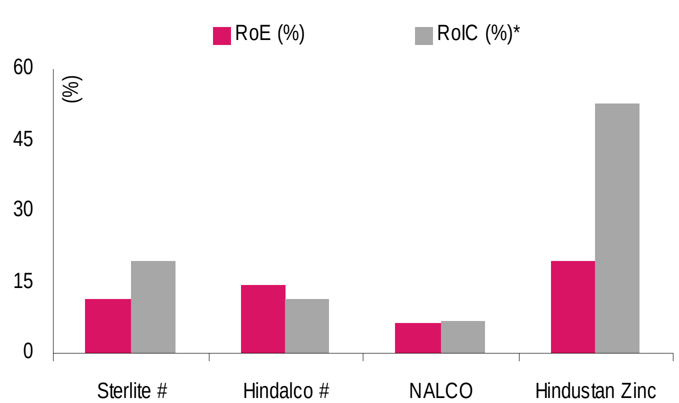
Source: Company, PINC Research
Note: # Equity value adjusted for goodwill; Debt proportionately consolidated for Sterlite

Valuation Ratios



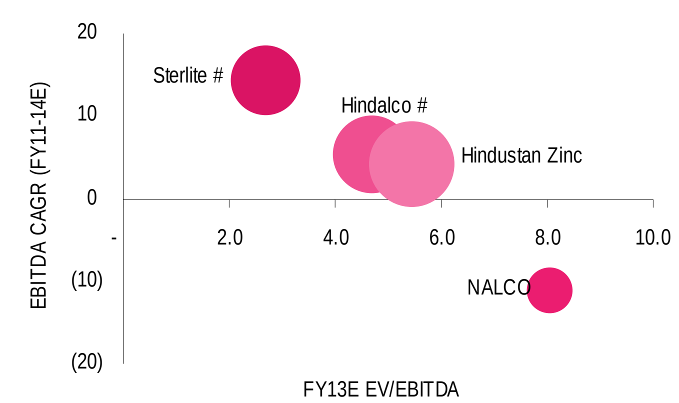
Source: Company, PINC Research
Note: # BV adjusted for goodwill, EV and EBITDA proportionately consolidated for Sterlite and Hindalco

Return ratios



Source: Company, PINC Research
*Note: # Equity adjusted for goodwill for Sterlite and Hindalco; * Invested Capital = Capital Employed - CWIP - Goodwill - Cash & Equivalents*

Earnings growth vs. valuations



Source: Company, PINC Research
Note: Size of the bubble represents market cap of the companies; EV and EBITDA proportionately consolidated for Sterlite and Hindalco

PINC RESEARCH

We have summarised below the key themes having a bearing on the performance of non-ferrous companies in India and outlook on them.

Theme	Outlook	Impact
Hindalco		
LME prices	Expect to remain under pressure	↓
Copper TcRc	Up 12% YoY for CY12	↑
Currency	Weaker rupee to benefit domestic realisation, export revenue	↑
Cost	Sticky on higher energy prices	↓
Novelis	Stable EBITDA; +ve cash flow	↑
Financial leverage	High at 1.3x net D/E for FY13E	↓
Expansion projects		
Hirakud - 52ktpa smelting, 100MW CPP, 150ktpa rolling	*Nearing completion*	↑
Mahan - 359ktpa Al, 900MW CPP	*Nearing completion, Uncertainty on alumina, coal*	↓
Utkal alumina - 1.5mntpa alumina, 90MW CPP	*Delayed; Awaiting clearance on captive bauxite*	↓
Aditya, Jharkhand	*Long drawn projects - contribution FY14E onwards*	↔
Sterlite		
LME prices	Expect to remain under pressure	↓
Copper TcRc	Up 12% YoY for CY12	↑
Currency	Weaker rupee to benefit domestic realisation, export revenue	↑
Cost	Sticky on higher energy prices	↓
Stake increase in VAL	Unfounded, concerns overdone; more than factored in the price	↔
Financial leverage	Net cash company, strong cash flow generation	↑
Expansion projects		
HZL - 310ktpa zinc/ lead, 320tpa silver	*Completed/ near completion*	↑
Balco - 325ktpa Al, 1,200MW CPP	*Delayed; lacking captive bauxite, alumina, coal*	↓
Copper - 400ktpa smelter, 160MW CPP	*Put on hold, except 80MW CPP*	↓
SEL - 2,400MW IPP	*Delayed, nearing completion; Coal supply concerns*	↔
VAL - 1.25mntpa Al smelter	*Delayed, high cost due to lack of bauxite, alumina, captive power*	↓
Hindustan Zinc		
LME prices	Expect to remain under pressure	↓
Currency	Weaker rupee to benefit domestic realisation, export revenue	↑
Expansion projects - 310ktpa zinc/ lead, 320tpa silver	Silver to provide next leg of growth	↑
Cost	To increase slightly on higher energy, mining cost	↓
Financial leverage	Very strong; to strengthen further	↑
Minority stake buyout by Sterlite	Uncertain; stuck in arbitration	↓
NALCO		
LME prices	Expect to remain under pressure	↓
Currency	Weaker rupee to benefit domestic realisation, export revenue	↑
Cost	Coal and employee cost to rise further; Captive coal block in development stage only	↓
Weak growth prospects	Further expansion of aluminium capacity long drawn (FY16E)	↓
Foray into unrelated business	Imprudent diversification into unrelated business (green energy) and geography (Indonesia)	↓

Source: PINC Research

Global Comparative Valuations

	Mcap	Curr EV	Curr	Price perf. (%)			OPM (%)		EV/EBIDTA (x)		P/E (x)		P/B (x)		ROE (%)	
	(USD mn)	(USD mn)	D/E (x)	5D	3M	1-Yr	CY11/ FY12E	CY12/ FY13E	CY11/ FY12E	CY12/ FY13E	CY11/ FY12E	CY12/ FY13E	CY11/ FY12E	CY12/ FY13E	CY11/ FY12E	CY12/ FY13E
LME Aluminium**	2,047			4.0	(7)	(18)										
Industry Average				3.1	(3)	(33)	20	20.0	5.7	5.8	11.6	10.0	2.8	2.4	11.3	9.7
Alcoa Inc	9,749	21,147	0.5	6.0	(6)	(44)	13	13.8	6.4	6.2	12.4	10.9	0.7	0.7	5.5	5.5
Anglo American PLC	50,145	60,840	0.4	3.0	5	(25)	40	40.4	4.5	4.0	7.5	6.7	1.1	1.0	16.5	16.1
United Co RUSAL PLC	9,107	20,569	1.0	-	(25)	(60)	21	18.6	8.2	9.1	9.3	12.4	13.7	11.9	15.0	-
Century Aluminum Co	809	850	0.3	8.0	0	(46)	9	11.4	7.0	5.4	36.6	13.4	0.7	0.7	1.3	4.9
Nippon Light Metal Co Ltd	730	2,842	1.9	5.0	(12)	(35)	NA	NA	NA	NA	5.7	5.3	NA	NA	-	-
Aluminium Bahrain BSC	1,987	2,878	0.6	-	(35)	NA	NA	NA	NA	NA	4.5	8.7	NA	NA	-	-
Sterlite Industries India* #	6,219	6,412	0.3	1.0	(18)	(44)	25	26.4	3.0	2.7	6.9	6.4	0.8	0.7	11.6	11.3
Hindalco Industries Ltd* #	4,547	8,578	1.0	7.0	(3)	(45)	12	12.2	4.0	4.7	5.9	7.3	1.1	1.0	20.8	14.3
National Aluminium Co Ltd*	2,826	2,129	-	5.0	(8)	(39)	20	16.9	7.0	8.0	15.3	19.1	1.2	1.2	8.2	6.3
LME Copper**	7,569			2.0	5	(20)										
Industry Average				1.7	1	(32)	24	23.9	6.7	7.2	10.3	10.6	2.2	1.8	26.6	22.1
Aurubis AG	2,309	2,572	0.5	(4.0)	4	(9)	4	3.4	4.5	4.8	7.9	9.5	1.1	1.0	14.7	10.8
Jiangxi Copper Co Ltd	10,554	11,334	0.4	3.0	22	(32)	10	10.8	6.8	6.8	6.5	6.5	1.2	1.1	19.1	17.7
Yunnan Copper Industry Co	3,638	6,017	4.4	3.0	(8)	(40)	10	8.9	12.3	14.0	22.5	20.7	NA	NA	-	-
Sumitomo Metal Mining Co Ltd	7,429	9,853	0.3	-	(3)	(31)	16	14.7	6.0	6.4	7.4	8.3	0.9	0.8	12.8	10.7
MMC Norilsk Nickel OJSC	30,215	28,239	0.2	-	(19)	(32)	50	48.4	3.9	4.3	6.4	6.9	1.9	1.5	30.5	26.6
Southern Copper Corp	26,205	27,197	0.7	4.0	19	(33)	57	57.3	6.9	6.7	11.3	11.5	5.9	4.7	55.7	45.0
LME Zinc**	1,839			1.0	0	(25)										
Industry Average				3.6	13	(27)	33	35.7	5.3	4.7	10.1	9.1	1.2	1.1	16.1	15.6
Nyrstar	1,433	1,805	0.6	6.0	3	(31)	9	13.5	4.8	3.2	10.6	5.7	0.8	0.7	9.2	15.5
Korea Zinc Co Ltd	5,125	4,795	0.1	5.0	12	11	20	21.5	5.5	4.8	7.8	6.8	1.7	1.4	24.9	23.0
Lundin Mining Corp	2,421	2,212	-	10.0	12	(40)	46	48.1	6.3	6.2	11.5	10.1	0.7	0.7	6.7	5.4
Volcan Cia Minera SAA	4,260	4,230	-	5.0	28	(1)	55	60.6	6.3	5.4	9.3	8.3	NA	NA	29.1	26.5
HudBay Minerals Inc	1,714	879	-	3.0	(3)	(39)	28	35.1	3.9	3.4	15.5	17.9	1.0	0.9	5.6	3.8
Xstrata PLC	46,258	56,735	0.2	3.0	11	(33)	35	36.7	4.8	4.3	7.8	6.9	1.0	0.9	13.7	14.7
Boliden AB	4,259	4,994	0.3	3.0	34	(19)	17	18.5	4.9	4.7	8.2	7.6	1.4	1.2	17.6	16.6
Hindustan Zinc Ltd*	10,230	8,238	-	5.0	5	(6)	53	52.0	6.3	5.4	9.8	9.3	2.0	1.7	21.7	19.4

Source: Bloomberg, PINC Research

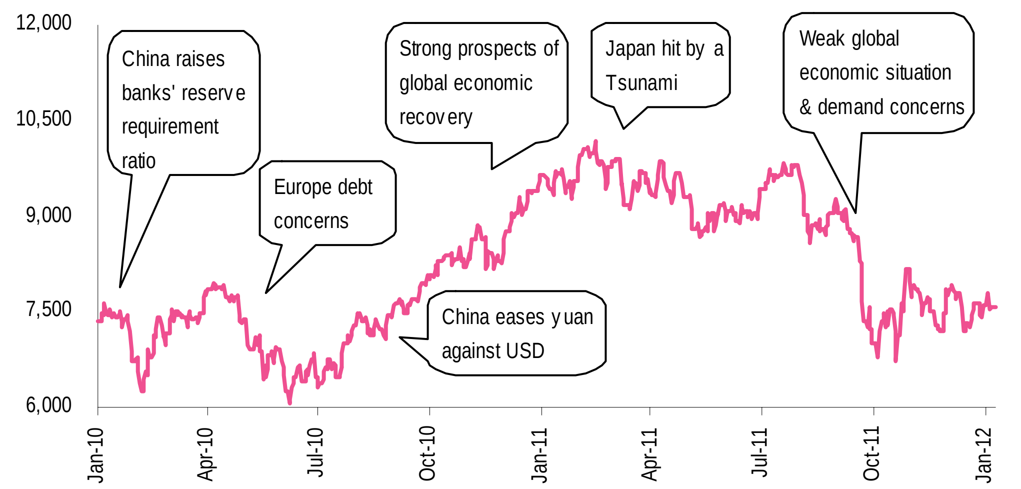
** PINC estimates; # EV/EBITDA based on proportionate consolidation & Equity value for P/B adjusted for goodwill; ** Value corresponding to Mcap is CMP in USD/t   Note: CMP as on 9th Jan. 2012*

PINC RESEARCH

Non ferrous sector – Demand growth concerns on economic uncertainty

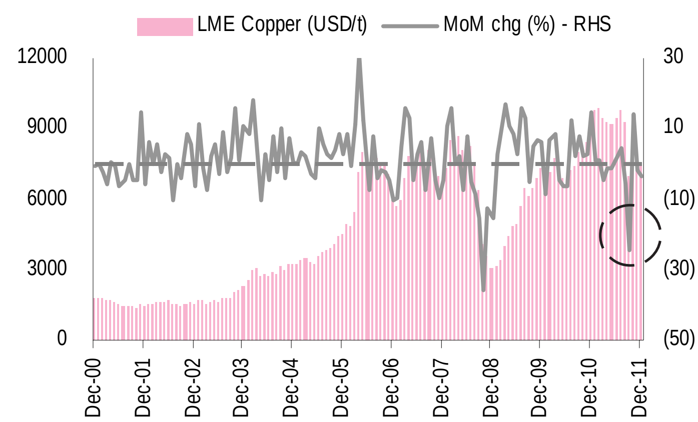
Non ferrous metal prices have witnessed a steep decline in 2011 with heightened volatility on EU sovereign debt crisis, stalemate on the austerity measures in EU & QE3 by US Fed and fears of hard-landing in China.

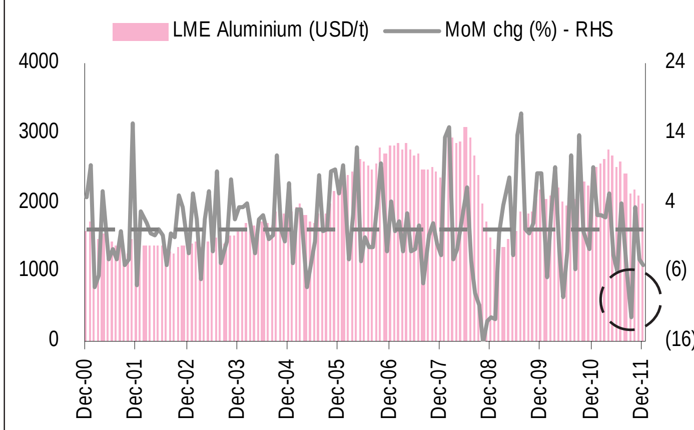
LME Copper movement (USD/t)

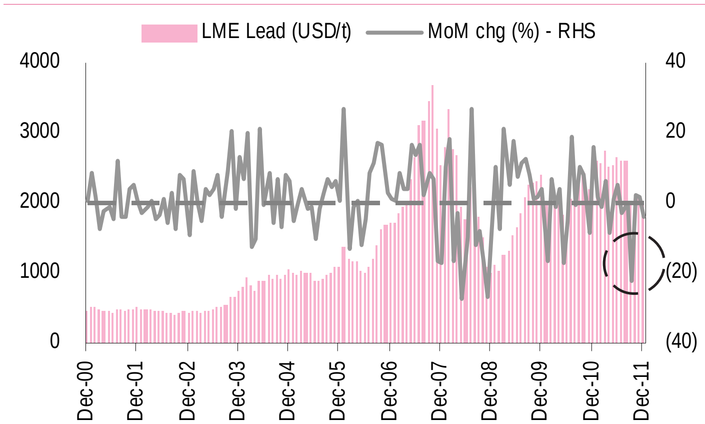


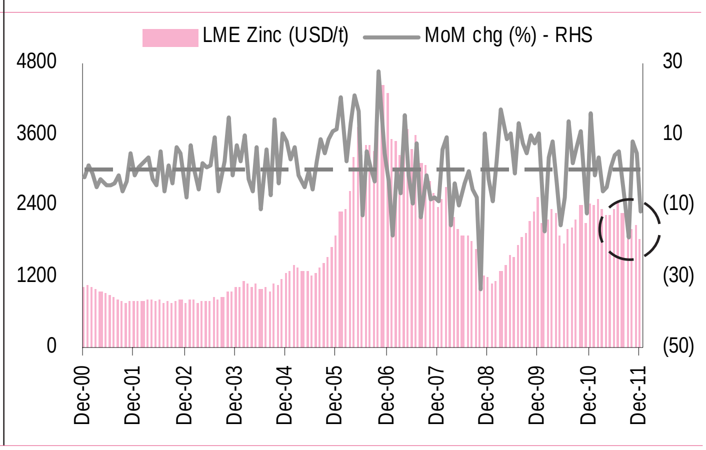
Source: Bloomberg, PINC Research

Increased volatility in metal prices









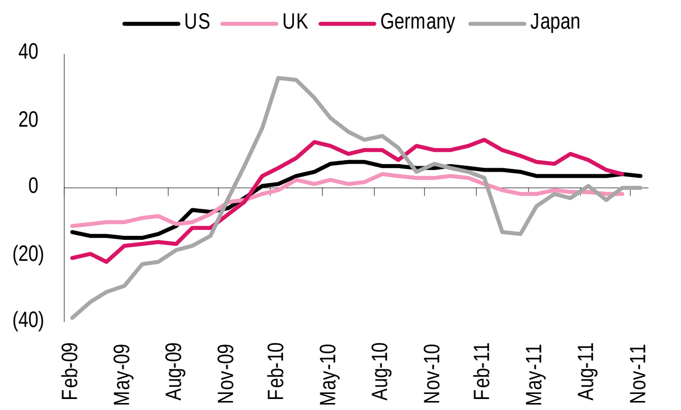
Source: Bloomberg, PINC Research

GDP growth in EU slowed down to 1.8% in Q2CY11 and Q3CY11 each from 2.4% in Q1CY11 as debt concerns mounted. Greece recorded a GDP decline of 5.2%, the highest amongst EU countries. US GDP growth increased marginally to 3.9% in Q3CY11 on better consumption and higher investments.

The OECD leading indices reflect a downward movement with Europe showing a steeper decline indicative of increasing pressure on resolving debt issues.

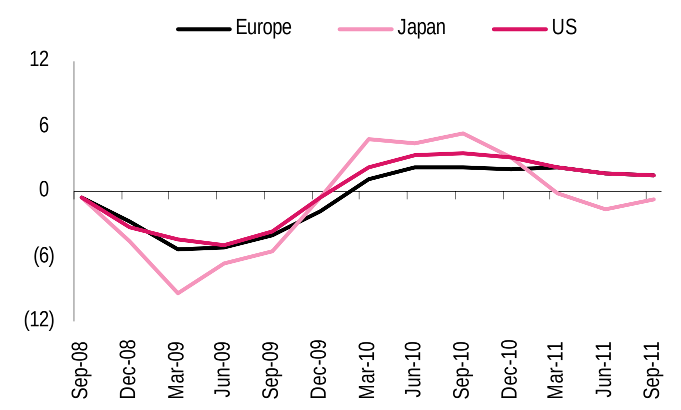
The manufacturing PMI in Europe entered the contraction phase in Aug'11 by declining below 50 and has been lower than 50 since. December PMI at 46.9 was a slight improvement from 28-mth low November PMI of 46.4. On the other hand, US manufacturing PMI increased to an 8-mth high of 59.9 as production recovers. However, many manufacturing units are cautious about higher raw material costs that can impact margins in Q1CY12.

IIP growth (%)



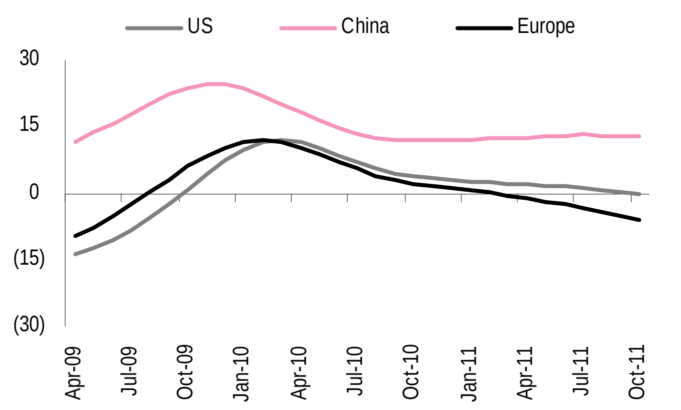
Source: Bloomberg, PINC Research

GDP growth (%)



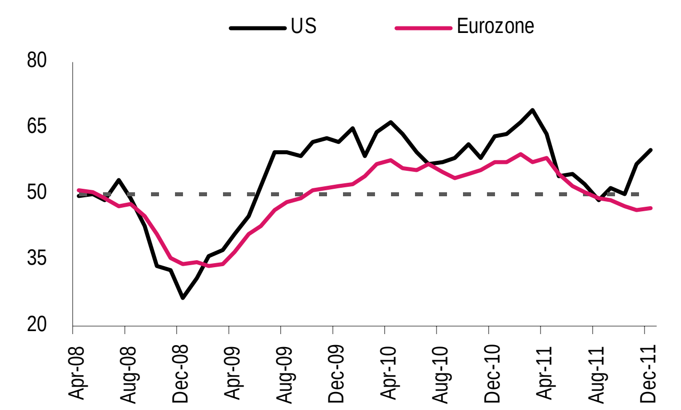
Source: Bloomberg, PINC Research

OECD leading indicators



Source: Bloomberg, PINC Research

Production PMI



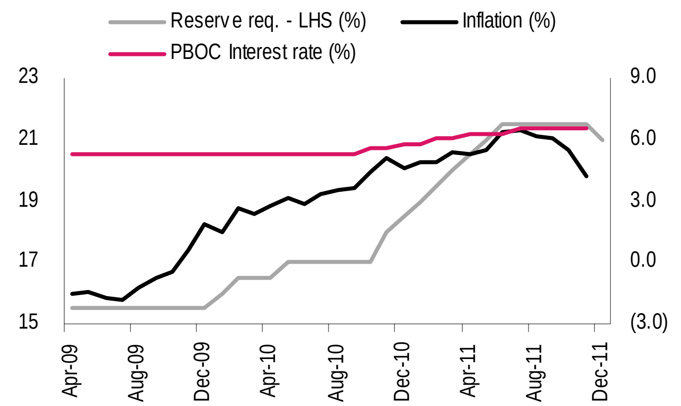
Source: Bloomberg, PINC Research

Tightening monetary policy in China and India to curb inflation has further aggravated the situation. This has led to slowdown in growth and deterioration in business confidence in these economies, stroking fears of a hard landing in China, the world's largest producer and consumer of metals.

Is China headed for a hard-landing?

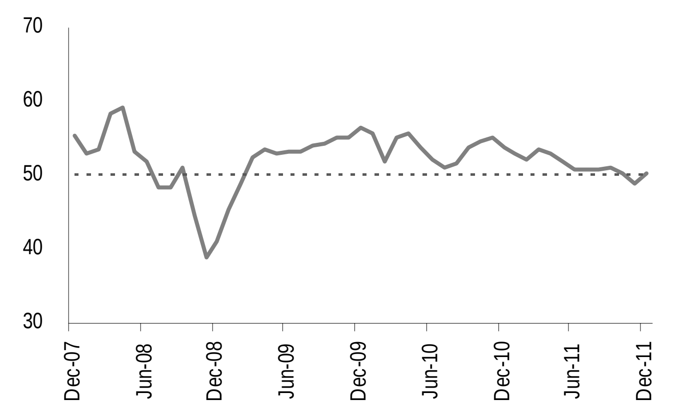
Following tight monetary policy to curb inflation, China's lead indicators have declined since Jul'11, signifying a decline in business & consumer confidence. The manufacturing PMI breached 50 in Nov'11, the lowest since Jan'09, before re-bounding marginally to 50.4 in Dec'11. China's IIP growth has declined to 12.4% in Nov'11 from 15.1% in Jun'11.

China inflation & interest rates



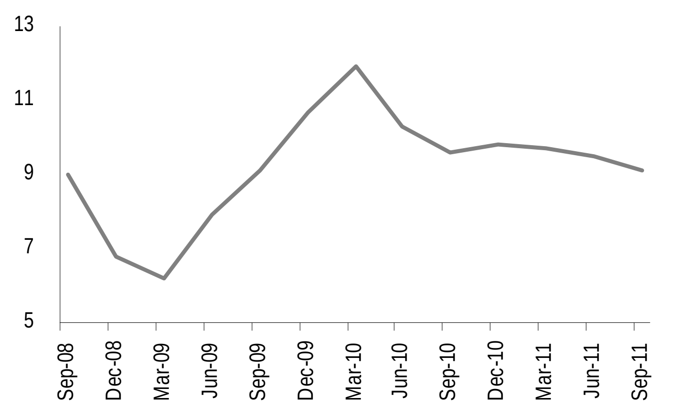
Source: Bloomberg, PINC Research

China manufacturing PMI



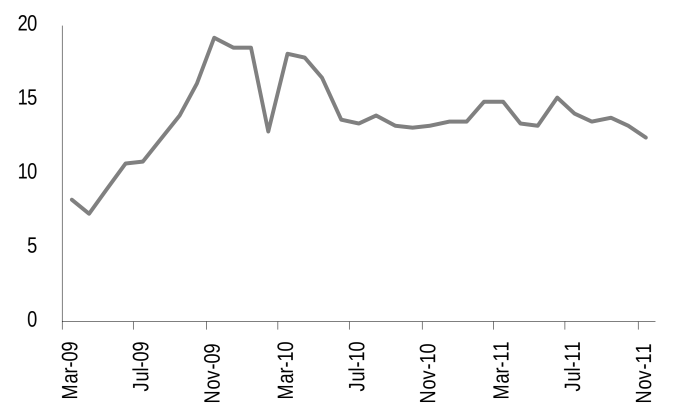
Source: Bloomberg, PINC Research

China GDP growth (%)



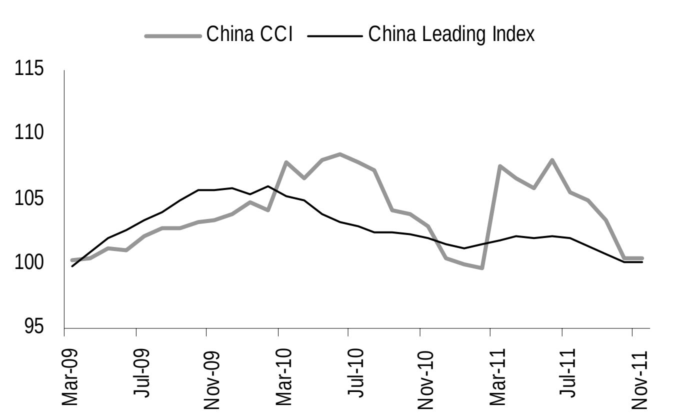
Source: Bloomberg, PINC Research

China IIP growth (%)



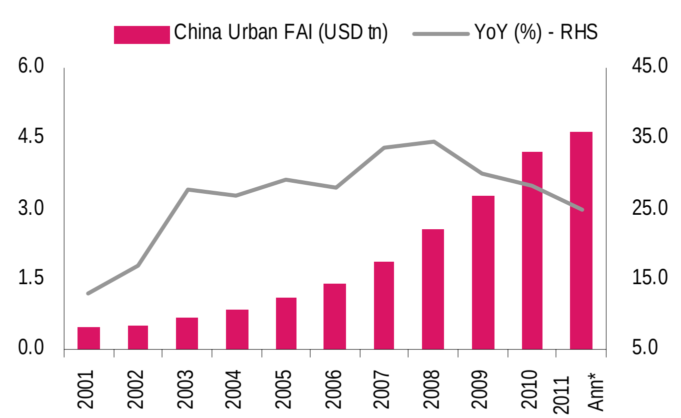
Source: Bloomberg, PINC Research

China leading Index (1996 = 100) & CCI



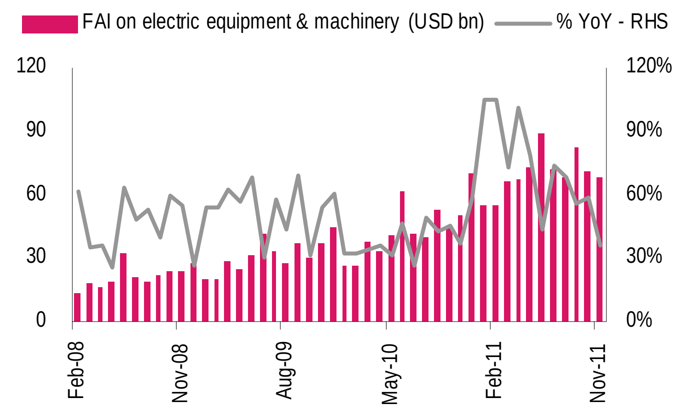
Source: Bloomberg, PINC Research; CCI - Consumer Confidence Index

China urban FAI & YoY growth



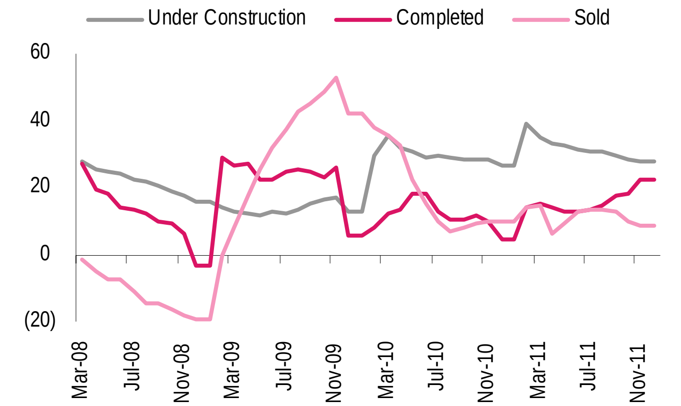
*Source: Bloomberg, PINC Research; * Jan-Nov. annualised*

FAI on electric equipment and machinery (USD bn)



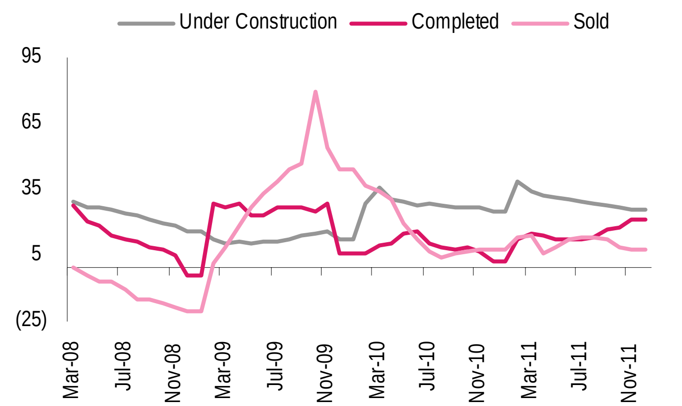
Source: Bloomberg, PINC Research

China commercial real estate space growth YoY %



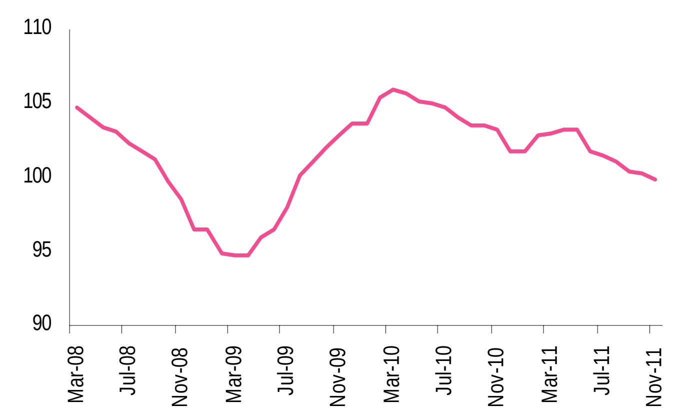
Source: Bloomberg, PINC Research

China residential real estate space growth YoY %



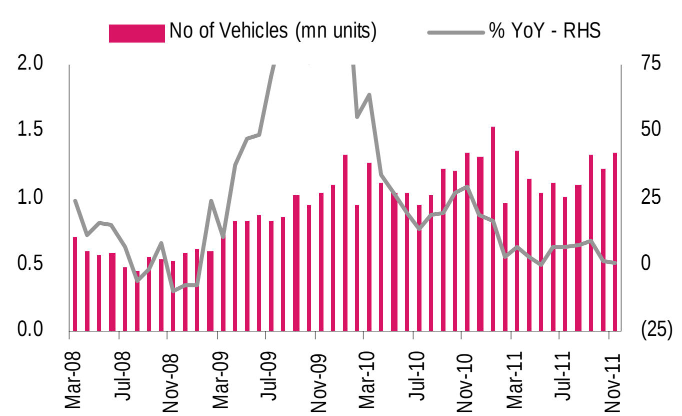
Source: Bloomberg, PINC Research

China: Real estate climate index



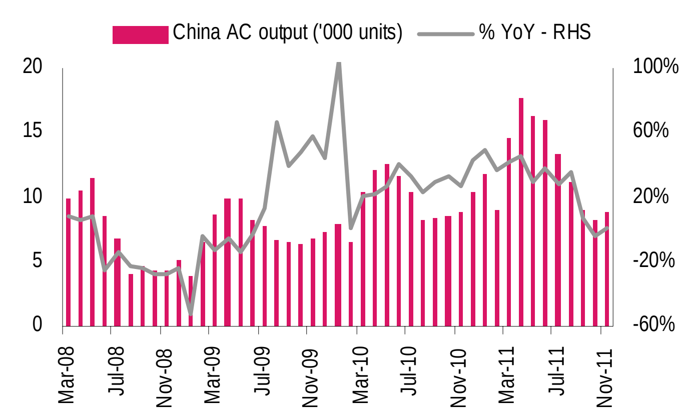
Source: Bloomberg, PINC Research
Note: China real estate - Business confidence index

China passenger car sales



Source: Bloomberg, PINC Research

China air conditioners output

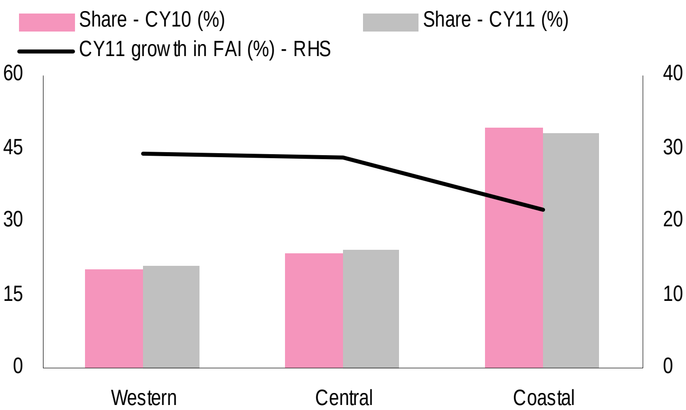


Source: Bloomberg, PINC Research

To reverse the trend of this slowdown and buoyed by decline in inflation, China's central bank has recently adopted a dovish monetary policy stance, with a 50bps reduction in the reserve requirement. However, they have maintained their intent to reign in property prices.

So, is China headed for a hard landing? We don't think so. In our opinion, China would witness a soft-landing at worse, with inflation already declining and China's central bank adopting a easing monetary policy stance. And, although years of double-digit demand growth for metals in China may not continue, we believe that the demand for metals would be sustained by increased focus on development in hitherto lagging central and western regions.

FAI in Western & Central China - increasing share



Source: National Bureau of Statistics China, PINC Research

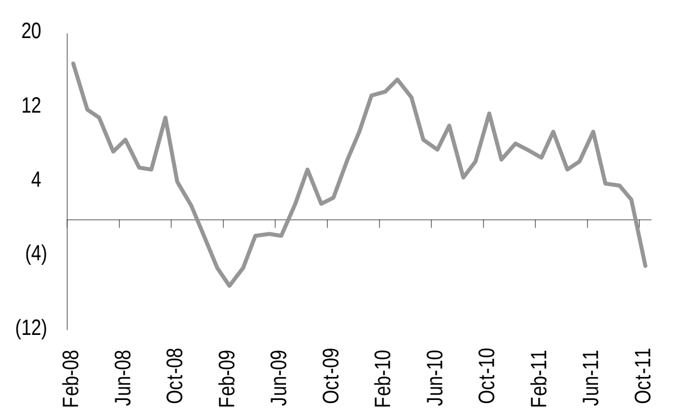
Steel consumption/capita (focus on coastal till now)

Source: PINC Research
Note: Difference in steel consumption per capita is an indication of disparate focus on Coastal region

India – Multitude of concerns emerged in 2011

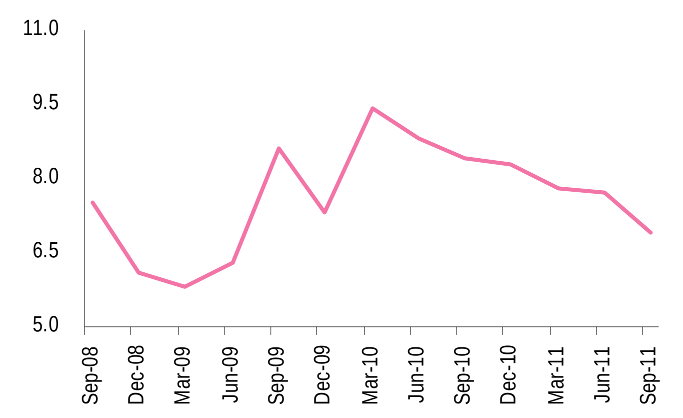
2011 has been a forgettable year for India, with a multitude of issues emerging, most prominent being persistent inflation, sharp depreciation of Rupee, political scams and policy inaction. As a result, there was a slowdown in growth, with a 5.1% YoY decline in IIP for Oct'11, impacting demand growth for metals.

India IIP growth (%)



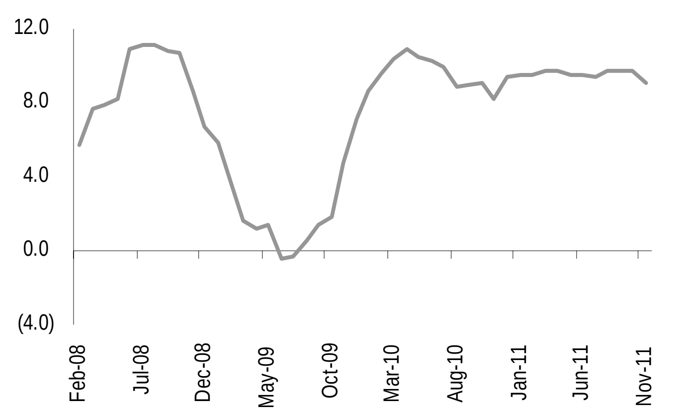
Source: Bloomberg, PINC Research

India GDP growth (% YoY)



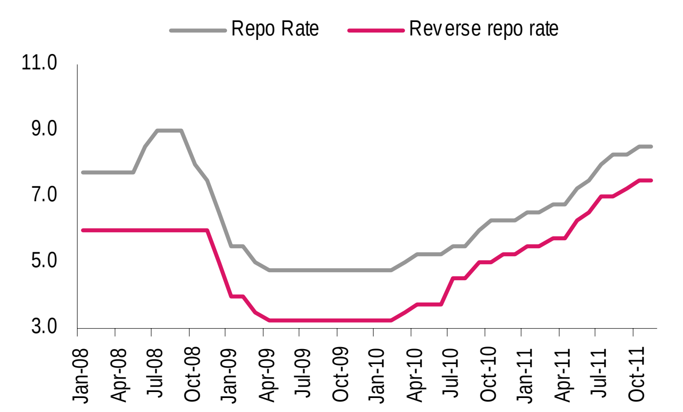
Source: Bloomberg, PINC Research

India inflation (%)



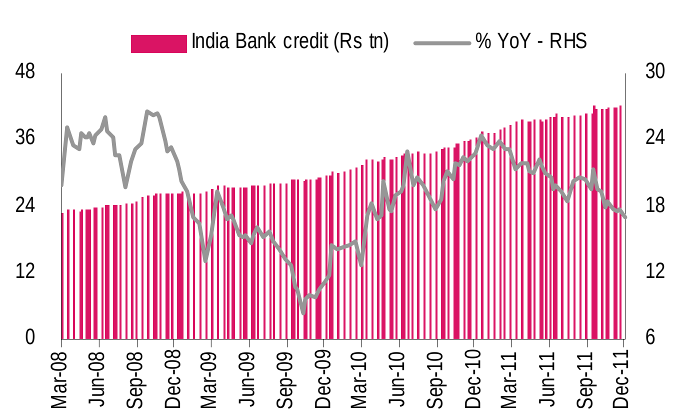
Source: http://eaindustry.nic.in, PINC Research

India repo & reverse repo rate (%)



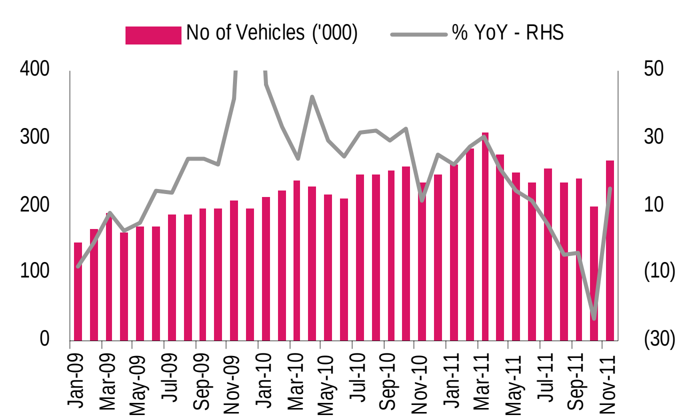
Source: Bloomberg, PINC Research

India credit growth



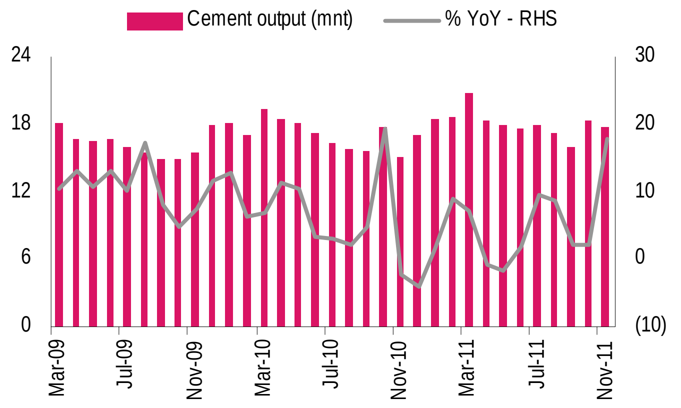
Source: Bloomberg, PINC Research

India passenger vehicle production & growth



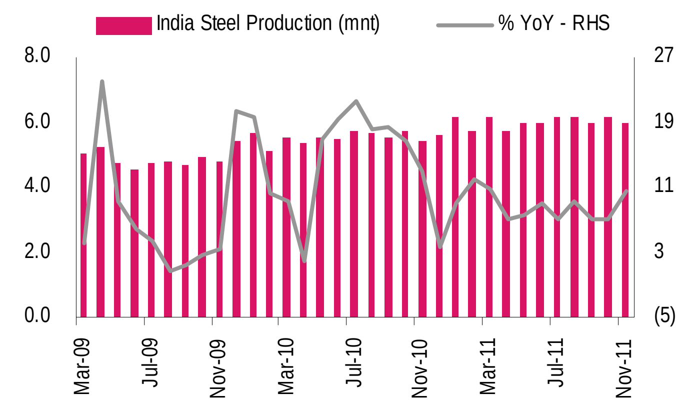
Source: SIAM, PINC Research

India cement output & growth



Source: CMA, PINC Research

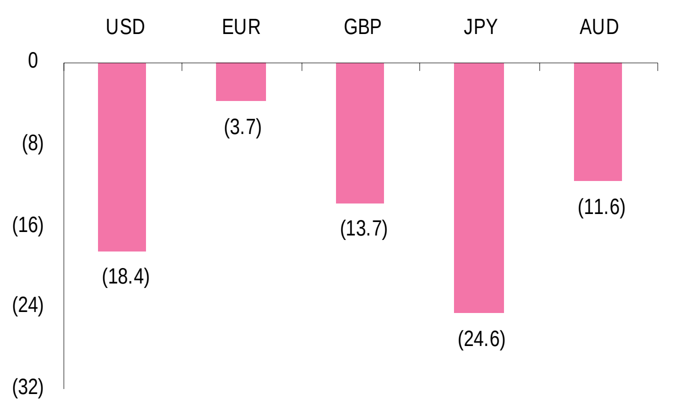
India steel production & YoY growth



Source: Bloomberg, PINC Research

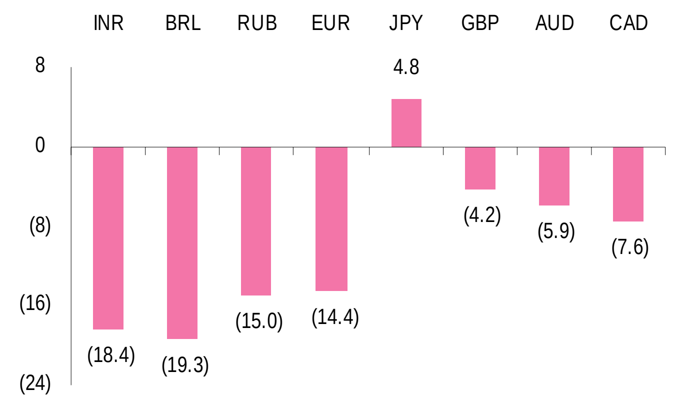
India's situation has been worsened by a sharp **depreciation in Rupee,** with INR being one of the worst performing currencies globally. .

INR vs. other currencies (Jul'11-Jan'12)



Source: Bloomberg, PINC Research

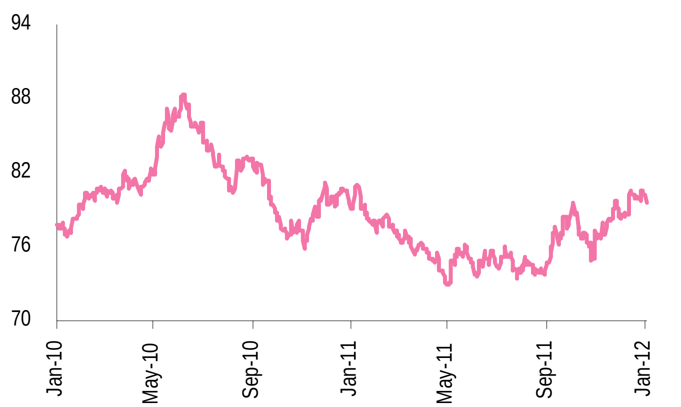
USD vs. other currencies (Jul'11-Jan'12)



Source: Bloomberg, PINC Research

Dollar appreciation could put further pressure on commodity prices

Dollar Index



Source: Bloomberg, PINC Research

CRB Index

Source: Bloomberg, PINC Research

World economic outlook

On the back of slowdown in recovery coupled with an increase in fiscal and financial uncertainty, IMF projects a weak expansion in the developed economies and fairly robust growth in the developing economies. IMF estimates a world GDP growth of 4% in both 2011 and 2012 vs. 5% in 2010 with developed economies' real GDP expansion of 1.5% in 2011 and 2% in 2012. In the developing economies, emerging capacity constraints and policy tightening is expected to lower the GDP expansion to 6% in 2012. Issues in Europe debt crisis resolution and weakening of economic activity at US pose as two major risks.

Developed economies: Although US is showing signs of improvement, the uncertainty in EU prevails with a rising concern on demand growth.

China: Although we believe that China may not be headed for a hard-landing, a slowdown in demand growth could impact demand growth for metals from world's largest consumer.

India: With multitude of concerns emerging - persistent inflation, political scams, policy inaction, resulting in growth slowdown, 2011 was a forgettable year for India. Demand for metals, expected to persist at double-digit growth, declined to low-single digit, as capex cycle slowed down. However, a topping of interest rate cycle is expected to provide some respite in 2012.

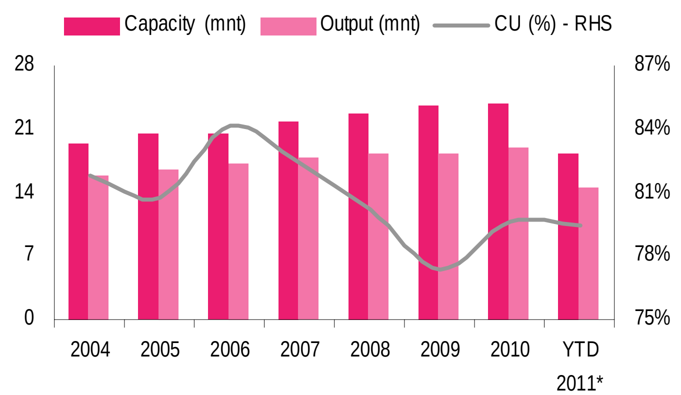
We expect uncertain growth outlook to impact demand for metals, putting pressure on their prices.

Copper - Most vulnerable to global economic slowdown

Copper supply impacted by reduced mine output on geological concerns and declining ore grade.

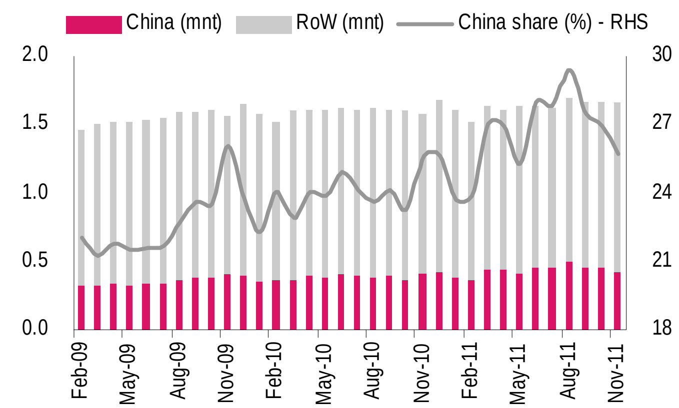
Global refined copper output grew at a CAGR of 3.2% over CY04-CY11 (Jan-Sep'11 annualised), led by China, where refined copper output has increased at a CAGR of 14.4% over CY04-CY11 (Jan-Nov'11 annualised).

