2 December 2013 | 24 pages

EMEA

Metals and Mining

Mulled Mine 2014

- **Investment thesis** – We remain neutral on the metals and mining sector on a six-month view; however, we think the sector can potentially deliver a strong second-half 2014 performance based on free cash flow, cost cutting and volume growth as the market looks into 2015.

- **2013 the year that was** – In 2013 the mining companies changed CEOs, cut capex plans and focused on costs but, despite this, the sector has underperformed the FTSE 100 by around 24% YTD. This looks set to be the third year running that the sector has underperformed, following 19% underperformance in 2011 and 12% in 2012.

- **2014 and inflection year?** – We believe that 2014 will be a tale of two halves. We believe the sector will perform in line with markets in the first half of 2014 driven by a near-term slowdown in China and a muted commodity price outlook. However, we think the sector will benefit in the second half from improving free cash flow yields and improving balance sheets driven by reduced capital spend and cost cutting. We see 2015 as a potential fillip year for the mining industry and we think that investors should position themselves for this by mid-2014.

- **Valuation** – We forecast the sector to deliver CAGR in earnings of around 7% until the end of the decade, driven principally by volume growth and cost cutting rather than by commodity prices. Importantly, we forecast free cash flow yield to grow at a CAGR of 23.9% until the end of the decade, which is a function of cut-backs in capex. Overall, we estimate the sector is trading at a c10% PE discount to the UK market, with Rio Tinto remaining the cheapest name on a relative basis.

- **Risks** – The key risk for 2014 is a deterioration or even collapse in emerging markets growth, which if to occur would result in further downward pressure on commodity markets. US tapering could also provide broader support for the US$ which again could provide downward pressure on commodity markets.

- **Stocks for 2014** – We believe the large diversified miners will outperform the sector in 2014. Rio Tinto remains our favoured Buy among the large-cap UK diversified mining companies, followed by Glencore-Xstrata. We have Sell ratings on Antofagasta, First Quantum, Nyrstar, New World Resources, African Barrick, Assore, Fresnillo, Hochschild, Petropavlovsk and Randgold Resources. We remain underweight the gold and base metals stocks and our least favoured name among the large-cap miners is Anglo American.

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See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

Sector Top Picks - 2014

We retain our current six-month neutral stance on the metals and mining sector, given our view of near-term risks and a slowdown in commodity consumption. However, we think 2014 could be an inflection point for the metals and mining sector as volume growth, cost cutting, and cash flow come through. We would be selectively building positions in our key favoured large diversified names such as Rio Tinto and Glencore-Xstrata with a view that these stocks could perform strongly in the second half of 2014.

Figure 1. Top Picks

Exposure	Overall Stance	Equities	RIC	CCY	Price 27/11/13	PT	Rating/Risk	1Y ETR	Analyst
Diversified	**Neutral**	**Leader(s)**							
		Rio Tinto PLC	RIO.L	GBP	31.39	40.00	Buy	31%	Heath R Jansen
		Laggard(s)							
		Anglo American PLC	AAL.L	GBP	13.39	14.00	Neutral	9%	Heath R Jansen
Bulks	**Overweight**	**Leader(s)**							
		African Minerals Ltd	AMlq.L	GBP	2.01	3.00	Buy/High	49%	Michael E Flitton
		African Rainbow Mineral	ARIJ.J	ZAR	183.26	225.00	Buy	26%	Michael E Flitton
		Laggard(s)							
		New World Resources	NWRR.L	GBP	0.75	0.75	Sell/High	0%	Harsh Bardia
		Assore Limited	ASRJ.J	ZAR	387.89	290.00	Sell	-23%	Michael E Flitton
Base Metals	**Underweight**	**Leader(s)**							
		Laggard(s)							
		Antofagasta	ANTO.L	GBP	7.76	7.70	Sell	2%	Jatinder Goel, CFA
		FST Quantum Minerals	FQM.L	GBP	10.10	9.50	Sell	-4%	Michael E Flitton
		Nyrstar	NYR.BR	EUR	2.13	2.00	Sell/High	1%	Jatinder Goel, CFA
PGMs	**Overweight**	**Leader(s)**							
		Lonmin PLC	LMI.L	GBP	3.08	4.52	Buy	47%	Jon H Bergtheil
		Aquarius Platinum Ltd	AQP.L	GBP	0.43	0.49	Neutral	14%	Jon H Bergtheil
		Petra Diamonds	PDL.L	GBP	1.09	1.41	Buy	29%	Jon H Bergtheil
Gold/Silver	**Underweight**	**Laggard(s)**							
		Petropavlovsk PLC	POG.L	GBP	0.61	0.55	Sell	-10%	Jon H Bergtheil
		African Barrick Gold Plc	ABGL.L	GBP	1.67	1.32	Sell	-21%	Jon H Bergtheil
Steels	**Underweight**	**Leader(s)**							
		ArcelorMittal	ISPA.AS	EUR	12.56	13.60	Buy	10%	Michael E Flitton
		Laggard(s)							
		Klöckner & Co.	KCOGn.DE	EUR	10.00	10.50	Neutral	5%	Nitesh Agarwal