Global refined capacity & output



*Source: ICSG, PINC Research * YTD - Jan-Sep'11*

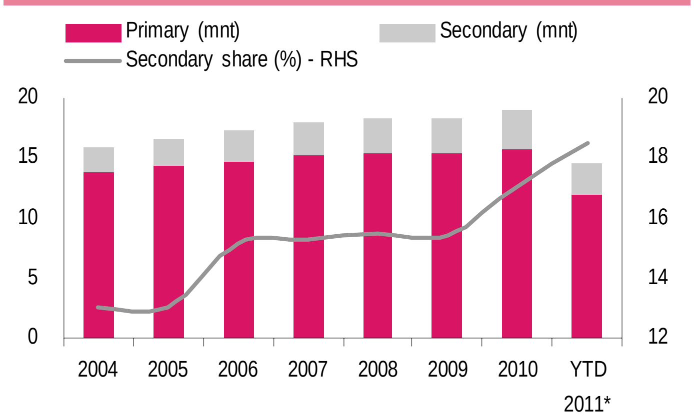
Copper monthly refined production



Source: Bloomberg, PINC Research

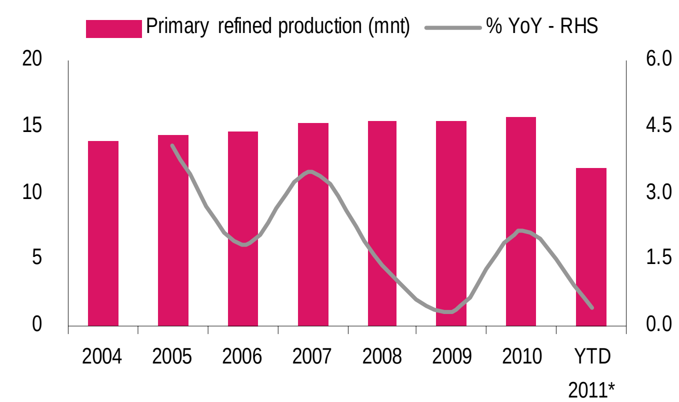
Globally, share of secondary refining has increased from 15.1% in CY06 to 18.5% in CY11 (Jan-Sep'11), as primary refining has been constrained by mine output which witnessed 1.1% CAGR over CY04-CY11 (Jan-Sep'11 annualised), lagging behind refining output.

World: Share of secondary refining of copper



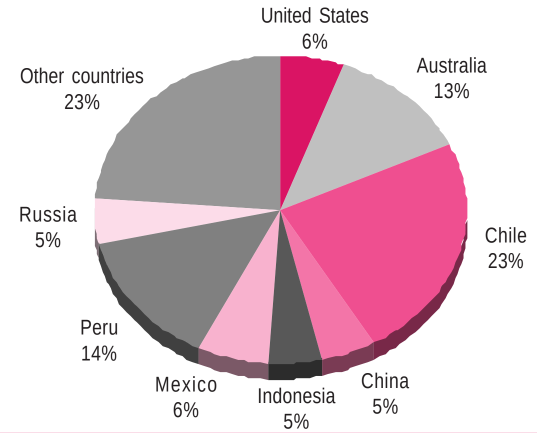
*Source: ICSG, PINC Research * YTD - Jan-Sep11*

Copper primary production constrained



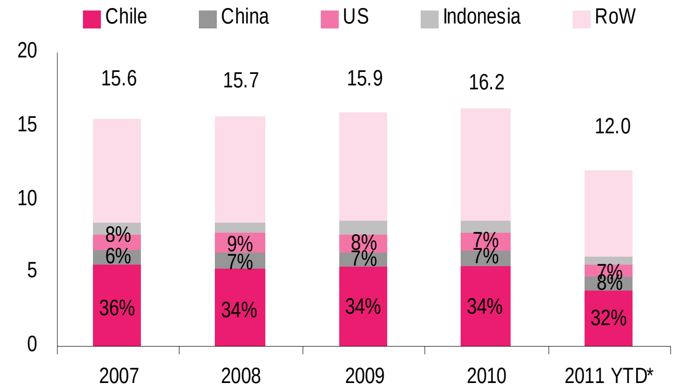
*Source: ICSG, PINC Research * YTD - Jan-Sep'11*

Copper mine reserves (630mnt - 2010)



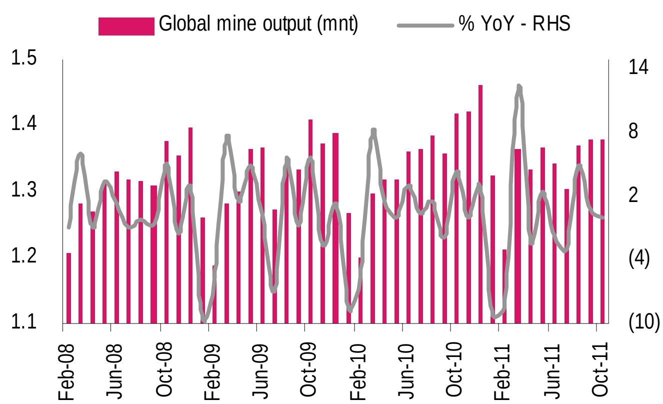
Source: USGS, PINC Research

Country-wise share of copper mined output (mnt)



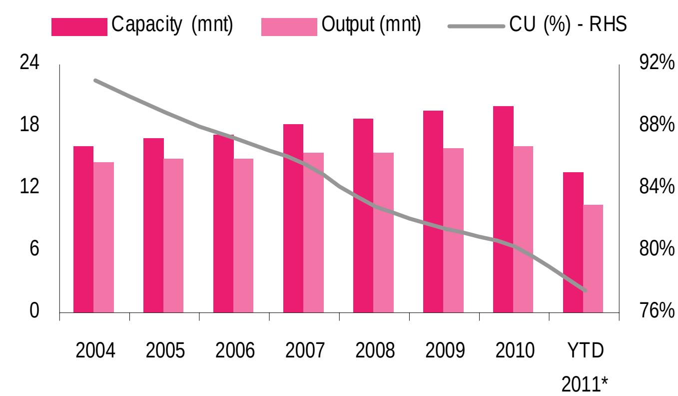
*Source: Bloomberg, PINC Research; * YTD - Jan-Sep'11*

Global monthly copper mine output



Source: Bloomberg, PINC Research

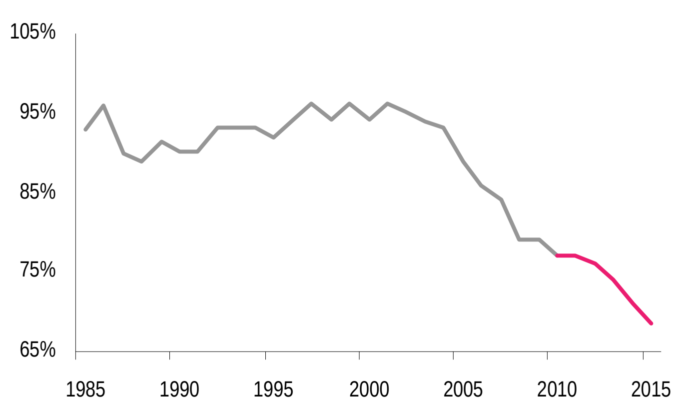
Copper mined capacity, output & CU



*Source: ICSG, PINC Research * YTD - Jan-Sep'11*

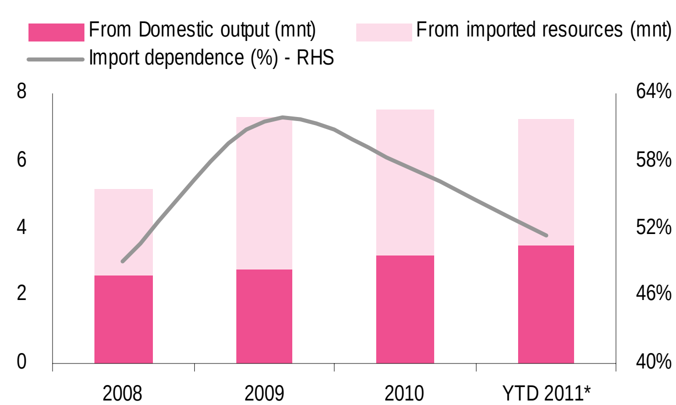
World's mining output has been impacted by declining ore grades, labour and weather issues in key producing countries like Chile, Indonesia. Average ore grade has declined from 0.95% to 0.75% over the last decade and expected to decline further as per Codelco, the largest copper producer globally. However, China's copper mine output has risen, resulting in a decline in China's import dependence from 62% in 2009 to 51% in Jan-Nov'11.

Copper mine industry's average grade (%)



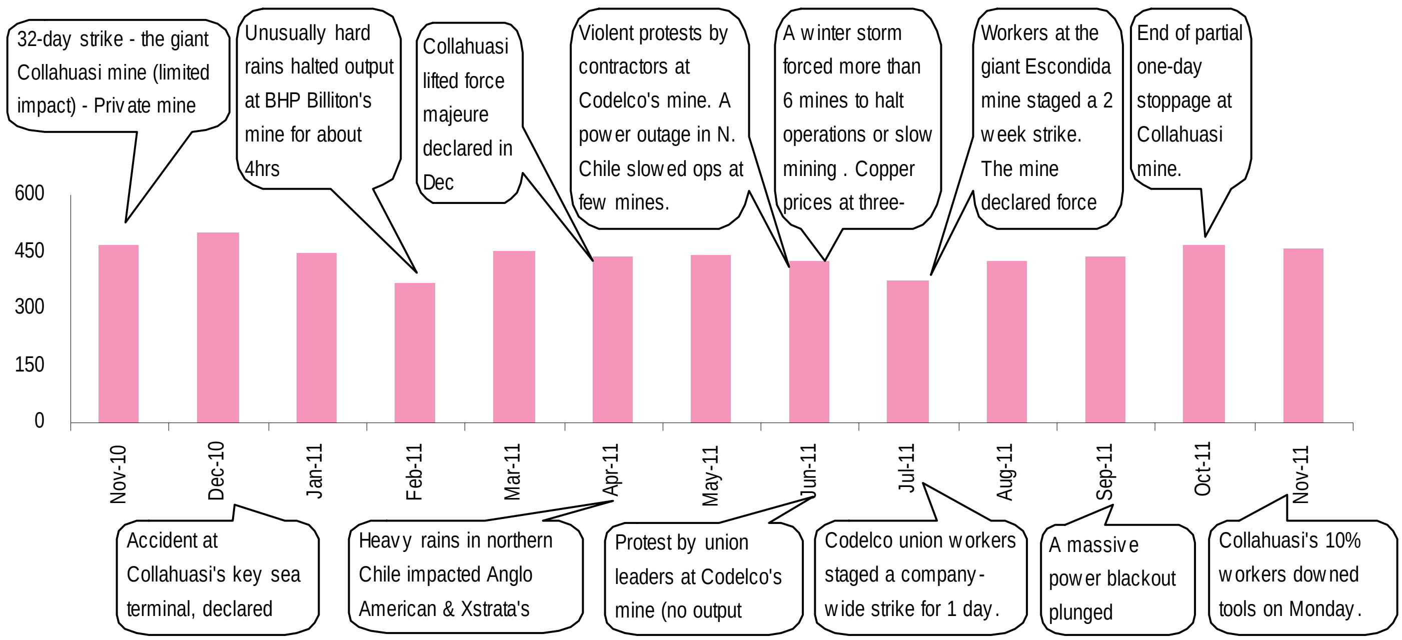
Source: Codelco & Brook Hunt, PINC Research

China's apperant copper consumption



Source: Bloomberg, PINC Research; YTD Jan-Nov'11

Chile copper mined output (kt) - Impacted by labour and weather issues

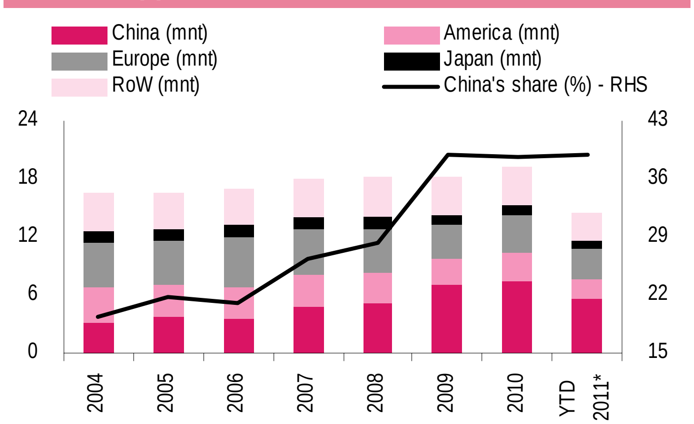


Source: Bloomberg, Industry, PINC Research

Demand growth hinges on China

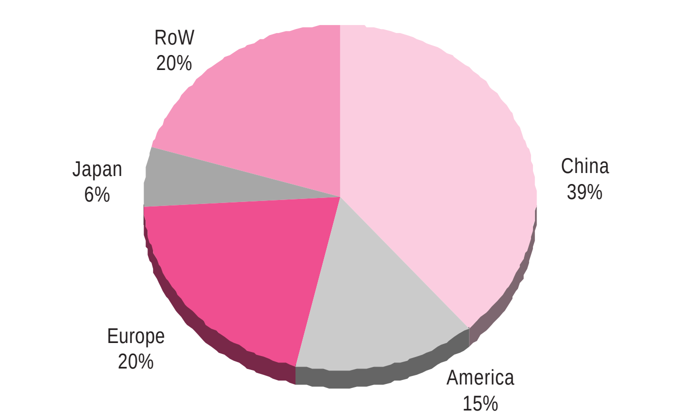
The demand for copper, widely known as the bellwether metal, has increased at 2.2% CAGR over CY04-CY11 (YTD - Jan-Sep'11), mainly driven by China, which has registered a 13% CAGR over the same period, with China's share rising to 39% of global demand.

Global copper demand over CY04-CY11



Source: Bloomberg, PINC Research; YTD - Jan-Sep'11

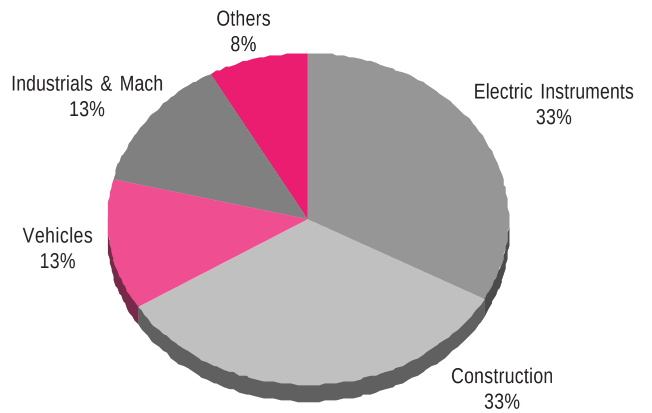
Regional distribution of Cu demand (19.2mnt -2010)



Source: Bloomberg, PINC Research

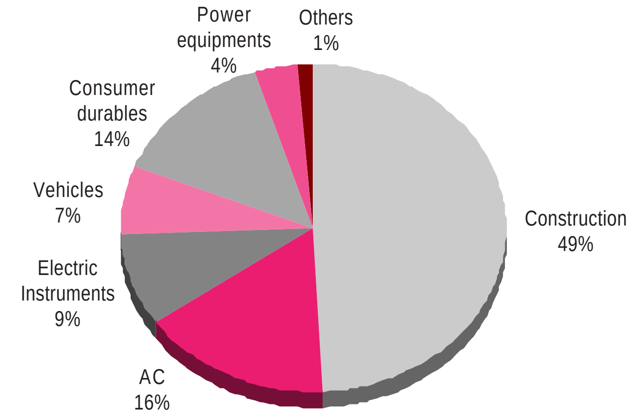
Copper is globally the 3rd largest consumed metal (after Steel and Aluminium) and finds wide usage in construction, electrical instruments, automobiles, and machinery owing to its excellent conductivity and corrosion resistance properties amongst others.

Global: end use demand for copper



Source: Bloomberg, PINC Research

China: end use demand for copper

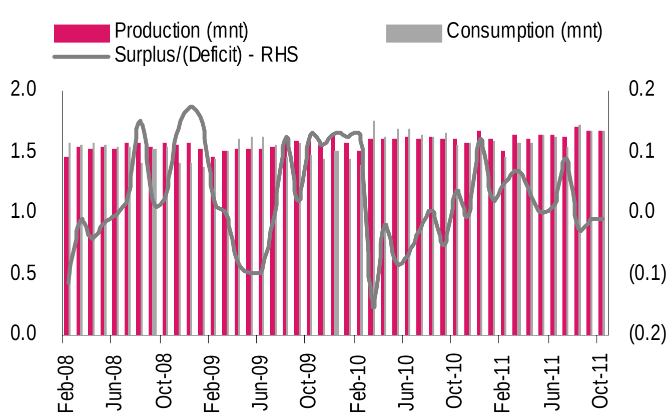


Source: Bloomberg, PINC Research

Global copper demand has exceeded output resulting in a deficit situation

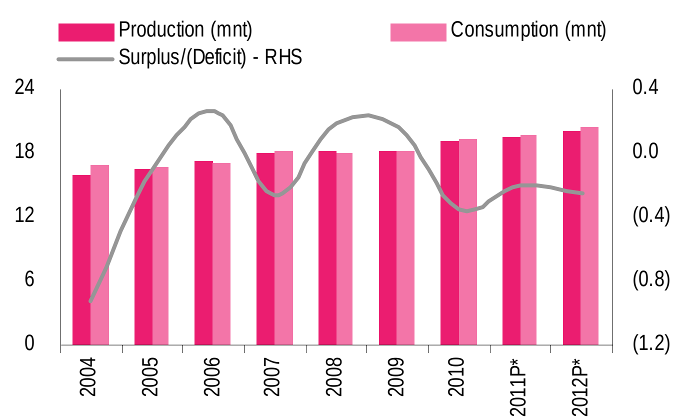
Global refined copper output has lagged demand, resulting in the emergence of a deficit situation in 2010. International Copper Study Group (ICSG) estimates the deficit situation to persist in CY11 and CY12.

World copper montlhly demand supply situation



Source: Bloomberg, PINC Research

World copper demand supply situation

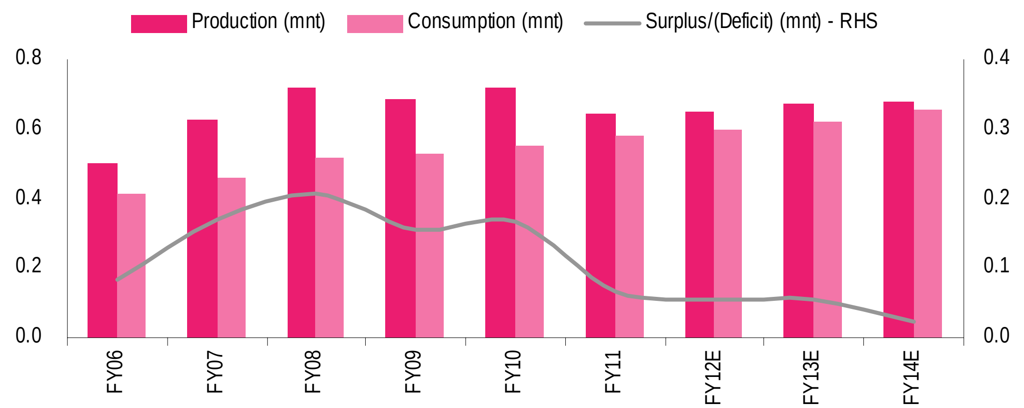


Source: Bloomberg, ICSG, PINC Research   ** ICSG projections*

India: Net surplus of copper could decline on delays in capacity addition

India's copper industry is characterised by custom smelting, with largest producers Hindalco (51% market share) and Sterlite (47% market share) dependent on imported copper concentrates, operating on a TcRc margin basis. Only state owned Hindustan Copper (2% market share) has integrated operations with captive copper mines in Rajasthan. Although India is currently net surplus on refined copper, the situation could change in the next 3-4 years, as the only capacity addition plan (400ktpa by Sterlite) has been put on hold due to delay in clearances from state pollution control department.

India's copper demand supply situation

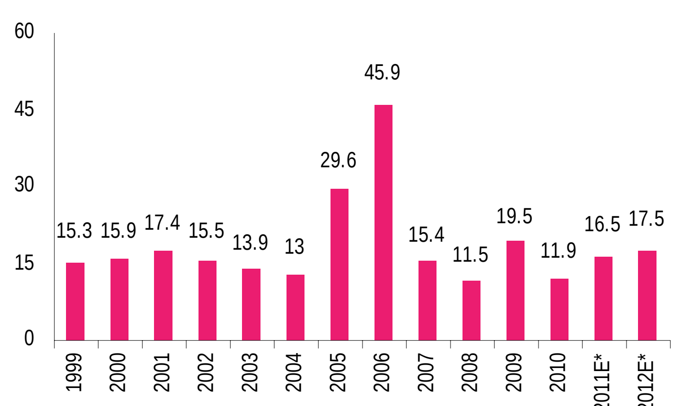


Source: Sterlite 20F, PINC Research

Copper TcRc on a rise

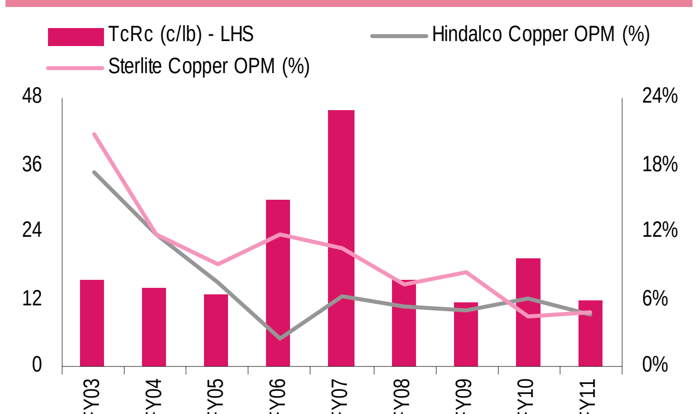
Copper TcRc for CY12, as negotiated between Freeport and Japan's Pan Pacific Copper, at USD63.5/t and USc6.35/lb (USc16/lb of total TcRc) has witnessed a 12.4% YoY hike, a 2nd consecutive year of hike. These will benefit Indian producers, whose operating profit margin is correlated with copper TcRc.

Copper TcRc (c/lb)



Source: Brook Hunt Copper Metal Service Report., PINC Research;
*Note: * PINC Estimates for FY i.e. 2011 is indicative of FY12 estimates.*

Copper TcRc vs. Indian players OPM

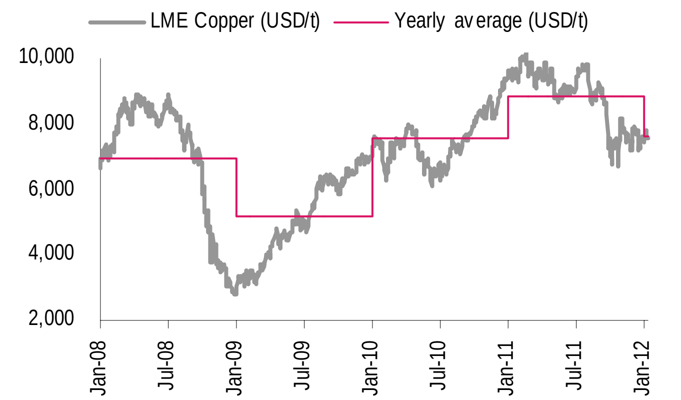


Source: Sterlite 20F, Company, PINC Research
Note: TcRc is for CY while OPM are for FY, FY03 = CY02

LME Copper: Heightened volatility

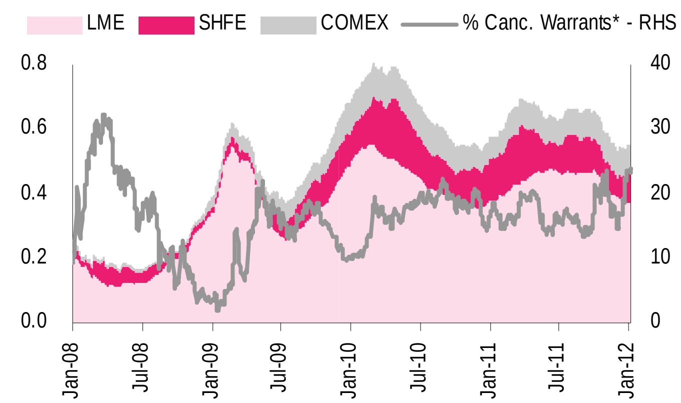
EU sovereign debt crisis, stalemate in austerity measures and QE3 and growth slowdown in China stroking fears of hard landing has resulted in increased volatility in LME prices with copper prices declining by 20% since Jul'11 and 26% from all-time peak of USD10,180/t seen in Feb'11, even though copper inventory has started declining.

LME Copper price



Source: Bloomberg, PINC Research

Copper inventory (mnt)

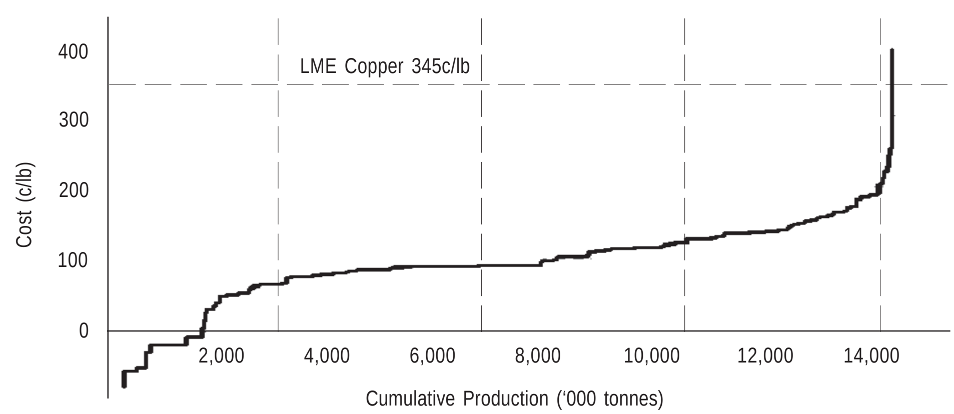


Source: Bloomberg, PINC Research

Nevertheless, LME prices still above the production cost for marginal producers

Despite recent decline, LME copper prices are still above marginal cost of production, characterised by 90th percentile on the copper cost curve.

Copper cost curve

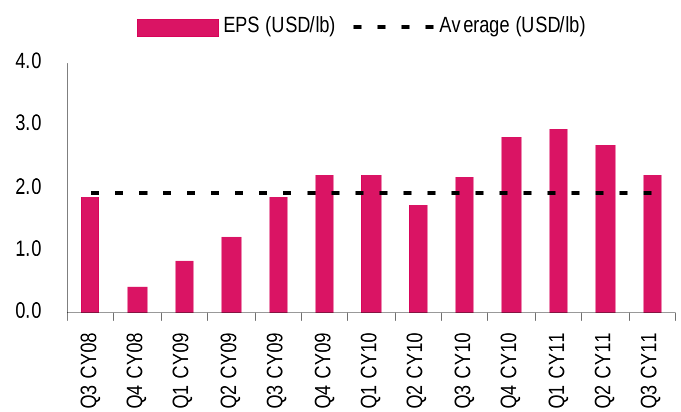


Source: Antofagasta presentation, PINC Research

Copper profitability has come off 3-yr high, but still above the average

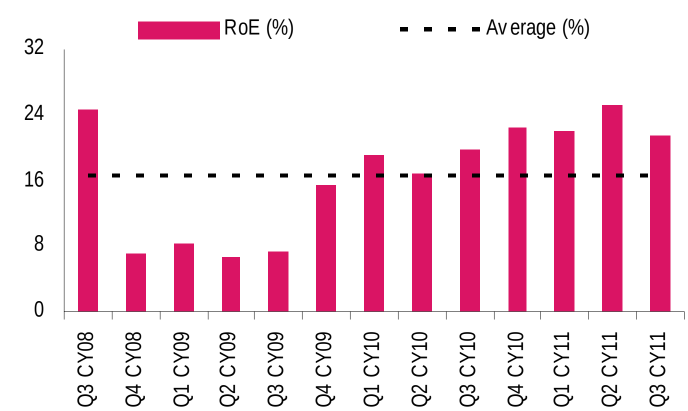
As per Bloomberg data, copper producers' cash margin and RoE has declined QoQ in Q3CY11 on lower LME prices. However, they are still higher than 3 year average, implying room for further decline in copper prices and profitability.

Copper producers cash margins



Source: Bloomberg, PINC Research

Copper producers RoE



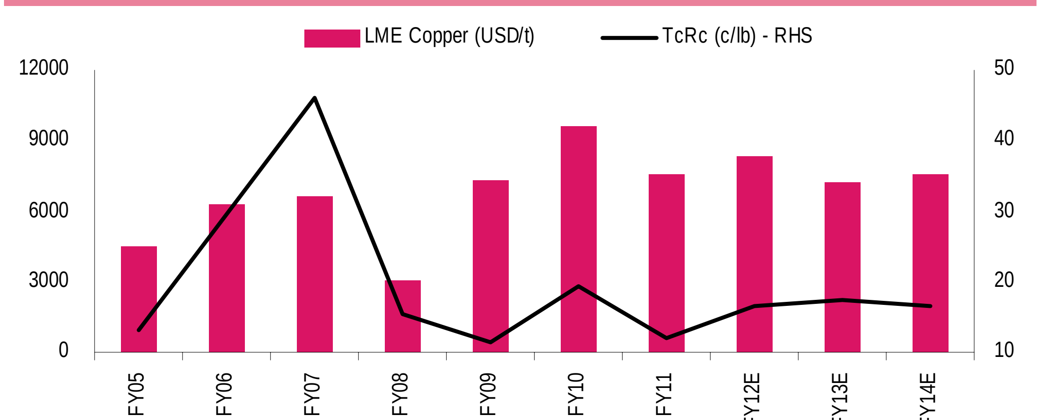
Source: Bloomberg, PINC Research

Outlook

Although, copper market is expected to remain in deficit in CY12, copper prices are most vulnerable to uncertainty on EU debt crisis and fears of China's hard landing. However, we expect TcRc margin to remain strong on improved concentrate supply situation.

While increased fear of China's hard landing and/or further deterioration of EU sovereign debt crisis could surprise on the downside, infusion of easy liquidity in the form of Quantitative Easing 3 (QE3) by US Fed could surprise on the upside. We have assumed average LME copper prices of USD8,302/t, USD7,223/t and USD7,584/t for FY12E, FY13E and FY14E respectively.

LME Copper vs. TcRc*



Source: Bloomberg, Sterlite 20F, PINC Research
*Note: * TcTc figures reflect CY numbers i.e. FY05 = CY04*

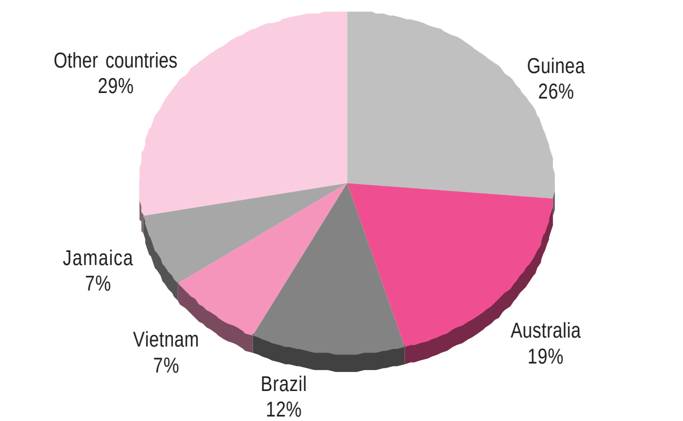
Aluminium - Price supported by cost curve and rising energy prices

Aluminium is the most abundant metal in the earth's crust. Aluminium is primarily produced from smelting of alumina, which in turn is derived from bauxite via refining process.

Higher demand from China to support bauxite prices

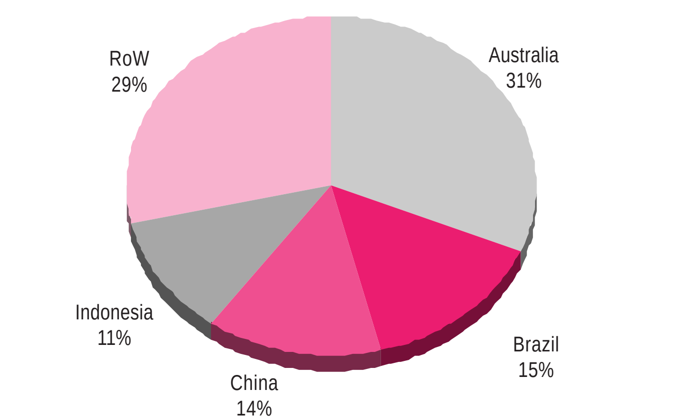
While Guinea holds the world's largest bauxite reserves followed by Australia and Brazil, Australia is the largest producer of bauxite globally.

Bauxite reserves (28.2bn tonnes - 2010)



Source: USGS, PINC Research

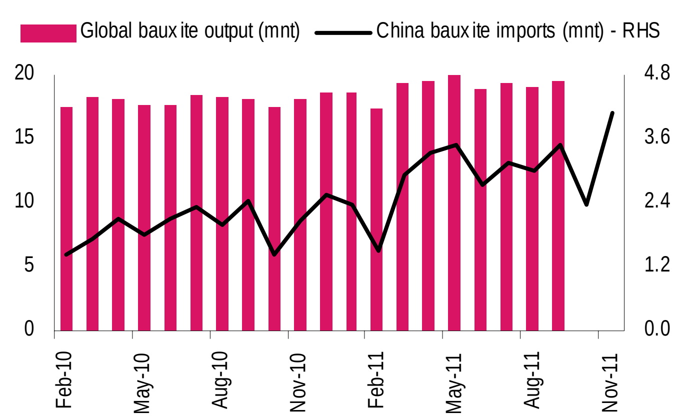
World bauxite production (215mnt - 2010)



Source: Bloomberg, PINC Research

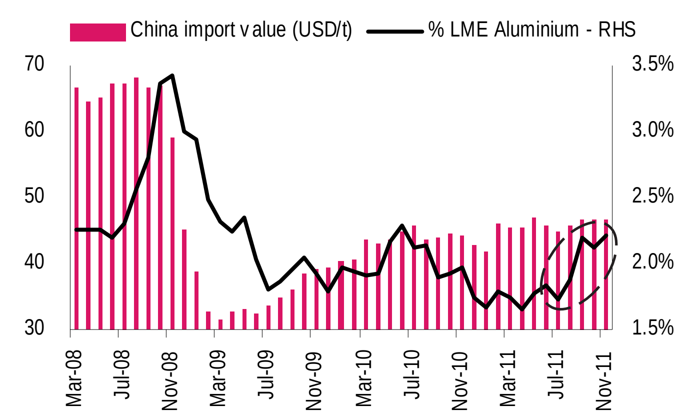
China produces 14% of the world's bauxite output, and is world's largest importer of bauxite. While China's domestic bauxite output has remained flat over the last 3 years, its bauxite requirement has increased on additional alumina capacity, thus increasing reliance on imported bauxite. 35% of China's alumina output in 2010 was generated via imported bauxite and has increased to 43% during Jan-Nov'11. China's bauxite imports grew by 76% YoY in November and 49% YoY Jan-Nov'11. Higher demand from China has been providing support to bauxite prices and we expect upward pressure on bauxite prices to continue.

Bauxite: World monthly production & China imports



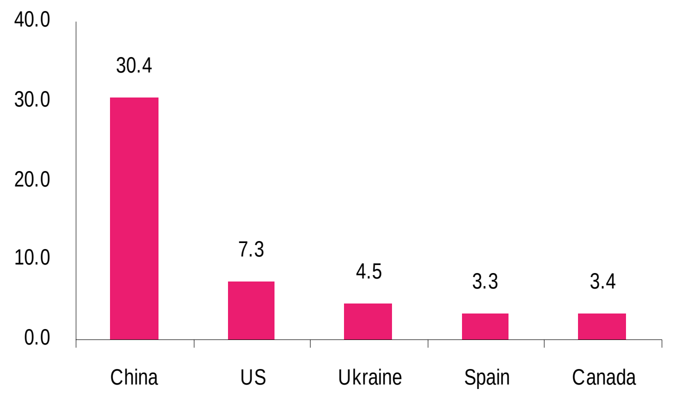
Source: Bloomberg, PINC Research

China monthly bauxite import prices (USD/t)



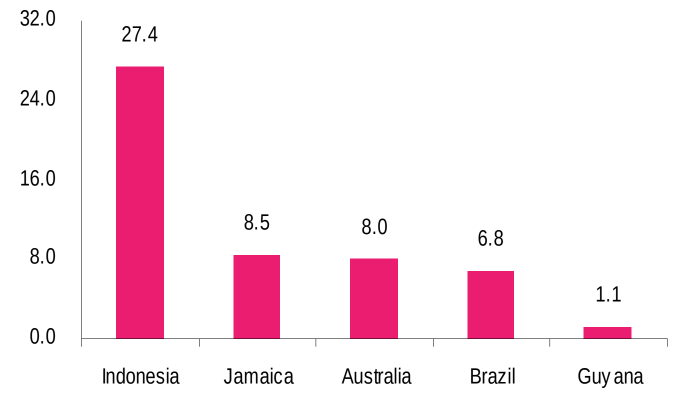
Source: Bloomberg, PINC Research

World top 5 bauxite importers - 2010 (mnt)



Source: Bloomberg, PINC Research

World top 5 bauxite exporters - 2010 (mnt)

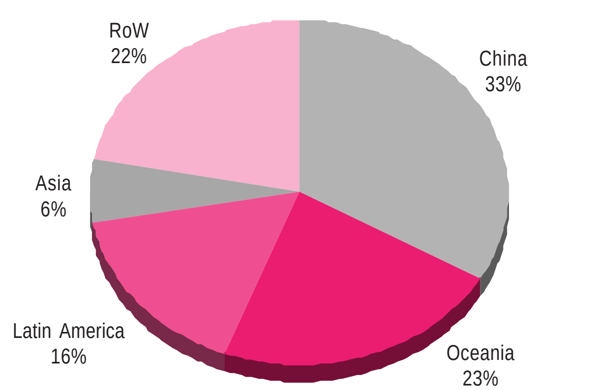


Source: Bloomberg, PINC Research

China's dependence on imported alumina declines with higher domestic capacity

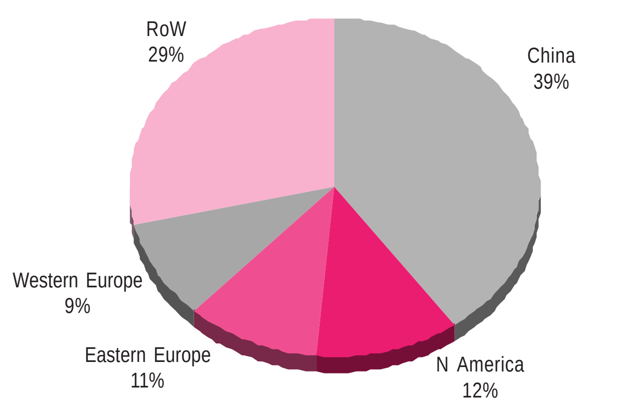
China is the largest producer as well as consumer of Alumina. In 2010, China accounted for 34% of global alumina production and ~39% of aluminium output respectively. Aluminium accounts for 95% of the world's alumina demand.

World alumina production (85.3mnt - 2010)



Source: USGS, PINC Research

World aluminium production* (40.4mnt - 2010)

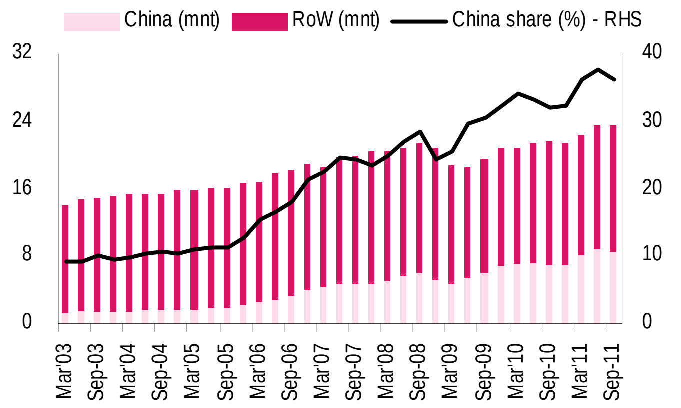


Source: Bloomberg, PINC Research;

*Note: *Aluminium accounts for 95% of alumina consumption and has been taken as a proxy for alumina consumption*

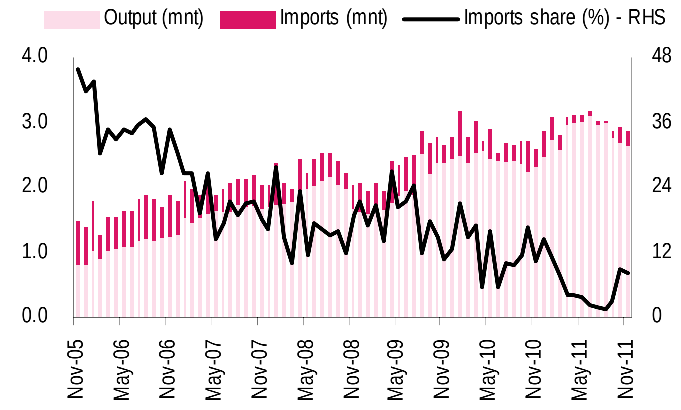
China's alumina output has increased at a CAGR of 27% over CY04-11(Jan-Sep'11 annualised), thereby raising its share in global alumina output from 10% in 2004 to 36.6% in Jan-Sep'11. This in turn has led to a decline in China's dependence on alumina imports. China's alumina imports declined at a CAGR of 15.9% over CY04-11 (Jan-Nov'11 annualised) and dropped 57% YoY over the first 11 months of 2011. We expect China's alumina imports to remain low as the output from expanded domestic capacity increases further.

World alumina monthly output & China's share



Source: Bloomberg, PINC Research

Alumina: China's import dependence declining

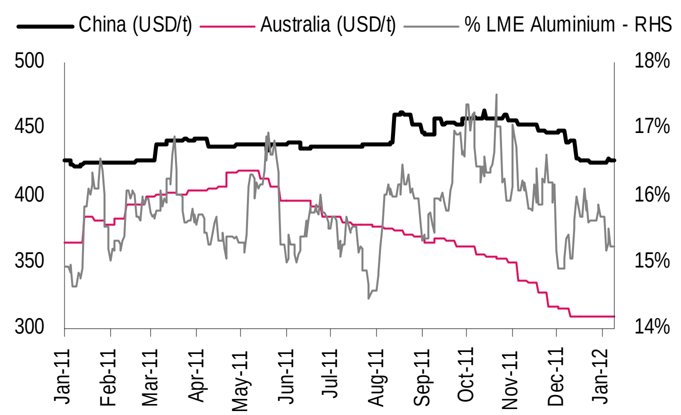


Source: Bloomberg, PINC Research

Cost of alumina for aluminium smelters in China to come down as share of imported alumina declines

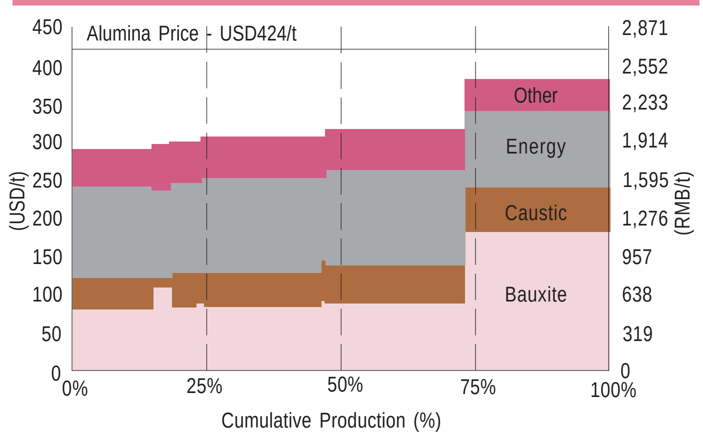
Alumina prices have declined on lower LME aluminium and reduced import demand from China. We expect alumina prices as a percent of LME aluminium to come under pressure as China's production of domestic alumina increases and its demand for imported alumina wanes. Further, blended cost of alumina for aluminium smelters in China is also expected to come down despite higher refining cost on rising energy prices, as share of costlier imported alumina declines. We have assumed alumina prices as 15.5%, 15.0% and 15.0% of LME aluminium for FY12E, FY13E and FY14E respectively.

Alumina price (USD/t)



Source: Bloomberg, PINC Research

China: Alumina cost curve



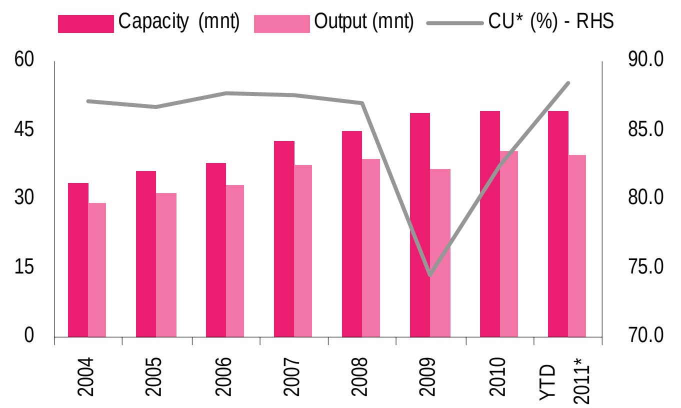
Source: Alumina Ltd. Q3CY11 Presentation, PINC Research

Note: Current alumina price is price in China, which is much higher than prices for Australia alumina

China the largest producer & consumer of aluminium

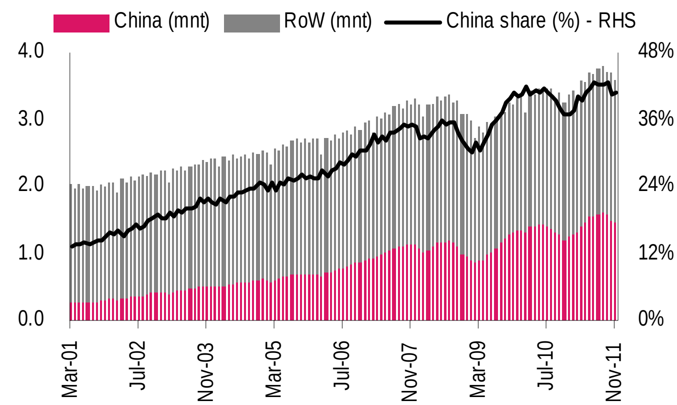
China is the largest producer of aluminium with a smelting capacity of ~18.4mnt, followed by Europe. The growth in global aluminium production has mainly been led by production growth in China. China's share in the global aluminium output has increased from 14% in 2001 to 40% in 2010 (41% Jan-Nov'11). After generating an all time high monthly output of 1.6mnt in Aug'11, China's output has been declining since Sep'11 on escalating power shortages and falling profitability.

World aluminium capacity and output



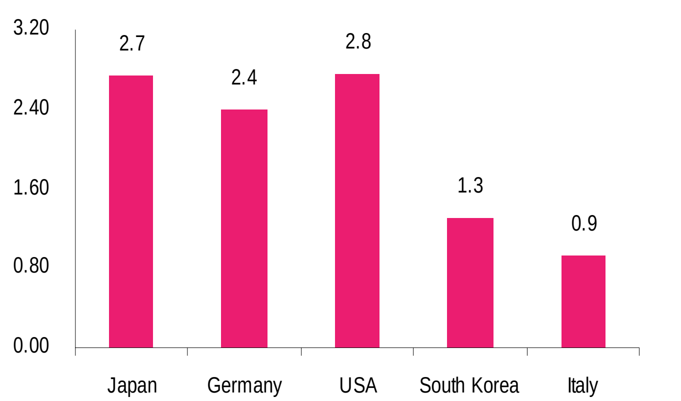
Source: Bloomberg, PINC Research; YTD - Jan-Nov.'11 annualised

World monthly aluminium output & China's share



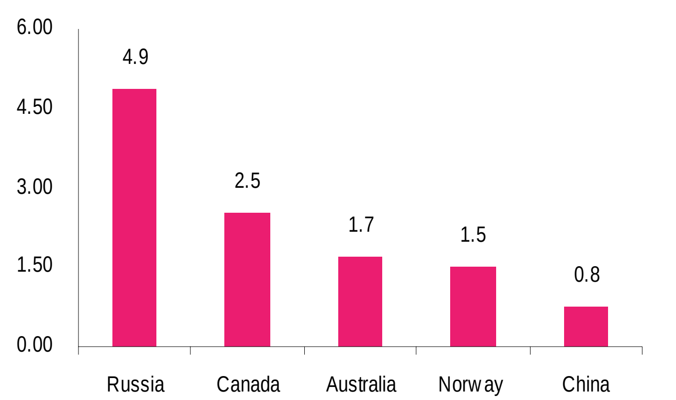
Source: Bloomberg, PINC Research

Worlds top 5 aluminium importers - 2010 (mnt)



Source: Bloomberg, PINC Research

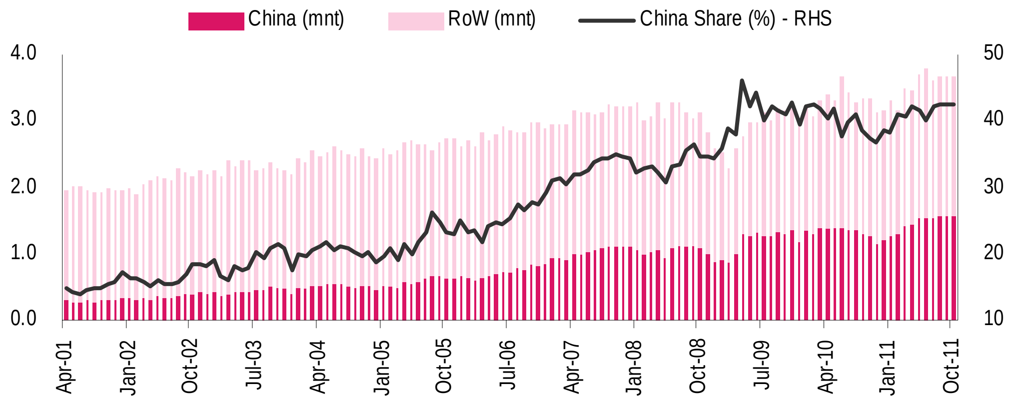
Worlds top 5 aluminium exporters - 2010 (mnt)



Source: Bloomberg, PINC Research

China, the largest producer of aluminium, is also the largest consumer of aluminium globally. In 2010, China's aluminium consumption comprised 40% of the global consumption. However, per capita aluminium consumption in China at 10kgs is still lower than 15kgs in developed economies.

World aluminium demand led by China

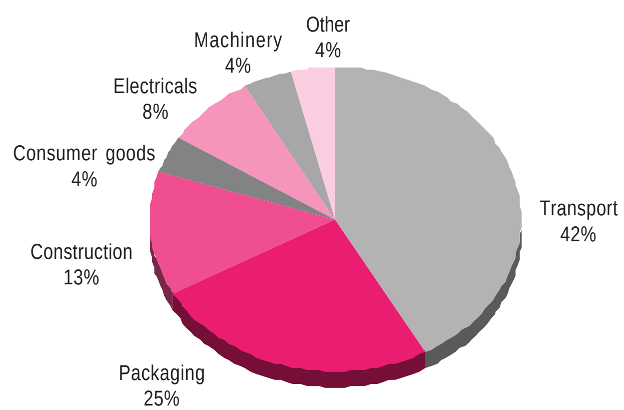


Source: Bloomberg, PINC Research

Aluminium demand to be driven by construction sector in developing nations and packaging in developed nations

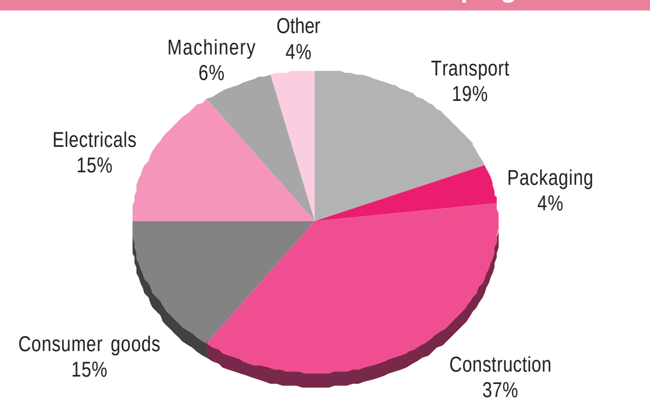
While automobile and packaging accounts for a prominent share of aluminium demand in developed economies, demand in developing economies comes mainly from construction, followed by automobile, electrical and consumer goods sectors. In India, 48% of the aluminium demand comes from the power sector and 15% from automobiles.

Aluminum end user demand: Matured economies



Source: Rusal, PINC Research

Aluminum end user demand: Developing economies

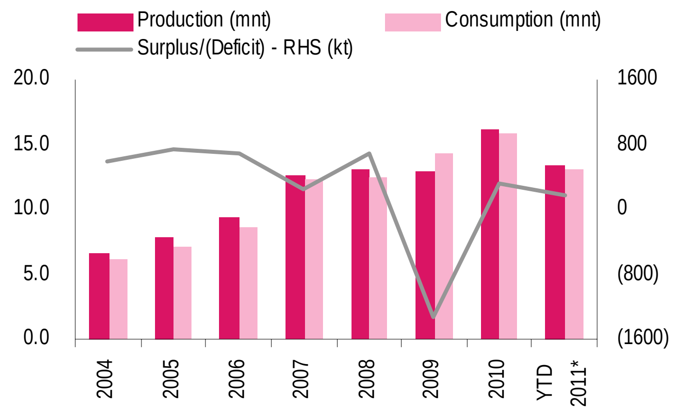


Source: Rusal, PINC Research

China and India to drive aluminium demand

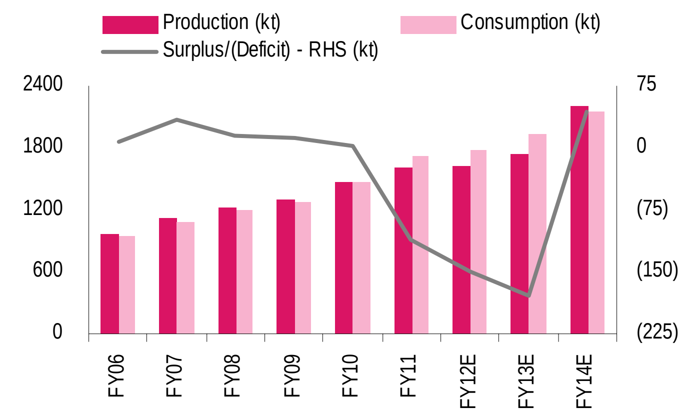
China has been a marginally surplus producer of aluminium, while India turned aluminium deficit in 2011 after being a marginal surplus producer for many years. We expect this deficit to continue till FY13, post which commissioning of new capacities will make India surplus in aluminium.

China aluminium demand supply



Source: Bloomberg, PINC Research; YTD - Jan-Sep'11

India aluminium demand supply

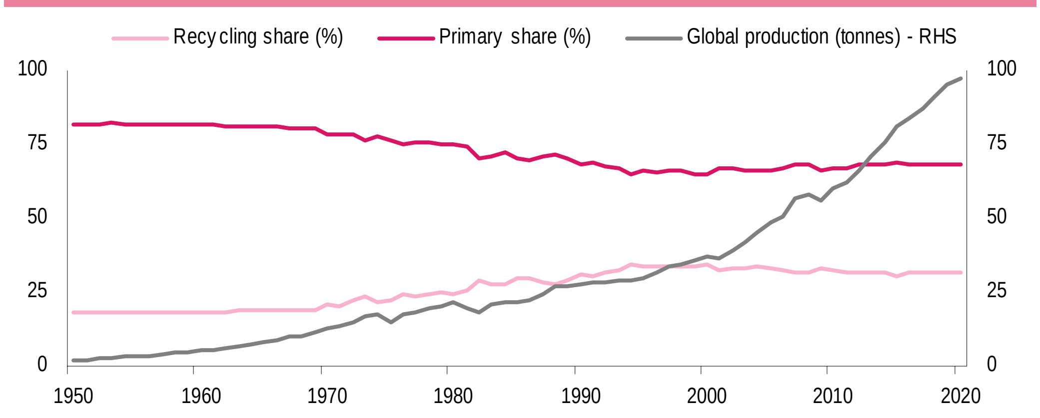


Source: Sterlite 20F, Company - NALCO, Sterlite, Hindalco, PINC Research

Aluminium scrap availability to increase, resulting in rising share

Recycled/ secondary aluminium needs only 5% of the energy and emits only 5% of the greenhouse gas as compared to primary aluminium production. As per Global Aluminium Recycling Committee (GARC), more than a third of all the aluminium currently produced globally originates from old, traded and new scrap and out of that 50% of the scrap is old scrap (i.e. scrap from end-of-life products). GARC projects secondary aluminium output to increase to ~31mnt in 2020 vs. more than 8mnt produced in 1990 and ~32mnt in 2010.

Share of primary & recycled metal production

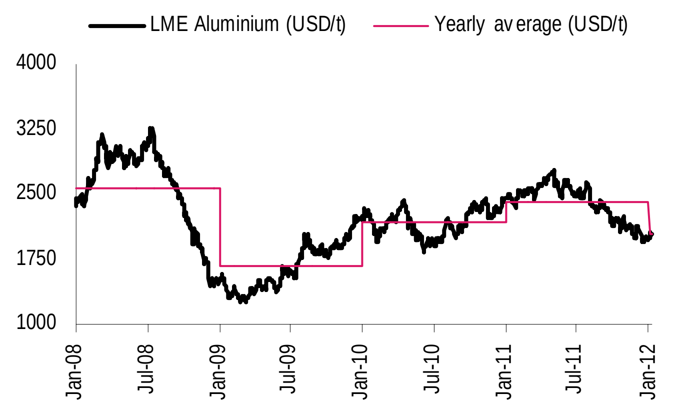


Source: Global Aluminium Recycling Committee, PINC Research

Steep price decline since Jul'11 on increased volatility; but supported by cost curve

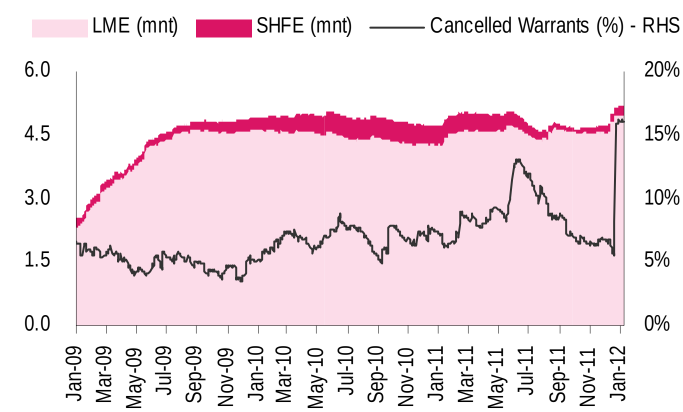
As with other base metals, aluminium prices have also witnessed high volatility and have corrected by 25% since Jun'11 with austerity concerns in US and Europe and monetary tightening in India and China. However, we believe that LME aluminium prices are now supported by China's marginal cost of production. Further, recent re-opening of the arbitrage window between LME and Shanghai (SHME aluminium at a 23% premium to LME prices) is expected to increase imports of aluminium in China and provide support to LME prices.

LME Aluminium prices



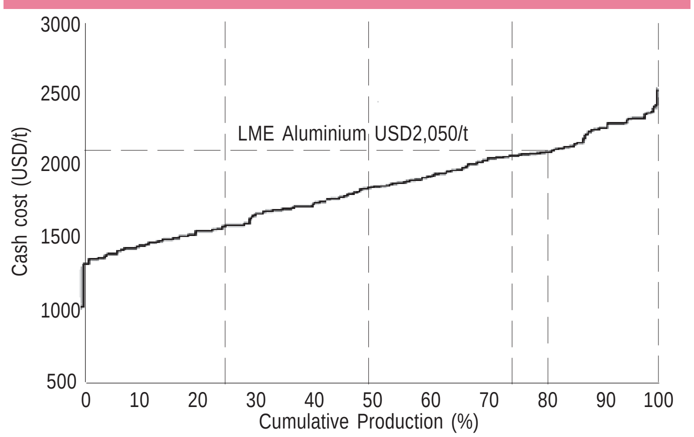
Source: Bloomberg, PINC Research

Aluminium inventory & cancelled warrants



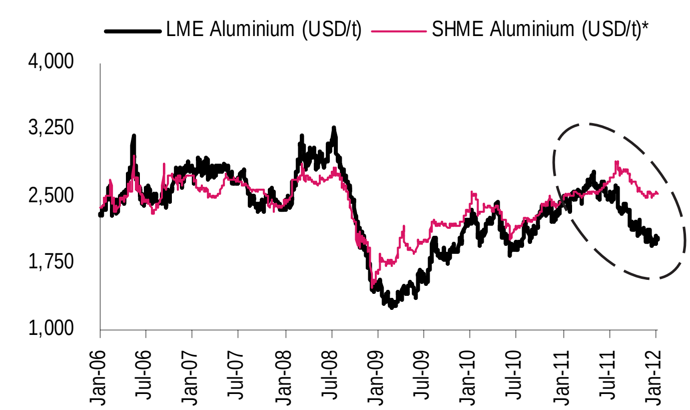
Source: Bloomberg, PINC Research

Aluminium cost curve



Source: Sterlite presentation, PINC Research

Aluminium premium on SHME rising above LME

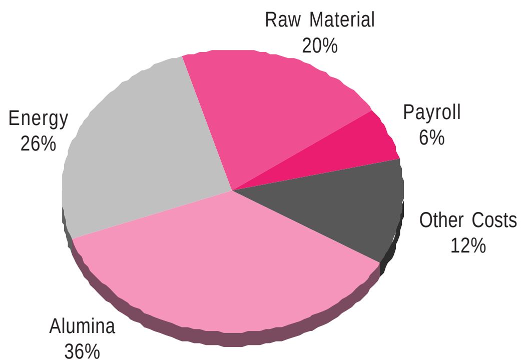


Source: Bloomberg, PINC Research

Strong energy prices to support aluminium cost curve

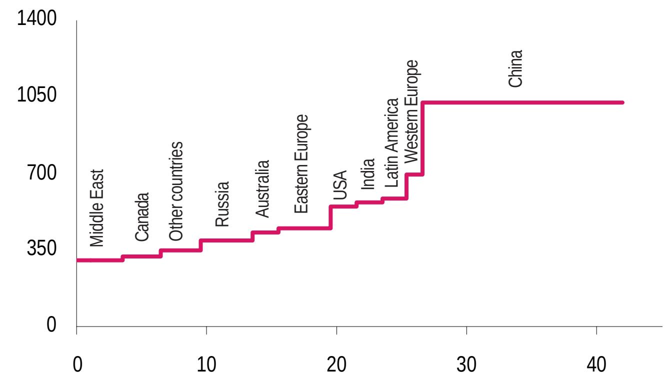
Alumina and energy cost are the major costs incurred in manufacturing aluminium. The cost of producing aluminium in China is one of the highest in the world, due to high energy cost. For China, energy cost per tonne of aluminum is ~USD1,000/t, while smelters in Middle East and Canada enjoy the lowest energy rates among the global producers.

Primary aluminium cost structure



Source: Bloomberg, PINC Research

Power cost curve (USD/t)



Source: Rusal, PINC Research

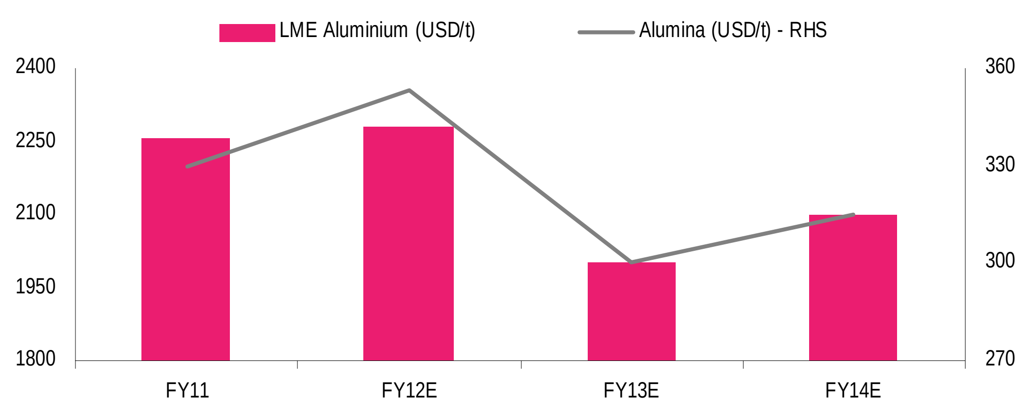
National Development and Reform Commission (NDRC), China's top economic planner, raised retail electricity prices for non-residential customers by RMB0.03/kWhr, equivalent to 0.47USc/kwhr and the on-grid electricity price by RMB0.026/kwhr in Nov'11. Furthermore, China's State Electricity Regulatory Commission announced that it expects a shortage of 26mn kWhr of electricity in the winters on falling hydropower output and coal shortages. These would put upward pressure on aluminium cost curve, providing support to prices.

Outlook – Prices to be supported by cost curve

Although concerns in the global economy and slowdown in the developing nations is exerting downward pressure on the LME prices, we expect the LME prices to be supported by marginal cost of production of Chinese smelters at USD2,000/t.

Although we expect China's alumina cost to decline on reduced share of imported alumina, rising energy cost to result in a cost-push for aluminium smelters, which should provide support to aluminium prices. We have assumed avg. LME aluminium price of USD2,280/t, USD2,000/t and USD2,100/t for FY12E, FY13E and FY14E respectively.

Aluminium & Alumina assumptions

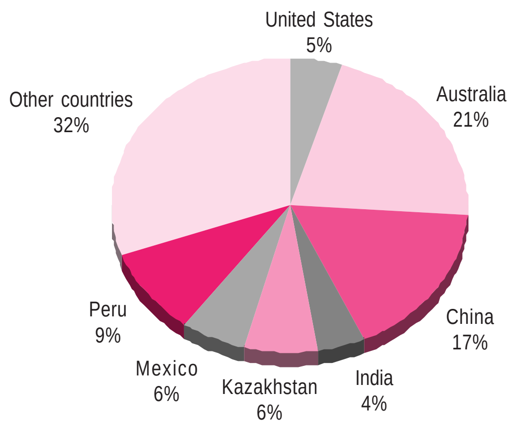


Source: Bloomberg, PINC Research

ZINC

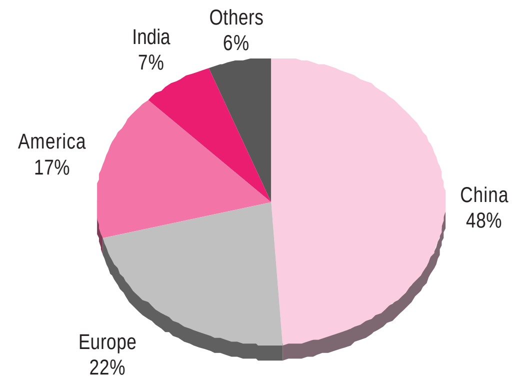
Australia and China together own 38% of the global zinc reserves.

Global zinc reserves (248mnt - 2010)



Source: Bloomberg, PINC Research

Share of global zinc output (1.1mnt - 2010)

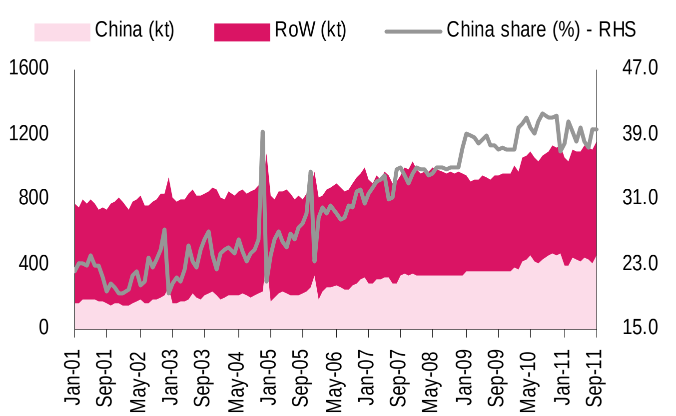


Source: Bloomberg, PINC Research

China: the driver of Zinc demand growth

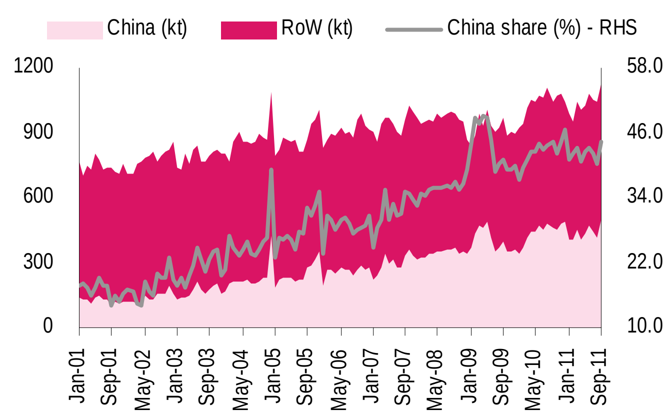
China is the largest producer and consumer of zinc globally. In 2010, China accounted for 40% of the global zinc production and 43% of the global zinc consumption. We expect developing countries like China and India to drive zinc demand going forward.

World monthly zinc slab output



Source: Bloomberg, PINC Research

World monthly zinc slab consumption

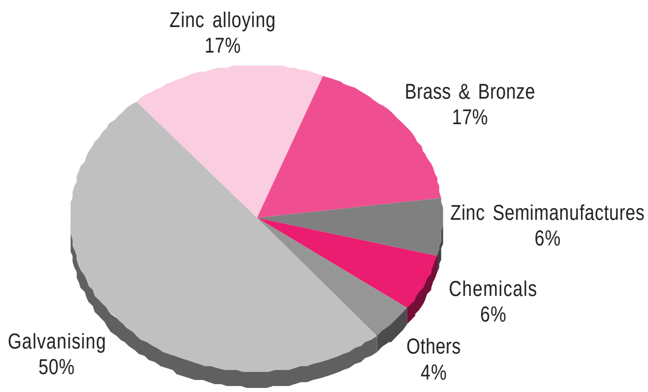


Source: Bloomberg, PINC Research

Zinc demand driven by galvanising and construction segments

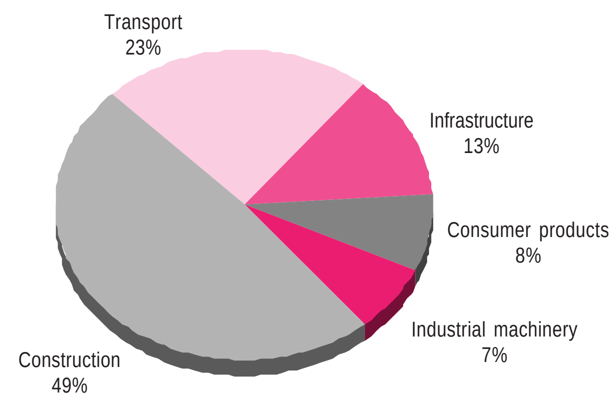
Galvanised steel products, which account for 50% of the total zinc demand, have shown a good growth in China and US in 2011. While China's and US's galvanized steel output grew 12.6% and 13.4% YoY over Jan-Oct'11, Japan's output declined 10.6% due to tsunami. However, we expect world galvanized steel output to be supported by Japan's reconstruction going forward.

First-use demand of zinc



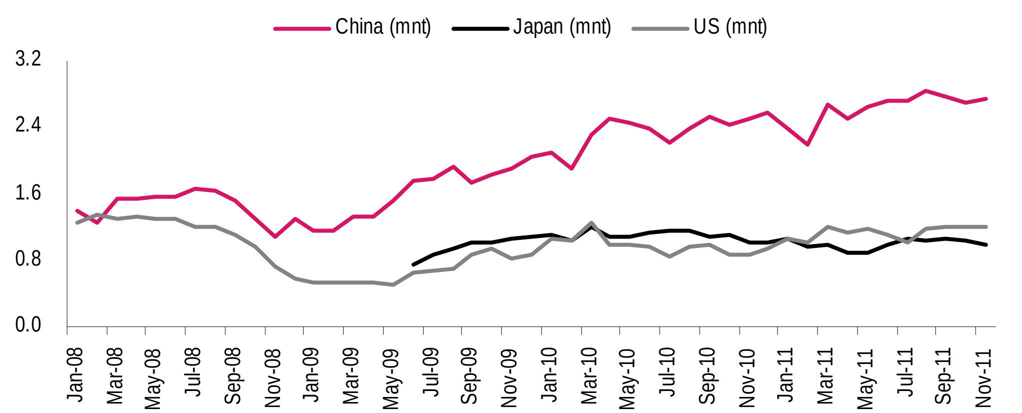
Source: ILZSG, PINC Research

End-use industry



Source: ILZSG, PINC Research

Galva sheets monthly output

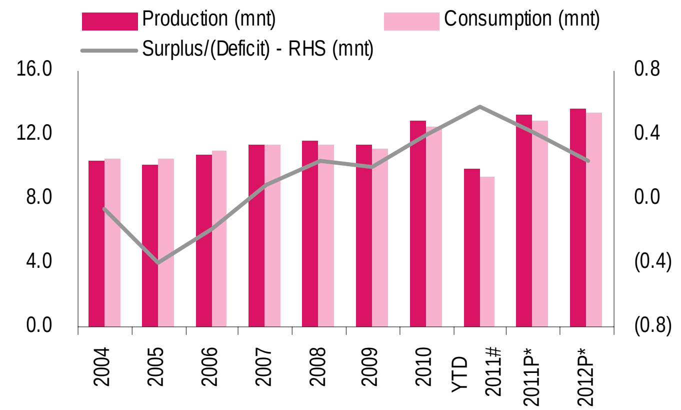


Source: Bloomberg, PINC Research

Global zinc surplus inching up on higher mine output, but expected to decline as demand catches up in 2012

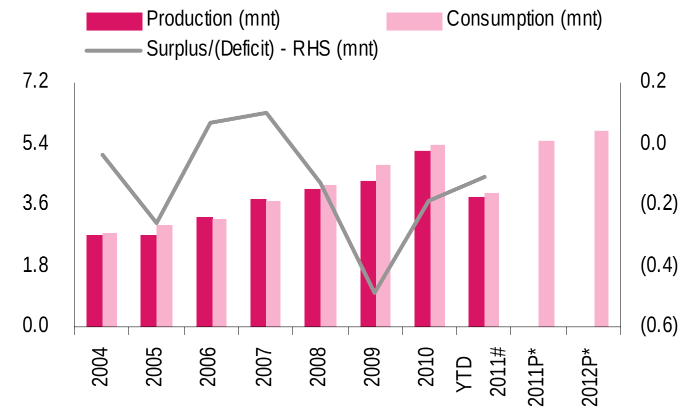
Zinc global surplus reached 420kt in 2010 and increased to 575kt in YTD 2011 (Jan-Sep'11) as zinc mined output increased by 3.6% over the same period on expanded production in China, India, Kazakhstan, Mexico and Russia, which have offset the decline in production out of Peru. Although ILZSG latest forecast (Oct'11) estimates global surplus of 371kt in 2011 and 188kt in 2012, we expect surplus to be revised upwards owing to increased demand concerns in EU and China. ILZSG has forecasted a global demand growth of 3.9% YoY for 2012, led by 5.7% YoY demand growth in China, which would increase China's deficit situation.

Global zinc demand supply



*Source: ILZSG, PINC Research; YTD - Jan-Sep'11 * ILZSG projections*

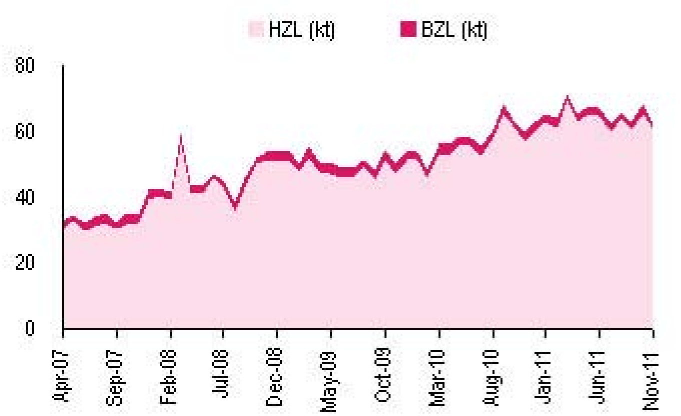
China zinc demand supply



*Source: ILZSG, PINC Research; YTD - Jan-Sep'11 * ILZSG projections*

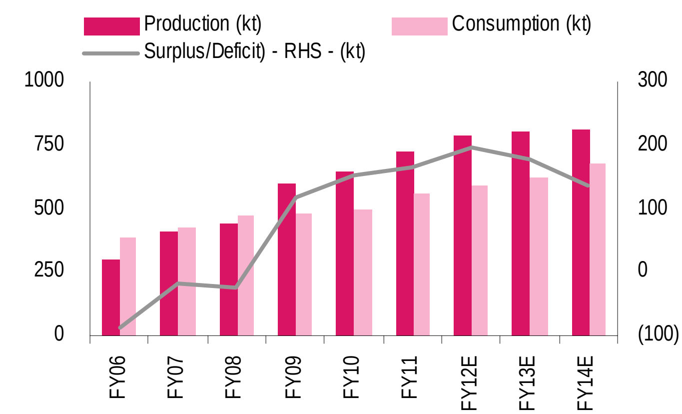
India's zinc production increased by 8.8% YoY over Apr-Nov'11 led by higher output from Hindustan Zinc. We expect Hindustan Zinc's output to increase by 6.1% and 2.3% in FY12E and FY13E as the expanded capacities stabilise.

India monthly zinc output



Source: Ministry of Mines, PINC Research

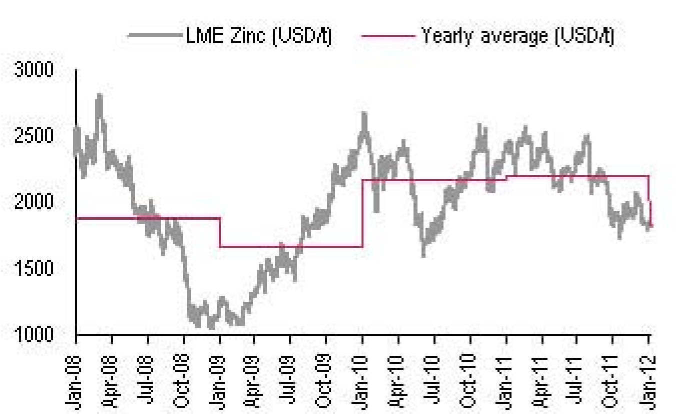
India zinc demand supply balance



Source: Sterlite 20F, PINC Research

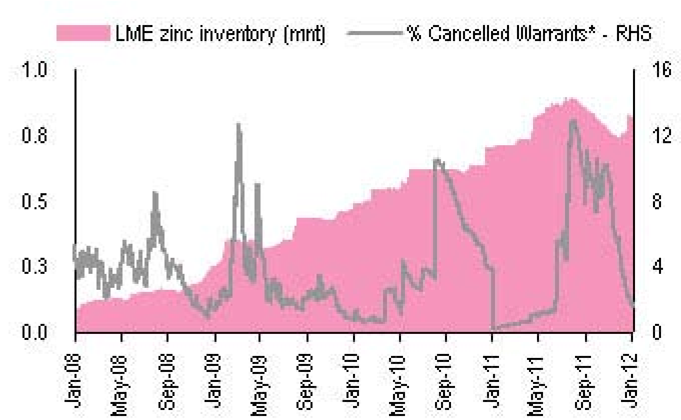
Zinc has corrected by 21.5% since July'11 on concerns of oversupply and demand uncertainty. LME inventories have been increasing with falling cancelled warrants indicative of a situation of oversupply amidst low demand.

LME Zinc prices



Source: Bloomberg, PINC Research

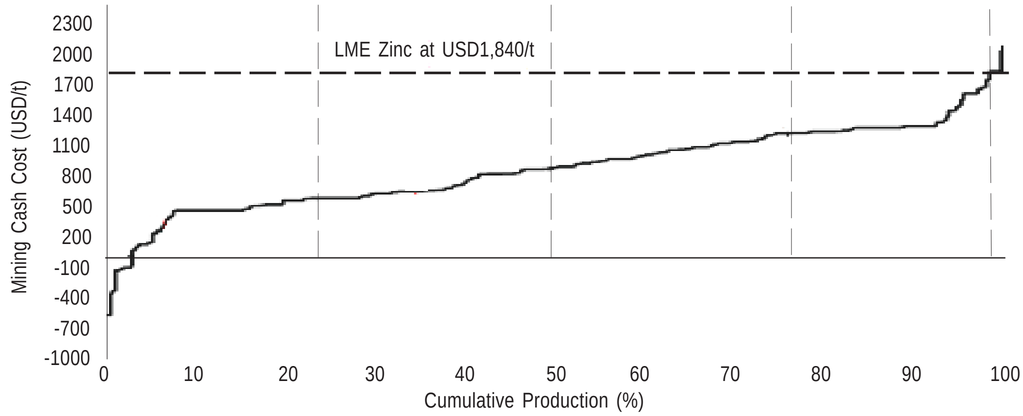
Zinc inventory



Source: Bloomberg, PINC Research

Further, LME zinc price is still higher than marginal cost of production, which could put further pressure on LME zinc prices. However, rising energy cost in China could provide some support to the prices.

Zinc cost curve

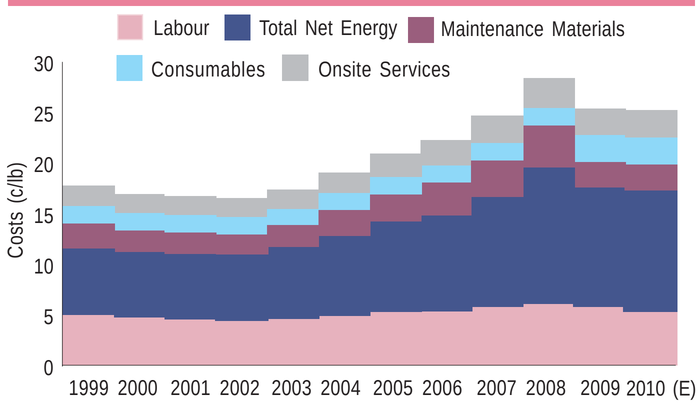


Source: Sterlite presentation, PINC Research

Rising energy prices in China could result in higher cost, providing price support

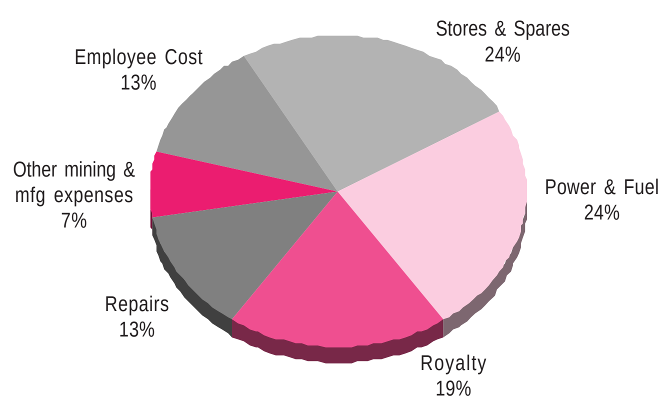
Energy forms a 54% of the conversion costs of Zinc and 23% for HZL (integrated). With a recently announced increase in energy prices in China, operating cost for zinc smelters is expected to increase significantly.

Zinc cash conversion cost (c/lb) for smelters



Source: Brook Hunt, PINC Research

HZL operating cost break-up (2010)



Source: Company, PINC Research

Outlook

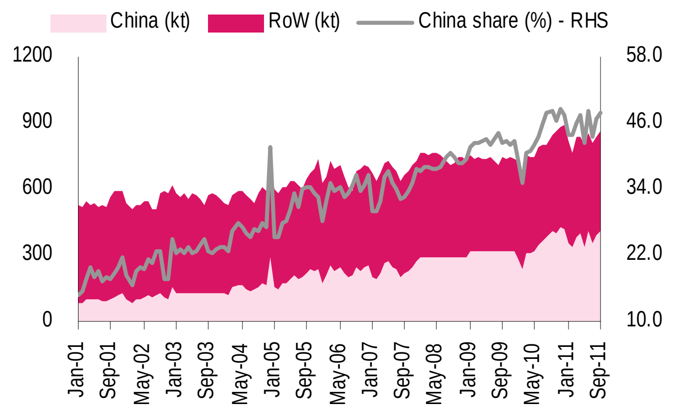
Although we believe that ILZSG is likely to revise forecast of global zinc surplus for 2011 and 2012 upwards on demand concerns in EU and China, we nevertheless expect surplus of zinc to come down from 575kt for Jan-Oct'11. However, prices are expected to be under pressure in the near term on oversupply and demand concerns. We have assumed average LME zinc prices of USD2,060/t, USD1,900/t and USD2,000/t for FY12E, FY13E and FY14E respectively.

Lead

China's lead-acid battery industry to pave way for lead demand growth

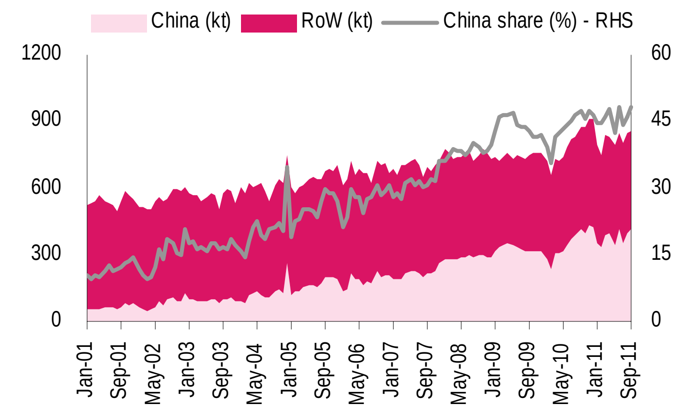
China is the largest producer & consumer of lead in the world. China's share in the world lead output increased from 28% in 2004 to 46% in YTD2011 (Jan-Sep'11), while share in consumption grew from 21% in 2004 to 46% in YTD2011 (Jan-Sep'11). Share of secondary output in the total refined output has been increasing, as per ILZSG's projections, the share of secondary output will increase to 56% in 2011 as against 50% in 2006.

Global monthly lead output & China's share



Source: Bloomberg, PINC Research

Global monthly lead demand & China's share

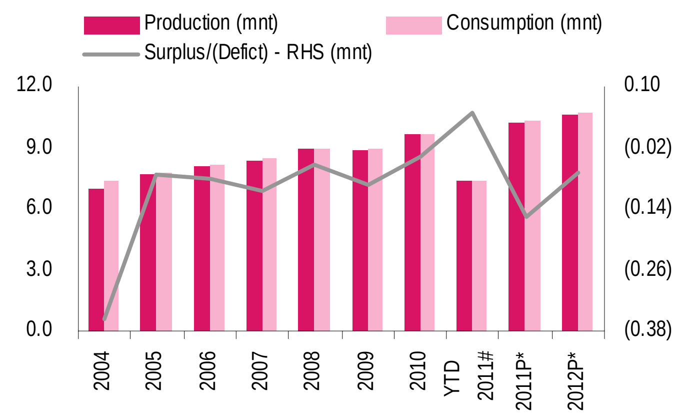


Source: Bloomberg, PINC Research

Growth in global lead mined output led by China

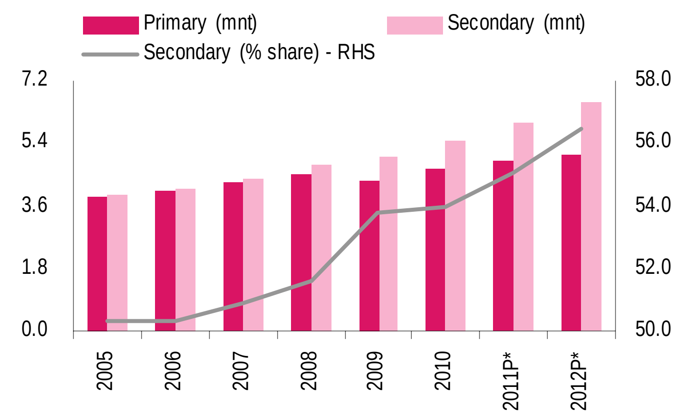
China's lead mined output grew by 12% over 2004-2011 (YTD - Jan-Sep'11), giving a boost to the global lead mined output which increased at a CAGR of 5% over the same period.

Global refined Lead demand supply



*Source: Bloomberg, ILZSG, PINC Research; #YTD - Jan-Sep, * ILZSG projections*

Increasing share of secondary lead output

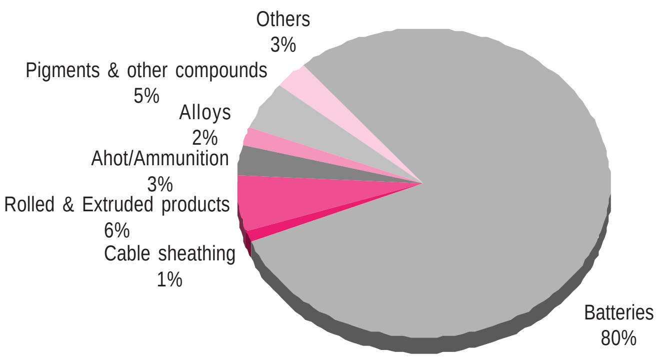


*Source: Bloomberg, ILZSG, PINC Research; #YTD - Jan-Sep, * ILZSG projections*

Major portion of the lead is used in batteries globally which in turn caters mainly to the automotive segment

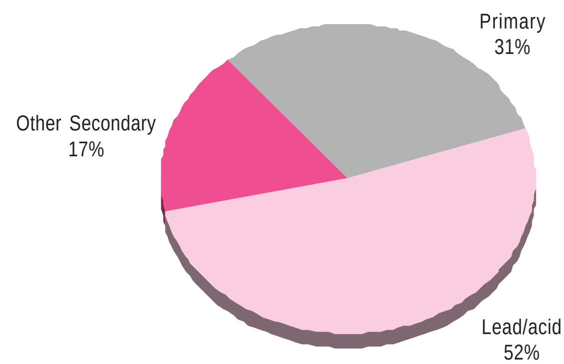
The global market size of batteries is USD60mn and lead batteries command 52% of the total market. China's lead battery market mainly caters to the automotive segment with ~85% of the lead battery being used in auto, motorcycles and electric bikes.

First use demand



Source: ILZSG, PINC Research

World battery industry 2010 (market size USD60bn)

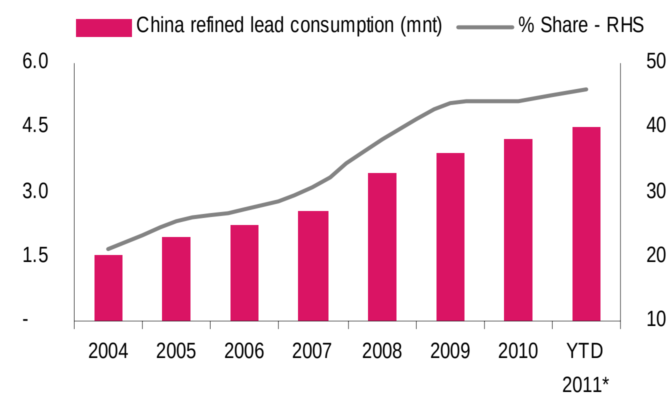


Source: ILZSG, PINC Research

China's lead demand to increase despite slowdown in auto sales & plant shutdowns

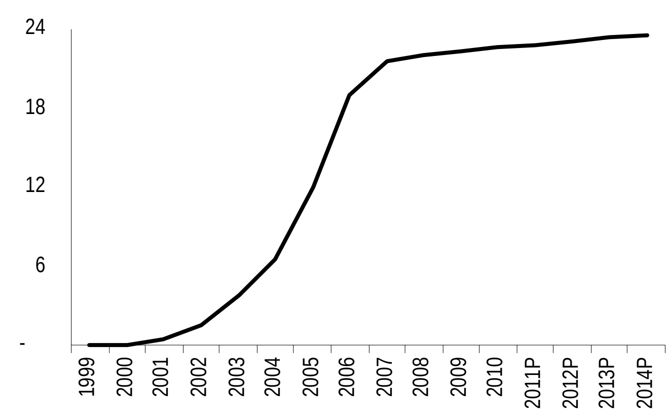
As per ILZSG global demand of refined lead is expected to increase by 6.1% YoY in 2011 and by a further 4% YoY in 2012. In China, the demand is expected to grow by 7.4% YoY and 6% YoY in 2011 and 2012 respectively led by rising e-bike output despite a slowdown in automobile sales and closure of battery production facilities for environmental reasons.

China lead consumption & global share



*Source: ILZSG, PINC Research; * YTD - Jan-Sep'11*

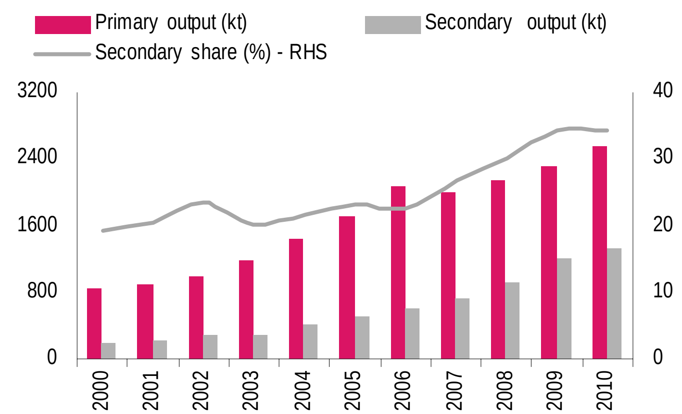
Led by rising e-bike output (mn units)



Source: ILZSG, PINC Research

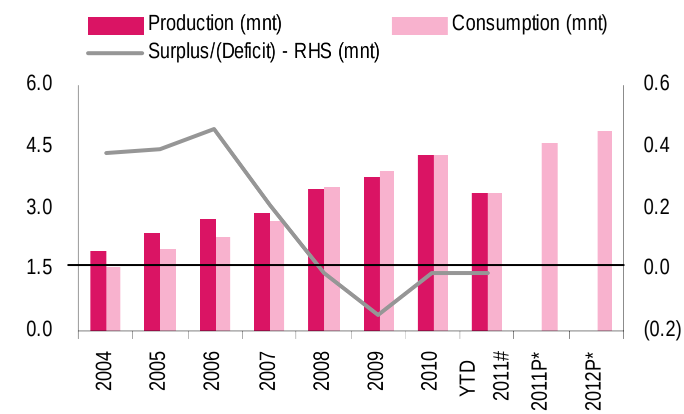
In recent years China's secondary lead production has been increasing. In the total lead production, the share of secondary lead production has increased to 34% in 2010 from 22% in 2006.

Increasing share of secondary lead output in China



Source: ILZSG, PINC Research

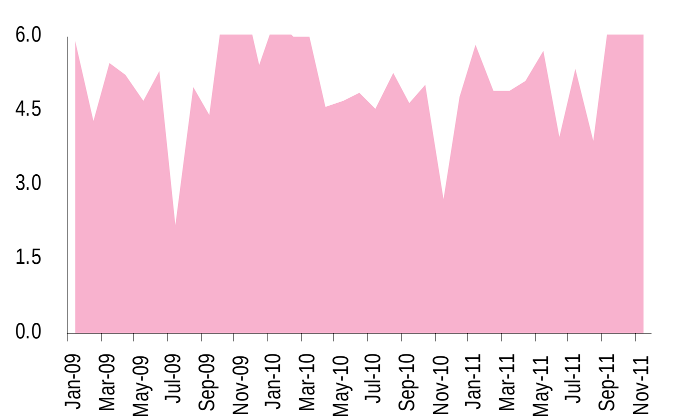
China refined Lead demand supply (mnt)



Source: Bloomberg, PINC Research; # YTD - Jan-Sep'11; * ILZSG projections

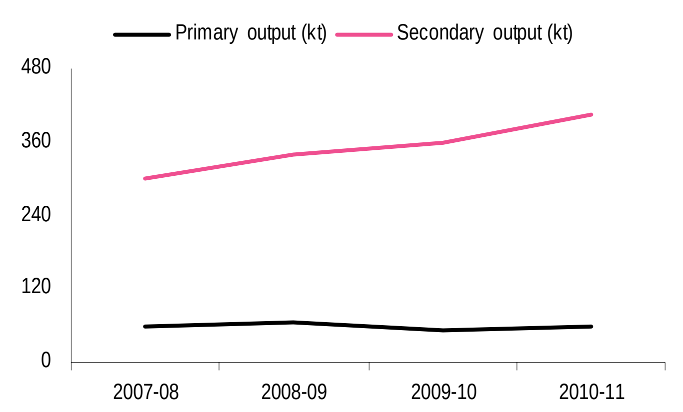
In India, batteries comprise ~75% of the lead consumption of the country. As per ILZDA, the Indian battery market size is USD3.22bn and is expected to grow to USD5.0bn in 2015 and USD9.0bn in 2020. Of the total battery market, 60% caters to the automotive segment and 40% to the industrial segment. HZL is the only producer in India and is expected to ramp up output with the recent commissioning of 100ktpa lead refining capacity. However, primary lead output accounts for only 13% of India's total lead production wherein the balance is being serviced by secondary lead output.