Source: Powered by dataCentral.

Diversified miners likely to outperform

The diversified miners are likely to outperform the rest of the sector companies in 2014E based on capex cuts, free cash flow generation, and an improving returns trajectory. Rio Tinto remains our key Buy based on a self-help strategy that the company has indicated could involve an Alcan spin-off, the staging of an expansion to 360mtpa in the Pilbara and the potential release of franking credits in Australia. Anglo American remains our least preferred large cap diversified miner, based on our view that there are no quick fixes and we maintain our Neutral recommendation

Mid-tier mining 2014 continues to face headwinds

We remain cautious on base metals equities on cracking concepts. Antofagasta and First Quantum are our least favoured stocks. First Quantum screens as one of the most financially risky stocks in our coverage, while declining returns on the Inmet acquisition and the bondholder litigation overhang remain a concern. In the case of Antofagasta there is little growth to 2015E and the capital projects are unattractive with limited room for a special dividend, in our view, due to the project pipeline. We are relatively positive on iron ore equities on a 12-month view and have got all three iron ore names AMI, FXPO, and LOND on Buy, but we maintain our preference for AMI on a strong balance sheet and significant volume growth prospects.

Smelting in 2014

Recent positive price settlements for copper TC/RC have been favourable for the smelting companies but we think this is now priced in. We think Zinc TC will remain under pressure beyond 2014. Nyrstar is our key Sell given our outlook on zinc TC coupled with potential financing issues with its growth projects.

Gold equities in 2014

Economic improvement should keep the ‘insurance’ demand for gold and silver as a commodity subdued, given that credit-crisis nerves are fading. The gold equities are in a bind and need self-help, in our view, but at this stage there seems little evidence of them being willing or able to turn their predicaments around. Our least favoured gold stock is Petropavlovsk, based on a balance sheet that is very vulnerable to lower gold prices. We think a share issue cannot be ruled out.

PGM metals in 2014

For 2014 we believe that PGMs will continue to outperform gold and silver, as they did in 2013, on the back of improving global auto demand. Platinum equities are also likely to be beneficiaries of a weakening South African currency and a lowering of inter-union tension now that the AMCU Union has achieved dominance. Section 54 safety stoppages have also been declining sharply, boosting industry production. Our favoured play is Lonmin given our view of efficiency improvements, a strong balance sheet and our PGM view.

Steel in 2014

We expect the European steel pricing environment in 2014 to remain subject to chronic overcapacity and lack of pricing power (see our sector framework European Steel - The Long and Short of it). As such, prices and therefore earnings are likely it continue to be driven by the inventory cycle in Europe and changes in China's IP. While a stabilisation in the European macro environment should help tighten the market, we are sceptical of the extent to which demand, and hence volume, recovery will drop through into earnings with cost bases now dominated by variable costs. In the near term the sector looks vulnerable to a pullback with the aggressive multiple expansion in Q4 taking valuations to trough multiples in what we regard as a mid-cycle environment.

We are constructive on ArcelorMittal based on a combination of a restructuring story and low-cost options, together with our favourable view on DM recovery. It is the only European steel stock with significant exposure to the US market. We remain more cautious on the rest of the steel names.