India monthly lead production - HZL (mnt)



Source: Ministry of Mines, PINC Research

Increasing share of secondary lead output in India

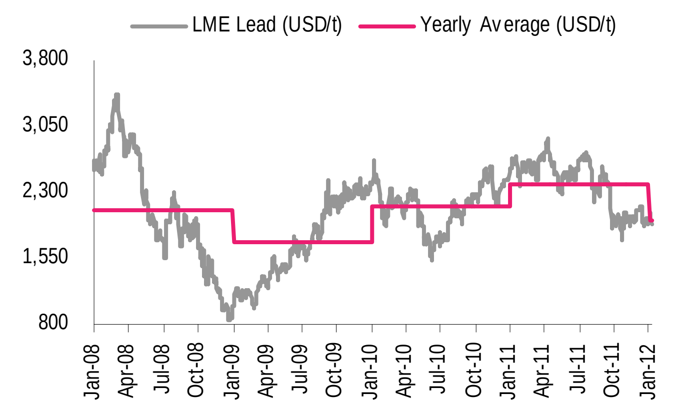


Source: ILZSG, PINC Research

LME prices decline on high inventory and declining cancelled warrants

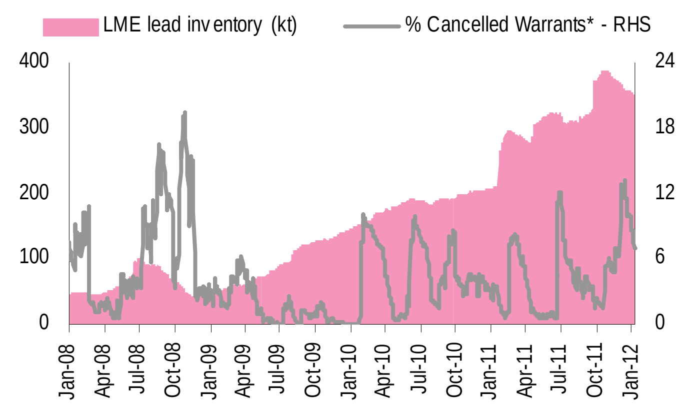
LME lead prices have declined by 27.3% since Jul'11 on demand concerns (LME inventory reached all-time high in Oct'11). Although inventory has declined since, declining level of cancelled warrants (inventory earmarked for deliveries) continue to signal weak demand.

LME Lead prices



Source: Bloomberg, PINC Research

Lead inventory



Source: Bloomberg, PINC Research

Outlook

With growth in automobile sector in both India and China, and focus on production of electric vehicles, global lead demand would be driven by developing economies. However, there is a weakness in demand in the interim, which is likely to keep LME lead prices under pressure. We have assumed average LME lead prices of USD2,250/t, USD2,000/t and USD2,100/t for FY12E, FY13E and FY14E respectively.

Key assumptions of macro variables

	CMP	Performance (%)			FY11	FY12E	FY13E	FY14E
	(USD/t)	1-m	3-m	2-yr		(USD/t)		
LME Copper	7,569	(2.9)	3.0	1.8	8,139	8,302	7,223	7,584
LME Aluminium	2,047	(0.8)	(6.7)	(9.0)	2,258	2,280	2,000	2,100
LME Lead	1,934	(9.9)	(1.2)	(22.8)	2,244	2,250	2,000	2,100
LME Zinc	1,839	(7.8)	(3.2)	(26.1)	2,187	2,060	1,900	2,000
Silver (USD/oz)	29.0	(9.9)	(6.9)	57.0	23.9	35.3	31.1	29.5
USD/INR	52.8	2.0	7.4	14.7	45.6	48.2	49.0	47.0
Copper TcRc (c/lb)					11.9	16.5	17.5	16.5

Source: Bloomberg, Sterlite, PINC Research

COMPANIES

- Hindalco Industries
- Sterlite Industries
- Hindustan Zinc
- National Aluminium Company

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INITIATING COVERAGE

Initiating Coverage
Sector: Metals & Mining
Sensex: 15,815

HINDALCO INDUSTRIES

Initiate	REDUCE
CMP	Rs118
TP	Rs122

11 January 2012

LME volatility, project concerns; Reduce

Although Hindalco may seem attractive after 53% decline in stock price in the last 1-yr, we believe it is still too early to turn positive on the stock. The reasons for our caution are: (a) higher LME volatility, with downside risk, (b) Sticky cost structure, mainly energy, (c) Project concerns: Long delays in greenfield projects, uncertainty on captive bauxite/ coal, & (d) High financial leverage. Despite aluminium volume growth and stable Novelis, we estimate Hindalco's consol. EPS to decline at a CAGR of 18% over FY12E-FY14E on higher interest & depreciation cost. We initiate coverage on Hindalco with a REDUCE rating and a SOTP-based target price of Rs122.

Increased LME volatility: LME aluminium prices have fallen by 23% since Jun'11 on rise in debt concern in EU and fear of hard-landing in China. We see these concerns to persist and expect LME prices to remain under pressure on slowdown in metals demand, although cost support could limit downside. We have assumed avg. LME aluminium of USD2,000/t & USD2,100/t for FY13E & FY14E respectively.

Sticky cost structure to put further pressure on margin: Hindalco India's integrated aluminium business has a sticky cost structure, which is expected to contract Hindalco's aluminium margin amidst lower LME prices. Rising power and fuel cost, which accounts for ~40% of aluminium operating cost, is likely to put additional pressure on margin. We expect OPM for Hindalco India's aluminium business to contract by 1,024bps over FY11-FY14E to 21.2%.

Project concerns: Although Hindalco's 359ktpa Mahan greenfield smelter is nearing completion, given the delay in the 1.5mntpa alumina refinery at Utkal Alumina and lack of clearances for captive bauxite (Baphlimali) and coal (Mahan coal block), we expect Hindalco to be dependent on imported alumina and coal for Mahan project in the interim. This, along with lower CU and higher cost during stabilisation phase, would put further pressure on company's margin over FY13E/ FY14E.

High financial leverage: With consol. net debt of Rs293bn (FY13E, adj. for liquid investment), Hindalco has net D/E of 1.3x (adj. for goodwill) & interest cover of 2.9x.

VALUATIONS AND RECOMMENDATION

Novelis' turnaround, rise in TcRc margin for copper custom smelting and weak rupee are likely to provide stability to Hindalco's operating profit despite volatile LME. However, we estimate Hindalco's EPS to decline by 20% YoY in FY13E, & 16% YoY in FY14E, on lower LME prices, higher energy cost, delays in captive alumina & coal and higher interest and depreciation cost on project commissioning. Although, the stock may seem attractive at 4.7x FY13E EV/EBITDA post 53% decline in 2011, we believe it is still too early to turn positive on the stock. We initiate coverage on Hindalco with a REDUCE rating and SOTP-based TP of Rs122.

KEY FINANCIALS (Rs mn)

	FY10	FY11	FY12E	FY13E	FY14E
Revenue	607,079	720,779	774,003	725,940	786,236
YoY Gr. (%)	*(8.0)*	*18.7*	*7.4*	*(6.2)*	*8.3*
Op. Profit	97,458	80,017	92,175	88,397	93,832
OPM (%)	*16.1*	*11.1*	*11.9*	*12.2*	*11.9*
Adj. Net Profit	38,225	24,463	38,200	30,737	25,828
YoY Gr.(%)	*1,041.8*	*(36.0)*	*56.2*	*(19.5)*	*(16.0)*

KEY RATIOS

	FY10	FY11	FY12E	FY13E	FY14E
Dil. EPS (Rs)	20.0	12.8	20.0	16.1	13.5
ROCE (%)	10.1	7.4	8.5	6.7	5.9
RoE (%)	36.0	16.2	20.8	14.3	10.8
PER (x)	6.0	9.2	5.9	7.3	8.7
P/BV (x)	1.7	1.4	1.1	1.0	0.9
EV/EBITDA (x)	3.7	4.5	4.0	4.7	5.0

Bikash Bhalotia **+91-22-6618 6387**
bikash.bhalotia@pinc.co.in

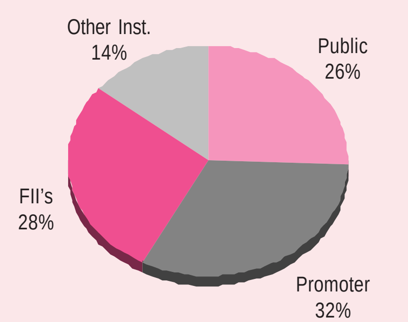
Harleen Babber **+91-22-6618 6389**
harleen.babber@pinc.co.in

Dipti Vijaywargi **+91-22-6618 6393**
dipti.vijaywargi@pinc.co.in

STOCK DATA

Market cap	Rs226bn
Book Value per share	Rs152
Shares O/S (F.V. Rs1)	1,915mn
Free Float	68%
Avg Trade Value (6 months)	Rs1,321mn
52 week High/Low	Rs252/111
Bloomberg Code	HNDL IN
Reuters Code	HACL.BO

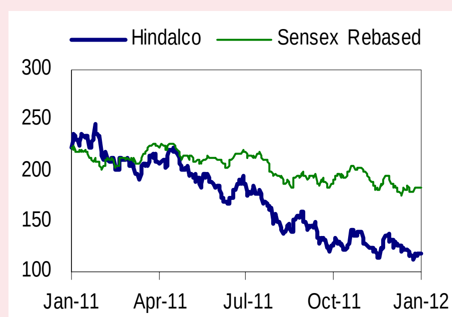
SHARE HOLDING PATTERN



PERFORMANCE (%)

	1M	3M	12M
Absolute	(10.8)	(6.4)	(48.9)
Relative	(8.4)	(3.8)	(31.3)

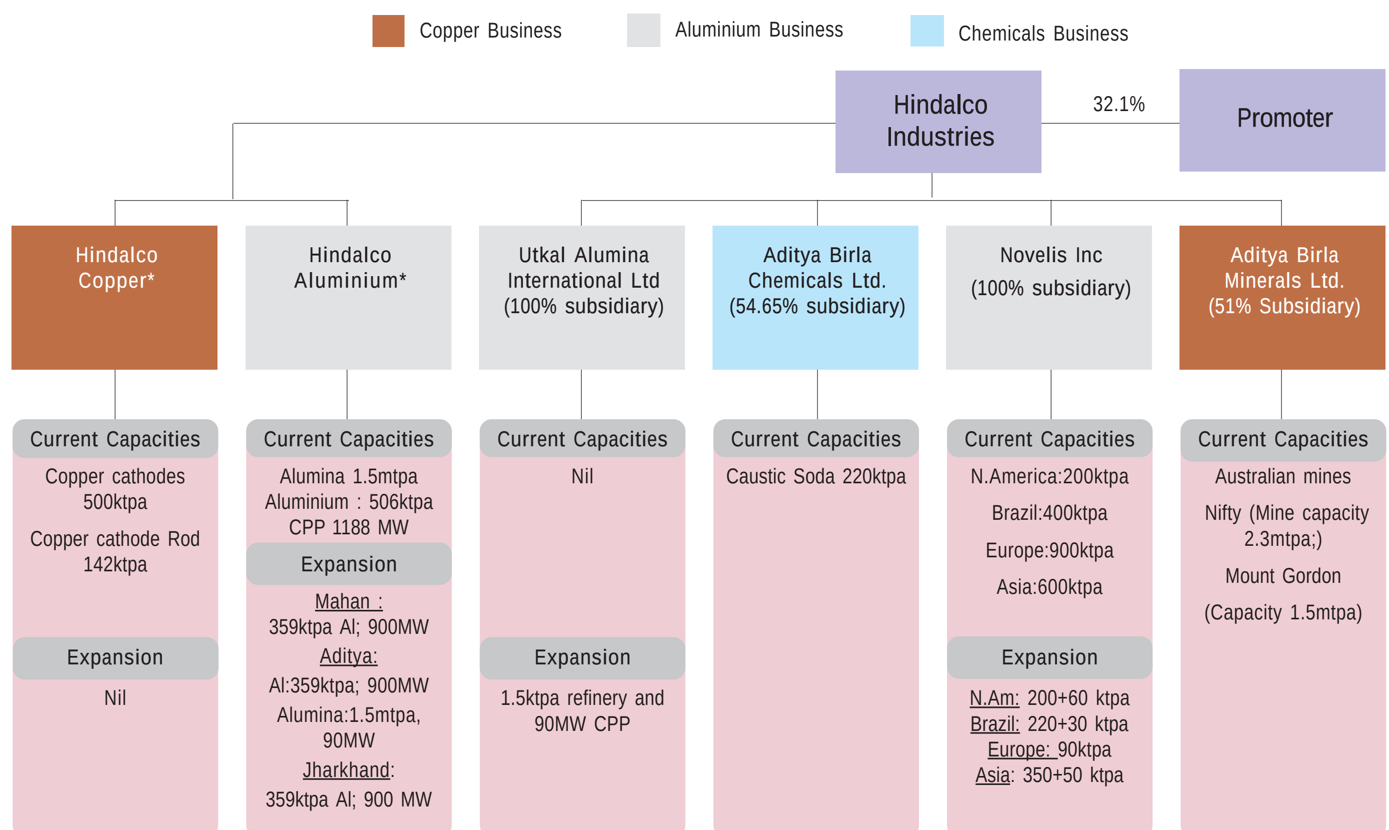
RELATIVE PERFORMANCE



About the company

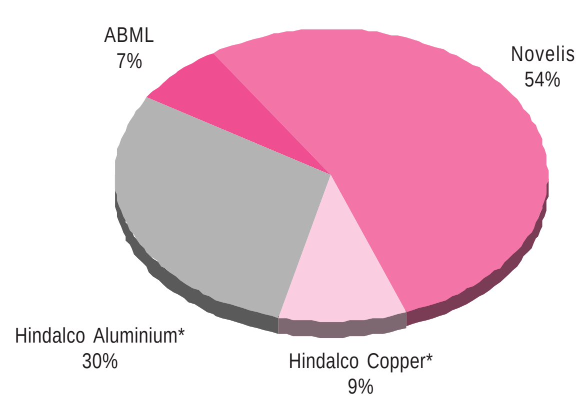
Hindalco Industries Limited, the metals flagship company of the Aditya Birla Group, is the world's largest aluminium rolling company (Novelis) and 2nd largest producer of primary aluminium in India. The company has an integrated aluminium complex at Renukoot, UP, another smelter at Hirakud, Odisha and two more refineries at Belgaum, Karnataka and Muri, Jharkhand. Its Copper smelter in Dahej, Gujarat is world's 2nd largest custom smelter at a single location.

Hindalco Industries - Group Structure



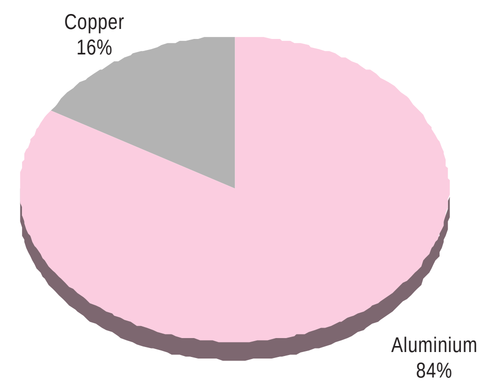
*Source: Company, PINC Research * Hindalco's business segments*

FY11 EBITDA break-up entities



Source: Company, PINC Research; Note: Business segments of Hindalco*

FY11 EBITDA break-up by business segments



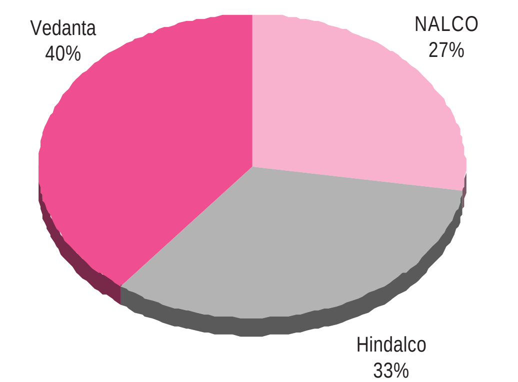
Source: Company, PINC Research

Hindalco Industries (India)

Market share in India - 51% - Copper and 33% - Aluminium

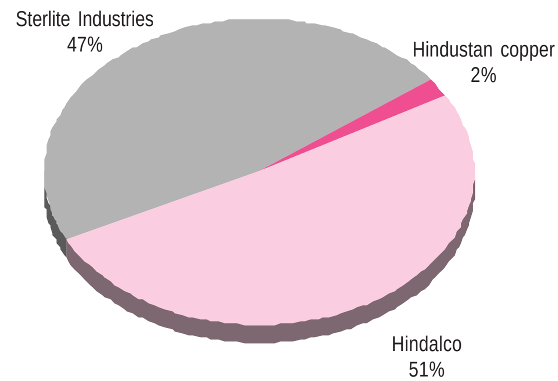
Hindalco's Indian operation comprises aluminium and copper divisions. Hindalco Industries is the largest copper producer and second largest aluminium producer in India with 51% and 33% market share respectively. The aluminium segment produces both primary metals and value added products in the form of flat rolled products, extrusions and foils. The copper segment comprises copper cathodes, continuous cast copper rods and by-products.

Aluminium market share in India (FY11)



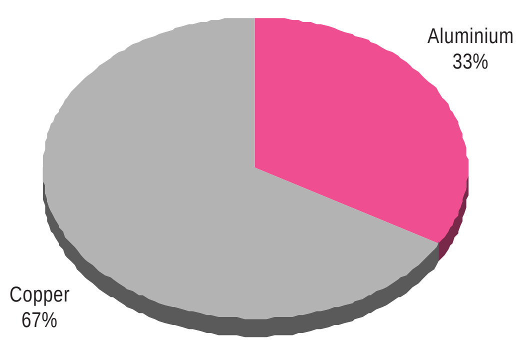
Source: Industry, Company, PINC Research
*Note:*includes Balco and VAL.*

Copper market share in India (FY11)



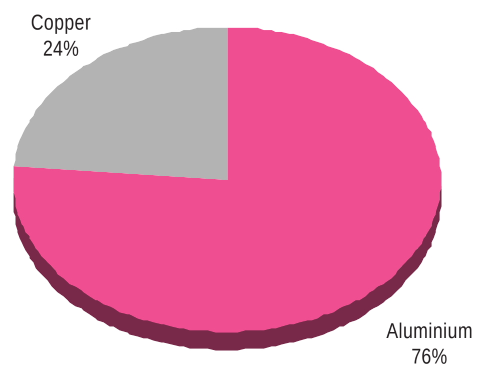
Source: Indistry, Company, PINC Research

Hindalco: Standalone revenue break-up (FY11)



Source: Company, PINC Research

Hindalco: Standalone EBITDA break-up (FY11)



Source: Company, PINC Research

Aluminium: Capacity expansion projects to drive volume and earnings growth

Hindalco to triple aluminium smelting capacity with a capex of Rs400bn.

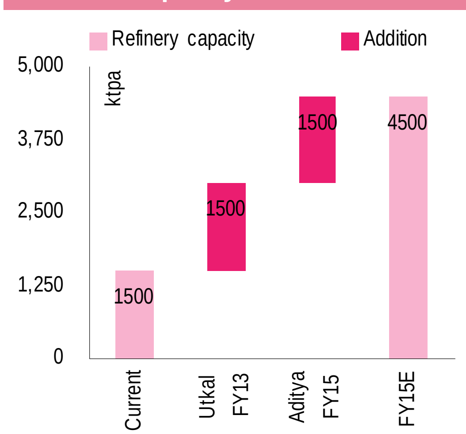
Hindalco is incurring a total capex of Rs400bn to triple its aluminium smelting capacity from 0.51mn tpa to 1.6mn tpa and Alumina refinery capacity from 1.5mn tpa to 4.5mn tpa by FY16E. The three planned smelters of 359ktpa with 900MW CPP each are strategically located near resources to achieve low cost of production.

Snapshot of Hindalco's capacity expansion projects

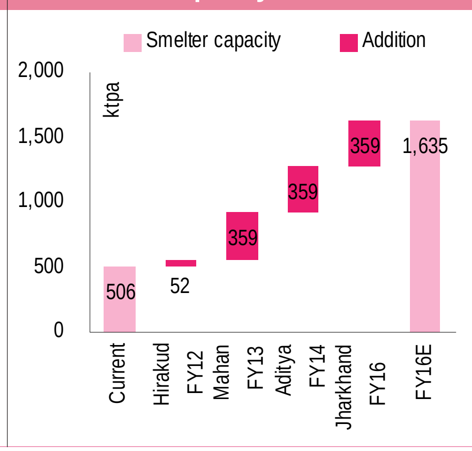
Expansion projects	Nature	Location	Capacity	Capex (Rs bn)	D/E	Description	Timeline	Status
Hirakud	Smelter, Rolling mill; Brownfield	Sambalpur, Odisha	52ktpa smelter, 150ktpa rolled, 100MW CPP (coal)	17.4		Dismantled rolling mill from Rogerstone	Early 2012	Project almost complete
Mahan Aluminium	Smelter; Greenfield	Bargwan, MP	359ktpa, 900MW CPP (coal)	105.0	75/25	Mahan Coal (50:50 JV with Essar power) to supply coal; Hindalco's share 3.6mtpa (30%)	Early 2012	Financial closure achieved
Utkal Alumina (UAIL), 100% Subsidiary	Refinery; Greenfield	Rayagada, Odisha	1.5mtpa, 90MW CPP	70.1	70/30	4.5mntpa captive bauxite, Baphlimali, 20 km away from the site	H2CY12	Financial closure achieved
Aditya Aluminium	Smelter; Greenfield	Lapanga, Odisha	359ktpa, 900MW CPP (coal)	105.0		20 mntpa JV coal mine at Ib Valley; coal blocks Talabira II and III, Orissa	Early 2013	
Aditya Alumina	Refinery; Greenfield	Koraput, Odisha	1.5mtpa, 90MW CPP	70.1	70/30	Captive bauxite with capacity of 4.2mntpa	2014	
Jharkhand Aluminium	Smelter; Greenfield	Sonahatu, Jharkhand	359ktpa, 900MW CPP (coal)	110.0		6mntpa coal mine in Auranga, Jharkhand (JV with Tata power)	2015	

Source: Company, PINC Research

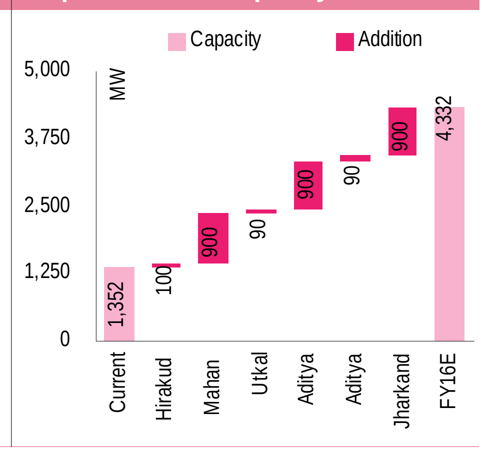
Alumina capacity



Aluminium capacity



Captive Power Capacity



Source: Company, PINC Research

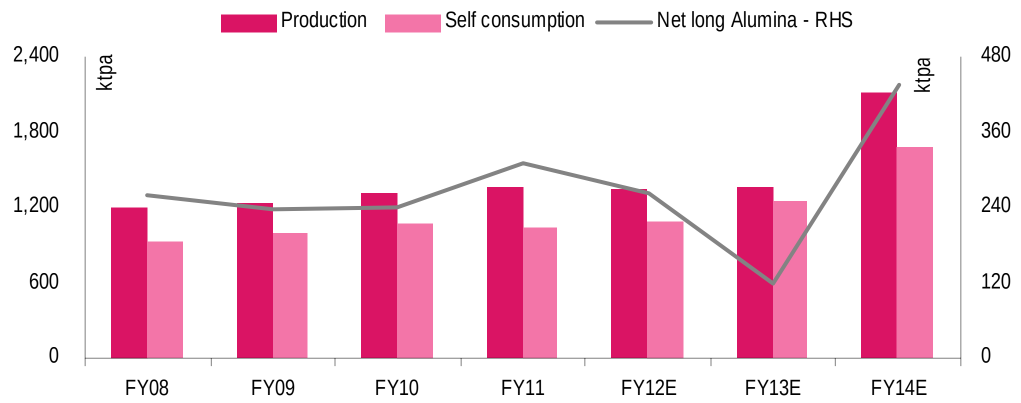
Utkal Alumina, scheduled for FY13E and Hirakud (FY12E), Mahan (FY13E) and Aditya (FY14E) are expected to start contributing to company's revenue and operating profit by FY14E.

Utkal Alumina to help in maintaining net long position in Alumina

To maintain net long position in Alumina with 1.5mntpa alumina capacity in Utkal Alumina.

Hindalco is setting up 1.5mntpa alumina capacity with 90MW CPP at Rayagada, Odisha in its wholly owned subsidiary Utkal Alumina. Bauxite for alumina will be sourced from Baphilmali mines located 20km away from the project site. This would aid Hindalco in maintaining a net long position in Alumina even after commissioning of Aluminium capacity in Mahan and Aditya by FY14.

Hindalco to maintain net long position in Alumina



Source: Company, PINC Research

Aluminium: Capacity expansion to boost output

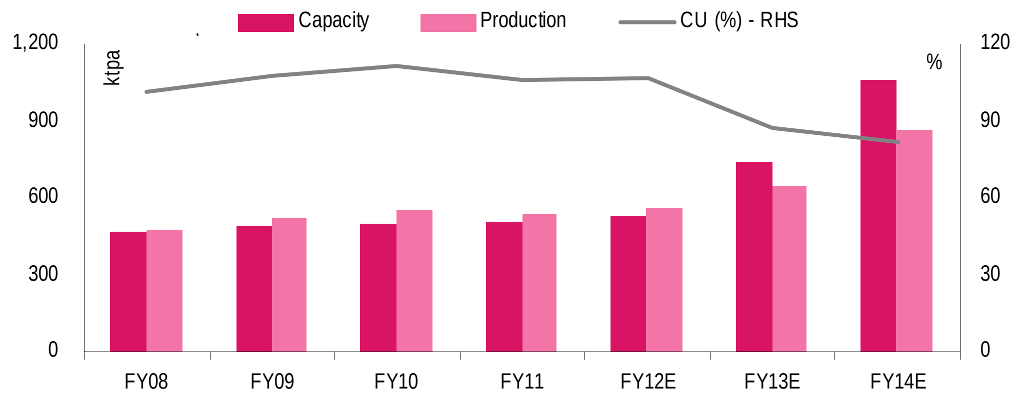
Hirakud: The Company is increasing Hirakud's capacity by 52ktpa by FY12-end along with 100MW CPP. Further, 135ktpa of rolling capacity has been transferred from Rogerstone, UK (Novelis) and has been recently commissioned.

Coal requirement for Mahan: Will have to part rely on e-auction and imported coal until the captive coal mine becomes operational.

Mahan: Greenfield Mahan project (359ktpa smelter, 900MW CPP) is expected to gradually commission from Q4FY12 onwards. While the alumina would be sourced from Utkal Alumina post it's commissioning, Mahan project would rely on alumina from Muri, Belgaum and imports in the interim, which will entail higher cost. Further, captive coal for the CPP (Mahan Coal Ltd, JV between Hindalco and Essar Power) is also facing delays due to Go-No Go issue, forcing the company to apply for tapering linkage in the interim. We believe that given the tight linkage coal situation in India, the company will have to part rely on e-auction and imported coal until the captive coal mine becomes operational. Thus, we expect Mahan's cash costs to remain high in the near term. For Mahan, we have assumed output of 72kt and 215kt at operating cost of USD2,365/t and USD2,250/t for FY13E and FY14E respectively.

Aditya: We have assumed gradual commissioning of potline in Aditya Aluminium during FY14 and FY15 and assumed an output of 57kt at an operating cost of USD2,450/t for FY14E.

Expansion projects to boost volume



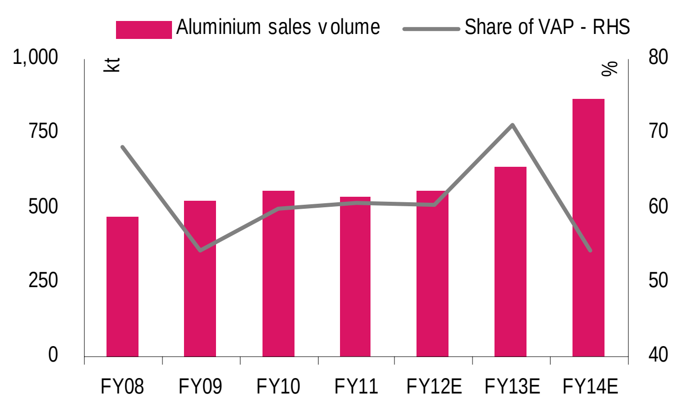
Source: Company, PINC Research

However, share of value added products to decline

Volume share of value added product to decline from 61% in FY11 to 52% in FY14 due to rising share of primary aluminium.

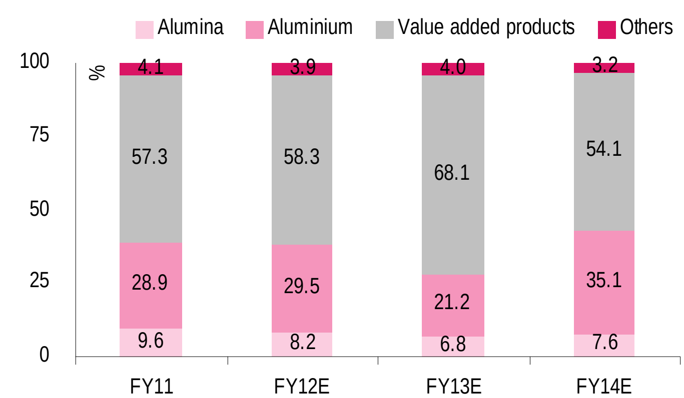
Hindalco's product-mix in its aluminium business has a large proportion of value-added products (61% by volume), which makes its earnings less sensitive to LME volatility. Although, we expect 17% CAGR in aluminium sales volume over FY11-FY14E, we estimate volume share of value added product to decline from 61% in FY11 to 54% in FY14 due to rising share of primary aluminium, despite 135ktpa of rolling capacity being transferred from Rogerstone, UK to be set-up in Hirakud in Q4FY12.

Volume growth boosted by primary aluminium



Source: Company, PINC Research

Declining share of value added products in revenues



Source: Company, PINC Research

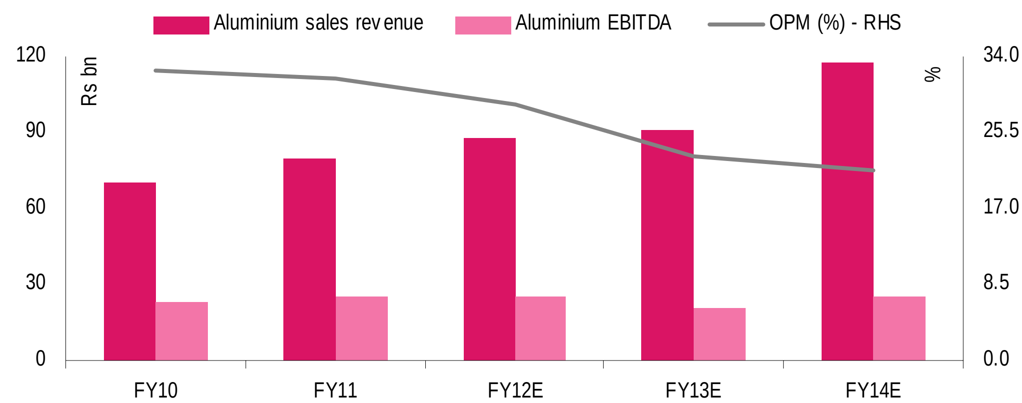
OPM to contract by 1,024bps over FY11-14E despite revenue and volume expansion.

Volume growth to drive revenue growth despite lower LME prices; EBITDA flat as OPM contracts

On the back of volume CAGR of 17% over FY11-FY14E, we estimate Hindalco India's aluminium revenue to grow at a CAGR of 14%. However, we expect OPM to contract 1,024bps due to lower LME prices and higher operating cost for newly commissioned greenfield capacities owing to lack of captive alumina or coal during the stabilisation phase. Consequently we estimate aluminium EBITDA to remain flat over FY11-FY14E.

Valuation: We value Hindalco's aluminium business at 5.0x FY13E EV/EBITDA.

Revenue to expand on volume growth while EBITDA flat as OPM declines



Source: Company, PINC Research

TcRc margin based business to ensure steady copper earnings.

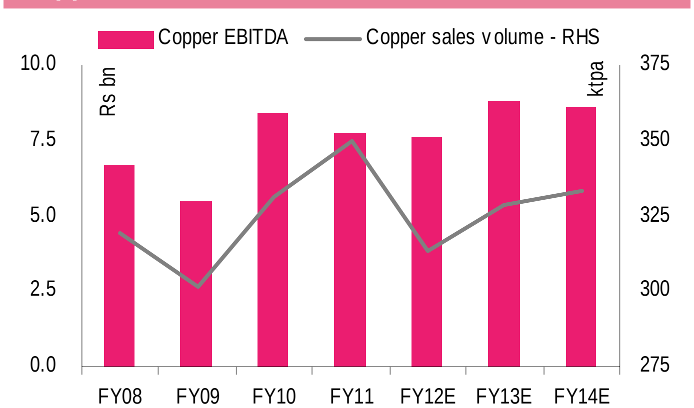
Estimate 3% EBITDA CAGR over FY11-FY14E for the copper business despite flat volume.

Steady copper earnings despite volatile LME

Hindalco's custom copper smelting business operates on a TcRc margin basis, wherein they import copper concentrate from S America and Australia at a discount to LME prices. Company's 51% subsidiary Aditya Birla Minerals (ABML) provided ~18% of concentrate requirement in FY11. While copper business revenue is determined by volatile LME prices, profitability is relatively stable, being determined by TcRc margins, by-product credit and import duty differential between copper concentrate (2.5%) and refined copper (5%).

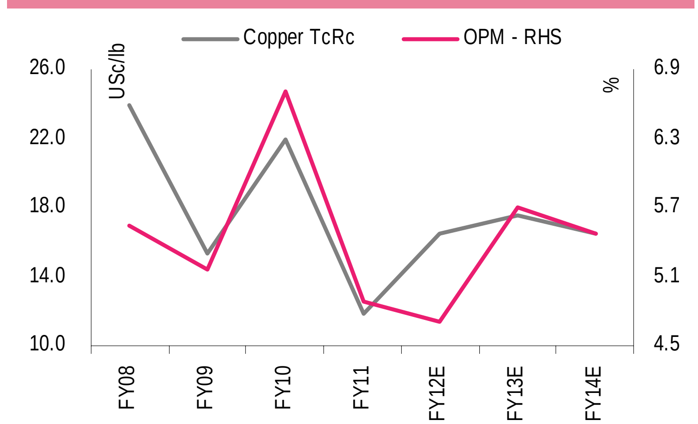
We expect copper profitability to strengthen with rising TcRc margin (USc13.5/lb in H1FY12 vs USc11.9/lb in FY11 and rising) and strong by-product realisations, despite a recent hike in import duty on copper concentrate from 2% to 2.5%. Consequently, we estimate 3% EBITDA CAGR over FY11-FY14E for the copper business despite flat volume, as the company does not have any expansion plans for the copper business.

Copper EBITDA and sales volume



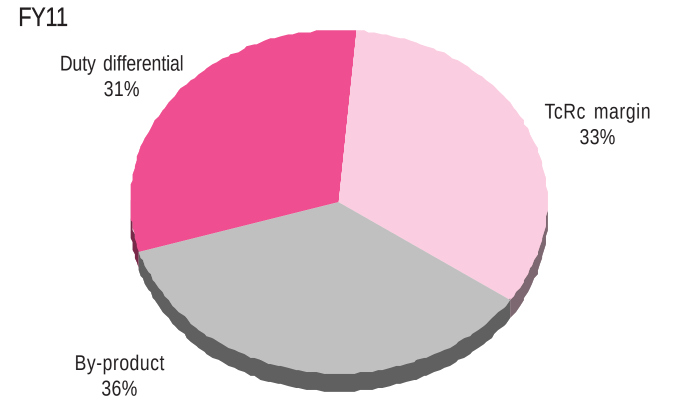
Source: Company, PINC Research

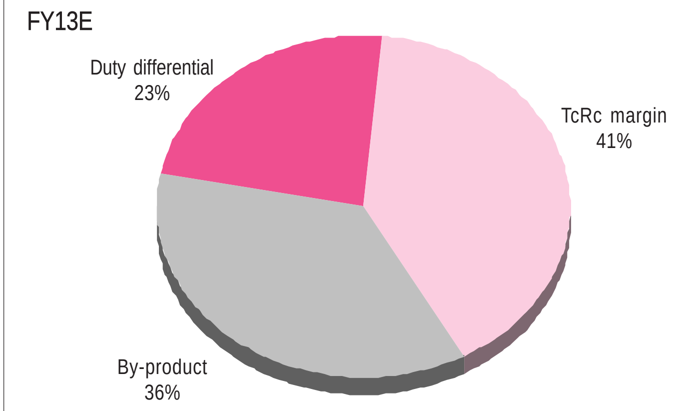
TcRc Vs OPMs



Source: Industry, Company, PINC Research

Higher TcRc to offset impact of reduced duty differential





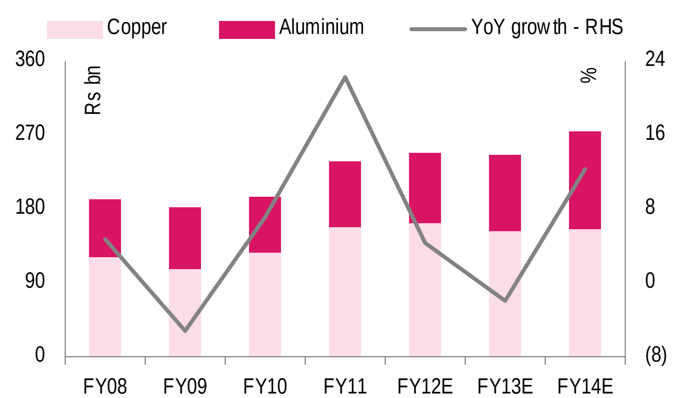
Source: PINC Research

Source: PINC Research

Valuation: We value Hindalco's copper business at 5.5x FY13E EV/EBITDA, a 10% premium to the aluminium business due to stable earnings of copper custom smelting**.**

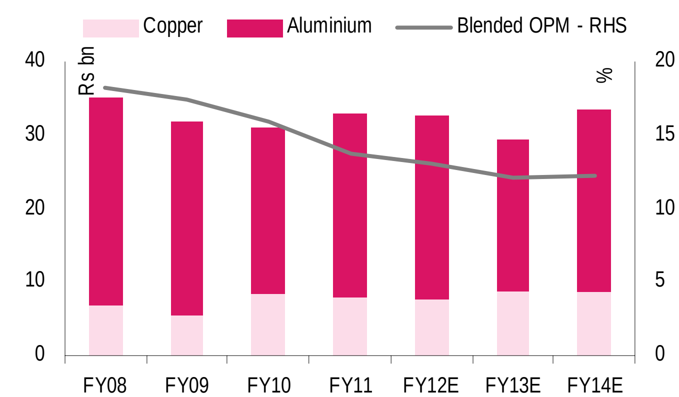
Hindalco standalone: Aluminium business to drive revenue and EBITDA growth.

Aluminium segment to drive revenue growth



Source: Company, PINC Research

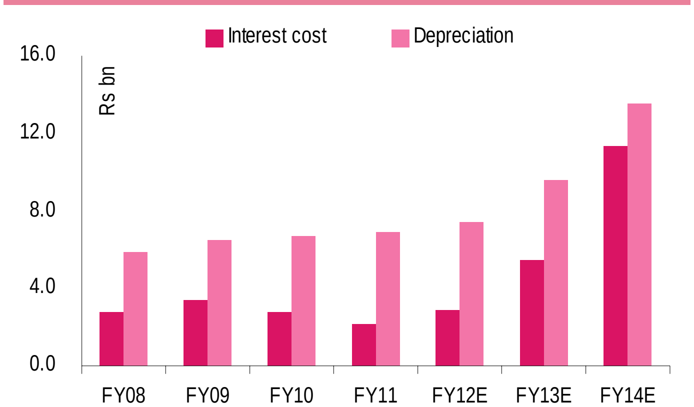
... and operating profit growth



Source: Company, PINC Research

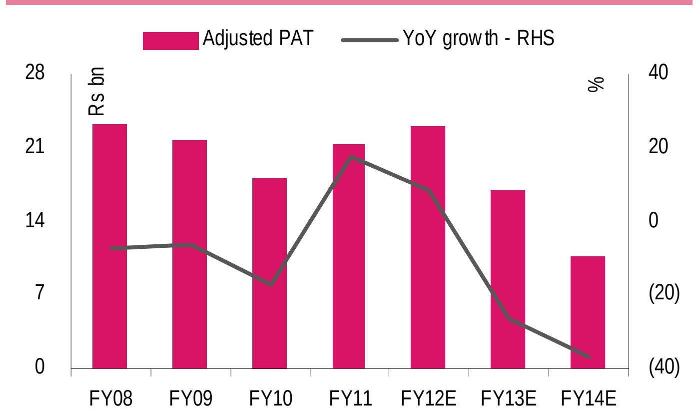
However, adjusted PAT to decline on higher interest and depreciation cost.

Rising interest and depreciation cost



Source: Company, PINC Research

....to result in PAT decline



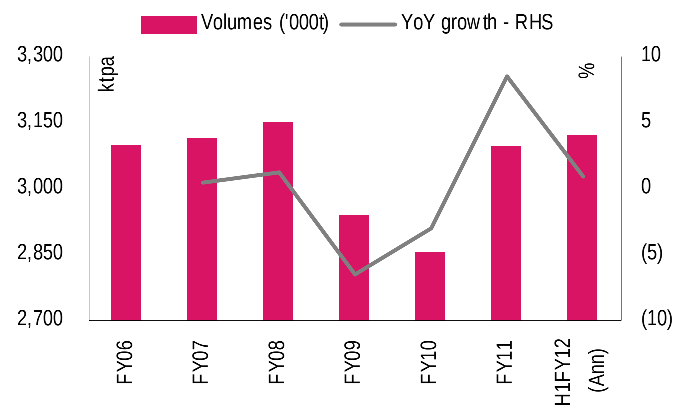
Source: Company, PINC Research

Novelis – Turned around to be a successful acquisition; what's next?

Despite sales volume being below pre-crisis levels, adjusted EBITDA has nearly doubled.

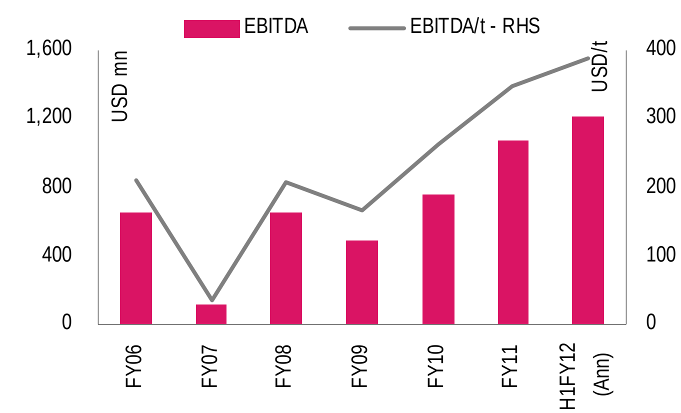
Although acquisition of Novelis in 2007 had made Hindalco world's largest aluminium rolling company, resultant debt and Novelis' depressed earnings with its can price ceiling contract and large exposure to the developed markets, was one of the biggest overhang on Hindalco's performance during FY09. This had warranted a goodwill impairment of USD1.34bn for Hindalco in FY09. However, with the expiry of the can price ceiling contracts in 2009 and cost restructuring, Novelis has emerged as a successful acquisition for Hindalco with an improvement in profitability. Despite sales volume being below pre-crisis levels, adjusted EBITDA has nearly doubled.

Novelis volume growth



Source: Company, PINC Research

Novelis EBITDA almost doubled



Source: Company, PINC Research

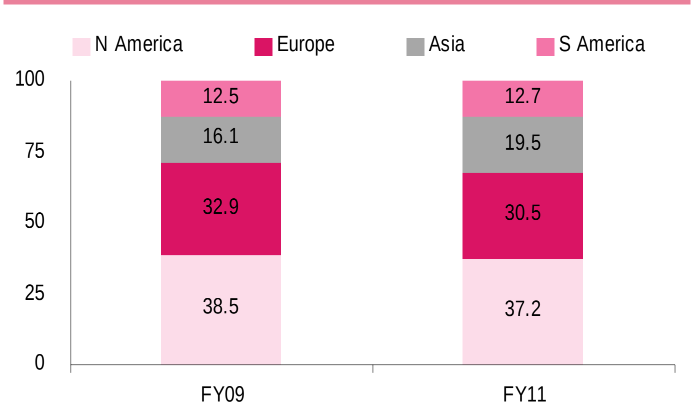
Novelis refinanced loans on their books, repaid the acquisition loan, paid dividend to Hindalco.

During FY11, Novelis not only refinanced loans on their books (USD2.7bn) to increase the duration, albeit at a slightly higher interest rate, but also repaid the acquisition loan of USD1.0bn with recourse to Hindalco's balance sheet and returned USD0.7bn to Hindalco by way of dividend. These have freed both Hindalco's and Novelis' balance sheet to pursue growth projects independently. Further, on the back of improved performance of Novelis, Hindalco rolled back goodwill impairment of USD1.34bn in FY11, taken in FY09.

Increased exposure to profitable beverage cans market & higher growth emerging markets.

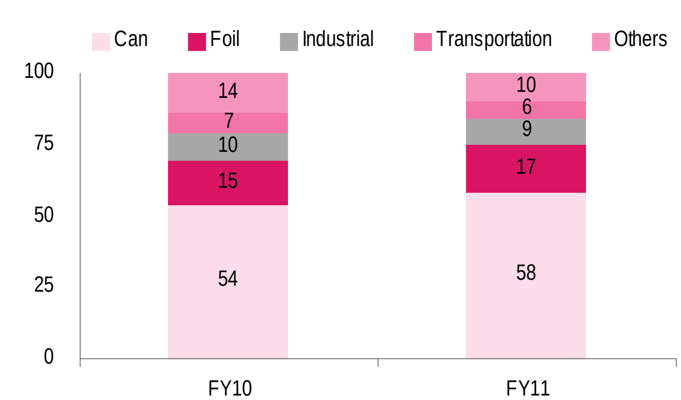
Further, the company has not only increased exposure to profitable beverage cans market, but also enhanced focus on higher growth emerging markets.

Increased focus on emerging markets (%)



Source: Company, PINC Research

Higher exposure to beverage cans market (%)



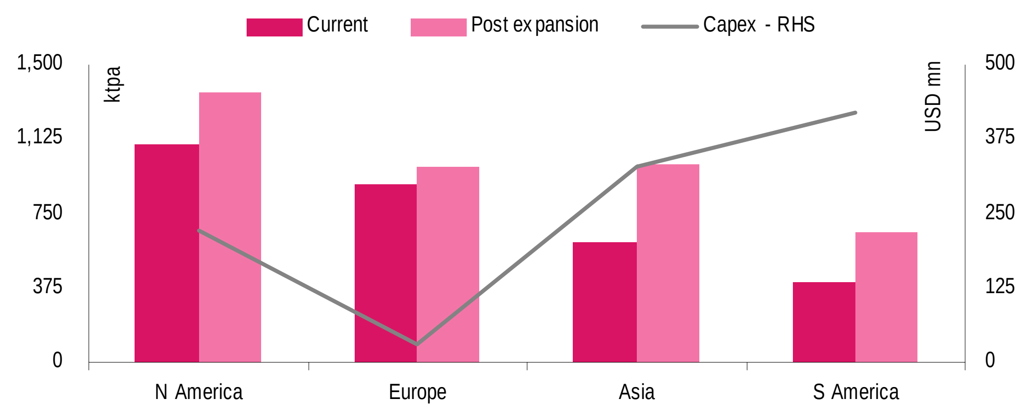
Source: Company, PINC Research

Novelis is expanding its capacity by 1mntpa by FY16E including 230ktpa of debottlenecking with focus on the faster growing Asia and Latin America markets.

Post restructuring, Novelis is ready for next leg of growth, driven by volume

With the expansion of EBITDA/t and debt refinancing resulting in reduced dependence on parent Hindalco, Novelis is ready for the next leg of growth, with focus on capacity expansion projects. The company has undertaken a capex of USD1.5bn (including maintenance capex) to increase capacity to 4.0mntpa from current 3.0mntpa by FY16E, with focus on the faster growing Asia and Latin America markets. Out of this, debottlenecking would result in a capacity expansion of ~230ktpa at a marginal capital cost.

Novelis' expansion plans – 1mntpa including 230ktpa of debottlenecking



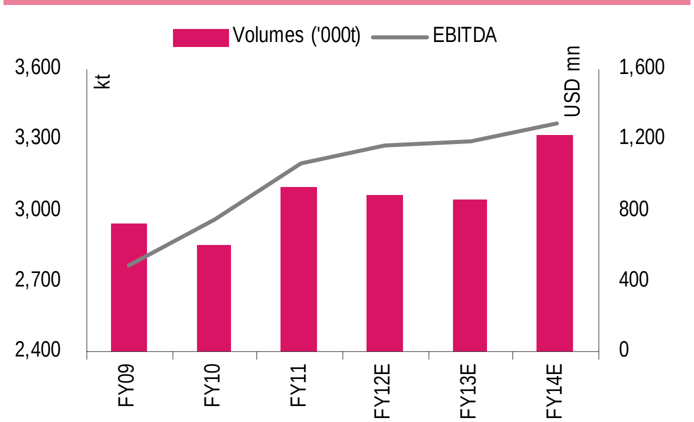
Source: Company, PINC Research

Novelis to be free-cash-flow positive (after interest, capex) during FY12-FY14E on the back of improved operating cash flow despite funding its expansion.

In addition, Novelis has transferred 135ktpa of rolling mill from Rogerstone, UK to Hirakud plant of Hindalco to produce can body stock for local and export market. This is expected to result in significant cost savings due to the integrated nature of the plant. The project would be completed soon.

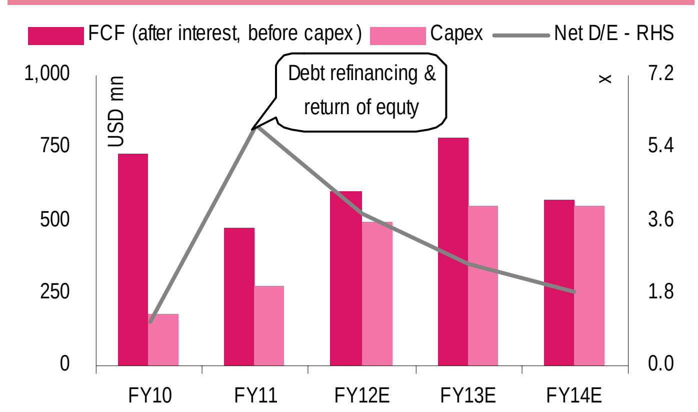
We expect these expansion projects to provide volume growth from FY14 onwards. Nonetheless, even after funding these projects, we estimate Novelis to be free-cash-flow positive (after interest, capex) during FY12-FY14E on the back of improved operating cash flow, resulting in an accrual to their cash and bank balance and lowering net debt/equity.

Volume growth to drive EBITDA growth in FY14E



Source: Company, PINC Research

Strong CFO to meet capex and deleverage B/S



Source: Company, PINC Research

Valuation: We value Novelis at 5.5x FY13E EV/EBITDA, a 10% premium to Hindalco's aluminium smelting business. It contributes Rs59/share to Hindalco (post 25% disc).

Aditya Birla Minerals Ltd – Restart of Mt. Gordon

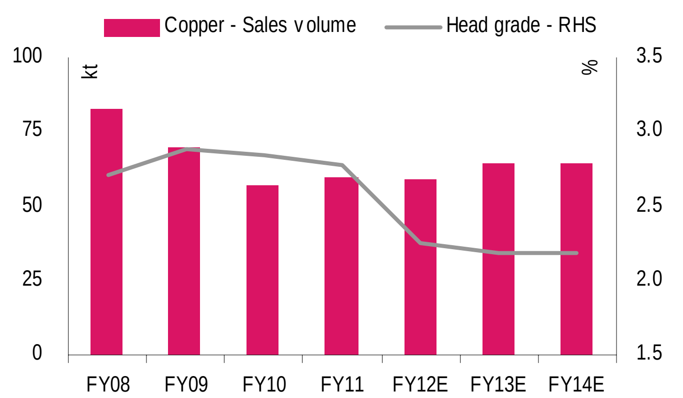
ABML's EBITDA to be sustained by 3% volume CAGR over FY11-FY14E, mainly led by recently restarted Mt Gordon.

Hindalco's 51%-owned Australian copper mining subsidiary Aditya Birla Minerals (ABML) owns 100% stake in Birla Nifty Pty and Birla Mt Gordon Pty located in Western Australia and Queensland respectively. 100% output from these mines is used to smelt copper at Dahej, meeting ~20% of Hindalco's concentrate requirement.

ABML as a resource base of 64mnt (42mnt in Nifty and 22mnt in Mt Gordon), with an average grade of 2.15%, i.e. copper content of ~1.38mnt, implying a mine life of 18years (based on annual output of 75kt of copper content).

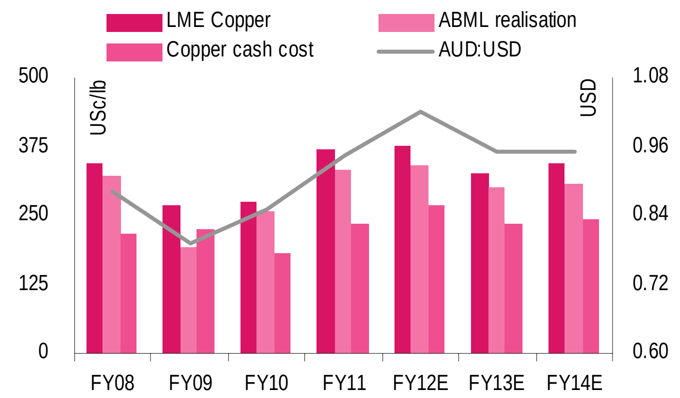
Although, the volatility in LME prices, decline in head grade and AUD appreciation are key concerns, we expect ABML's EBITDA to be sustained by 3% volume CAGR over FY11-FY14E, mainly led by recently restarted Mt Gordon.

ABML sales volume & head grade



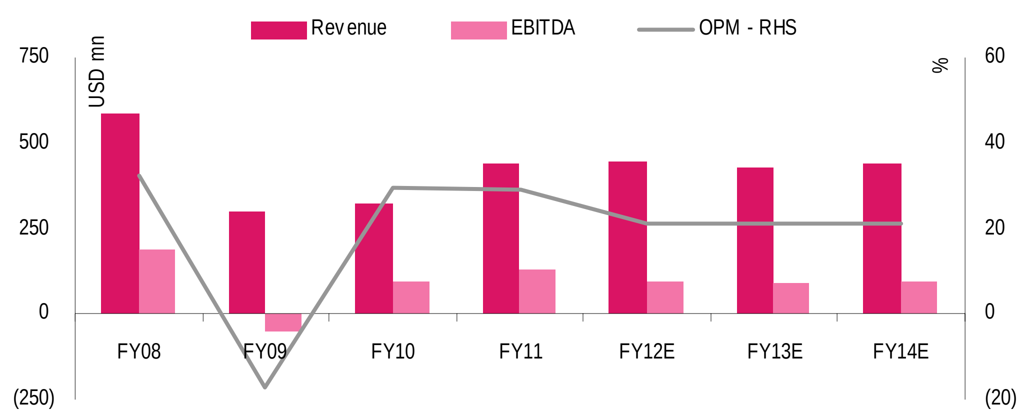
Source: Company, PINC Research

EBITDA +ve despite lower LME prices



Source: Company, PINC Research

EBITDA to be sustained by volume growth



Source: Company, PINC Research

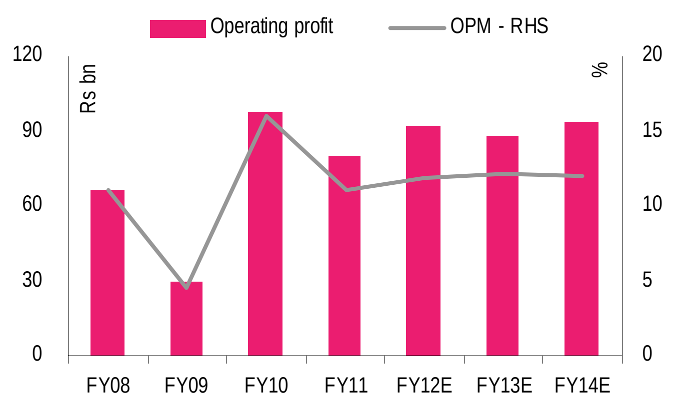
Valuation: ABML at 4.5x FY13E EV/EBITDA contributes Rs8/share to Hindalco, post 25% discount.

Consol. operating profit to increase on improved Novelis performance & higher aluminium volume. However, profitability to decline on higher interest & depreciation expenses.

Hindalco Industries Consolidated

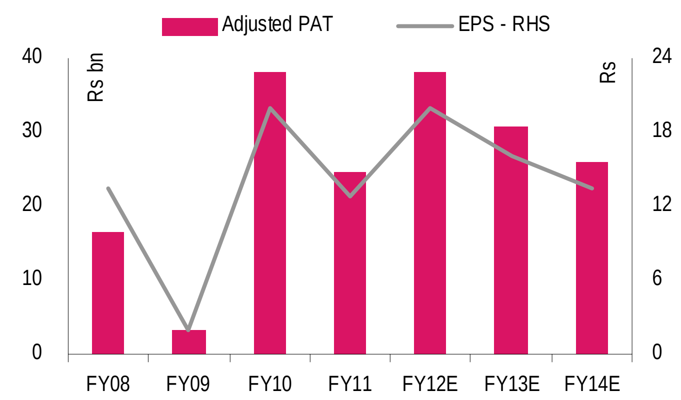
Despite lower LME prices, we estimate Hindalco's consolidated operating profit to increase at a CAGR of 5% over FY11-FY14E mainly driven by improved Novelis performance and higher aluminium volume as greenfield projects start contributing FY13E onwards. However, we estimate lower EBITDA CAGR of 1% over FY12E-FY14E, as majority of growth, coming from Novelis turnaround is captured in FY12E. We estimate adjusted PAT and EPS to decline on higher interest and depreciation cost on newly commissioned projects, which we expect would operate at low capacity utilisation levels during the stabilisation phase.

Operating profit to improve, led by Novelis



Source: Company, PINC Research

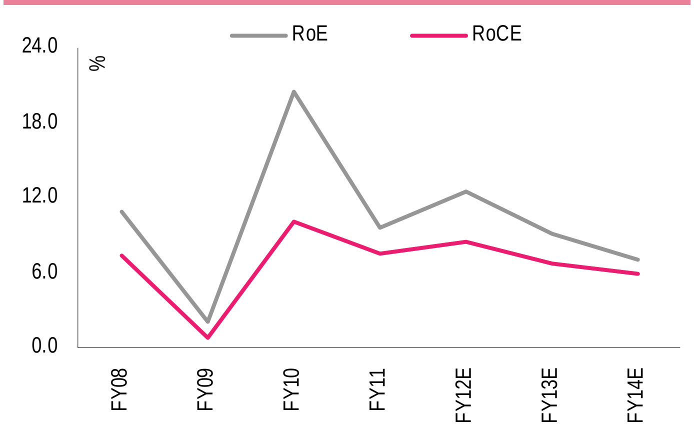
But profitability to decline on higher interest & dep.



Source: Company, PINC Research

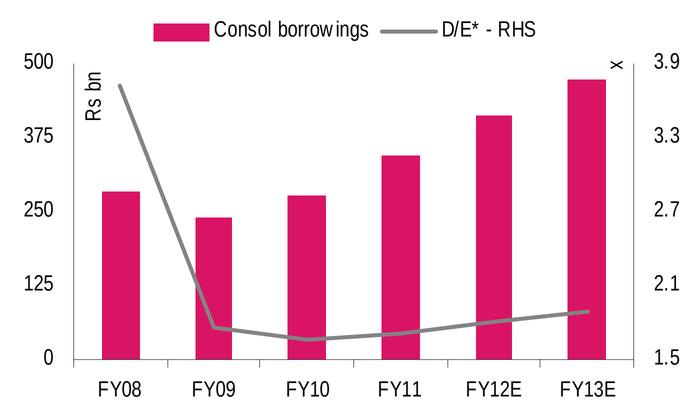
Consequently, we expect return ratios to continue to remain low, despite commissioning of a few capacities and operationalising part of the capital work in progress. On the other hand, we estimate financial leverage to increase further on massive capex plan lined up.

Hindalco: Return ratios to remain low



Source: Company, PINC Research

While leverage inches higher on capex plan



Source: Company, PINC Research
*Note: *based on equity value adj for goodwill.*

Operational summary

Key Assumptions	FY08	FY09	FY10	FY11	FY12E	FY13E	FY14E
USD/INR	40.3	46.0	47.5	45.6	48.2	49.0	47.0
LME Copper (USD/t)	7,592	5,882	6,105	8,139	8,302	7,223	7,584
LME Aluminium (USD/t)	2,625	2,236	1,867	2,258	2,280	2,000	2,100
Copper Business							
Copper Volumes (tonnes)	319,211	301,334	331,305	349,807	313,649	328,606	333,578
Captive conc (MIC, tonnes) - ABML (51% Subs.)	82,395	70,111	57,039	59,661	59,150	64,261	64,261
TcRc (Usc/lb)	24.0	15.3	22.0	11.9	16.5	17.5	16.5
Processing cost (Usc/lb)	15.5	18.8	16.5	20.5	21.5	21.7	21.8
EBITDA (USD/t)	511	386	482	461	504	545	547
EBITDA (Rs mn)	6,693	5,484	8,405	7,778	7,614	8,776	8,577
Alumina Segment - including Utkal Alumina							
Alumina volumes (tonnes)	259,627	238,350	241,095	309,566	261,629	250,000	436,695
Net realisations (USD/t)	568	559	512	543	570	500	435
Cost (USD/t)	216	210	205	236	244	240	252
EBITDA (Rs mn)	3,688	3,821	3,515	4,345	4,108	3,185	5,491
Aluminium Business							
Aluminium Volumes (tonnes)	473,118	521,069	554,333	534,400	557,882	640,426	862,838
Blended realisations (USD/t)	3,276	2,769	2,328	2,819	2,852	2,574	2,591
Cost (USD/t)	2,051	1,875	1,739	2,216	2,203	2,131	2,203
EBITDA (USD/t)	1,226	895	589	603	649	443	388
EBITDA (Rs mn)	23,354	21,443	15,489	14,698	17,449	13,901	15,740
Hindalco Standalone performance							
Revenue (Rs mn)	192,010	182,197	195,221	238,592	249,165	244,487	271,809
EBITDA (Rs mn)	34,011	31,311	29,499	31,854	32,594	29,431	31,275
OPM(%)	17.7	17.2	15.1	13.4	13.1	12.0	11.5
PAT (Rs mn)	7,053	6,109	4,621	4,687	5,755	4,242	2,678
CFO (Rs mn)	18,772	22,000	41,363	25,619	24,357	25,442	23,276
FCF (Rs mn)	(35,211)	(31,079)	(5,361)	(1,317)	(42,575)	(44,356)	(44,684)
Net debt (Rs mn)	81,816	74,806	62,167	70,381	119,196	172,357	231,768
ABML - 51% Subsidiary							
Sales Volume (tonnes)	82,395	70,111	57,039	59,661	59,150	64,261	64,261
Copper Realisation (USD/t)	7,111	4,234	5,686	7,357	7,504	6,645	6,825
Cost (USD/t)	4,817	4,959	4,006	5,219	5,911	5,230	5,387
EBITDA (USD mn)	189	(51)	96	128	94	91	92
Net debt (USD mn)		111	4	(90)	(103)	(106)	(117)
Novelis							
Shipments (000t)	3,150	2,943	2,854	3,097	3,060	3,045	3,316
Blended realisation (USD/t)	3,570	3,458	3,039	3,415	3,559	3,227	3,283
EBITDA (USD/t)	207	165	264	346	382	390	390
Adjusted EBITDA (USD mn)	651	486	754	1,072	1,170	1,186	1,294
PAT (USD mn)	(117)	(692)	405	200	270	279	341
CFO (USD mn)	794	(17)	908	685	919	1,104	887
FCF (USD mn)	(2,515)	520	764	202	512	668	471
Net debt (USD mn)	2,364	2,575	2,234	3,792	3,596	3,244	3,089
Consolidated							
Revenue (Rs mn)	600,128	659,630	607,079	720,779	774,003	725,940	786,236
EBITDA (Rs mn)	66,351	29,695	97,458	80,017	92,175	88,397	93,832
OPM (%)	11.1	4.5	16.1	11.1	11.9	12.2	11.9
Adj PAT (Rs mn)	16,452	3,348	38,225	24,463	38,200	30,737	25,828
EPS (Rs)	13.4	2.0	20.0	12.8	20.0	16.1	13.5
CFO (Rs mn)	61,416	54,926	62,666	59,941	70,428	82,762	77,420
FCF (Rs mn)	(164,032)	61,611	32,945	(21,452)	(33,014)	(26,159)	(15,434)
Net debt (Rs mn)	306,356	193,646	150,500	183,823	239,868	292,867	341,254

Source: Company; PINC Research

Valuation – Still early to turn positive; recommend REDUCE

Recommend 'Reduce' on the stock with a target price of Rs122, at 4.7FY13E blended EV/EBITDA.

Although Novelis' turnaround, rise in TcRc margin for copper custom smelting and weak rupee are likely to provide stability to Hindalco's operating profit despite volatile LME, we are cautious on Hindalco's earning growth prospects due to lower LME prices, sticky cost on rising energy cost, and higher interest and depreciation cost on commissioning of expansion projects. Further, we believe that delay in captive alumina project (Utkal) and captive coal block (Mahan) would lead to high operating cost for the greenfield projects in the interim. We estimate Hindalco's consol. EPS to decline by 20% YoY in FY13E, and 16% YoY in FY14E. Although, the stock may seem attractive at 4.7x FY13E EV/EBITDA post 53% decline in 2011, we believe that it is still too early to turn positive on the stock. We initiate coverage on Hindalco with REDUCE rating and SOTP-based target price of Rs122.

Hindalco - SOTP Valuation

Rs mn	Target EV/ EBIDTA (x)	EBIDTA	Target EV	CWIP (50% disc)	FY13 Net Debt	Residual Equity	Target Price (Rs)
Hindalco - Aluminium	5.0	20,655	103,275				
Hindalco - Copper	5.5	8,776	48,270				
Hindalco India	5.1	29,431	151,545	107,041	154,058	104,527	55
Novelis @ 25% holding disc.	5.5	54,512	299,818	9,800	158,966	112,989	59
ABML - Proportionate @ 25% disc.	4.5	2,271	10,220	-	(10,115)	15,251	8
Hindalco consolidated	**5.4**	**86,215**	**461,582**	**116,841**	**302,909**	**232,768**	**122**

Source: PINC Research

Sensitivity Analysis

Hindalco's target price and EBITDA is highly sensitive to LME aluminium, USD/INR, Novelis' EBITDA/t, while displaying little sensitivity to LME copper (as expected) and copper TcRc due to small share of copper business in Hindalco's consol. EBITDA.

Target price sensitivity (Rs)

FY13E USD / INR	FY13E LME aluminium (USD/t)				
	1,700	1,850	2,000	2,150	2,300
45.0	61	77	94	110	126
47.0	73	90	108	125	142
49.0	86	104	122	139	157
51.0	98	117	136	154	173
53.0	111	130	150	169	188

Source: PINC Research

EBITDA Sensitivity (Rs mn)

FY13E USD / INR	FY13E LME aluminium (USD/t)				
	1,700	1,850	2,000	2,150	2,300
45.0	64,752	70,570	76,388	82,206	88,024
47.0	70,239	76,316	82,392	88,469	94,545
49.0	75,727	82,062	88,397	94,732	101,067
51.0	81,214	87,808	94,401	100,995	107,589
53.0	86,701	93,554	100,406	107,258	114,110

Source: PINC Research

TP sensitivity (Rs)

FY13E USD / INR	FY13E Novelis EBITDA (USD/t)				
	325	345	365	385	405
45.0	80	87	94	100	107
47.0	94	101	108	115	122
49.0	107	114	122	129	136
51.0	120	128	136	143	151
53.0	134	142	150	157	165

Source: PINC Research

TP sensitivity (Rs)

FY13E LME copper (USD/t)	FY13E copper TcRc Margins (Usc/lb)				
	13.5	15.5	17.5	19.5	21.5
6,823	116	119	121	123	126
7,023	117	119	121	124	126
7,223	117	119	122	124	127
7,423	117	120	122	125	127
7,623	118	120	122	125	127

Source: PINC Research

Year Ended March (Figures in Rs mn)

Income Statement	FY10	FY11	FY12E	FY13E	FY14E
Net Revenue	607,079	720,779	774,003	725,940	786,236
Growth (%)	*(8.0)*	*18.7*	*7.4*	*(6.2)*	*8.3*
Operating Profit	97,458	80,017	92,175	88,397	93,832
Other income	3,227	4,309	10,439	11,833	12,823
EBITDA	100,685	84,325	102,614	100,230	106,655
Growth (%)	*175.0*	*(16.2)*	*21.7*	*(2.3)*	*6.4*
Depreciation	27,836	27,500	28,373	31,395	38,509
EBIT	72,849	56,825	74,241	68,835	68,146
Interest Paid	11,041	18,393	19,682	23,492	29,605
PBT (before E/o items)	61,808	38,432	54,559	45,343	38,541
Tax Provision	19,319	9,739	12,256	10,781	9,135
Minority Interest	4,264	4,230	4,103	3,825	3,578
Adjusted Net Profit	38,225	24,463	38,200	30,737	25,828
E/o loss/(income)	1,030	100	-	-	-
Reported Net profit	39,255	24,564	38,200	30,737	25,828
Growth (%)	*711*	*(37)*	*56*	*(20)*	*(16)*
Diluted EPS (Rs)	20.0	12.8	20.0	16.1	13.5
Dil. EPS Growth (%)	*914.6*	*(36.0)*	*56.2*	*(19.5)*	*(16.0)*

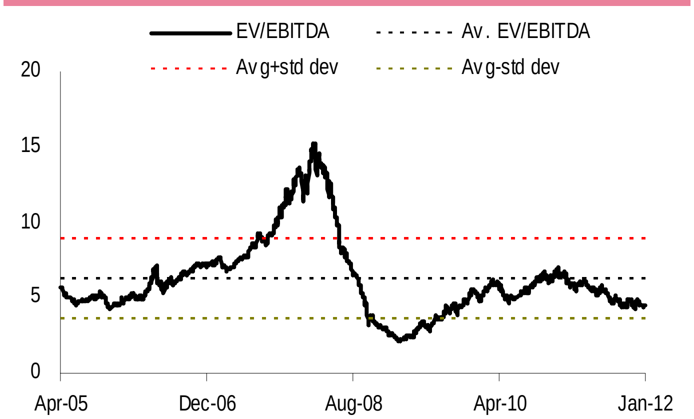
Cash Flow Statement	FY10	FY11	FY12E	FY13E	FY14E
Pre-tax profit	61,808	38,432	54,559	45,343	38,541
Depreciation	27,836	27,500	28,373	31,395	38,509
Total Tax Paid	(19,319)	(9,739)	(12,256)	(10,781)	(9,135)
Chg in working capital	(21,575)	(7,680)	(9,491)	5,146	(7,277)
Other CFO adjustments	13,916	11,428	9,243	11,658	16,782
Cash flow from oper (a)	62,666	59,941	70,428	82,762	77,420
Capital Expenditure	(21,113)	(90,039)	(113,882)	(120,755)	(105,676)
Chg in investments	(12,865)	4,237	-	-	-
Other investing activities	4,257	4,409	10,439	11,833	12,823
Cash flow from inv.(b)	(29,721)	(81,393)	(103,443)	(108,921)	(92,853)
Free cash flow (a+b)	32,945	(21,452)	(33,014)	(26,159)	(15,434)
Equity raised/(repaid)	26,085	1,239	-	-	-
Debt raised/(repaid)	(43,111)	36,933	67,508	67,200	62,500
Change in MI	-	-	-	-	-
Dividend (incl. Tax)	(3,034)	(3,345)	(3,348)	(3,348)	(3,348)
Other financing activities	(11,041)	(18,393)	(19,682)	(23,492)	(29,605)
Cash flow from fin (c)	(31,101)	16,433	44,478	40,360	29,547
Net chg in cash (a+b+c)	1,844	(5,019)	11,463	14,201	14,113

Balance Sheet	FY10	FY11	FY12E	FY13E	FY14E
Equity Share Capital	1,914	1,915	1,915	1,915	1,915
Reserves & surplus	213,533	288,318	323,170	350,559	373,038
Shareholders' funds	215,446	290,233	325,084	352,473	374,953
Minorities interests	17,372	22,169	25,781	29,374	32,951
Total Debt	239,987	276,920	344,428	411,628	474,128
Capital Employed	472,805	589,322	695,294	793,475	882,033
Net fixed assets	303,680	365,947	451,456	540,816	607,982
Goodwill	79,101	123,940	123,940	123,940	123,940
Cash & Cash Eq.	21,954	25,563	37,027	51,227	65,340
Net Other current assets	29,764	37,445	46,936	41,790	49,067
Investments	77,688	74,022	73,531	73,298	73,298
Net Deferred tax Assets	(39,382)	(37,596)	(37,596)	(37,596)	(37,596)
Total Assets	472,805	589,322	695,294	793,475	882,033

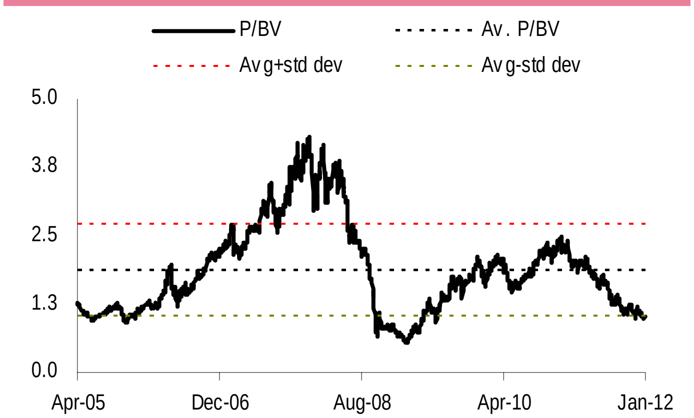
Key Ratios	FY10	FY11	FY12E	FY13E	FY14E
OPM (%)	16.1	11.1	11.9	12.2	11.9
Net Margin (%)	6.3	3.4	4.9	4.2	3.3
Yield (%)	1.1	1.3	1.3	1.3	1.3
Net debt/Equity (x) *	1.1	1.1	1.2	1.3	1.4
Working Capital Days	36	34	39	39	40
RoCE (%)	10.1	7.4	8.5	6.7	5.9
RoE (%) *	36.0	16.2	20.8	14.3	10.8
RoIC (%) ##	13.6	11.2	14.3	11.3	9.1
EV/Net Sales (x) #	0.6	0.5	0.5	0.6	0.6
EV/EBITDA (x) #	3.7	4.5	4.0	4.7	5.0
PER (x)	6.0	9.2	5.9	7.3	8.7
PCE (x)	3.4	4.3	3.4	3.6	3.5
Price/BV (x) *	1.7	1.4	1.1	1.0	0.9

*Note: TP and EV based valuation multiples calculated valuing CWIP at 50% discount to book value; * Based on equity value adjusted for goodwill; # Based on proportionate consolidation; ## Invested Capital = Capital Employed - CWIP - goodwill - Cash & Equivalents; CMP as on 9th Jan'12*

1-Year rolling forward EV/EBIDTA Band



1-Year rolling forward P/BV Band



Initiating Coverage
Sector: Metals & Mining
Sensex: 15,815

STERLITE INDUSTRIES

Initiate	BUY
CMP	Rs94
TP	Rs114

Concerns on stake increase in VAL overdone; BUY

11 January 2012

Bikash Bhalotia **+91-22-6618 6387**
bikash.bhalotia@pinc.co.in

Harleen Babber **+91-22-6618 6389**
harleen.babber@pinc.co.in

Dipti Vijaywargi **+91-22-6618 6393**
dipti.vijaywargi@pinc.co.in

Sterlite Inds (STLT) has declined by 52% in 2011, not only on decline in demand, falling LME prices and short-supply of coal, but also on concerns that Sterlite would increase its stake in loss-making 29.5% associate Vedanta Aluminium (VAL). We believe that the concerns has been overdone, as Sterlite has denied any plans to increase stake in VAL, although they would convert a part of loans given to VAL into equity in proportion to their stake. Nonetheless, we have not ascribed any value to the loans given to VAL. We initiate coverage on Sterlite with a BUY rating and SOTP-based TP of Rs114.

Concerns on stake increase in VAL unfounded and overdone: Despite plans to convert part of loan given to VAL (Rs89.4bn) into equity, Sterlite has clarified that equity infusion in VAL would be in proportion to STLT's stake and there is no plan to change VAL's shareholding. Nevertheless, we have factored in the concerns by not only ascribing zero value to the loan given by Sterlite to VAL, but also by deducting the value of corporate guarantee given by STLT (Rs45.4bn) from STLT's valuation.

Highly profitable zinc business - Last man standing: Sterlite's zinc business (HZL, Zinc Intl.) are amongst lowest cost producers of zinc globally (lowest decile and 2nd quartile respectively), and would be profitable, even if LME zinc were to decline to USD1,300/t. Further, with ~3x expansion of silver capacity at HZL, profit of HZL would improve further. We estimate zinc business to generate operating cash flow of >Rs60bn annually during FY12E-FY14E despite lower LME prices.

Energy business - New growth driver: From 1,100MW of commercial power capacity in FY11, STLT is raising the capacity to ~3,400MW by H1FY14E and ~5,400MW by FY16E. Despite concerns on coal supply (no captive coal, only 30% linkage), we estimate rising power capacity to result in power sales volume, revenue and EBITDA CAGR of 107%, 112% and 90% respectively over FY11-FY14E.

Strong balance sheet: On a proportionate consolidation basis (including VAL), Sterlite has FY13E net debt of Rs1.4bn, with a net D/E of 0.003x.

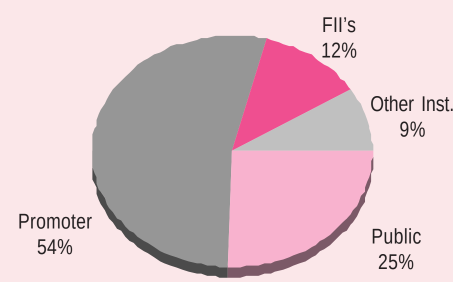
VALUATIONS AND RECOMMENDATION

Although, there are many concerns facing Sterlite (volatile LME, poor supply of linkage coal impacting power generation cost, unprofitable aluminium business at current LME prices, and equity infusion in loss-making VAL), we believe that concerns are overdone, as the stock has declined by 52% in 2011, underperforming Sensex by 29%. Current stock price is not only discounting the impact of Rs135bn on account of VAL (Rs89.4bn of loans given + Rs45.4bn of corporate guarantee), but also underplaying the strong cash generation from zinc business and earnings growth driven by energy business. We initiate coverage on Sterlite with a BUY and SOTP-based target price of Rs114.

STOCK DATA

Market cap	Rs317bn
Book Value per share	Rs135
Shares O/S (F.V. Rs1)	3,361mn
Free Float	46.7%
Avg Trade Value (6 months)	Rs789mn
52 week High/Low	Rs190/86
Bloomberg Code	STLT IN
Reuters Code	STRL.BO

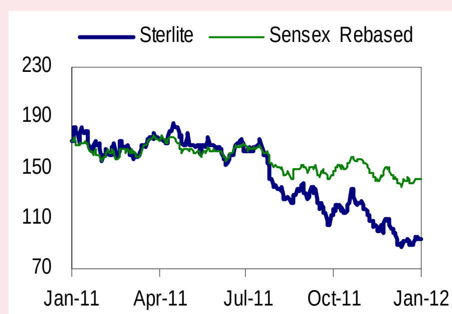
SHARE HOLDING PATTERN



PERFORMANCE (%)

	1M	3M	12M
Absolute	(6.7)	(16.7)	(44.7)
Relative	(4.3)	(14.2)	(27.1)

RELATIVE PERFORMANCE



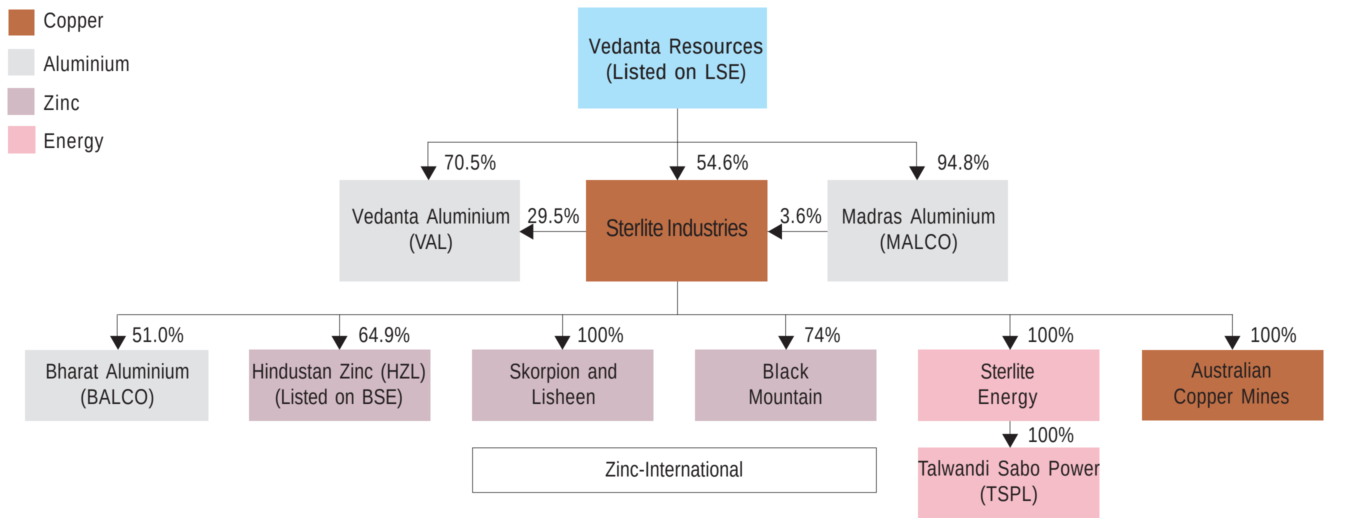
KEY FINANCIALS (Rs mn)

	FY10	FY11	FY12E	FY13E	FY14E
Revenue	247,272	304,689	379,002	395,498	446,747
YoY Gr. (%)	*15.0*	*23.2*	*24.4*	*4.4*	*13.0*
Op. Profit	65,605	80,705	96,112	104,429	121,257
OPM (%)	*26.5*	*26.5*	*25.4*	*26.4*	*27.1*
Adj. Net Profit	41,199	47,366	45,757	49,605	59,232
YoY Gr.(%)	*32.4*	*15.0*	*(3.4)*	*8.4*	*19.4*
KEY RATIOS					
Dil. EPS (Rs)	12.3	14.1	13.6	14.8	17.6
ROCE (%)	12.5	11.9	10.6	10.1	10.4
RoE (%)	13.7	12.9	11.6	11.3	12.2
PER (x)	14.4	6.7	6.9	6.4	5.4
P/BV (x)	1.7	0.8	0.8	0.7	0.6
EV/EBITDA (x)	10.1	3.8	3.0	2.7	1.9

About the company

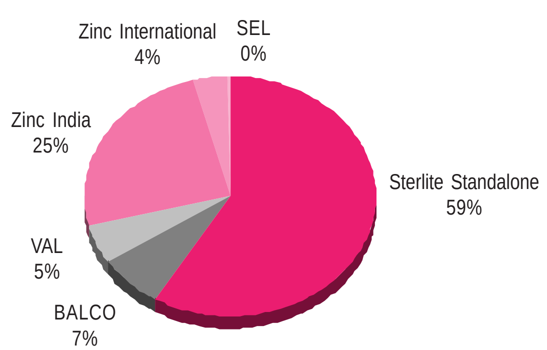
Sterlite Industries Limited, a subsidiary of the London based Vedanta group, is the largest diversified non-ferrous metals and mining company in India, with operations in copper, aluminium, zinc and power. The company is the largest zinc producer, second largest copper producer and third largest aluminium producer in India with 15%, 47% and 63% market share respectively (based on proportionate consolidation).

Strerlite Industries - Group Structure



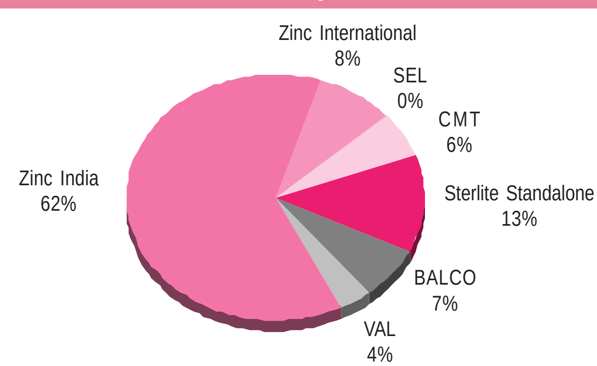
Source: Company; PINC Research

FY11 Revenue mix - Subsidiary-wise*



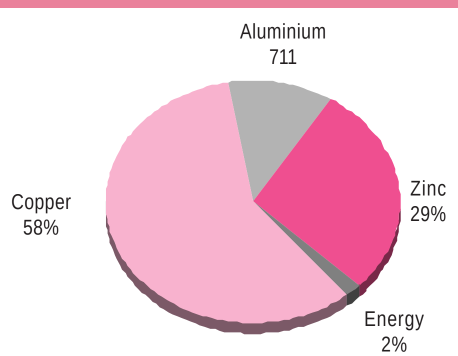
*Source: Company, PINC Research; *Proportionate Consolidation (incl. VAL)*

FY11 EBITDA mix - Subsidiary-wise*



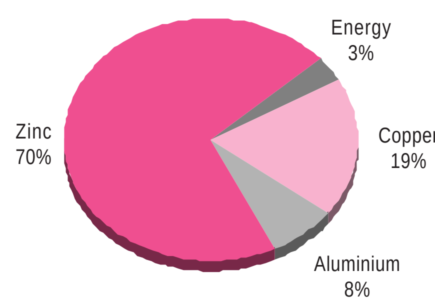
*Source: Company, PINC Research; *Proportionate Consolidation (incl. VAL)*

FY11 Revenue mix - Business segment-wise*



*Source: Company, PINC Research; *Proportionate Consolidation (incl. VAL)*

FY11 EBITDA mix - Business segment-wise*



*Source: Company, PINC Research; *Proportionate Consolidation (incl. VAL)*

Copper Business - Stable operating profit; despite volatile LME

Sterlite standalone's core business is copper smelting and refining, wherein it sources ~8% of copper concentrate requirement from 100% subsidiary Copper Mines of Tasmania (CMT), Australia and remaining from 3rd party miners. While copper revenue is determined by volatile LME, profitability is relatively stable, determined by TcRc margins, by-product credit and duty differential between copper concentrate (2.5%) and refined copper (5%).

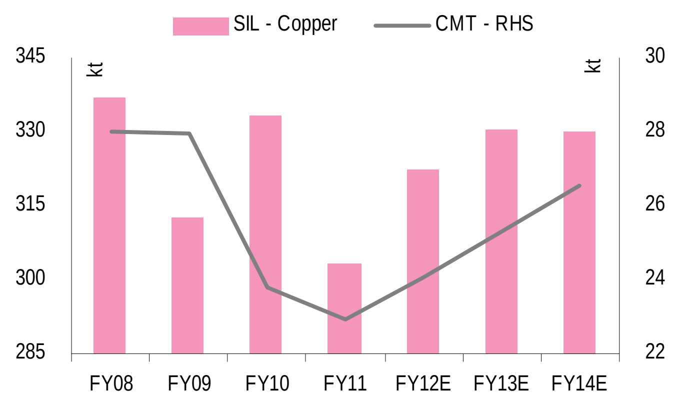
Copper operations to register EBITDA and PAT CAGR of ~4% over FY11-FY14E driven by reduced cost of smelting on captive power, rising TcRc margins & strong by-product credit.

The company currently has a copper smelting capacity of 405ktpa which it plans to expand to 805ktpa along with 160MW CPP at a project cost of USD500mn. However, the project has been put on hold (apart from 80MW CPP for the existing smelter) due to delays in clearance for the smelter from state pollution control board.

Despite a hike in import duty on copper concentrate from 2% to 2.5%, we expect copper operations to register EBITDA and PAT CAGR of 7% and 3% respectively over FY11-FY14E driven by (a) reduced cost of smelting on captive power (b) rising TcRc margins and (c) strong by-product credit.

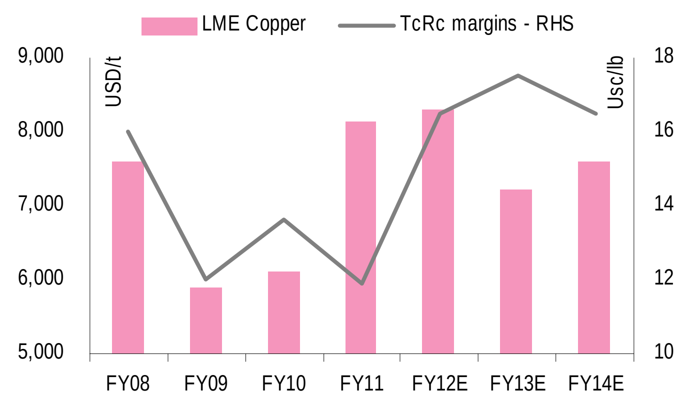
Copper Mines of Tasmania (CMT), a 100% subsidiary of Sterlite, with copper mines in Mt Lyell, Australia, contributes ~8% of concentrate demand of custom smelter. With a reserve and resource base of 14mnt (excl. inferred) and 1.2% grade, the mine has a life of 7years.

Sales volume of Sterlite Industries and CMT



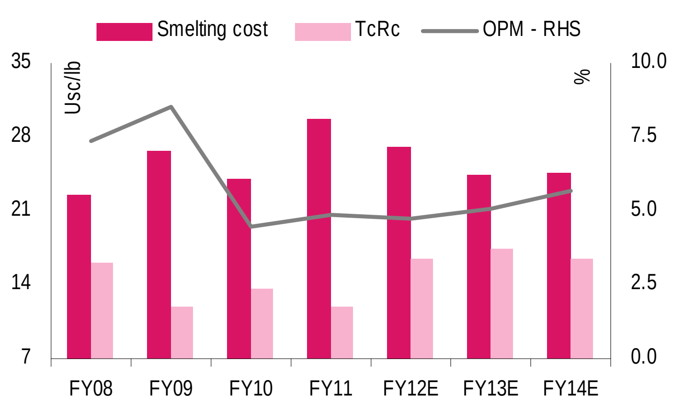
Source: Company, PINC Research

LME Copper and TcRc margin



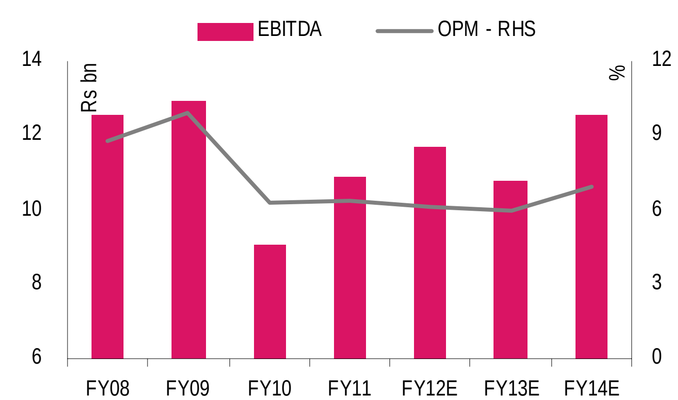
Source: Company, PINC Research

Copper processing margin, TcRc Margin & OPM (%)



Source: Company, PINC Research

Copper business EBITDA and OPM (%) - Incl. CMT



Source: Company, PINC Research

Valuation: We value Sterlite's custom smelting copper business @ 5.5x FY13E EV/ EBITDA (higher multiple owing to low sensitivity to LME volatility) and CMT @ 3x FY13E EV/EBITDA (lower multiple due to mine life of only 7yrs). Copper business contributes Rs18 (Rs16 for Sterlite standalone and Rs2 for CMT) to our target price.

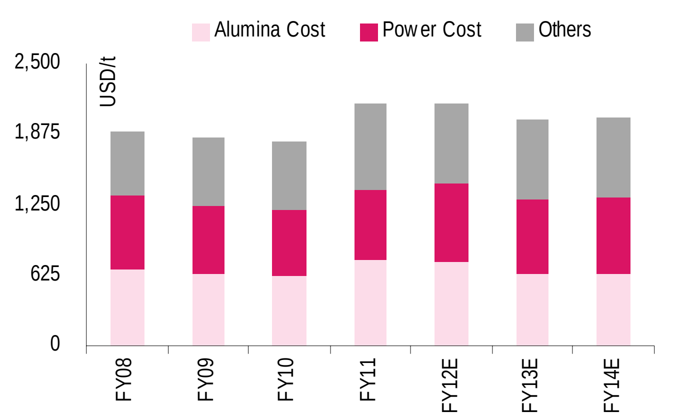
Aluminium Business - Impacted by lower LME prices, rising energy cost and lack of captive bauxite

Sterlite has presence in Aluminium Business through its 51% subsidiary BALCO and 29.5% associate Vedanta Aluminium (VAL).

Balco's aluminium cash cost in H1FY12 has risen by 15% YoY, putting pressure on OPM.

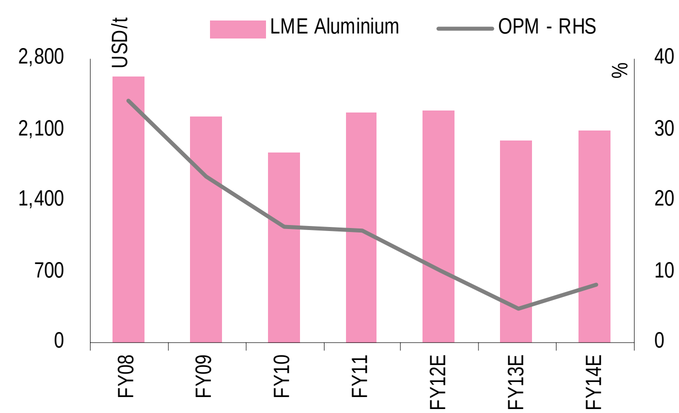
BALCO: Sterlite Industries own 51% stake in its aluminium subsidiary BALCO, with remaining 49% owned by Govt of India (GoI). Sterlite has a call option to acquire GoI's 49% stake in the business, which has been stuck in arbitration proceedings since 2009. Balco has 245ktpa of aluminium smelting capacity with 810MW of CPP, out of which 270MW is surplus and is sold in the merchant market. However, the company is short alumina and procures part requirement from Sterlite's associate VAL (~400ktpa, 80% of the total requirement) on a conversion basis (Balco provides low-grade bauxite to VAL from its captive bauxite mines for alumina refining) and imports remaining 20%. However, owing to high cost of refining at VAL, the cost of alumina for Balco is high. Further, the company has been struggling lately from short supply of linkage coal, forcing increased dependence on e-auction purchases and imports (share of linkage coal has reduced to 30% from 60% earlier). Consequently, we estimate Balco's aluminium business OPM to come under pressure on lower LME prices and higher energy cost.

Balco's aluminium operating cost



Source: Company, PINC Research

LME Aluminium price and OPM*



Source: Company, PINC Research
*Note: * OPM for Balco's aluminium business only*

Brownfield expansion – Not very exciting without captive resources

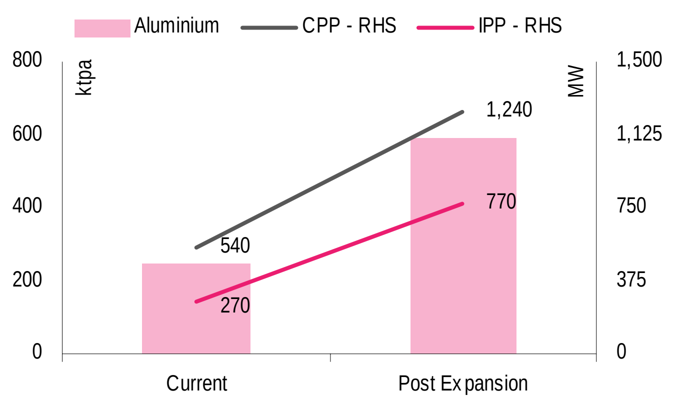
Balco's aluminium smelting capacity to increase 2.3x to 570ktpa & its CPP to increase 2.5x to 2,010MW by FY13.

Balco is setting up a brownfield aluminium capacity of 325ktpa along with 1,200MW (300MW*4) CPP (including 500MW of surplus power) at Chhattisgarh by FY13. Out of total project cost of USD1.8bn, BALCO has already spent USD1.2bn till Q2FY12. First metal tapping is expected in Q4FY12E, with full commissioning of the smelting potline in ~1yr from that. 1st unit of 300MW CPP is expected to be synchronised soon, with commissioning by Q1FY13; remaining 3 units to be commissioned gradually by FY13-end. Post this project, Balco's aluminium smelting capacity will increase 2.3x to 570ktpa and its CPP will rise 2.5x to 2,010MW.

Balco's EBITDA to register a CAGR of 12% over FY11-FY14E despite 24% volume CAGR as aluminium EBITDA declines to USD180/t in FY14E from USD409/t in FY11, impacted by a decline in LME prices & high operating cost, mainly power on short supply of linkage coal.

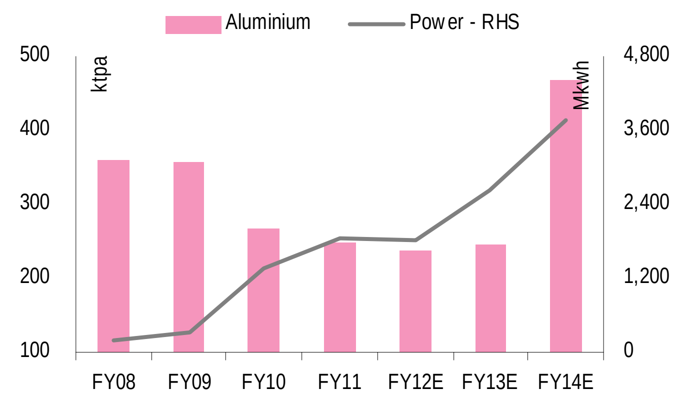
However, in the absence of captive alumina and uncertainty with regards to captive coal mine (Balco has been allotted Durgapur II Taraimar coal block with an estimated reserves of 211mnt. However, since the mine has received only forest stage-I clearance yet and awaits stage-II clearance and environment clearance, we have not factored it in our estimates), we are not very excited about Balco's expansion. Despite a 24% metal volume CAGR and 27% power sales CAGR over FY11-FY14E, we estimate Balco's EBITDA to grow at a CAGR of 12% over FY11-FY14E as aluminium EBITDA/t declines to USD180/t in FY14E from USD409/t in FY11, impacted by a decline in LME prices and high operating cost, mainly power on short supply of linkage coal. Although we estimate blended OPM to contract 608bps in FY12E on increased cost, we expect it to expand in FY13E and FY14E on rising share of power revenue (to 21% in FY14E) and EBITDA (to 67% in FY14E). However, on higher interest and depreciation cost, we estimate Balco's adjusted PAT to decline at a CAGR of 27% over FY11-FY14E.