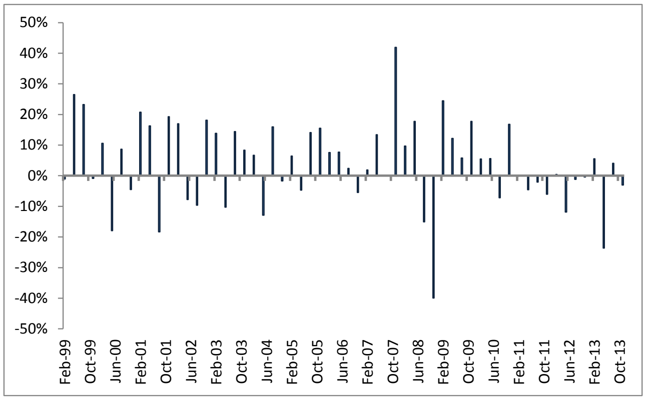
The Year That Was and the Year That Will Be

2013 - The year that was

- The UK mining sector has underperformed the FTSE100 index by around 24% YTD. 2013 looks set to represent the third consecutive year of underperformance after the sector underperformed by 19% in 2011 and 12% in 2012.

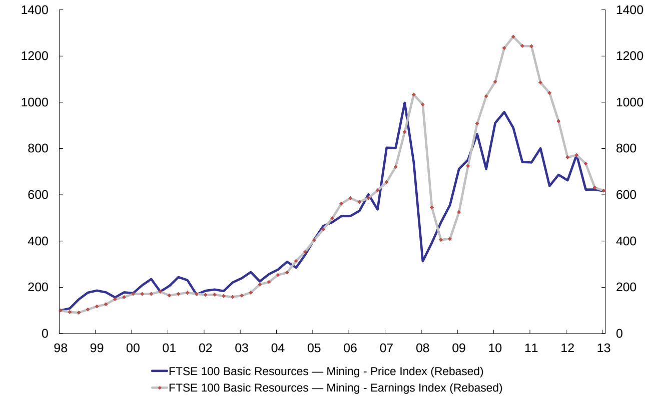
- In our view, the major driver of the underperformance has been falling earnings, driven largely by lower commodity prices.

Figure 2. QTR performance – UK mining sector versus the FTSE 100



Source: Datastream, Citi Research

Figure 3. FTSE 100 miners price and earnings indexed



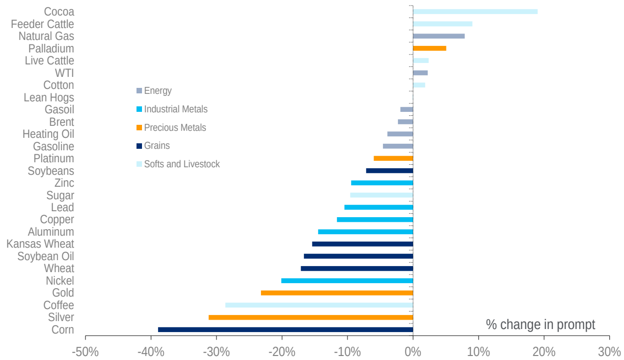
Source: Datastream, Citi Research

- Negative commodity price drivers - Most major commodities are down 10-15% this year, with commodity prices struggling since the Super Cycle Sunset.

Figure 4. Nominal commodity price returns (Super Cycle Sunset)

Source: Bloomberg, Citi Research

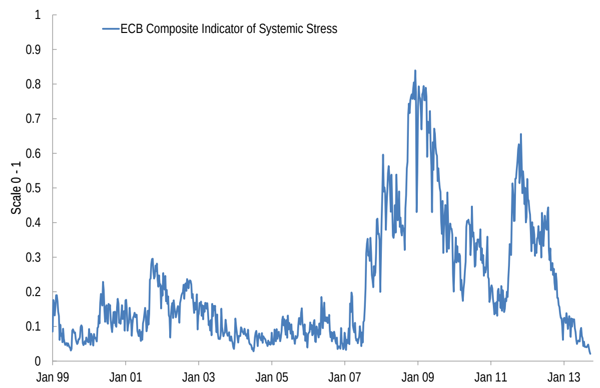
Figure 5. 2013 YTD nominal commodity price returns