Aluminium and Power expansion



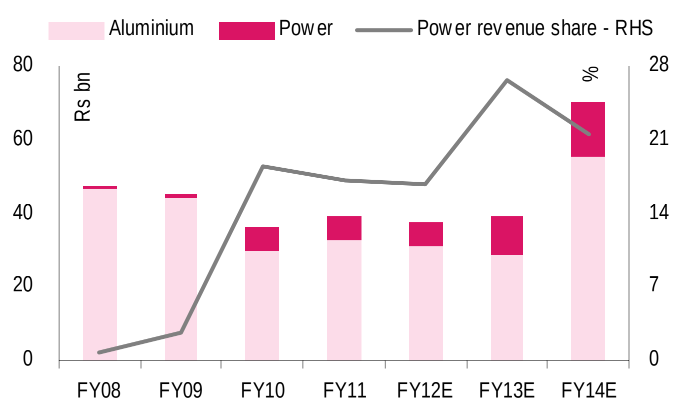
Source: Company, PINC Research

Aluminium and power sales volume trend



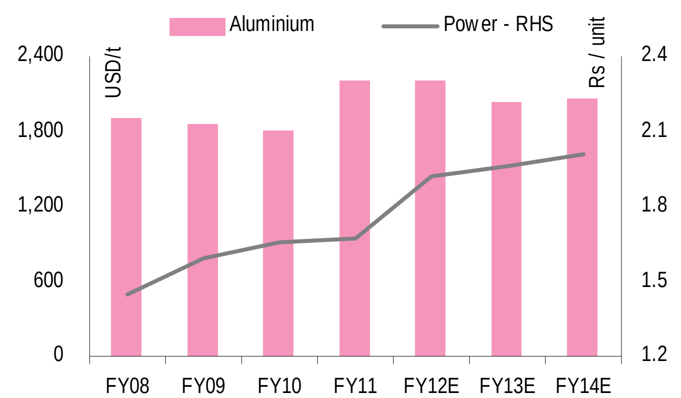
Source: Company, PINC Research

Share of power revenue to increase



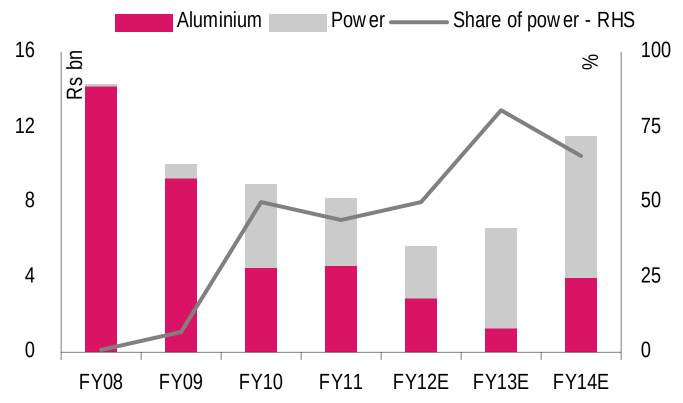
Source: Company, PINC Research

Aluminium and power operating cost trend



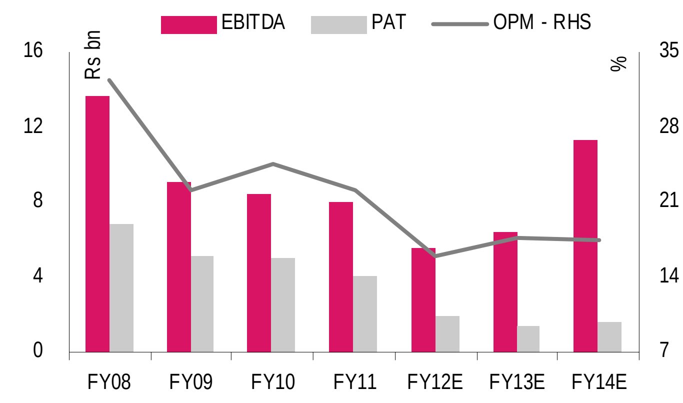
Source: Company, PINC Research

Share of power EBITDA to improve further in FY13E



Source: Company, PINC Research

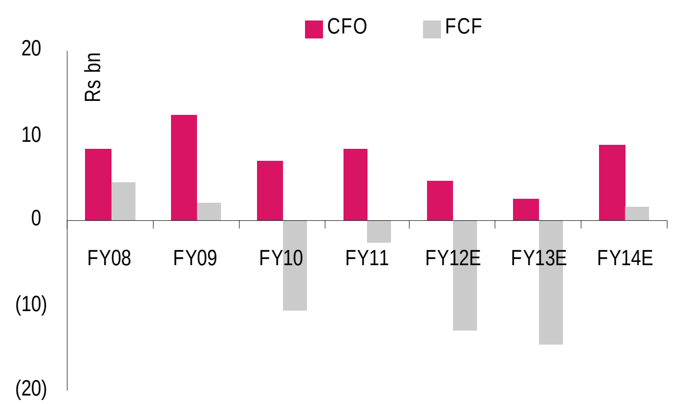
Balco: EBITDA, OPM and PAT



Source: Company, PINC Research

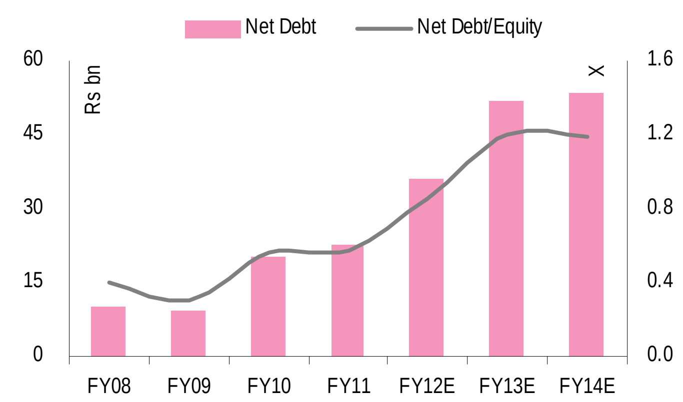
We expect Balco to remain FCF negative until FY14E, as the cash flow from operations is expected to fall short of the capex requirement. Consequently, we expect Balco's financial leverage to increase with net D/E rising to 1.2x in FY14E from 0.6x in FY11.

Free cash to decline further in FY13E



Source: Company, PINC Research

Resulting in higher net debt and net D/E



Source: Company, PINC Research

Valuation : We value Balco at 5x FY13 EV/EBITDA, with 25% subsidiary discount. It contributes Rs2/share to our target price.

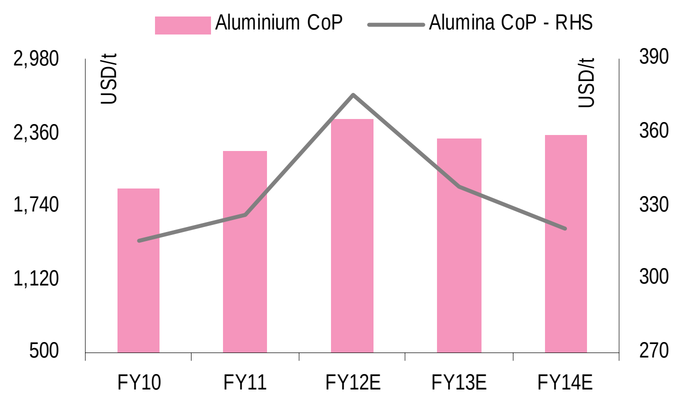
Vedanta Aluminium Ltd

Though 1.25mntpa aluminium smelting project is on track, VAL's expansion plans of 3.6mntpa alumina refinery & 1,980MW CPP have been put on hold pending environmental clearance.

Sterlite holds 29.5% stake in group company Vedanta Aluminium Ltd (VAL), while the remaining 70.5% stake is held by the Sterlite's parent, Vedanta Resources. VAL has 0.5mntpa aluminium smelting capacity with 1,215MW CPP at Jharsuguda, Odisha and 1.0mntpa alumina refinery at Lanjigarh, Odisha. Further, the company has undertaken 1.25mntpa brownfield aluminium smelting expansion at Jharsuguda for a capex of USD3.0bn, which will take aluminium smelting capacity at Jharsuguda to 1.75mntpa, making it the largest single location aluminium smelter in the world. However, pending environmental clearances, the company has put expansion plans of 3.6mntpa alumina refinery and 1,980MW CPP for the expanded smelting capacity on hold.

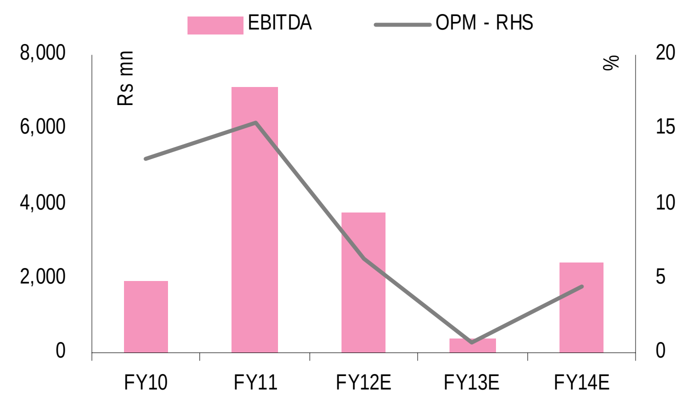
VAL's alumina and aluminium operations has been severely impacted by lack of clearance for the bauxite mining at Niyamgiri, Odisha and short supply of linkage coal for their CPP. Consequently, the company's alumina refinery is operating on third party bauxite (incl. ~45% obtained from group compnay Balco for conversion). Further, dependence on e-auction and imported coal for 70% coal requirement has resulted in higher power generation cost. These, along with intermittent pot outages have caused operating cost for aluminium to be much higher at USD2,500/t+ compared to targeted cost of USD1,800/t. The company has signed a MoU with the State govt of Odisha for supply of 150mnt of bauxite from the nearby areas. However, we have not factored in the supply of captive bauxite or commissioning of the 1.25mntpa aluminium smelter in our projections.

Aluminium and Alumina operating cost



Source: Company, PINC Research

EBITDA and OPM (%)

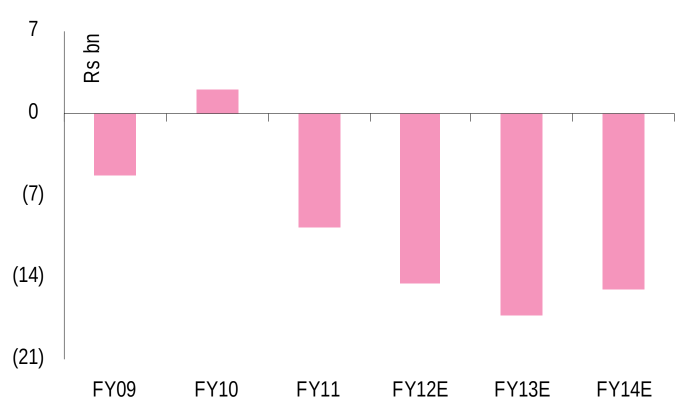


Source: Company, PINC Research

VAL to continue to incur losses at PAT level on high interest and depreciation cost.

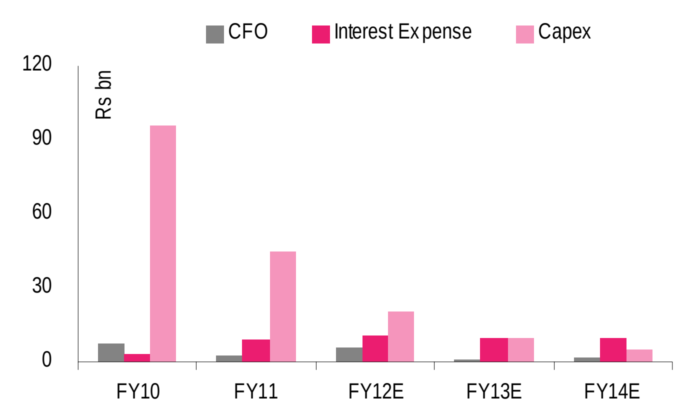
Consequently, we expect VAL to continue to incur losses at PAT level on high interest and depreciation cost. Further, cash flow from operations is not even sufficient to meet the interest expenses, let alone the capex. Hence, the company's dependence on external funding (debt and/or equity) to sustain its operations and expansion projects would continue.

PAT to decline on high interest and depreciation



Source: Company, PINC Research

Cash flow from operations, Interest expense & capex



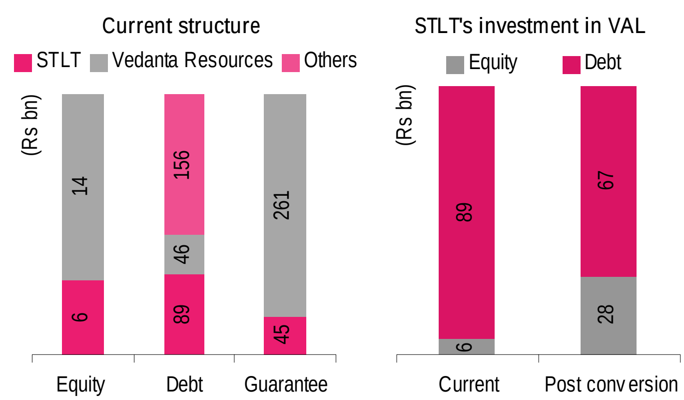
Source: Company, PINC Research

Out of total quasi-equity/ debt of Rs291bn on VAL's books, Sterlite has given Rs89.4bn vis-à-vis Rs45.9bn given by Vedanta Resources, VAL's parent.

Sterlite to convert part of loan to VAL into equity, Vedanta Resources to match their share

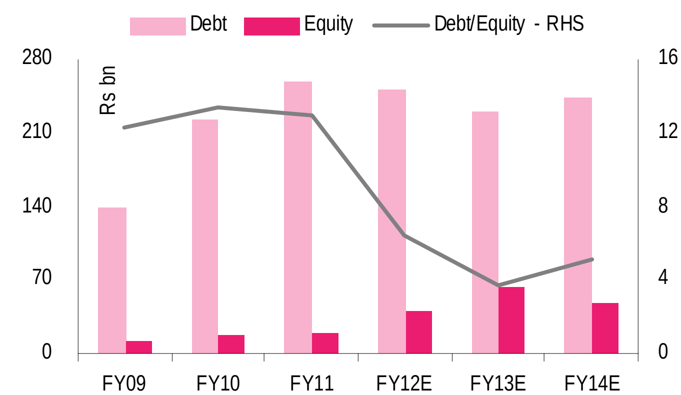
For a total capex of Rs400bn in VAL, VAL's promoters (Vedanta Resources - 70.5%, Sterlite - 29.5%) has infused only Rs19.5bn of equity as of yet, against an equity requirement of Rs120bn. However, they have infused Rs135bn of inter-corporate loans/ quasi-equity, part of which would be converted into equity over next 2 years. Sterlite plans to convert Rs22bn of quasi-equity into equity, which would reduce their share of loans to Rs67bn. Vedanta Resources (VR) would match equity infusion in their stake i.e. 70.5%. However, VAL's financial leverage to remain high, resulting in continued concerns on its balance sheet.

VAL's capital structure to change



Source: Company, PINC Research
Note: VR to match equity infusion in their stake

VAL's leverage high despite equity infusion



Source: Company, PINC Research

However, concerns of Sterlite raising stake in VAL unfounded

Although Sterlite is converting part of its loan to VAL into equity, concerns that Sterlite would increase their stake in loss-making associate is unfounded as the company has clarified that the equity infusion in VAL would be in proportion to their 29.5% stake, such that there is no change in VAL's shareholding. We come to understand that VAL's parent, Vedanta Resources would match Sterlite's Rs22bn for 29.5% stake in proportion to their stake of 70.5%.

Nevertheless, to be on the side of caution, we have not valued the loan given by Sterlite to VAL (Rs67bn post part conversion into equity).

VAL: Concerns overdone

	Rs bn
MCap of Sterlite	316.0
Less: EV of Sterlite (S)	*49.7*
Less: Net cash in STLT (S)	*83.5*
Less: Value of Subs @ 25% disc.	
100% in CMT	*7.2*
51% in Balco	*7.4*
64.9% in HZ	*253.9*
100% in Zinc Intl.	*63.7*
100% in SEL	*26.6*
100% in TSPL	*0.2*
Value ascribed to VAL	(176.2)
Liability of Sterlite Inds in VAL	
Loans and advances	*80.2*
Corporate guarantee	*45.4*
Extent of concerns overdone	50.6

Source: PINC Research
Note: Without holding discount, market value of STLT's 64.9% stake in HZL is more than STLT's market cap

Valuation: Concerns abound in VAL, but overdone for Sterlite

VAL's profitability and value is intrinsically linked to captive bauxite mines and increased supply of linkage/captive coal. However, in the absence of these key resources, we are very cautious on VAL's sustenance. Despite ~Rs75bn of equity infusion assumed from Vedanta Resources and Sterlite, we value VAL at -Rs147bn (negative value) at 5.0x FY13E EV/EBITDA. We believe that there are concerns on VAL as a going concern. Hence, not only are we not giving any equity value to VAL, but also have taken a haircut on the value of corporate guarantee of Rs45.4bn given by Sterlite for loans taken by VAL. Nevertheless, we find that the concerns on VAL has been overdone. We calculate that against Sterlite's liability of Rs126bn, current market cap of Sterlite implies a value of -Rs188bn (negative value) for VAL.

Zinc business - The cash cow

Zinc is the largest contributor of EBITDA for Sterlite (~69% of consol. EBITDA in FY11). Sterlite has a presence in the zinc business through HZL and Zinc International (Anglo American's zinc assets that Sterlite acquired in FY11 for a consideration of USD1.54bn).

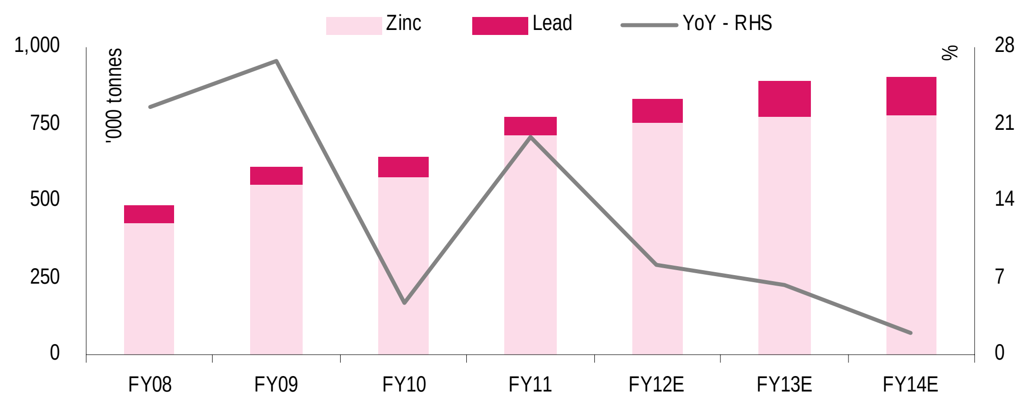
Hindustan Zinc: SIL operates its fully integrated zinc business in India through its 64.9% subsidiary company Hindustan Zinc (HZL). HZL is India's only and world's largest integrated producer of zinc and lead, with mines in Rajasthan, India and smelters in Rajasthan and Andhra Pradesh, India. Further, along with captive power, the company has presence in wind power as well with windmills in Gujarat and Karnataka, India.

Completion of capacity expansion to drive volume growth

Incremental capacity to drive the company's Zinc and lead sales volume CAGR by 3% and 29% respectively in FY11-FY14E .

HZL has recently completed their brownfield expansion project (210ktpa zinc, 100ktpa lead), taking integrated capacity to 1.064mntpa, comprising of 879ktpa of zinc and 185ktpa of lead capacity. We expect the incremental capacity to drive the company's Zinc and lead sales volume CAGR by 3% and 29% respectively in FY11-FY14E.

Sales volume and growth trend



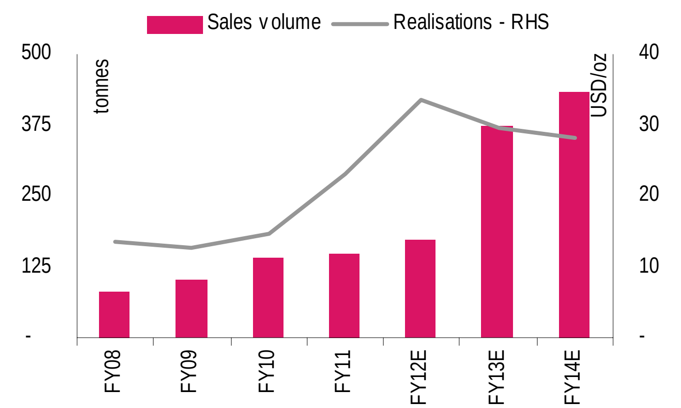
Source: Company, PINC Research

Silver – The new growth frontier

Silver sales volume to grow at a CAGR of 43% over FY11-FY14E with ~3x increase in silver capacity from current 180tpa to 500tpa.

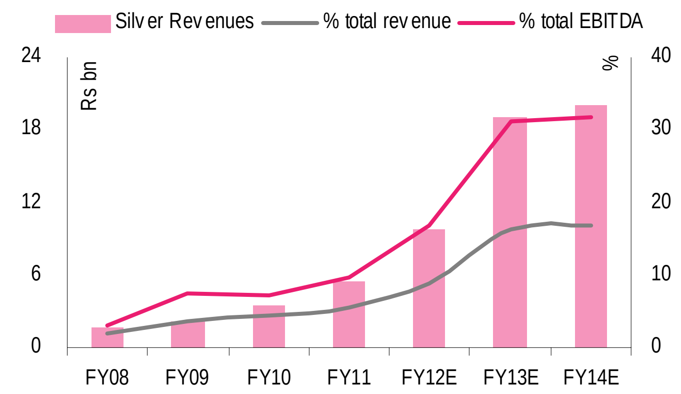
HZL produces silver as a by-product in lead smelting operations. With higher contribution from silver-rich Sindesar Khurd (SK) mines, HZL is increasing its silver capacity ~3x to 500tpa from current 180tpa. The expansion is expected to start commercial production by H1FY13. Accordingly, we expect silver sales volume to grow at a CAGR of 43% over FY11-FY14E. Further, we expect silver revenues to jump to Rs20bn by FY14E from Rs5bn in FY11, led by the expansion and strong silver prices. Moreover, we expect silver contribution to EBITDA to increase from 10% in FY11 to ~32% in FY14E.

Silver sales volume and realisation



Source: Company, PINC Research

Increasing silver contribution to revenue & EBITDA



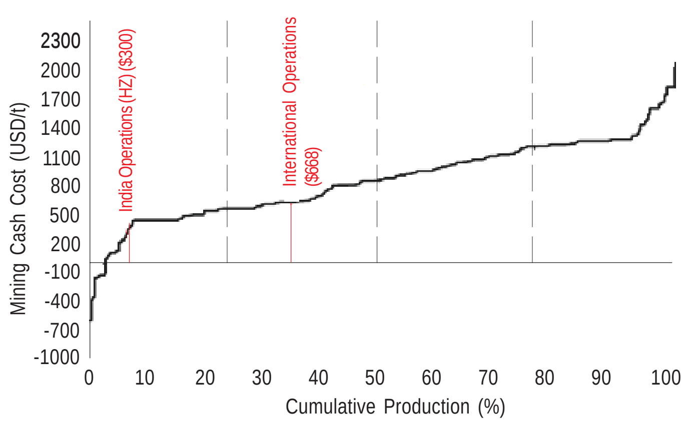
Source: Company, PINC Research

HZL's Cop to increase on higher energy and labor cost amidst increasing stripping ratio & reduced blended ore grade.

High level of cost efficiency to drive margin, despite slight cost pressure

HZL's operating cost lies in the lowest decile on global cost curve on the back of integration with captive mines and power and close proximity to mine site, allowing HZL to report highest OPM globally. Although we expect cost to increase for HZL on higher energy and labor cost amidst increasing stripping ratio and reduced blended ore grade, we estimate that HZL would continue to make OPM in excess of 50%.

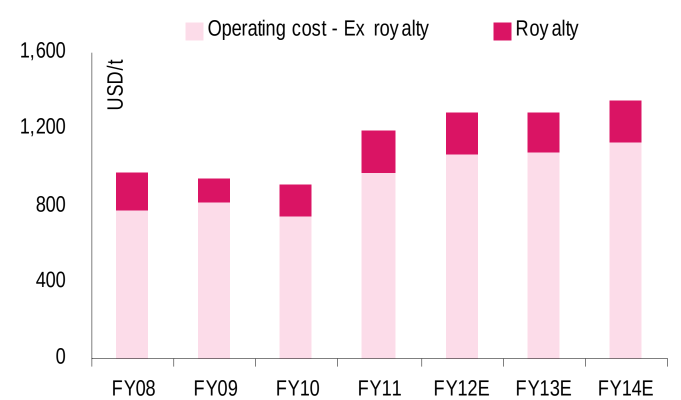
HZL's position on the global zinc cost curve



Source: Company

Note:HZL costs excludes Silver credit; Cost of international operations is weighted average mining cost of Lisheen and Black Mountain for CY 2009

HZL's operating cost to increase

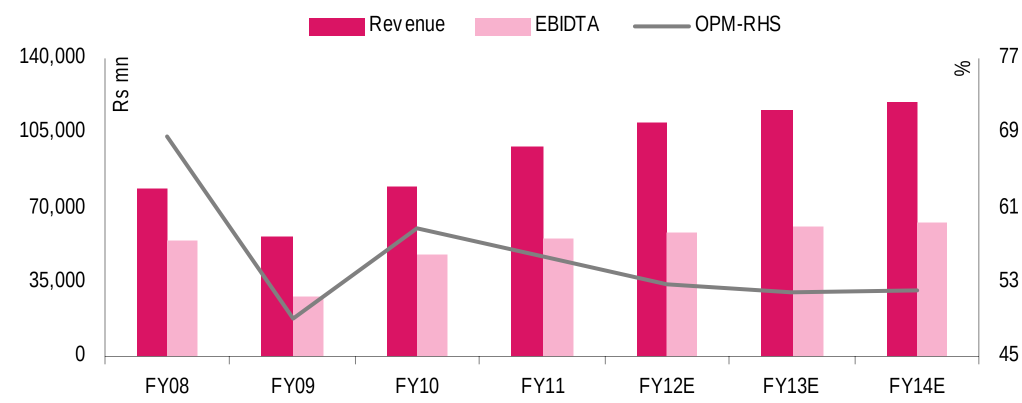


Source: Company, PINC Research

Earnings growth to continue on volume growth, despite margin contraction

Despite margin contraction on lower LME prices and higher operating cost, we estimate an EBITDA CAGR of 4.1% over FY11-FY14E driven by volume CAGR of 3.5%. We further estimate a 9% CAGR in HZL's PAT.

Volumes boost revenue & EBITDA, while OPM contracts



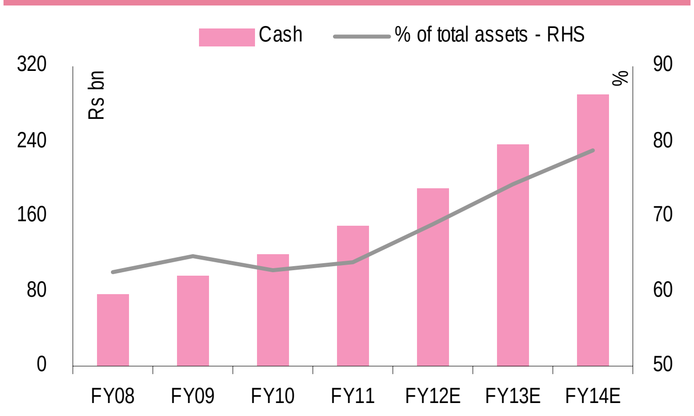
Source: Company, PINC Research

Strong balance sheet getting stronger; We value cash at 20% discount to BV

We expect the company's cash reserve to increase futher to Rs290bn or Rs69/ share by FY14E on strong cash flow generation, volume growth and 50%+ OPM.

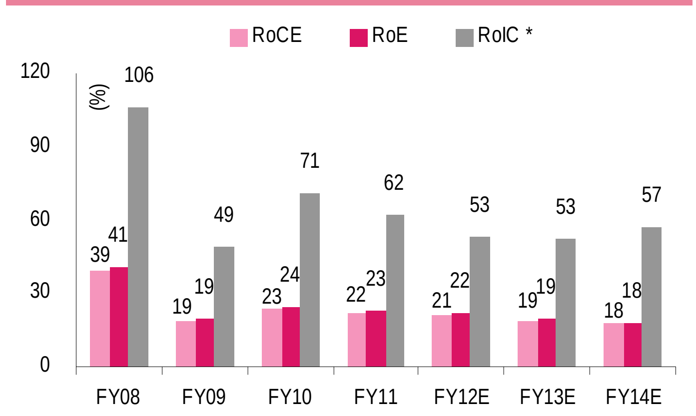
Hindustan Zinc is a debt free company with cash of Rs163bn or Rs39/share as on Q2FY12. We expect the company's cash reserve to increase further to Rs290bn or Rs69/share by FY14E on strong cash flow generation on volume growth and 50%+ OPM. However, we see low return on surplus cash and lack of growth projects to deploy surplus cash (capacity addition in wind power is marginal investment for the player of the size of HZL) as main concerns for HZL, because of which, HZL's RoE is much lower compared to RoIC. We have factored in these concerns by valuing cash at 20% discount to book value.

Cash as a % of total capital employeed



Source: Company, PINC Research

Return ratios (%)



Source: Company, PINC Research

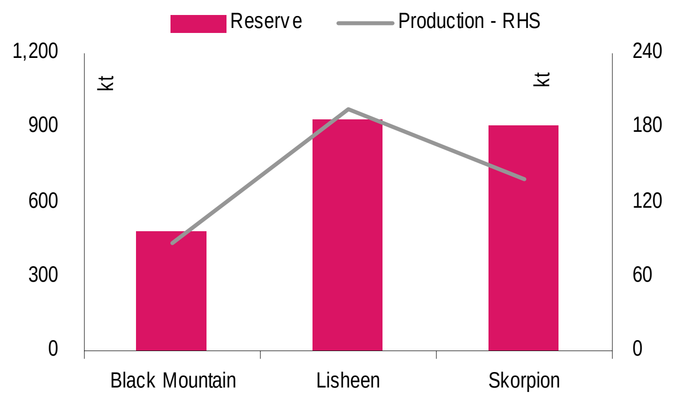
*Note: * Invested Capital = Capital Employed - CWIP - Goodwill - Cash & Equivalents*

Valuation: We value Hindustan Zinc at 6x FY13 EV/EBITDA, a 28% premium to its global peers on high margin, strong cash generation and diversification with rising share of silver. We value the surplus cash at 20% discount to book value. HZL contributes Rs81/share to our target price of Sterlite Industries.

Zinc International (erstwhile Anglo American's zinc assets)

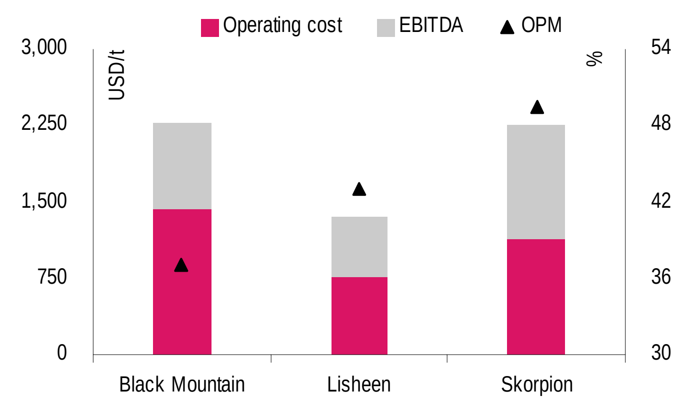
Sterlite completed the acquisition of zinc assets from Anglo American Plc in FY11 for a consideration of USD1.54bn. The zinc assets of Anglo American include 100% stake in Skorpion mines (Namibia), 100% in Lisheen mine (Ireland) and 74% stake in Black Mountain Mines (incl. Black Mountain mine and Gamsberg project), South Africa. Zinc International has 2.3mnt of reserves (metals in conc.), 400ktpa of mining, ~150ktpa of smelting capacity.

Reserve and output (CY10)



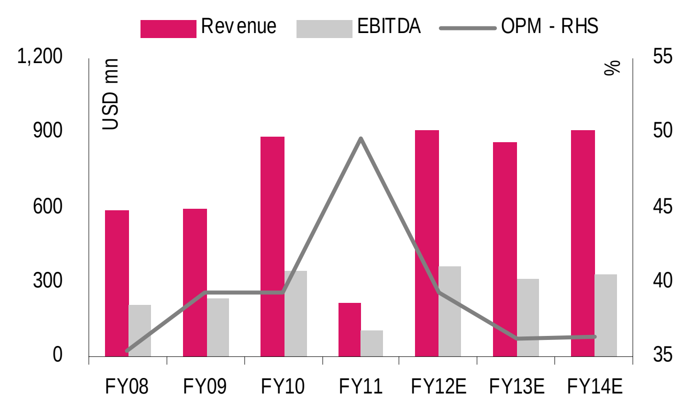
Source: Company, PINC Research

Operating cost/t, EBITDA/t and OPM for (CY10)



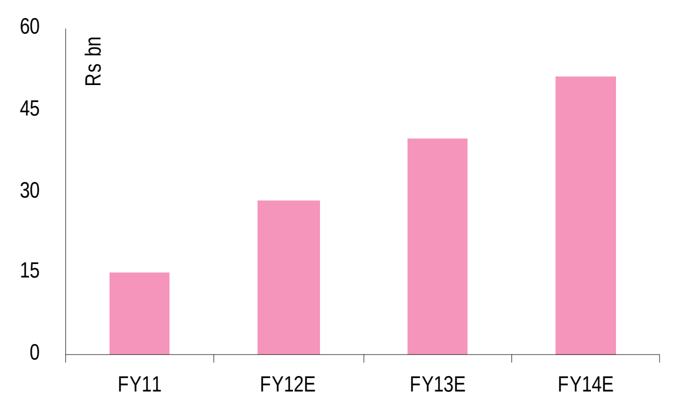
Source: Company, PINC Research

Zinc International: Revenue, EBITDA, OPM



Source: Company, PINC Research

Zinc International: Net cash position to strengthen



Source: Company, PINC Research

The strong cash generation is to be used to develop the Gamsberg project (part of Black Mountain, S Africa). However, the project is at a very nascent stage and the capex for the development has not been finalised yet.

Valuation: Although Zinc International is an attractive investment for Sterlite for its cost efficient operations and strong cash generation, low mine life (6-7years) is a cause for concern. The future attractiveness depends on Sterlite's capability to increase the reserves and resources of the operational mines (mainly Skorpion) through exploration and development of the Gamsburg project. Owing to low mine life, we value Zinc International @3.5x FY13E EV/EBITDA, contributing Rs18.9/share of Sterlite Industries.

Sterlite Energy - The new growth frontier

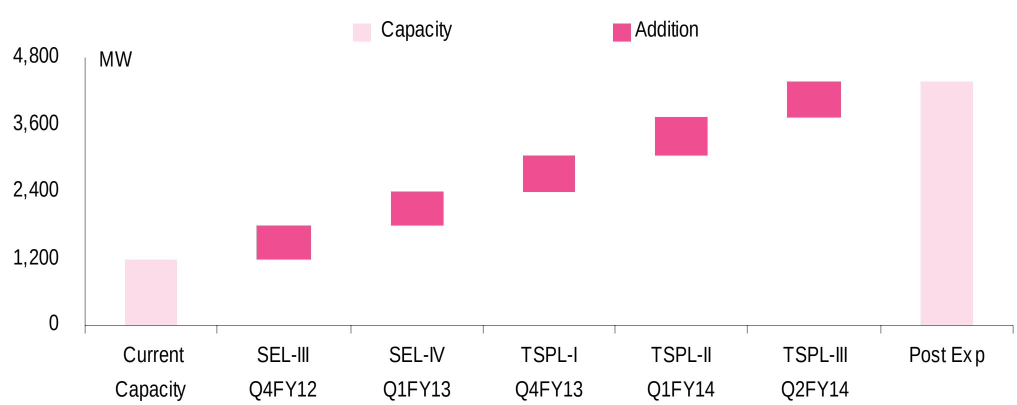
Sterlite has forayed into commercial power generation business through its wholly owned subsidiary Sterlite Energy Ltd (SEL). SEL is currently setting up 2 large thermal coal based power projects – a 2,400MW (4*600MW) IPP at Jharsuguda, Odisha and a 1,980MW (3*660MW) at Talwandi Sabo, Punjab (through SEL's 100% subsidiary Talwandi Sabo Power i.e. TSPL) at an investment outlay of Rs84.5bn and Rs108bn respectively.

Sterlite Energy Power Project - Snapshot

Sterlite Energy (4380 MW)	Jharsuguda	Talwandi Sabo
Capacity (MW)	2,400 (600*4)	1,980 MW (660*3) #
Commissioning (MW)	Already commissioned 1200MW. Unit III 600 MW - Q4FY12. Unit IV 600MW - Q1FY13	First unit by Q4FY13 and balance units every quarter thereafter
Fuel required	~13mtpa @ avg GCV of 3,200	~7.2mtpa @ avg GCV of 4,500
Fuel linkage	65% coal linkage, 25-30% e-auction and 5-10% imported / coal linkage for the entire capacity achieved	Coal linkage in place for 1,980MW
Mines allotted	112mn tonnes Rampia coal block allotted	Applied for
Power Evacuation	600MW to the grid and rest to the merchant market, post the expansion of VAL the company will stop selling in the merchant market in order to supply to VAL.	The entire production would be sold to Punjab State Electricity Board
Project Cost	USD 1,900mn	USD2,100mn
Amount spent till 31st Sept 2011	USD1,577mn	USD569mn

Source: Company, PINC Research
Note: # 4th unit of 660MW of Talwandi Sabo has been put on hold

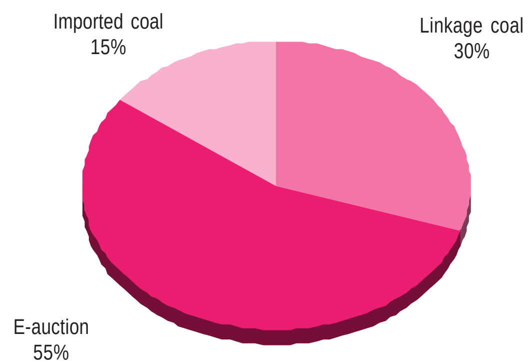
Synchronization Schedule (as per company)



Source: Company, PINC Research
Note: In addition, Sterlite is increasing commercial power capacity by 500MW in Balco, 51% subsidiary, in addition to existing 270MW of commercial power capacity

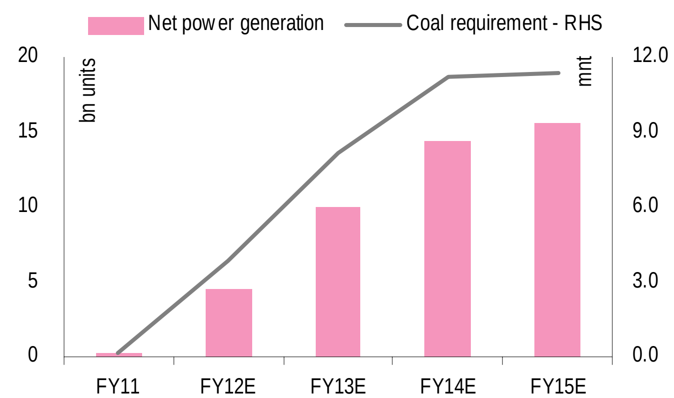
Jharsuguda: SEL has commissioned 2 units out of 2,400MW IPP at Jharsuguda, Odisha and expects to commission the remaining two units over the next 12 months, with the 3rd unit expected to synchronise in Q4FY12. However, the two commissioned units are operating at 50-55% PLF due to linkage coal supply constraints. SEL has been allotted coal block in consortium with 5 other companies (Arcelor Mittal, Reliance Energy, Lanco Infratech, GVK, Essar) at Rampia, Odisha for the 2,400MW IPP in Odisha, with SEL's share at 112mnt. However, the mine has obtained only forest stage-I clearance yet. Currently, linkage coal is meeting 30% of SEL's coal requirement, while e-auction and imported coal meets 55% and 15% of requirement respectively. If there is a delay in obtaining clearances and developing the captive coal block, SEL's dependence on e-auction/ imported coal is likely to increase further with the commissioning of 3rd and 4th units.

Coal supply sources currently



Source: Company, PINC Research

Net power generation and coal requirement



Source: Company, PINC Research

Offtake uncertainty

While the power generated from 1st unit of 600MW is slated to be sold to Odisha state grid, there is high uncertainty wrt to offtake of power generated from remaining 3 units, with no PPA in place. The company expects to sell the power in the short-term spot market and is subjected to the vagaries of the merchant market, even though we expect merchant tariff in excess of Rs4/unit.

Further, SEL has entered into a contract with group company VAL to sell entire output of 1,800MW to VAL for its 1.25mntpa aluminium smelter (VAL has stalled its 1,980MW CPP project), as and when the brownfield expansion project is commissioned. Although this may provide greater visibility wrt to offtake volume, tariff would be lower than the merchant power tariff we have assumed, raising uncertainty regarding tariff. Nevertheless, we have not assumed this in our estimates, as their are significant uncertainties wrt to VAL's 1.25mntpa aluminium smelter owing to lack of clearance to expand their alumina capacity.

Consequently, we have assumed a higher WACC of 12.5% for discounting SEL's free cash flow to determine DCF-based value.

Valuation: We have valued SEL at equity value of Rs26.6bn, ie Rs7.9/share of Sterlite Industries, 25% discount to DCF based value of Rs35.4bn.

DCF valuation for SEL

(Rs mn)	FY11	FY12E	FY13E	FY14E	FY15E	...FY20E	...FY25E	...FY 30E	...FY35E	FY36E
Installed Capacity (MW)	600	1,200	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Power sales (mn kwhr)	210	4,544	10,044	14,428	15,558	15,558	15,558	15,558	15,558	15,558
Blended power tariff (Rs/kwhr)	3.10	3.42	3.78	3.87	3.89	3.94	3.98	4.03	4.08	4.1
Cost (Rs/kwhr)	2.12	2.51	2.44	2.35	2.27	2.39	2.51	2.64	2.78	2.8
EBITDA (Rs/kwhr)	0.98	0.91	1.34	1.52	1.62	1.54	1.47	1.39	1.30	1.3
Revenue	651	15,554	37,996	55,864	60,570	61,232	61,927	62,657	63,425	63,583
EBITDA	156	3,020	11,047	18,733	22,307	21,017	19,660	18,235	16,736	16,428
Interest	-	5,876	6,293	5,889	5,595	2,650	(0)	(0)	(0)	(0)
Depreciation	121	2,072	3,598	4,743	4,861	5,500	5,893	6,667	7,543	7,732
PAT	76	(2,304)	1,655	6,553	9,795	11,976	12,659	14,846	17,534	18,142
DCF	FY11	FY12E	FY13E	FY14E	FY15E	...FY20E	...FY25E	...FY 30E	...FY35E	FY36E
Cash flow from Operations		15,118	14,343	19,471	19,437	17,895	14,951	14,212	13,448	13,292
Capex		14,000	8,000	2,218	2,273	2,572	2,910	3,292	3,725	3,818
FCFF		(23,458)	(3,229)	10,180	15,925	15,359	12,373	11,331	10,232	10,006
WACC (%)		12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Discounted Value			(3,229)	9,049	12,583	6,735	3,011	1,530	767	666
Enterprise Value			103,047							
Less:Net debt			67,618							
Residual equity value			35,429							

Source: Company, PINC Research

Talwandi Sabo Power

SEL's 100% subsidiary Talwandi Sabo Power (TSPL) is setting up a 1,980MW commercial power project in Talwandi Sabo, Punjab at a capex of USD2.1bn, expected to be commissioned by FY14. The power generated would be sold to Punjab state electricity board on a CERC-determined tariff based on regulated return. Even though the company has obtained fuel linkage, reduced supply guarantee (50%) by Coal India is likely to result in reduced linkage coal supply, leading to dependence on e-auction/ imported coal. Further, long distance of transportation (>1,200km) would result in high cost of landed coal for TSPL. Nevertheless, with the cost of fuel pass-through in a regulated-return project, we are comfortable with the business model and have assumed a WACC of 10.2% (CoE of 15.5%).

DCF valuation for Talwandi Sabo

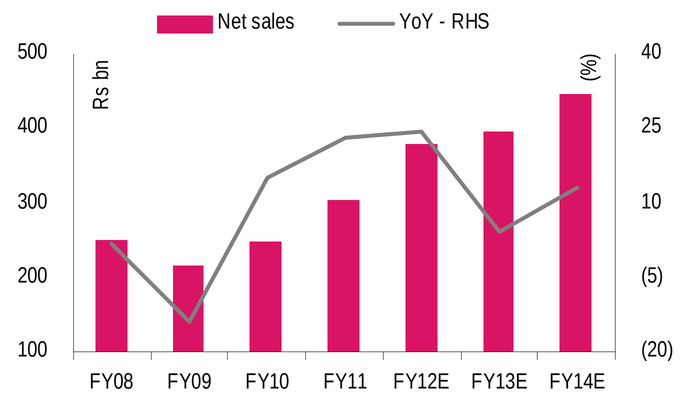
(Rs mn)	FY13E	FY14E	FY15E	FY16E	FY17E	... FY20E	... FY25E	... FY30E	... FY35E	... FY41E
Installed Capacity (MW)			1,320	1,980	1,980	1,980	1,980	1,980	1,980	1,980
Power Unit Sales (mn kwhr)			3,187	10,887	12,720	12,766	12,766	12,766	12,766	12,766
Blended power tariff (Rs/kwhr)			4.58	4.00	3.71	3.58	3.70	4.05	4.5	5.1
Cost (Rs/kwhr)			2.39	2.27	2.20	2.23	2.46	2.72	3.0	3.4
EBITDA (Rs/kwhr)			2.20	1.73	1.51	1.35	1.24	1.34	1.51	1.72
Revenue			14,607	43,598	47,242	45,705	47,292	51,725	57,417	64,797
EBITDA			6,999	18,872	19,239	17,187	15,837	17,062	19,245	21,973
Interest			3,006	7,991	8,056	7,233	6,410	5,587	4,763	3,940
Depreciation			1,901	5,127	5,331	4,718	4,111	3,647	3,294	2,979
PAT			1,775	4,818	4,868	5,819	7,725	10,771	15,203	21,741
DCF	FY13E	FY14E	FY15E	FY16E	FY17E	... FY20E	... FY25E	... FY30E	... FY35E	... FY41E
Cash flow from Operations			9,114	23,333	17,779	14,743	12,659	12,642	13,928	15,561
Capex	24,120	27,000	14,469	2,283	500	2,160	2,160	2,160	2,160	2,160
FCFF	(24,120)	(27,000)	(11,713)	6,442	14,471	12,278	9,768	10,247	11,652	13,469
WACC (%)	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
Discounted Value	(24,120)	(24,501)	(9,645)	4,814	9,813	6,221	3,045	1,966	1,375	888
Enterprise Value	25,811									
Less:Net debt	25,582									
Residual equity value	230									

Source: Company, PINC Research

Sterlite Industries Consolidated

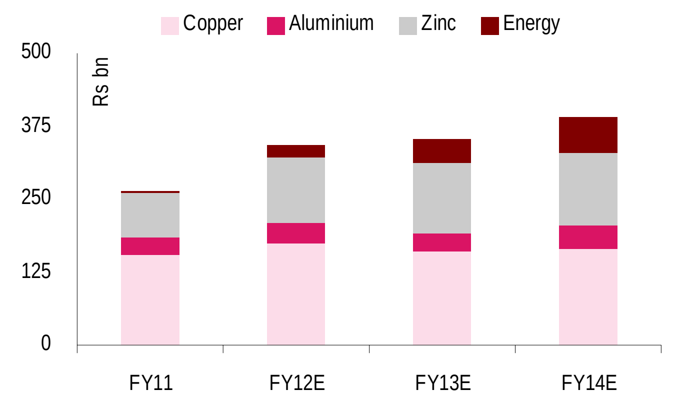
Despite lower LME prices, we estimate Sterlite's consolidated revenue to grow at a CAGR of 14% over FY11-FY14E, mainly driven by growth in zinc business (HZL and Zinc International) and power sales (Balco's power segment, SEL and TSPL). Consequently, we expect share of zinc and power in revenue to rise to 31% and 16% respectively by FY14E from 29% and 2% in FY11 (based on proportionate consolidation).

Net Revenue and growth trend



Source: Company, PINC Research
Note: Full consolidation basis

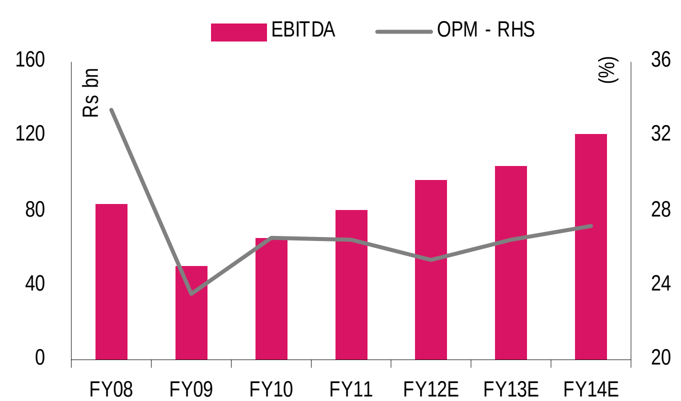
Revenue share of business segments



Source: Company, PINC Research
Note: Proportionate consolidation incl. VAL

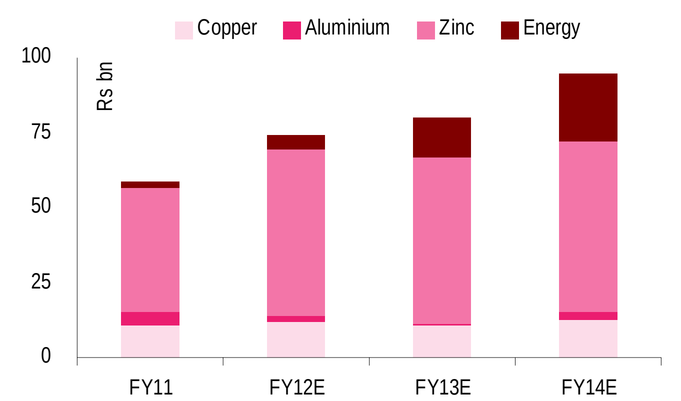
Consequently, we estimate Sterlite's EBITDA to grow at a CAGR of 15% over FY11-FY14E, with OPM expanding by 65bps, despite lower LME prices, led by higher share of high OPM zinc and power businesses.

EBITDA and OPM trend



Source: Company, PINC Research; Full consolidation basis

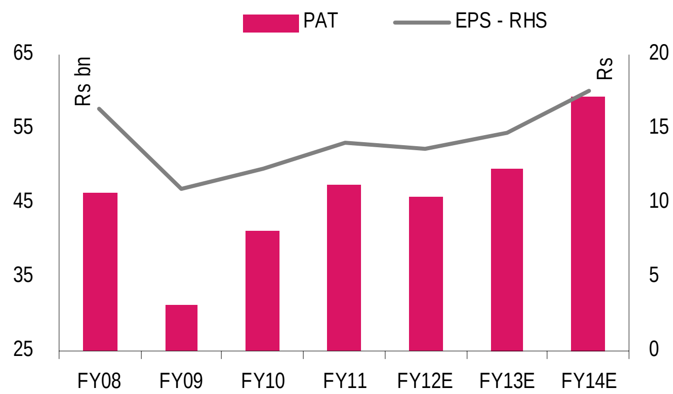
EBITDA share of business segments



Source: Company, PINC Research
Note: Proportionate consolidation incl. VAL

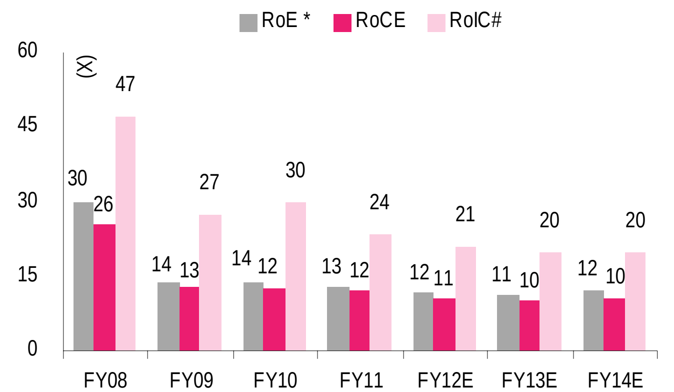
Led by growth in EBITDA, we estimate Sterlite's consolidated PAT and EPS to grow at a CAGR of 7.7% each over FY11-FY14E despite higher interest and depreciation cost on commissioning of capacity expansion projects.

Consolidated PAT and EPS



Source: Company, PINC Research

Return ratios



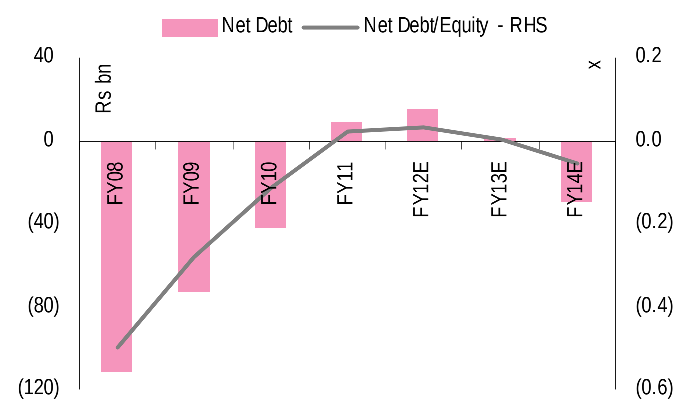
Source: Company, PINC Research
Note:Based on equity value adjusted for goodwill , Invested Capital = Capital employeed - CWIP - Cash & equivalents

Further, as Sterlite's various expansion projects near completion (please refer next page for details), we estimate Sterlite's consolidated free cash flow to turn positive FY12E onwards. Consequently, we expect Sterlite's balance sheet to strengthen further, becoming net cash positive (on proportionate consolidation basis, incl. VAL).

Cash flow from operations and free cash flow

Source: Company, PINC Research

Consolidated net borrowing and net D/E



Source: Company, PINC Research
Note: Proportionate consolidation incl. VAL; Equity value adjusted for goodwill

Summary of Sterlite's various expansion projects

Projects	Capacity (ktpa)	Estimated capex (USD mn)	Spent till Sep'11 (USD mn)	Committed but not spent (USD mn)	Completion date/ status
Alumina					
Debottlenecking Lanjigarh I	1mtpa	150	74	76	On Hold
Lanjigarh II Alumina Refinery	3mtpa	1,570	819	751	On Hold
Aluminium					
Korba III Smelter	325kt, 1,200MW CPP	1,820	1,234	586	Q2FY13
Jharsuguda II Smelter	1.25mntpa	2,920	2,187	733	Progressively by Q3FY14
Power					
Talwandi Sabo Power Project	2,640MW	3,030	569	2,461	FY14
HZL WPP Project	150MW	190	190	-	105MW completed, 45MW by Q3FY12
SEL IPP	2,400MW	1,900	1,577	324	1,200MW completed, 600MW in Q4FY12 and 600MW in Q1FY13
Copper					
Copper	400ktpa & 160MW CPP	500	201	299	80MW CPP on schedule, 400ktpa smelter, 80MW CPP put on hold
Total		12,080	7,532	4,548	

Source: Company, PINC Research

Operational Summary

Sales volume	FY09	FY10	FY11	FY12E	FY13E	FY14E
Copper (tonnes)	312,572	333,244	303,327	322,312	330,224	330,117
- Sterlite Industries	312,572	333,244	303,327	322,312	330,224	330,117
- CMT, Aus (100%)	27,952	23,777	22,929	24,075	25,279	26,543
Aluminum (tonnes)	356,513	372,802	632,412	642,650	654,902	882,852
- Balco (51%)	356,513	267,802	247,412	237,650	244,902	467,852
- Vedanta Aluminium (VAL, 29.5% associate)	-	105,000	385,000	405,000	410,000	415,000
Zinc, Lead and Silver (tonnes)	612,894	642,076	863,832	1,287,880	1,350,331	1,371,001
- HZL (65%) - Zinc	552,330	577,685	712,603	755,940	773,520	782,310
- HZL (65%) - Lead	60,564	64,391	57,229	77,340	112,905	121,590
- HZL (65%) - Silver	103	139	147	172	372	432
- Zinc International (100%) - Zinc and Lead			94,000	454,600	463,906	467,101
Commercial Energy (mn units)	320	1,354	2,061	6,348	12,665	18,204
- Sterlite Energy (100%)			210	4,544	10,044	14,428
- Talwandi Sabo (100%)					-	-
- Balco (51%)	320	1,354	1,851	1,805	2,621	3,776
Realization Assumptions	**FY09**	**FY10**	**FY11**	**FY12E**	**FY13E**	**FY14E**
USD INR	46.0	47.5	45.6	48.2	49.0	47.0
LME Copper (USD/tonne)	5,882	6,105	8,139	8,302	7,223	7,584
Copper TcRc (USc/lb)	12.0	13.6	11.9	16.5	17.5	16.5
LME Aluminium (USD/tonne)	2,236	1,867	2,258	2,280	2,000	2,100
LME Zinc (USD/tonne)	1,572	1,922	2,187	2,060	1,900	2,000
LME Lead (USD/tonne)	1,663	1,979	2,244	2,250	2,000	2,100
Commercial Energy (Rs/kWhr)						
- Sterlite Energy (100%)			3.10	3.42	3.78	3.87
- Talwandi Sabo (100%)					-	-
- Balco (51%)	3.73	4.98	3.65	3.50	4.00	4.00
Operating cost estimates	**FY09**	**FY10**	**FY11**	**FY12E**	**FY13E**	**FY14E**
Copper						
- Sterlite smelting cost (USc/lb) - Gross	26.7	24.0	29.8	27.1	24.3	24.6
- CMT (100%) - Mining cost (USD/tonne)	3,139	3,867	4,500	4,950	4,752	4,515
Aluminium (USD/tonne)						
- Balco (51%): Aluminium cost	1,851	1,807	2,202	2,214	2,035	2,056
- VAL (29.5%): Alumina cost	315	316	326	375	337	321
- VAL (29.5%): Aluminium cost	2,182	1,887	2,225	2,488	2,313	2,347
Zinc, Lead and Silver (USD/tonne)						
- HZL blended cost - Incl. royalty	937	915	1,187	1,284	1,285	1,354
- HZL royalty cost	116	167	214	216	208	219
- Zinc International (100%)			1,171	1,218	1,181	1,240
Commercial Energy (Rs/kWhr)						
- Sterlite Energy (100%)			2.12	2.51	2.44	2.35
- Talwandi Sabo (100%)					-	-
- Balco (51%)	1.59	1.66	1.67	1.92	1.96	2.01

Operational Summary

Revenue (Rs mn)	FY09	FY10	FY11	FY12E	FY13E	FY14E
Copper	116,501	131,692	153,530	173,746	161,929	162,716
- Sterlite Inds - Custom copper smelting	116,501	131,692	153,530	173,746	161,929	162,716
- CMT, Aus (100%) - Copper mining	7,047	7,601	8,126	9,212	8,469	9,007
Aluminium	41,748	42,317	75,661	87,753	79,159	103,419
- Balco (51%) - Aluminium	39,679	27,465	29,451	28,206	25,680	49,178
- VAL (29.5%, Associate) - Aluminium	2,069	14,852	46,210	59,547	53,479	54,241
Zinc, Lead and Silver	57,760	81,250	110,302	155,180	159,411	163,884
- HZL (65%) - Zinc, Lead and Silver	57,760	81,250	100,348	111,170	117,301	121,074
- Zinc International (100%) - Zinc, Lead			9,954	44,010	42,110	42,810
Commercial Energy	1,194	6,739	7,399	21,870	48,478	70,968
- Sterlite Energy (100%)			651	15,554	37,996	55,864
- Talwandi Sabo (100%)					-	-
- Balco (51%)	1,194	6,739	6,748	6,316	10,482	15,104
Consolidated revenue	215,002	247,272	304,689	379,002	395,498	446,747
Operating Profit (Rs mn)	FY09	FY10	FY11	FY12E	FY13E	FY14E
Copper	12,902	9,076	10,876	11,708	10,798	12,567
- Sterlite Inds - Custom copper smelting	9,892	5,838	7,456	8,241	8,216	9,192
- CMT, Aus (100%) - Copper mining	3,011	3,238	3,421	3,467	2,582	3,375
Aluminium	9,108	6,442	11,760	6,597	1,655	6,390
- Balco (51%) - Aluminium	9,320	4,504	4,610	2,845	1,265	3,958
- VAL (29.5%, Associate) - Aluminium	(212)	1,939	7,150	3,752	390	2,432
Zinc, Lead and Silver	28,299	47,781	60,808	75,874	76,217	78,681
- HZL (65%) - Zinc, Lead and Silver	28,299	47,781	55,874	58,551	60,962	63,105
- Zinc International (100%) - Zinc, Lead			4,934	17,322	15,255	15,577
Commercial Energy	684	4,495	3,810	5,877	16,390	26,254
- Sterlite Energy (100%)			156	3,020	11,047	18,733
- Talwandi Sabo (100%)					-	-
- Balco (51%)	684	4,495	3,654	2,857	5,343	7,521
Consol. Operating profit (Rs mn)	50,601	65,605	80,705	96,112	104,429	121,257
Proportionate operating profit including VAL*	36,159	45,303	59,293	73,967	80,027	94,299
Adjusted PAT after minority interest (Rs mn)	31,112	41,199	47,366	45,757	49,605	59,232
No. of equity shares (mn)	2,834	3,362	3,361	3,361	3,361	3,361
EPS (Rs)	11.0	12.3	14.1	13.6	14.8	17.6

Source: Company, PINC Research
*Note: * Proportionate for Sterlite's stake in its subsidiaries and associate VAL*

Valuation

We value Sterlite on a sum-of-the-parts basis. Key considerations in the valuation are as mentioned below:

1. 25% holding company discount on the valuation of subsidiaries and associate VAL.
2. We have valued cash held in HZL at a 20% discount to account of the low return on the huge cash reserve (Rs289.7bn in FY14E).
3. We have considered Rs22bn of loans of Rs89.4bn given to VAL by Sterlite Industries to be converted into equity. However, we have not valued the remaining Rs67bn loans to VAL, given poor profitability of VAL in the absence of captive resources and lower LME prices. Further, we have taken a haircut of Rs45.4bn in our valuation, pertaining to the corporate guarantee given by Sterlite on loans availed by VAL.

SOTP VALUATION

(Rs mn)	Equity Stake	FY13E EBIDTA	Target EV (Incl. CWIP)	Residual Equity value	Holdco Disc. (%)	Net attributable Equity Value	Target Price (Rs)	Valuation Methodology
Copper - Sterlite Inds	100.0%	8,216	49,689	52,961	0.0%	52,961	15.8	5.5x FY13E EV/EBITDA
Copper - CMT	100.0%	2,582	7,747	9,660	25.0%	7,245	2.2	3.0x FY13E EV/EBITDA
Aluminium, Power - Balco	51.0%	6,366	71,271	19,407	25.0%	7,423	2.2	5.0x FY13E EV/EBITDA
Aluminium - VAL (Associate)	29.5%	390	81,202	(147,240)	25.0%	(32,577)	-	5.0x FY13E EV/EBITDA
Zinc, Lead, Silver - HZL	64.9%	60,962	367,271	557,432	25.0%	271,330	80.7	6.0x FY13E EV/EBITDA
Zinc, Lead - Sterlite Infra	100.0%	15,255	50,486	84,888	25.0%	63,666	18.9	5.0x FY13E EV/EBITDA
Energy - Sterlite Energy	100.0%	11,047	103,047	35,429	25.0%	26,572	7.9	DCF - WACC of 12.5%
Energy - Talwandi Sabo	100.0%	-	25,811	230	25.0%	172	0.1	DCF - WACC of 10.2%
Sterlite Ind. - Proportionate consol		80,027	535,442	511,402	16.0%	429,368	128	SOTP valuation
Less: Additional risk on stake in VAL						45,380	13.5	Corporate guarantee given
Sterlite Industries - Consol						383,988	114	SOTP value net of corp guarantee

Source: PINC Research

Note: Despite negative equity value of VAL, contribution to target price is zero due to maximum liability to equity shareholders. However, we have taken a haricut on Sterlite's valuation to the extent of corporate guarantee given for VAL, which is the additional liability possible for Sterlite

Sensitivity analysis

Target price sensitivity (Rs)

FY13E USD / INR	FY13E LME aluminium price (USD/t)				
	1,700	1,850	2,000	2,150	2,300
45.0	110	111	111	112	113
47.0	111	112	113	114	115
49.0	113	113	114	115	116
51.0	114	115	116	117	117
53.0	115	116	117	118	119

Source: PINC Research

Target price sensitivity (Rs)

FY13E USD / INR	FY13E LME zinc price (USD/t)				
114	1,600	1,750	1,900	2,050	2,200
45.0	92	99	106	113	120
47.0	96	103	110	117	125
49.0	99	107	114	122	129
51.0	103	111	118	126	134
53.0	106	114	122	131	139

Source: PINC Research

Year Ended March (Figures in Rs mn)

Income Statement	FY10	FY11	FY12E	FY13E	FY14E
Net Revenue	247,272	304,689	379,002	395,498	446,747
Growth (%)	*15.0*	*23.2*	*24.4*	*4.4*	*13.0*
Operating Profit	65,605	80,705	96,112	104,429	121,257
Other income	15,736	20,951	20,183	23,986	26,693
EBITDA	81,341	101,657	116,295	128,415	147,950
Growth (%)	*22.2*	*25.0*	*14.4*	*10.4*	*15.2*
Depreciation	7,498	10,301	19,068	21,062	24,875
EBIT	73,844	91,355	97,227	107,353	123,074
Interest Paid	3,360	3,312	7,484	9,470	11,979
PBT (before E/o items)	70,484	88,043	89,743	97,883	111,095
Tax Provision	12,632	17,882	20,094	22,814	25,426
Minority Interest	16,653	22,795	23,892	25,464	26,437
Adjusted Net Profit	41,199	47,366	45,757	49,605	59,232
E/o loss/(income)	(3,762)	3,060	-	-	-
Reported Net profit	37,437	50,425	45,757	49,605	59,232
Growth (%)	*6*	*35*	*(9)*	*8*	*19*
Diluted EPS (Rs)	12.3	14.1	13.6	14.8	17.6
Dil. EPS Growth (%)	*11.6*	*15.0*	*(3.4)*	*8.4*	*19.4*

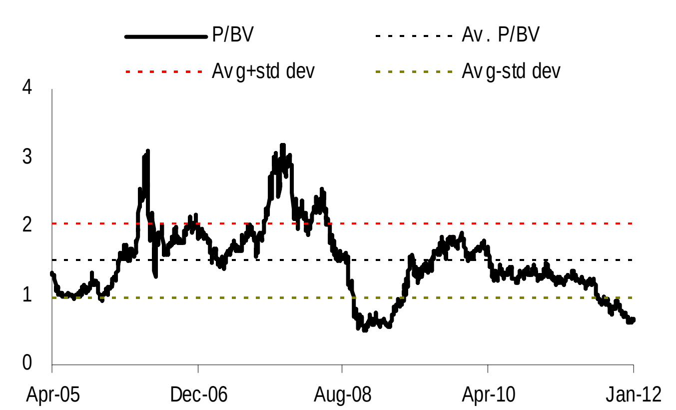
Cash Flow Statement	FY10	FY11	FY12E	FY13E	FY14E
Pre-tax profit	70,484	88,043	89,743	97,883	111,095
Depreciation	7,498	10,301	19,068	21,062	24,875
Total Tax Paid	(12,632)	(17,882)	(20,094)	(22,814)	(25,426)
Chg in working capital	3,027	(5,003)	(9,932)	(10,642)	(5,136)
Other CFO adjustments	(12,376)	(17,639)	(12,699)	(14,516)	(14,714)
Cash flow from oper (a)	56,001	57,820	66,087	70,973	90,695
Capital Expenditure	(66,707)	(86,157)	(70,450)	(59,520)	(43,618)
Chg in investments	(73,314)	(15,814)	-	-	-
Other investing activities	11,974	24,011	20,183	23,986	26,693
Cash flow from inv.(b)	(128,046)	(77,959)	(50,267)	(35,534)	(16,925)
Free cash flow (a+b)	(72,046)	(20,139)	15,820	35,439	73,770
Equity raised/(repaid)	76,529	-	-	-	-
Debt raised/(repaid)	22,465	24,687	52,239	39,384	21,600
Change in MI	-	-	-	-	-
Dividend (incl. Tax)	(4,991)	(6,470)	(9,729)	(9,729)	(9,729)
Other financing activities	(3,360)	(3,312)	(7,484)	(9,470)	(11,979)
Cash flow from fin (c)	90,643	14,905	35,026	20,185	(108)
Net chg in cash (a+b+c)	18,597	(5,234)	50,846	55,624	73,662

Balance Sheet	FY10	FY11	FY12E	FY13E	FY14E
Equity Share Capital	1,681	3,361	3,361	3,361	3,361
Reserves & surplus	368,439	410,994	451,331	495,517	549,329
Shareholders' funds	370,120	414,355	454,692	498,878	552,691
Minorities interests	84,096	102,913	118,237	134,299	151,974
Total Debt	92,600	117,287	169,526	208,910	230,510
Capital Employed	546,816	634,555	742,455	842,086	935,174
Net fixed assets	220,702	296,557	347,939	386,397	405,140
Goodwill	12,799	38,918	38,918	38,918	38,918
Cash & Cash Eq.	231,660	226,426	277,271	332,896	406,558
Net Other current assets	92,418	92,139	92,071	90,713	95,849
Investments	4,762	2,251	7,992	14,899	10,446
Net Deferred tax Assets	(15,524)	(21,736)	(21,736)	(21,736)	(21,736)
Total Assets	546,816	634,555	742,455	842,086	935,174

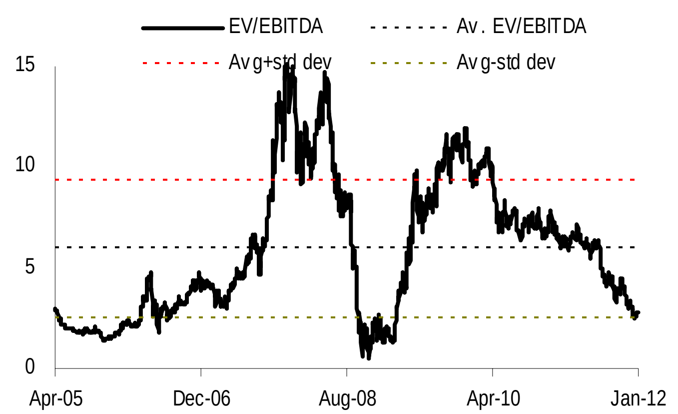
Key Ratios	FY10	FY11	FY12E	FY13E	FY14E
OPM (%)	26.5	26.5	25.4	26.4	27.1
Net Margin (%)	16.7	15.5	12.1	12.5	13.3
Yield (%)	0.5	1.2	1.2	1.2	1.2
Net debt/Equity (x) * #	(0.1)	0.0	0.0	0.0	(0.1)
Working Capital Days	13	11	24	36	38
RoCE (%)	12.5	11.9	10.6	10.1	10.4
RoE (%) *	13.7	12.9	11.6	11.3	12.2
RoIC (%) ##	29.6	23.5	21.0	19.5	19.6
EV/Net Sales (x) #	1.9	0.7	0.6	0.5	0.4
EV/EBITDA (x) #	10.1	3.8	3.0	2.7	1.9
PER (x)	14.4	6.7	6.9	6.4	5.4
PCE (x)	12.2	5.5	4.9	4.5	3.8
Price/BV (x) *	1.7	0.8	0.8	0.7	0.6

*Note: TP and EV based valuation multiples calculated valuing CWIP at 30-50% discount to book value; * Based on equity value adjusted for goodwill; # Based on proportionate consolidation; ## Invested Capital = Capital Employed - CWIP - Goodwill - Cash & Equivalents CMP as on 9th Jan'12*

1-Year rolling forward P/BV Band



1-Year rolling forward EV/EBITDA Band



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PINC RESEARCH

Company Update
Sector: Metals & Mining
Sensex: 15,815

HINDUSTAN ZINC

Maintain	ACCUMULATE
CMP	Rs124
TP	Rs132

COMPANY UPDATE

Defensive amongst metal stocks

11 January 2012

Hindustan Zinc (HZL) is expected to register a 3.5% and 4.1% CAGR in volume and EBITDA respectively over FY11-14E on expanded capacities and efficient cost structure, resulting in strong cash generation despite OPM contraction on lower LME prices. To factor in low return on the surplus cash, we have valued cash at 20% discount to book value. Nevertheless, we remain positive on the stock and maintain ACCUMULATE with a revised target price of Rs132.

Completed capacity expansion to provide volume growth: HZL recently completed brownfield expansion (210ktpa zinc, 100ktpa lead), taking integrated capacity to 1.064mntpa (879ktpa zinc, 185ktpa lead) & making the company world's largest zinc producer, with its Rampura Agucha mine being the largest globally. We estimate a volume CAGR of 3.5% over FY11-FY14E on expanded capacity.

Silver lining: Silver capacity is being expanded by ~3x by H1FY13 to capitalise on capacity expansion at silver-rich Sindesar Khurd (SK) mines. We estimate silver sales CAGR of 54.6% over FY11-FY14E on 43.4% volume CAGR and high silver prices despite a 36% decline in the last 5 months.

OPM to contract by 356bps over FY11-14E on lower LME prices and rising operating costs: HZL is one of the lowest cost producers of zinc and lead globally on captive mines and power and enjoys one of the highest OPMs. However, we estimate OPM to contract 356bps over FY11-FY14E to 52.1% on lower LME prices and higher energy and mining cost on rising stripping ratio.

Strong balance sheet getting stronger: HZL is a debt free company with cash of Rs163bn as on Q2FY12. We expect the company's cash reserve to increase further to Rs290bn by FY14E on strong cash flow generation on volume growth and 50%+ OPM. To factor in low return on surplus cash and lack of growth projects to deploy the same, we have valued surplus cash at 20% discount to BV.

Return ratios to decline on low returns on cash: We expect RoE, RoCE and RoIC to decline by ~500bps over FY11-14E on low return on cash.

VALUATIONS AND RECOMMENDATION:

With volume growth on recently expanded capacity, >30years mine life, rising share of silver profit, highly cost efficient operations, and strong balance sheet providing support during volatile LME, HZL is the defensive amongst metal stocks. Although low return on surplus cash is a cause for concern, we have factored in the concerns by valuing cash at 20% discount to book value. Further, recent move to increase dividend have allayed some of the concerns. We like the stock at 5.4x FY13E EV/ EBITDA and maintain ACCUMULATE with a revised target price of Rs132 (6x FY13E EV/EBITDA, 28% premium to global peers on high margin, strong cash generation and diversification with rising share of silver.

KEY FINANCIALS (Rs mn)

	FY10	FY11	FY12E	FY13E	FY14E
Revenue	81,250	100,348	111,170	117,301	121,074
YoY Gr. (%)	*40.7*	*23.5*	*10.8*	*5.5*	*3.2*
Op. Profits	47,781	55,874	58,551	60,962	63,105
OPM (%)	*58.8*	*55.7*	*52.7*	*52.0*	*52.1*
Adj. Net Profit	39,287	46,732	53,321	56,038	60,474
YoY Gr.(%)	*53.8*	*18.9*	*14.1*	*5.1*	*7.9*
KEY RATIOS					
Dil. EPS (Rs)	9.3	11.1	12.6	13.3	14.3
ROCE (%)	23.4	22.1	21.0	18.9	17.7
RoE (%)	24.2	23.0	21.7	19.4	18.1
PER (x)	9.3	11.2	9.8	9.3	8.6
P/BV (x)	2.0	2.3	2.0	1.7	1.5
EV/EBITDA (x)	5.4	7.0	6.3	5.4	4.6

Bikash Bhalotia **+91-22-6618 6387**
bikash.bhalotia@pinc.co.in

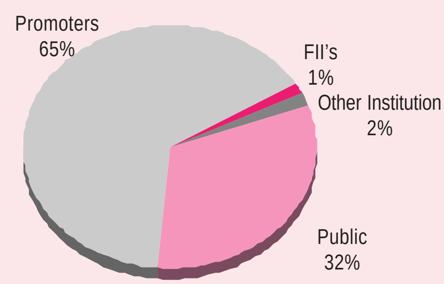
Harleen Babber **+91-22-6618 6389**
harleen.babber@pinc.co.in

Dipti Vijaywargi **+91-22-6618 6393**
dipti.vijaywargi@pinc.co.in

STOCK DATA

Market cap	Rs522bn
Book Value per share	Rs53
Shares O/S (F.V. Rs10)	4,225mn
Free Float	35.08%
Avg Trade Value (6 months)	Rs109mn
52 week High/Low	Rs155/106
Bloomberg Code	HZ IN
Reuters Code	HZNC.BO

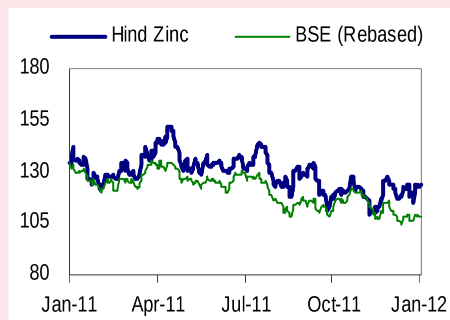
SHARE HOLDING PATTERN



PERFORMANCE (%)

	1M	3M	12M
Absolute	(0.2)	4.6	(8.4)
Relative	2.3	7.2	11.3

RELATIVE PERFORMANCE



About the company

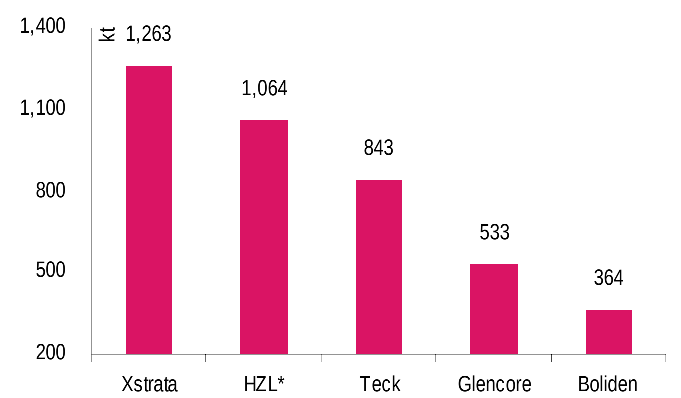
HZL has become world's second largest integrated zinc-lead producer, with its Rampura Agucha mine being the largest globally

Hindustan Zinc Ltd (HZL), a 64.9% subsidiary of Sterlite Industries, has presence in zinc, lead, silver and wind power business. HZL is India's only and world's largest integrated producer of zinc and lead, with mines in Rajasthan, India and smelters in Rajasthan and Andhra Pradesh, India. Further, along with captive power, the company has presence in wind power as well with windmills in Gujarat and Karnataka,India.

Completion of capacity expansion to drive volume growth

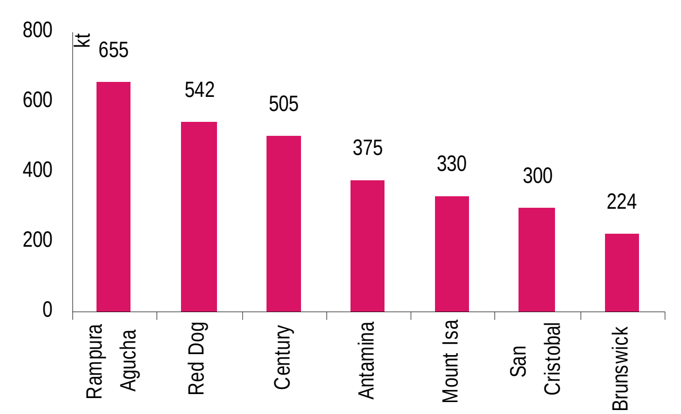
HZL has recently completed their brownfield expansion project (210ktpa zinc, 100ktpa lead), taking integrated capacity to 1.064mntpa, comprising 879ktpa of zinc and 185ktpa of lead capacity. With this, the company has become world's second largest integrated zinc-lead producer, with its Rampura Agucha mine being the largest globally.

World's largest zinc/lead producers (2010 output)



*Source: Company, PINC Research; * HZL capacity post-expansion*

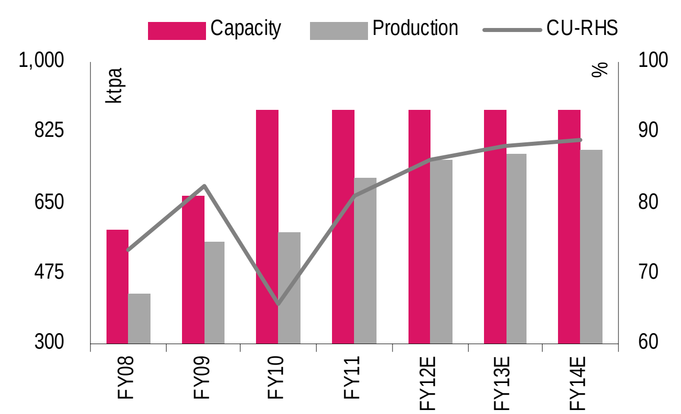
World's largest zinc mines (2010 MIC)



Source: Company, PINC Research

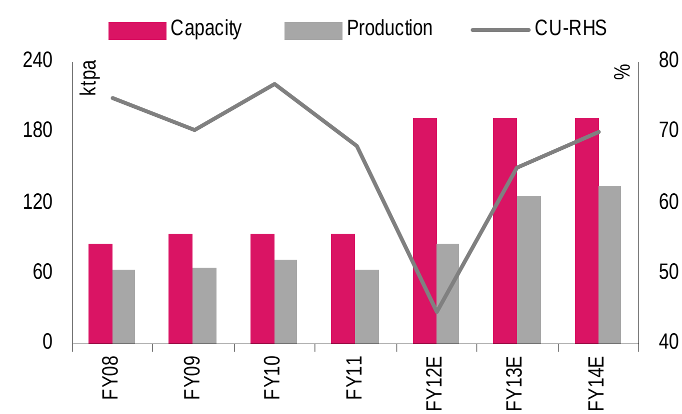
Subsequently, we estimate increased capacity to provide volume CAGR of 3.5% over FY11-FY14E for HZL.

Zinc: Capacity, output and capacity utilisation



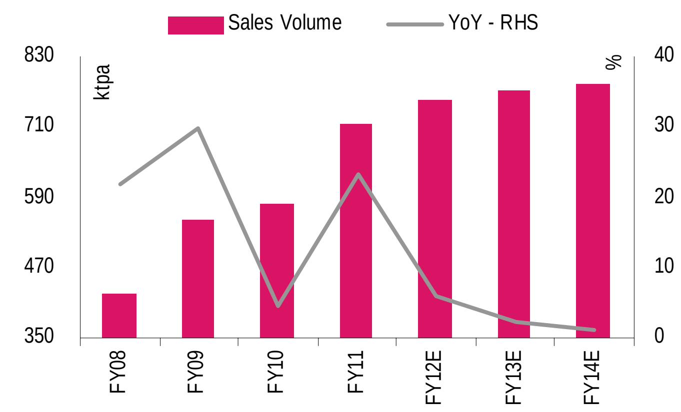
Source: Company, PINC Research

Lead: Capacity, output and capacity utilisation



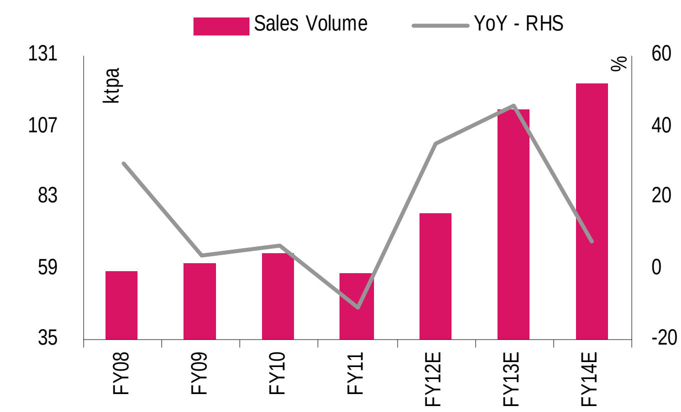
Source: Company, PINC Research

Zinc sales volume and YoY growth



Source: Company, PINC Research

Lead sales volume and YoY growth

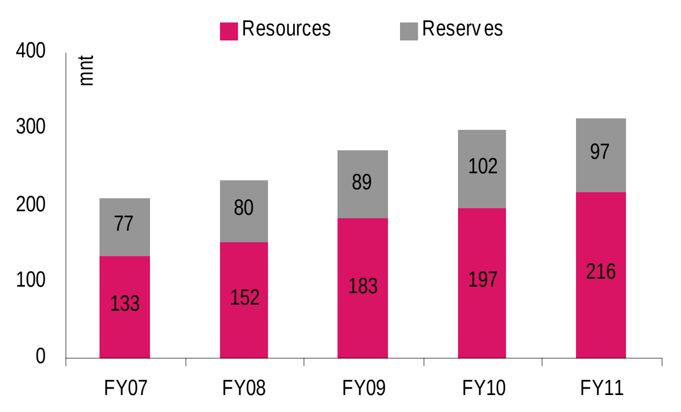


Source: Company, PINC Research

… Supported by large mine life (>30years)

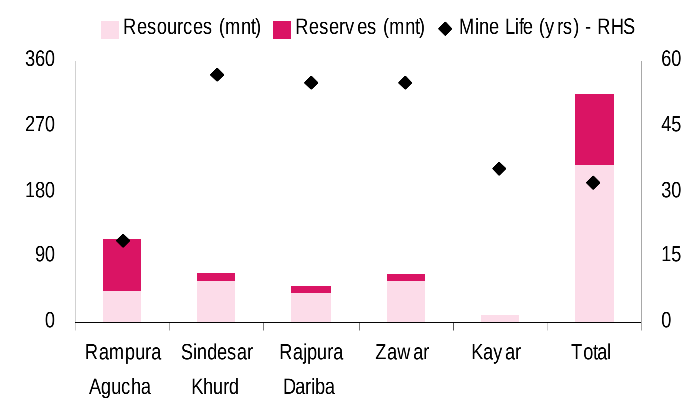
Through continuous exploration activities, HZL has been able to increase its reserves and resources YoY on a net basis. As of FY11, the company has 313mnt of R&R, with zinc-lead content of 34.7mnt, implying a mine life of 32.6yrs on increased capacity.

Increase in the R&R base over last 5 years



Source: Company, PINC Research

Support of large mine life



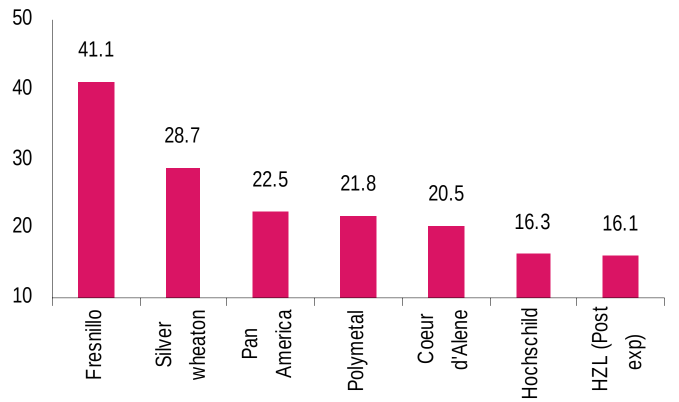
Source: Company, PINC Research

Silver – The new growth frontier

With commissioning of last leg of mining at SK mines, HZL would become seventh largest silver producer in the world.

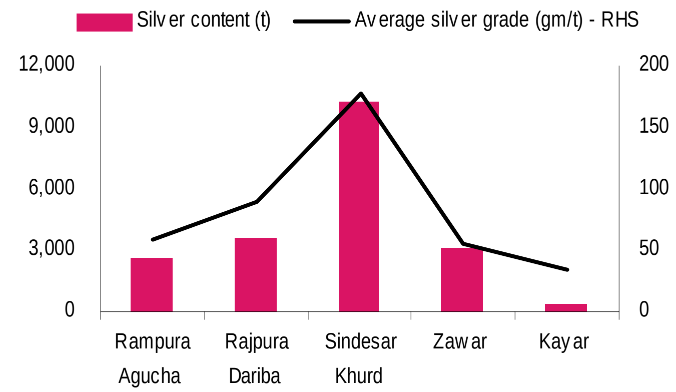
With the increase in contribution from high silver content Sindesar Khurd (SK) mines, HZL is increasing its silver capacity ~3x to 500tpa from current 180tpa. The expanded capacity is expected to commence operations by H1FY13. With total silver content of ~20kt, HZL has silver mine life of 40yrs on expanded capacity of 500tpa. With the capacity expansion, HZL would not only become seventh largest silver producer in the world, but also benefit from high level of silver prices despite a 23% decline in last 5-mths.

Largest global silver producers (moz)



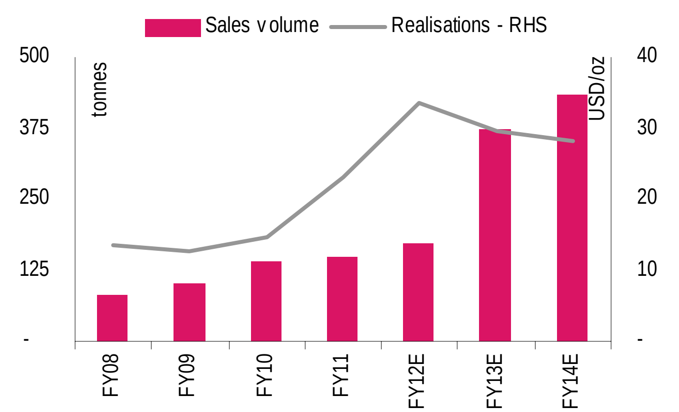
Source: Company, PINC Research

HZL to enter the league with silver-rich SK mines



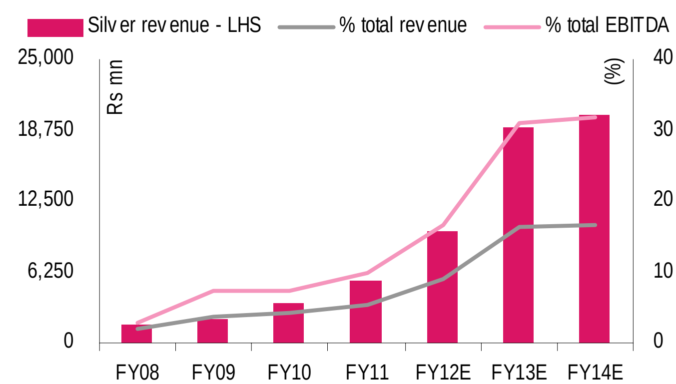
Source: Company, PINC Research
Note: Avg silver grade is gm/t of R&R

Silver volume and realisation



Source: Company, PINC Research

Increasing silver contribution to revenue & EBITDA



Source: Company, PINC Research

With silver being the by-product of zinc and lead, the incremental cost in silver mining is negligible, implying very high margin (~95%) in silver business for HZL.

Wind power – Marginal contributor

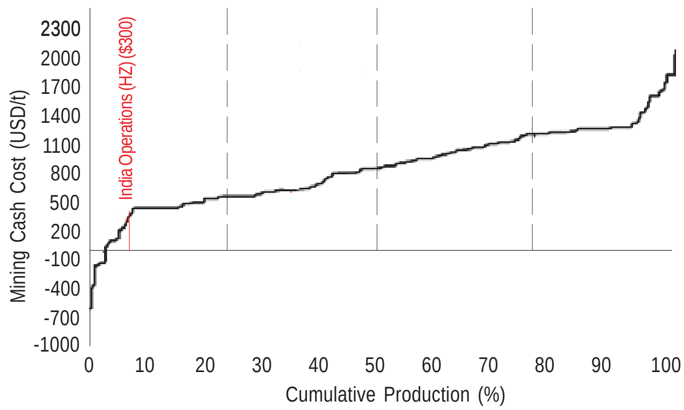
HZL has undertaken 150MW of wind power capacity addition with a capex of USD190mn, out of which 105MW has already been commissioned. With the commissioning of remaining capacity, HZL's total wind power capacity would increase to 273MW. Nevertheless, wind power would remain a marginal business for HZL, accounting for less than 1% of total revenue and EBITDA even after expansion.

Lowest decile cost positioning to support margins; but rising cost a concern

HZL enjoys one of the highest OPM globally.

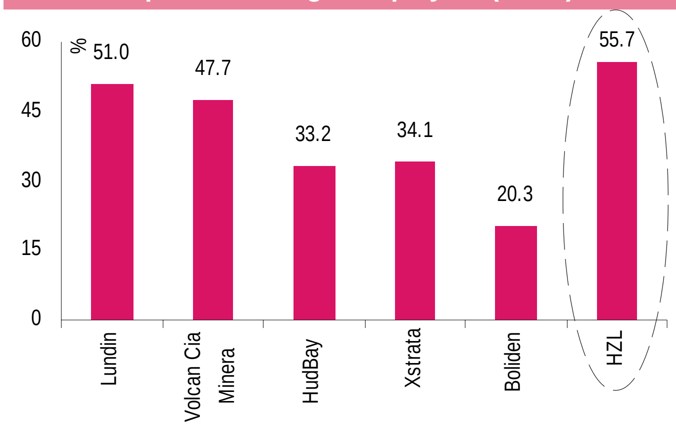
HZL's operating cost lies in the lowest decile on global cost curve on the back of integration with captive mines and power. Consequently, the company enjoys one of the highest OPM globally.

HZL's position on the global zinc cost curve



Source: Company
Note:HZL costs excludes Silver credit

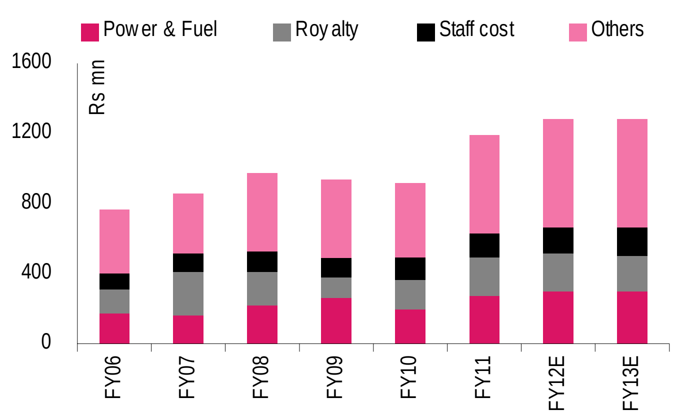
OPM Comparison with global players (CY10)



Source: Company, PINC Research

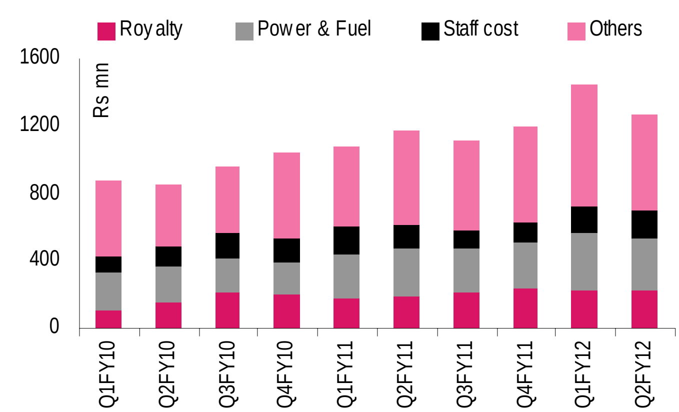
However, HZL's operating cost has been rising due to higher royalty, energy and mining cost on an increasing stripping ratio and a decline in blended ore grade.

YoY movement in operating cost



Source: Company, PINC Research

QoQ movement in operating cost



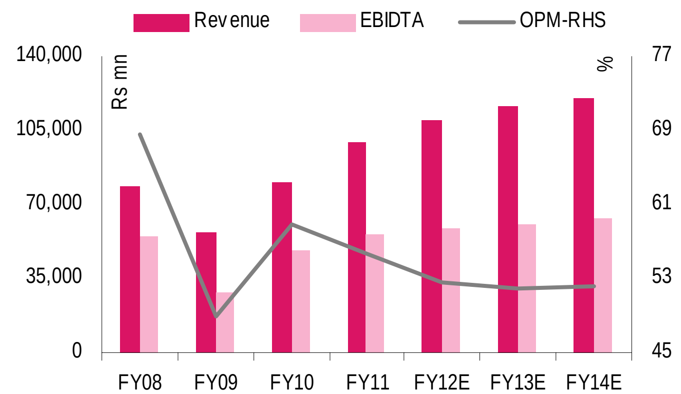
Source: Company, PINC Research

Volume growth to drive EBITDA despite OPM contraction

However, operating cost is rising on higher royalty, energy & mining cost on a rising stripping ratio & a decline in blended ore grade.

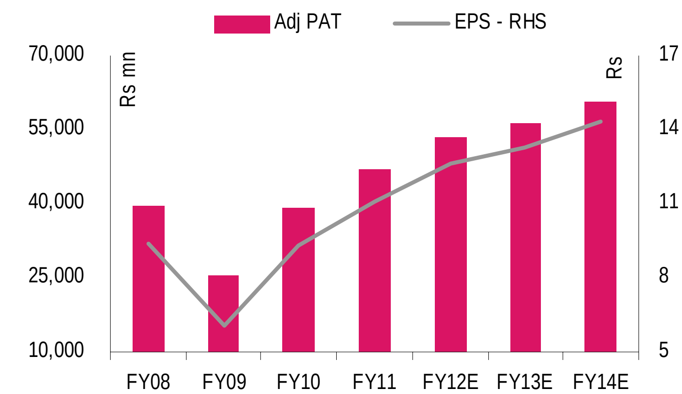
Although we believe HZL's OPM is likely to shrink on lower LME prices and operating cost pressure, we estimate an EBITDA CAGR of 4.1% over FY11-FY14E driven by volume CAGR of 3.5% and rising share of silver. This, along with return from ever-increasing treasury, would drive EPS CAGR of 9.0% over the same period. However, we estimate HZL's historically high RoE would contract on low return on treasury, despite high return on the core business.

Revenue, EBITDA and OPM



Source: Company, PINC Research

Adjusted PAT and EPS



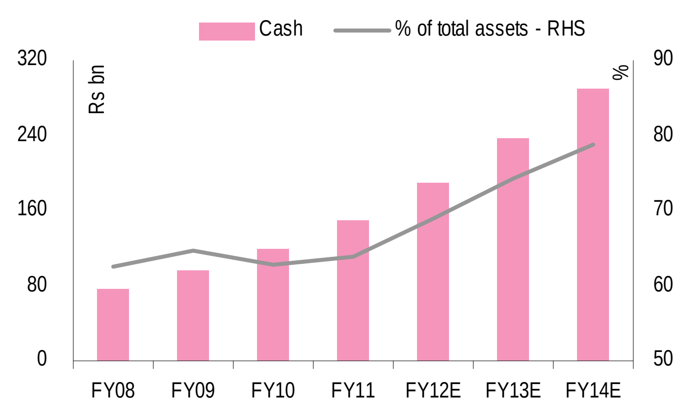
Source: Company, PINC Research

Strong balance sheet getting stronger

Lack of growth projects to deploy surplus cash and low return on cash invested in debt mutual funds,

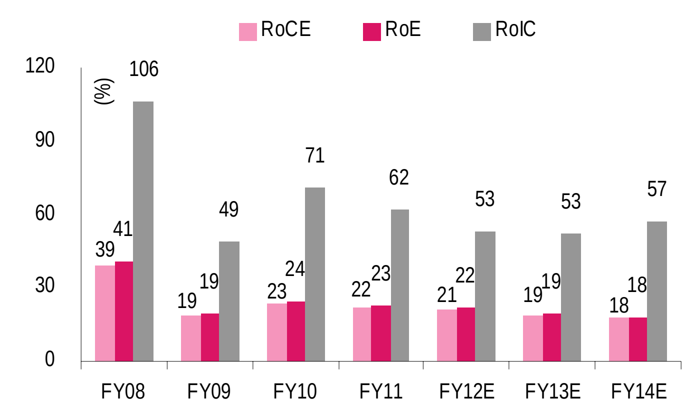
HZL is a debt free company with cash of Rs163bn or Rs39/share as on Q2FY12. We expect the company's cash reserve to increase further to Rs290bn or Rs69/share by FY14E on strong cash flow generation on volume growth and 50%+ OPM. However, we see lack of growth projects to deploy surplus cash (capacity addition in wind power is marginal investment for the player of the size of HZL) and low return on cash invested in debt mutual funds as key concerns and value the cash at a 20% discount to book value.

Cash and as a % of capital employeed



Source: Company, PINC Research

Return ratios (%)



Source: Company, PINC Research;
Note: Invested Capital = Capital employeed - CWIP - Cash & equivalents

Valuations and Recommendation

With volume growth on recently expanded capacity, >30years mine life, rising share of silver profit, highly cost efficient operations, and strong balance sheet providing support during volatile LME, HZL is the defensive amongst metal stocks. Although low return on surplus cash is a cause for concern, we have factored in the concerns by valuing cash at 20% discount to book value. Further, recent move to increase dividend have allayed some of the concerns. We like the stock at 5.4x FY13E EV/EBITDA and maintain ACCUMULATE with a revised target price of Rs132 (6x FY13E EV/EBITDA, 28% premium to global peers on high margin, strong cash generation and diversification with rising share of silver).

PINC revised assumptions and estimates

	FY12E			FY13E			FY14E
	Earlier	Revised	% Change	Earlier	Revised	% Change	Introducing
LME Zinc (USD/t)	2,075	2,060	(0.7)	2,050	1,900	(7.3)	2,000
LME Lead (USD/t)	2,225	2,250	1.1	2,050	2,000	(2.4)	2,100
Silver (USD/oz)	34.0	35.3	3.9	32.3	31.1	(3.8)	29.5
USD/INR	46.0	48.2	4.8	45.5	49.0	7.7	47.0
Total sales volume (ktpa)	855	850	(0.6)	911	895	(1.8)	911
Net Sales (Rs mn)	106,627	111,170	4.3	118,784	117,301	(1.2)	121,074
Op profit (Rs mn)	55,792	58,551	4.9	64,810	60,962	(5.9)	63,105
Net Profit (Rs mn)	52,011	53,321	2.5	60,748	56,038	(7.8)	60,474
EPS (Rs)	12.3	12.6	2.5	14.4	13.3	(7.8)	14.3
Target price (Rs)				135	132	(2.0)	

Source: PINC Research

Target price sensitivity (Rs)

FY13E USD / INR	LME Zinc: Avg. price for FY13E (USD/t)				
	1,600	1,750	1,900	2,050	2,200
45.0	107	114	121	127	134
47.0	112	119	126	133	141
49.0	117	124	132	139	147
51.0	122	130	138	146	153
53.0	127	135	143	152	160

Source: PINC Research

Target price sensitivity (Rs)

FY13E EV/EBITDA multiple (x)	LME Zinc: Avg. price for FY13E (USD/t)				
	1,600	1,750	1,900	2,050	2,200
5.0	105	111	117	124	130
5.5	111	118	125	132	139
6.0	117	124	132	139	147
6.5	123	131	139	147	155
7.0	129	138	146	155	164

Source: PINC Research

Year Ended March (Figures in Rs mn)

Income Statement	FY10	FY11	FY12E	FY13E	FY14E
Net Revenues	81,250	100,348	111,170	117,301	121,074
Growth (%)	*40.7*	*23.5*	*10.8*	*5.5*	*3.2*
Operating Profit	47,781	55,874	58,551	60,962	63,105
Other income	4,985	6,196	13,471	16,571	20,205
EBITDA	52,766	62,070	72,022	77,533	83,310
Growth (%)	*49.7*	*17.6*	*16.0*	*7.7*	*7.5*
Depreciation	3,343	4,747	5,829	6,233	6,395
EBIT	49,423	57,322	66,193	71,300	76,915
Interest Paid	408	183	366	366	366
PBT (before E/o items)	49,016	57,139	65,828	70,934	76,549
Tax Provision	9,729	10,408	12,507	14,896	16,075
Adjusted Net Profit	39,287	46,732	53,321	56,038	60,474
Growth (%)	*53.8*	*18.9*	*14.1*	*5.1*	*7.9*
E/o (loss)/income	1,127	2,273	-	-	-
Reported Net Profit	40,414	49,005	53,321	56,038	60,474
Diluted EPS (Rs)	9.3	11.1	12.6	13.3	14.3
Diluted EPS Growth (%)	*53.8*	*18.9*	*14.1*	*5.1*	*7.9*

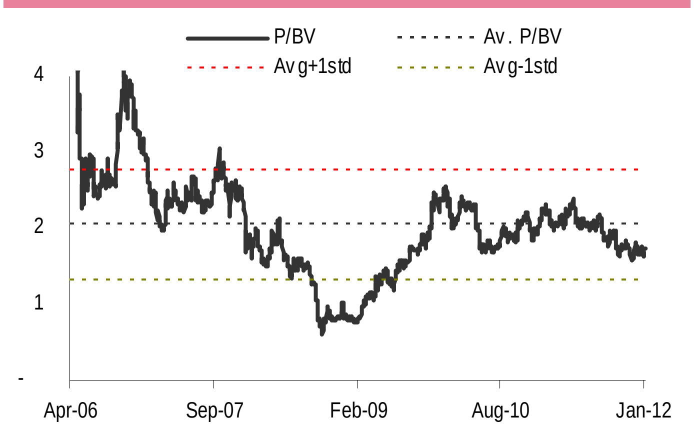
Cash Flow Statement	FY10	FY11	FY12E	FY13E	FY14E
Pre-tax profit	49,016	57,139	65,828	70,934	76,549
Depreciation	3,343	4,747	5,829	6,233	6,395
Total Tax Paid	(8,311)	(10,408)	(12,507)	(14,896)	(16,075)
Chg in working capital	3,219	(6,394)	2,570	242	454
Other operating adjustments	(4,348)	(3,712)	(13,105)	(16,205)	(19,839)
Cash flow from oper (a)	42,918	41,373	48,614	46,308	47,483
Capital Expenditure	(23,897)	(13,239)	(8,650)	(3,000)	(3,000)
Chg in investments	-	-	-	-	-
Other investing activities	6,112	8,469	13,471	16,571	20,205
Cash flow from inv.(b)	(17,785)	(4,771)	4,821	13,571	17,205
Free cash flow (a+b)	25,132	36,603	53,435	59,879	64,688
Equity raised/(repaid)	-	-	-	-	-
Debt raised/(repaid)	518	(601)	-	-	-
Dividend (incl. Tax)	(2,956)	(4,911)	(12,276)	(12,276)	(12,276)
Other financing activities	(408)	(183)	(366)	(366)	(366)
Cash flow from fin (c)	(2,846)	(5,694)	(12,642)	(12,642)	(12,642)
Net chg in cash (a+b+c)	22,286	30,908	40,793	47,237	52,046

Balance Sheet	FY10	FY11	FY12E	FY13E	FY14E
Equity Share Capital	*4,225*	*8,451*	*8,451*	*8,451*	*8,451*
Reserves & surplus	*177,014*	*216,881*	*257,926*	*301,687*	*349,885*
Shareholders' funds	181,240	225,332	266,376	310,138	358,335
Minorities interests	-	-	-	-	-
Total Debt	605	4	4	4	4
Capital Employed	181,844	225,336	266,380	310,142	358,339
Net fixed assets	72,771	81,294	84,116	80,883	77,488
Cash & Cash Eq.	118,767	149,675	190,468	237,705	289,751
Net Other current assets	(2,581)	3,813	1,243	1,001	547
Investments	-	-	-	-	-
Net Deferred tax Assets	(7,112)	(9,447)	(9,447)	(9,447)	(9,447)
Total Assets	181,844	225,336	266,380	310,142	358,339

Key Ratios	FY10	FY11	FY12E	FY13E	FY14E
OPM (%)	58.8	55.7	52.7	52.0	52.1
Net Margin (%)	48.4	46.6	48.0	47.8	49.9
Yield (%)	0.7	0.8	2.0	2.0	2.0
Net debt/Equity (x)	(0.7)	(0.7)	(0.7)	(0.8)	(0.8)
Working Capital Days	15	17	26	26	26
RoCE (%)	23.4	22.1	21.0	18.9	17.7
RoE (%)	24.2	23.0	21.7	19.4	18.1
EV/Net Sales (x) *	3.2	3.9	3.3	2.8	2.4
EV/EBITDA (x) *	5.4	7.0	6.3	5.4	4.6
PER (x)	9.3	11.2	9.8	9.3	8.6
PCE (x)	8.6	10.1	8.8	8.4	7.8
Price/BV (x)	2.0	2.3	2.0	1.7	1.5

*Note: EV-based valuation ratios and target price calculated by valuing Capital WIP at book value; * Cash at 20% discount to book value; CMP as on 9th jan 2012*

1-Year rolling forward P/BV Band



1-Year rolling forward EV/EBIDTA Band

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PINC RESEARCH

Company Update
Sector: Metals & Mining
Sensex: 15,815

NATIONAL ALUMINIUM COMPANY

Downgrade	SELL
CMP	Rs56
TP	Rs42

COMPANY UPDATE

Multiple headwinds; Recommend SELL

11 January 2012

Bikash Bhalotia **+91-22-6618 6387**
bikash.bhalotia@pinc.co.in

Harleen Babber **+91-22-6618 6389**
harleen.babber@pinc.co.in

Dipti Vijaywargi **+91-22-6618 6393**
dipti.vijaywargi@pinc.co.in

Although NALCO's net revenue is expected to show a CAGR of 3.2% over FY11-14E on expanded alumina capacity, we expect a 11.1% CAGR decline in EBITDA on lower LME prices, flat aluminium volumes, and high energy & wage costs. OPM is estimated to decline by 949bps over FY11-14E. Moreover, we view NALCO's foray in unrelated business as a huge negative that offsets the company's strong balance sheet.

Alumina volume to expand while aluminium volume growth remains flat over FY11-14E: Alumina sales volume is estimated to grow at 23% CAGR over FY11-14E on newly commissioned capacity (525ktpa), while aluminum sales volume is expected to remain flat.

NALCO looses cost advantage over domestic peers, OPM under pressure: NALCO's aluminium operating cost rose 14.7% CAGR over FY07-H1FY12 on higher energy and wage cost, losing cost advantage over peer Hindalco. We estimate that NALCO's operating cost would remain high on sticky energy cost and 7th wage-revision due in 2012. We expect OPM to contract by 949bps over FY11-14E.

Diversification in unrelated business a negative: We view NALCO's diversification into green energy (setting up a 50MW wind power project) and nuclear power generation (JV with NPCIL) as a negative as it would lead to utilisation of company's resources into non-core business. However, due to long gestation period, we have not factored these in our estimates.

Investment in Indonesia a long term play: NALCO's plan to set up a 0.5mntpa aluminium smelter with a 1,250MW CPP in Indonesia in a 100% subsidiary is still under the feasibility study stage and thus, we have not factored this in our estimates.

Strong balance sheet, but many negative offshoots: Although, we expect CFO to decline at a CAGR of 17% over FY11-FY14E, we believe that the company would continue to generate strong free cash flows, which is expected to strengthen the balance sheet further with cash and equivalents of Rs60.1bn in FY14E, representing 45% of the total capital employed. However, due to low return on surplus cash, investment in non-core businesses and risk of investing the surplus cash in buying govt.'s stake in another state-owned enterprise in a bid to meet govt's divestment target, **we value surplus cash at 20% disc. to BV**.

VALUATIONS AND RECOMMENDATION

Although NALCO's stock has declined 48% in 2011 on 19% decline in LME aluminium prices and concerns on rising energy cost, putting pressure on margin, we continue to remain negative on NALCO owing to increased volatility in LME prices, continued cost pressure and imprudent investment of surplus cash. We downgrade the stock to 'SELL' with a revised target price of Rs42 (5.0x FY13E EV/EBITDA) while valuing the cash at 20% discount to book value.

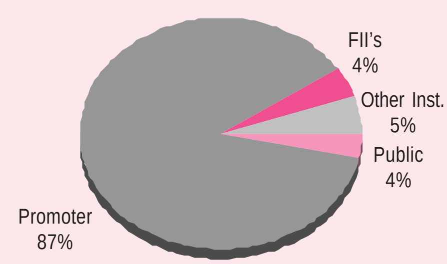
KEY FINANCIALS (Rs mn)

	FY10	FY11	FY12E	FY13E	FY14E
Revenue	51,745	60,558	64,559	64,018	66,548
YoY Gr. (%)	*(0.8)*	*17.0*	*6.6*	*(0.8)*	*4.0*
Op. Profits	10,907	15,941	13,121	10,849	11,202
OPM (%)	*21.1*	*26.3*	*20.3*	*16.9*	*16.8*
Adj. Net Profit	8,025	10,702	9,398	7,552	7,667
YoY Gr.(%)	*(36.2)*	*33.4*	*(12.2)*	*(19.6)*	*1.5*
KEY RATIOS					
Dil. EPS (Rs)	3.1	4.2	3.6	2.9	3.0
ROCE (%)	7.5	9.3	7.7	5.9	5.8
RoE (%)	8.0	9.9	8.2	6.3	6.1
PER (x)	27.8	13.5	15.3	19.1	18.8
P/BV (x)	2.1	1.3	1.2	1.2	1.1
EV/EBITDA (x)	15.4	5.4	7.0	8.0	7.1

STOCK DATA

Market cap	Rs144bn
Book Value per share	Rs45
Shares O/S (F.V. Rs 5)	2,577mn
Free Float	12.85%
Avg Trade Value (6 months)	Rs19mn
52 week High/Low	Rs 120/48
Bloomberg Code	NACL.IN
Reuters Code	NALU.BO

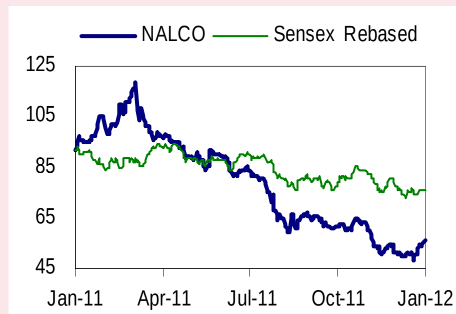
SHARE HOLDING PATTERN



PERFORMANCE (%)

	1M	3M	12M
Absolute	10.2	(9.1)	(39.7)
Relative	12.6	(6.5)	(22.1)

RELATIVE PERFORMANCE



About the company

Alumina output to grow on new capacities, while aluminium volume to remain stagnant or decline due to lack of coal and power.

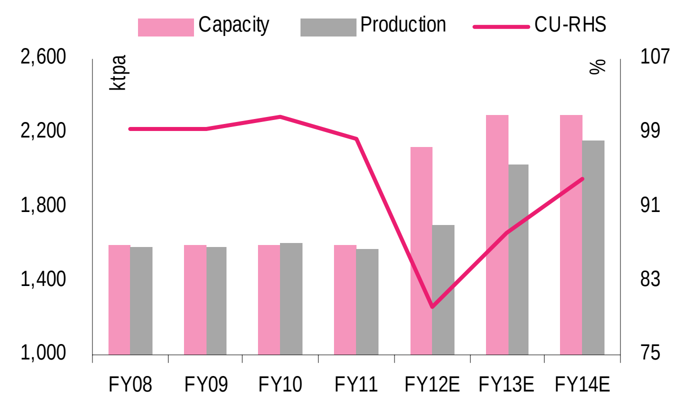
National Aluminium Company (NALCO), a state owned enterprise with 87% owned by GoI, is the largest producer of alumina and 3rd largest producer of aluminium in India, based out of bauxite-rich state of Odisha. The company's operation is completely integrated with own bauxite mines, captive power and surplus alumina.

Alumina volume to grow, aluminium business stagnant

Output loss of 15.9kt in FY12 until Nov'11 on short supply of coal and labour strike.

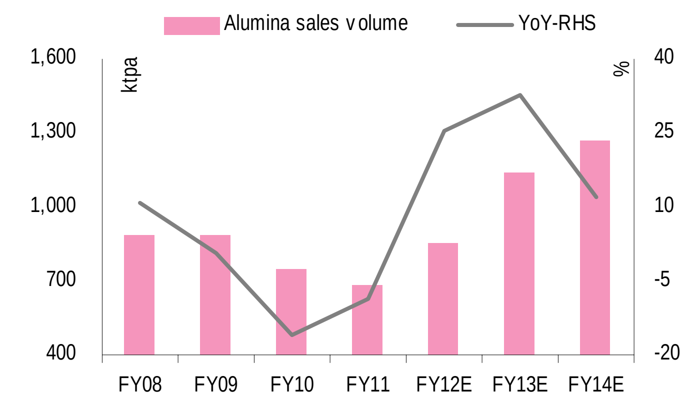
NALCO has recently commissioned 525ktpa of alumina refinery, part of phase-II expansion and has announced phase-III expansion consisting of 110ktpa of aluminium smelter (expected FY17) and 175ktpa of alumina refinery (expected Jun'12) along with associated bauxite mining. Consequently, for alumina, we estimate 11% output CAGR and 23% sales volume CAGR, while aluminium volume is expected to remain stagnant, with downside risk on supply-shortage of coal and power. The company has lost output of 15.9kt in FY12 until Nov'11 due to short supply of coal and labour strike.

Alumina Capacity, output and capacity utilisation



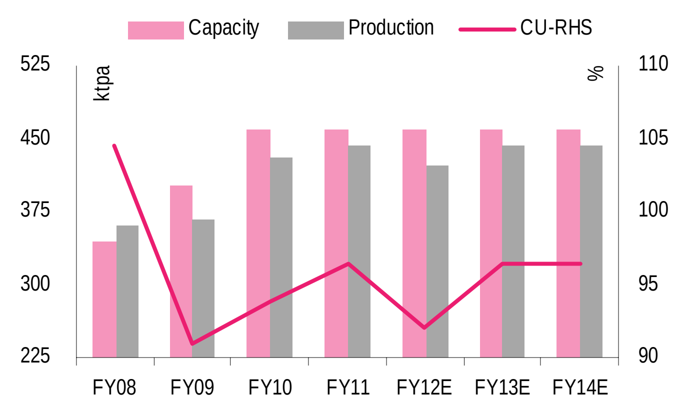
Source: Company, PINC Research

Alumina sales volume and YoY growth (%)



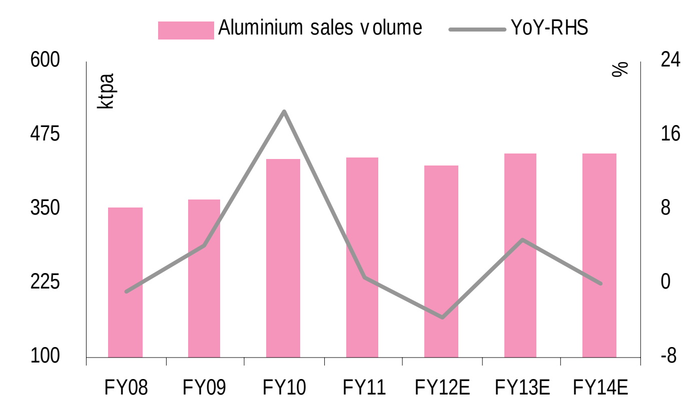
Source: Company, PINC Research

Aluminium Capacity, output and capacity utilisation



Source: Company, PINC Research

Aluminium sales volume and YoY growth (%)



Source: Company, PINC Research

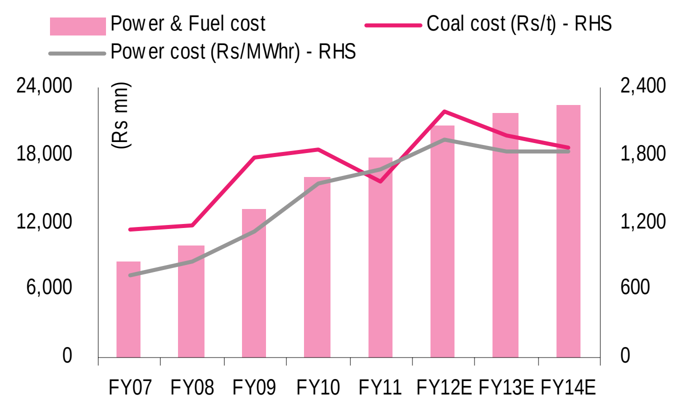
Losing out on the cost advantage on higher coal and employee cost

Despite only a 5.5% CAGR in aluminium output over FY07-FY11, NALCO's power and fuel cost has increased at a CAGR of 20.1% over the period on an 8.5% CAGR hike in coal cost and 25.3% CAGR hike in power cost as the company has been unable to secure linkage coal for its expanded CPP capacity, resulting in dependence on imported and e-auction coal. We estimate power and fuel cost to rise by another 16.8% YoY in FY12E due to higher coal cost, as supply of linkage coal is further impacted by heavy monsoon, thereby increasing dependence on the imported and e-auction coal.

Power and fuel cost to rise by 16.8% YoY in FY12E due to higher coal cost and employee cost to increase further with the 7th wage-revision due in 2012.

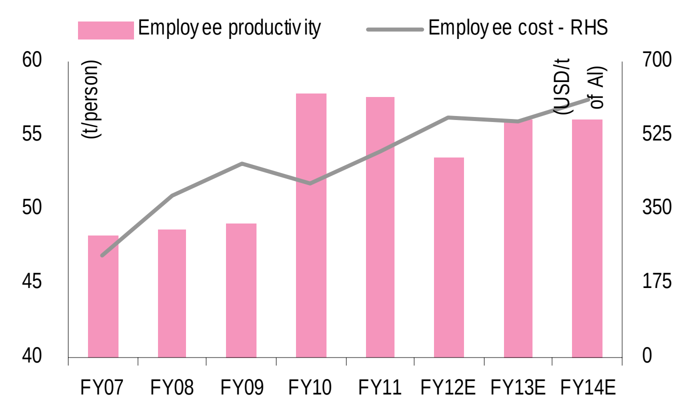
Further, the company's employee cost has increased at a CAGR of 26% over FY07-FY11, even while employee productivity has increased at only 4.5% during the period. Consequently, employee cost/t of aluminium has increased to USD489/t in FY11 and is slated to increase further with the 7th wage-revision due in 2012.

Power & Fuel cost on the rise



Source: Company, PINC Research

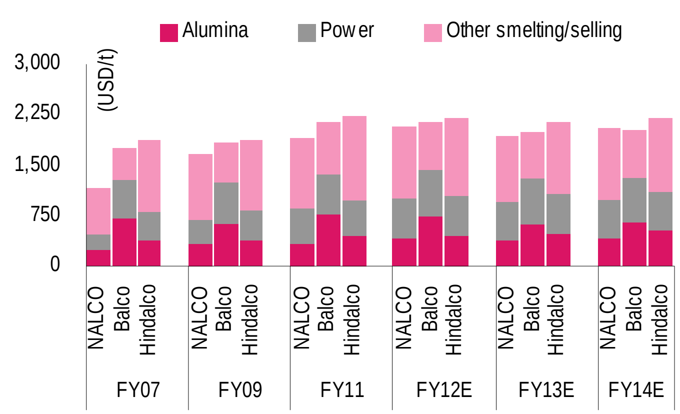
Employee cost to increase with wage revision



Source: Company, PINC Research

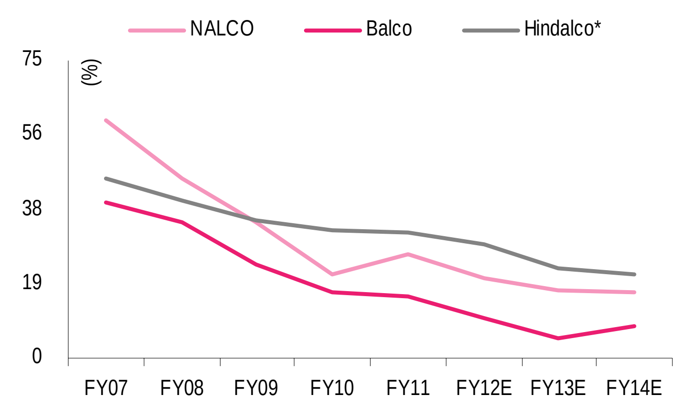
As a result, NALCO has lost on its cost advantage vis-à-vis other domestic producers i.e. Balco and Hindalco. NALCO's OPM has declined below that of Hindalco's aluminium business and is hovering near that of Balco's aluminium business, even though Balco does not have the advantage of high grade bauxite or captive alumina.

NALCO has lost on its cost advantage



Source: Company, PINC Research

NALCO's OPM lower than Hindalco's

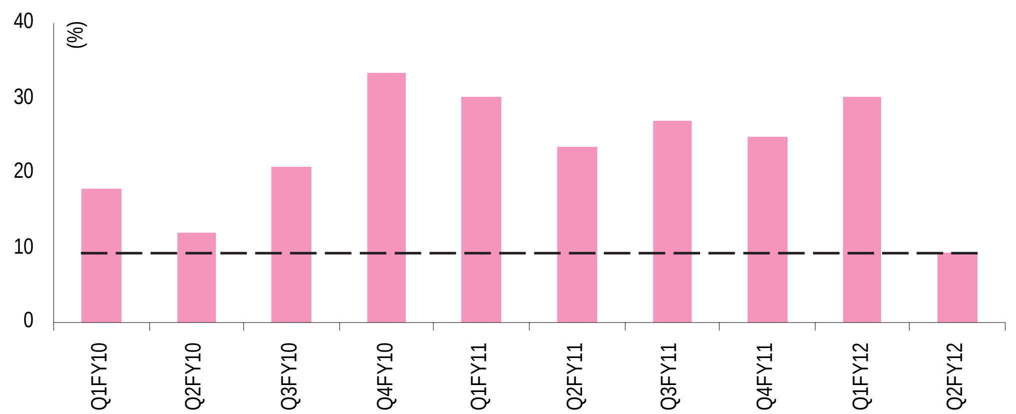


Source: Company, PINC Research
*Note: *OPM for Hindalco India's aluminium business*

Company's OPM for Q2FY12 has contracted 1,405bps YoY and reached 10-qtrs low, as the company continued to struggle with short supply of coal, impacting cost and production.

OPM at 10-qtrs low as coal shortage impacted cost and output.

OPM at 10-qtrs low



Source: Company, PINC Research

NALCO has been allotted mining lease at Utkal E-coal block, with total reserves of 70mnt. The company has plans to develop the coal block at a capex of Rs2.8bn and intends to commence mining by Jun'12. However, we have not factored this in our estimates, as the company has faced significant delays in the past in securing environment clearance and acquisition of land.

Investment in Indonesia – Too early to make an impact

NALCO plans to invest Rs180bn in Indonesia to set up a 0.5mntpa aluminium smelter along with a 1,250MW CPP in the coal-rich East Kalimantan district of Indonesia in a 100% subsidiary. For this, the company has shortlisted MEC coal for supplying 8mntpa coal, out of which 4.5mntpa would be used in Indonesia, while the remaining would be shipped to India for consumption in NALCO's captive power plants. Further, as per news sources, NALCO is looking to buy 25% stake in MEC coal by Mar'12 and is conducting due diligence for the same. However, the project is still at the feasibility study stage and hence, we have not factored this in our estimates.

Diversification into green energy

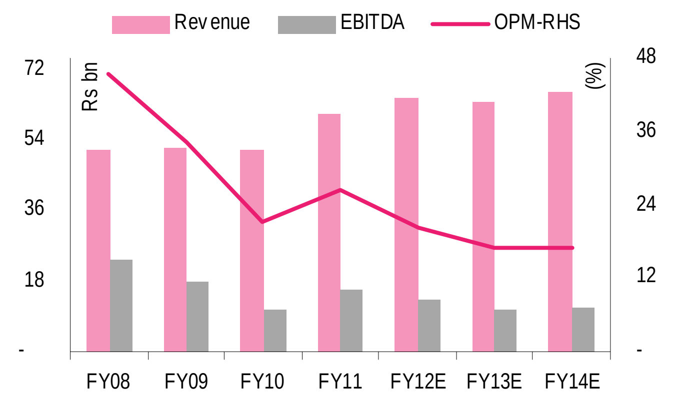
Recently, NALCO has diversified into green energy with a plan to set-up 50MW of wind power plant in Andhra Pradesh, India for a capex of Rs2.74bn. Further, the company has forayed into Nuclear Power generation in a JV with Nuclear Power Corporation of India (NPCIL). The company has planned 2 units of 700MW each at Kakrapar in Gujarat, India for a capex of Rs115bn. NALCO would initially have 26% stake in the JV company, with an option to raise the stake to 49% at a later date. We don't see these diversifications very positively and have not factored these in our estimates.

Lower LME prices and rising operating cost to result in earnings decline

Operating profit to decline due to lower LME prices and higher operating cost on coal shortage.

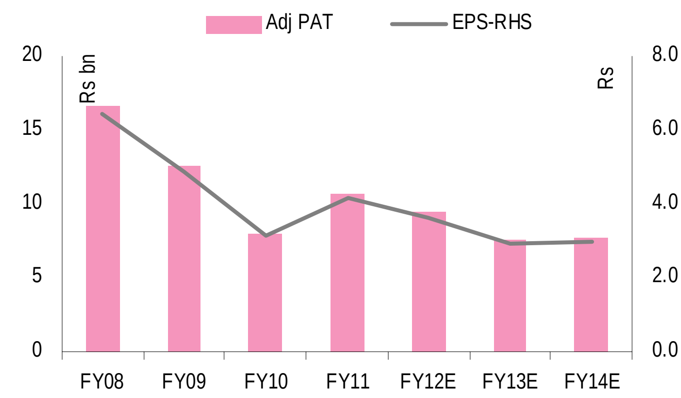
Despite 23% CAGR in alumina sales volume over FY11-FY14E, we expect NALCO's operating profit to decline at a CAGR of 11% over the period on lower LME prices and higher operating cost, as the company is impacted by short supply of coal. Consequently, we estimate NALCO's net profit to decline at a CAGR of 11% as well over FY11-FY14E.

Revenue, EBITDA and OPM



Source: Company, PINC Research

Adjusted PAT and EPS

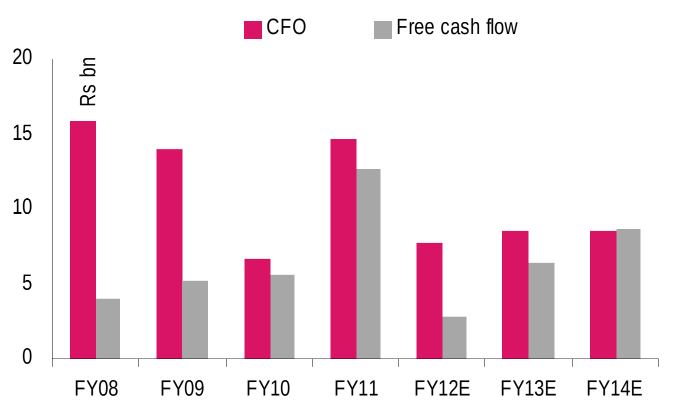


Source: Company, PINC Research

Strong free cash flow generation to strengthen balance sheet further

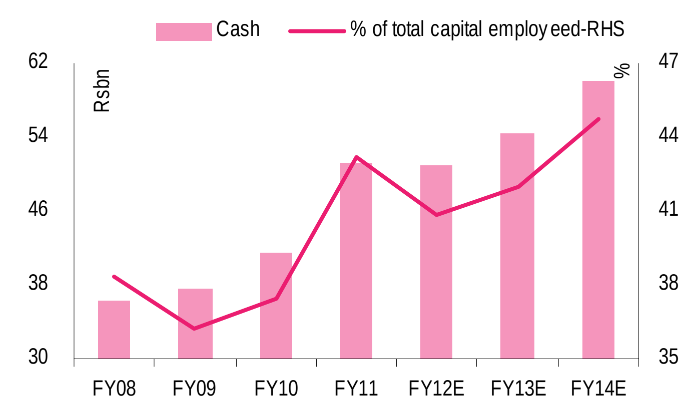
Although, we estimate cash flow from operation to decline at a CAGR of 17% over FY11-FY14E, the company would continue to generate strong free cash flow, which is expected to strengthen the balance sheet further with cash and equivalent of Rs60.1bn in FY14E, representing 45% of the total capital employed.

CFO and free cash flow



Source: Company, PINC Research

Cash and Equivalent and as a % of capital employed



Source: Company, PINC Research

But is it really in minority shareholders' interest?

Diversification in unrelated businesses (green energy, nuclear power) & geographies (Indonesia) is a negative offshoot of a strong balance sheet. We value surplus cash at 20% discount to BV.

Due to lack of sufficient growth projects in the core business and mechanism to return the surplus to the investors, we believe that the diversification in unrelated businesses (green energy, nuclear power) and geographies (Indonesia) is a negative offshoot of a strong balance sheet. Further, there is a risk of investing the surplus cash in buying govt's stake in another state-owned enterprise in a bid to meet the government's divestment target. Considering these risks, we are not excited about NALCO's strong balance sheet and value the cash at a 20% discount to book value.

Valuations and Recommendation

Although NALCO's stock has declined 48% in 2011 on 19% decline in LME aluminium prices and concerns on rising cost, putting pressure on margin, we remain negative on NALCO on lower LME prices, continued cost pressure and imprudent investments. We downgrade the stock to 'SELL' with a revised TP of Rs42 (5.0x FY13E EV/EBITDA).

PINC revised assumptions and estimates

	FY12E			FY13E			FY14E
	Earlier	Revised	% Change	Earlier	Revised	% Change	Introducing
LME Aluminium (USD/t)	2,300	2,280	(0.9)	2,250	2,000	(11.1)	2,100
Benchmark Alumina (USD/t)	357	353	(0.9)	349	300	(14.0)	315
USD/INR	46.0	48.2	4.8	45.5	49.0	7.7	47.0
Aluminium sales ('000 t)	437	423	(3.2)	469	443	(5.5)	443
Alumina sales ('000 t)	923	854	(7.5)	1,075	1,134	5.5	1,270
Net Sales (Rs mn)	65,132	64,559	(0.9)	69,762	64,018	(8.2)	66,548
EBITDA (Rs mn)	13,333	13,121	(1.6)	15,603	10,849	(30.5)	11,202
Net Profit (Rs mn)	9,569	9,398	(1.8)	10,635	7,552	(29.0)	7,667
EPS (Rs)	3.7	3.6	(1.8)	4.1	2.9	(29.0)	3.0
Target price (Rs)				57	42	(27.6)	

Source: PINC Research

Target price sensitivity (Rs)

FY13 EV/EBITDA (x)	FY13E LME Aluminium price (USD/tonne)				
	1,800	1,900	2,000	2,100	2,200
4.0	27	32	37	43	48
4.5	28	34	39	45	51
5.0	29	35	42	48	54
5.5	30	37	44	51	57
6.0	31	38	46	53	61

Source: PINC Research

FY13E EPS sensitivity (Rs)

Alumina as a % of LME Aluminium	FY13E LME Aluminium price (USD/tonne)				
	1,800	1,900	2,000	2,100	2,200
14.0%	1.1	1.8	2.6	3.4	4.2
14.5%	1.2	2.0	2.8	3.6	4.4
15.0%	1.3	2.1	2.9	3.7	4.5
15.5%	1.4	2.3	3.1	3.9	4.7
16.0%	1.6	2.4	3.2	4.0	4.9

Source: PINC Research

Year Ended March (Figures in Rs mn)

Income Statement	FY10	FY11	FY12E	FY13E	FY14E
Total Revenue	51,745	60,558	64,559	64,018	66,548
Growth (%)	*(0.8)*	*17.0*	*6.6*	*(0.8)*	*4.0*
Operating Profit	10,907	15,941	13,121	10,849	11,202
Growth (%)	*(39.1)*	*46.2*	*(17.7)*	*(17.3)*	*3.3*
Other income	3,741	3,617	5,127	4,851	5,174
EBITDA	14,648	19,558	18,248	15,700	16,375
Depreciation	3,194	4,301	5,011	5,211	5,422
EBIT	11,454	15,258	13,237	10,489	10,953
Interest Paid	23	1	1	1	1
PBT (before E/o items)	11,432	15,257	13,237	10,489	10,952
Tax Provision	3,406	4,555	3,839	2,937	3,286
Minority Interest	-	-	-	-	-
Adjusted Net Profit	8,025	10,702	9,398	7,552	7,667
Growth (%)	*(36.2)*	*33.4*	*(12.2)*	*(19.6)*	*1.5*
E/o loss/(income)	117	(9)	-	-	-
Reported Net profit	8,142	10,693	9,398	7,552	7,667
Diluted EPS (Rs)	3.1	4.2	3.6	2.9	3.0
Diluted EPS Growth (%)	*(36.2)*	*33.4*	*(12.2)*	*(19.6)*	*1.5*

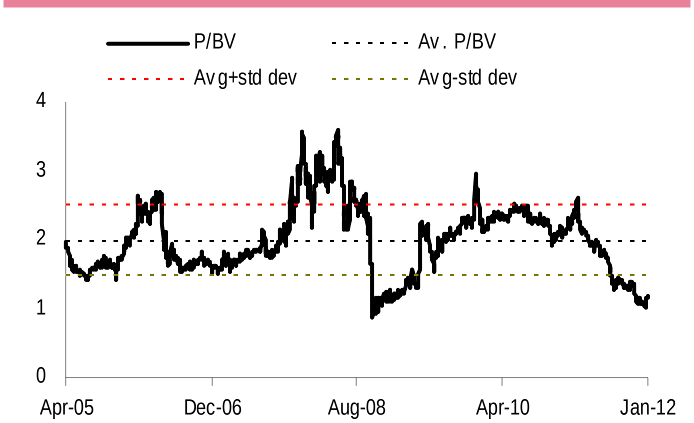
Cash Flow Statement	FY10	FY11	FY12E	FY13E	FY14E
Pre-tax profit	11,432	15,257	13,237	10,489	10,952
Depreciation	3,194	4,301	5,011	5,211	5,422
Total Tax Paid	(3,406)	(4,555)	(3,839)	(2,937)	(3,286)
Chg in working capital	(1,412)	3,472	(1,603)	652	587
Other operating adjustments	(3,082)	(3,768)	(5,126)	(4,850)	(5,173)
Cash flow from oper (a)	6,725	14,707	7,680	8,564	8,503
Capital Expenditure	(4,944)	(5,583)	(10,000)	(7,000)	(5,000)
Chg in investments	-	-	-	-	-
Other investing adjustments	3,858	3,608	5,127	4,851	5,174
Cash flow from inv (b)	(1,086)	(1,975)	(4,873)	(2,149)	174
Free cash flow (a+b)	5,639	12,732	2,807	6,414	8,677
Equity raised/(repaid)	-	-	-	-	-
Debt raised/(repaid)	-	149	-	-	-
Change in minority interest	-	-	-	-	-
Dividend (incl. Tax)	(1,885)	(3,003)	(3,015)	(3,015)	(3,015)
Other financing adjustments	(23)	(1)	(1)	(1)	(1)
Cash flow from fin (c)	(1,907)	(2,855)	(3,016)	(3,016)	(3,016)
Net chg in cash (a+b+c)	3,732	9,878	(209)	3,399	5,661

Balance Sheet	FY10	FY11	FY12E	FY13E	FY14E
Equity Share Capital	6,443	12,886	12,886	12,886	12,886
Reserves & surplus	97,513	98,760	105,143	109,679	114,331
Shareholders' funds	103,956	111,646	118,029	122,565	127,217
Minority interest	-	-	-	-	-
Total Debt	-	149	149	149	149
Capital Employed	103,956	111,795	118,178	122,714	127,366
Net fixed assets	70,797	72,371	77,360	79,149	78,727
Cash & Cash Eq.	41,391	51,269	51,060	54,459	60,119
Net working capital	(1,626)	(4,910)	(3,308)	(3,959)	(4,546)
Investments	-	-	-	-	-
Net Deferred tax Assets	(6,606)	(6,935)	(6,935)	(6,935)	(6,935)
Total Assets	103,956	111,795	118,178	122,714	127,366

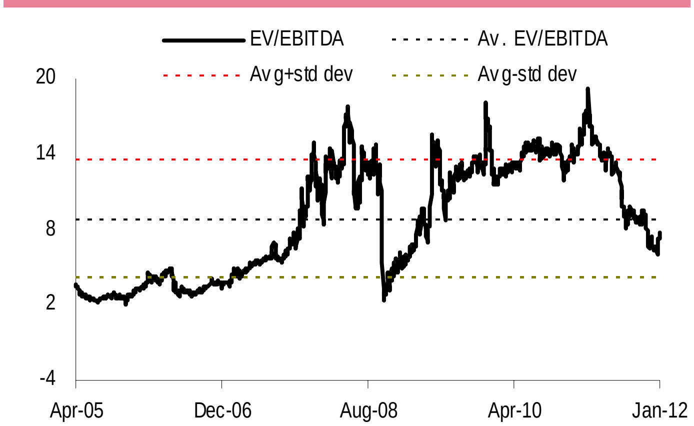
Key Ratios	FY10	FY11	FY12E	FY13E	FY14E
OPM (%)	21.1	26.3	20.3	16.9	16.8
Net Margin (%)	15.5	17.7	14.6	11.8	11.5
Yield (%)	0.7	1.8	1.8	1.8	1.8
Net debt/Equity (x)	(0.4)	(0.5)	(0.4)	(0.4)	(0.5)
Working Capital Days	(46)	(64)	(63)	(64)	(64)
RoCE (%)	7.5	9.3	7.7	5.9	5.8
RoE (%)	8.0	9.9	8.2	6.3	6.1
EV/Net Sales (x) *	3.2	1.4	1.4	1.4	1.2
EV/EBITDA (x) *	15.4	5.4	7.0	8.0	7.1
PER (x)	27.8	13.5	15.3	19.1	18.8
PCE (x)	19.9	9.6	10.0	11.3	11.0
Price/BV (x)	2.1	1.3	1.2	1.2	1.1

*Note: EV based valuation multiples calculated valuing CWIP at book value; * Cash at 20% discount to book value; CMP as on 9th Jan 2012.*

1-Year rolling forward P/BV Band



1-Year rolling forward EV/EBIDTA Band



PINC RESEARCH

TEAM

EQUITY DESK

Sadanand Raje	Head - Institutional Sales Technical Analyst	*sadanand.raje@pinc.co.in*	91-22-6618 6366

RESEARCH

Vineet Hetamasaria, CFA	**Head of Research,** *Auto, Cement*	*vineet.hetamasaria@pinc.co.in*	91-22-6618 6388
Nikhil Deshpande	*Auto, Auto Ancillary, Cement*	*nikhil.deshpande@pinc.co.in*	91-22-6618 6339
Tasmai Merchant	*Auto, Auto Ancillary, Cement*	*tasmai.merchant@pinc.co.in*	91-22-6618 6377
Vinod Nair	*Construction, Power, Capital Goods*	*vinod.nair@pinc.co.in*	91-22-6618 6379
Ankit Babel	*Capital Goods, Engineering*	*ankit.b@pinc.co.in*	91-22-6618 6551
Hitul Gutka	*Power*	*hitul.gutka@pinc.co.in*	91-22-6618 6410
Subramaniam Yadav	*Construction*	*subramaniam.yadav@pinc.co.in*	91-22-6618 6371
Madhura Joshi	*Power*	*madhura.joshi@pinc.co.in*	91-22-6618 6395
Satish Mishra	*Fertiliser, Oil & Gas*	*satish.mishra@pinc.co.in*	91-22-6618 6488
Urvashi Biyani	*Fertiliser, Oil & Gas*	*urvashi.biyani@pinc.co.in*	91-22-6618 6334
Naveen Trivedi	*FMCG*	*naveent@pinc.co.in*	91-22-6618 6384
Rohit Kumar Anand	*IT Services*	*rohit.anand@pinc.co.in*	91-22-6618 6372
Niraj Garhyan	*IT Services*	*niraj.garhyan@pinc.co.in*	91-22-6618 6382
Namrata Sharma	*Media*	*namrata.sharma@pinc.co.in*	91-22-6618 6412
Sakshee Chhabra	*Media*	*sakshee.chhabra@pinc.co.in*	91-22-6618 6516
Bikash Bhalotia	*Metals, Mining*	*bikash.bhalotia@pinc.co.in*	91-22-6618 6387
Harleen Babber	*Metals, Mining*	*harleen.babber@pinc.co.in*	91-22-6618 6389
Dipti Vijaywargi	*Metals, Mining*	*dipti.vijaywargi @pinc.co.in*	91-22-6618 6393
Sushant Dalmia, CFA	*Pharma*	*sushant.dalmia@pinc.co.in*	91-22-6618 6462
Poonam Sanghavi	*Pharma*	*poonam.sanghavi@pinc.co.in*	91-22-6618 6709
Suman Memani	*Real Estate, Mid caps*	*suman.memani@pinc.co.in*	91-22-6618 6479
Abhishek Kumar	*Real Estate, Mid caps*	*abhishek.kumar@pinc.co.in*	91-22-6618 6398
C Krishnamurthy	*Technical Analyst*	*krishnamurthy.c@pinc.co.in*	91-22-6618 6747

SALES

Rajeev Gupta	*Equities*	*rajeev.gupta@pinc.co.in*	91-22-6618 6486
Ankur Varman	*Equities*	*ankur.varman@pinc.co.in*	91-22-6618 6380
Himanshu Varia	*Equities*	*himanshu.varia@pinc.co.in*	91-22-6618 6342
Shailesh Kadam	*Derivatives*	*shaileshk@pinc.co.in*	91-22-6618 6349
Ganesh Gokhale	*Derivatives*	*ganeshg@pinc.co.in*	91-22-6618 6347

DEALING

Mehul Desai	*Head - Sales Trading*	*mehul.desai@pinc.co.in*	91-22-6618 6303
Amar Margaje		*amar.margaje@pinc.co.in*	91-22-6618 6327
Ashok Savla		*ashok.savla@pinc.co.in*	91-22-6618 6321
Sajjid Lala		*sajjid.lala@pinc.co.in*	91-22-6618 6337
Raju Bhavsar		*rajub@pinc.co.in*	91-22-6618 6322
Hasmukh D. Prajapati		*hasmukhp@pinc.co.in*	91-22-6618 6325

DIRECTORS

Gaurang Gandhi		*gaurangg@pinc.co.in*	91-22-6618 6400
Hemang Gandhi		*hemangg@pinc.co.in*	91-22-6618 6400
Ketan Gandhi		*ketang@pinc.co.in*	91-22-6618 6400

COMPLIANCE

Rakesh Bhatia	Head Compliance	*rakeshb@pinc.co.in*	91-22-6618 6400

Rating Objective

Rating	Large Caps	Mid Caps
	M.Cap > USD1bn	M.Cap <= USD1bn
	Return %	
BUY	More than 15	More than 20
Accumulate	5 to 15	10 to 20
Reduce	(-)5 to +5	0 to 10
Sell	Below (-)5	Less than 0

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