Source: Bloomberg, Citi Research, * through to 14th November

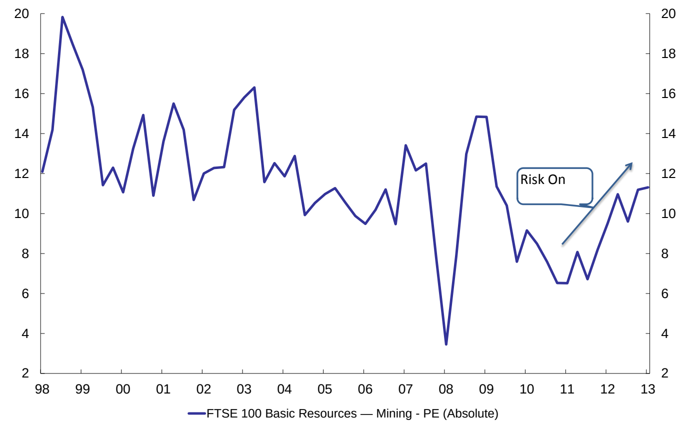
- Falling macro risk, as evidenced by the ECB Corporate Indicator of Systemic Stress, has been positive for equities and driven a PE rerating of equity markets and the miners. The ECB's composite indicator of systemic risk is constructed largely from a variety of financial market indicators. The indicator is at its lowest implied risk level since inception in 1999.

Figure 6. ECB Composite Indicator of Systemic Stress



Source: ECB

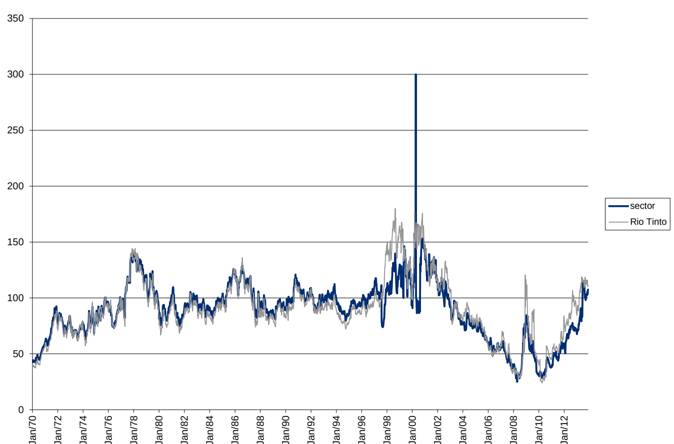
Figure 7. Forward PE of UK FTSE 100 Mining



Source: Citi Research

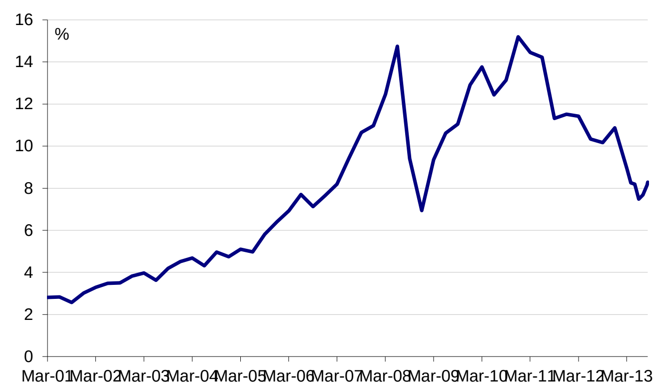
- As we have highlighted previously, we believe that the mining sector has transitioned away from being valued as a growth sector to now trading on a dividend / value basis. This is shown by the abrupt derating on a dividend yield basis, with the miners now trading in line with the market on a yield basis. Importantly, this could draw a floor under the sector as a % of the overall market at around 8%, which would mean it would be difficult to run a structural underweight position on the mining sector.

Figure 8. UK mining dividend yield versus the UK market



Source: Datastream, Citi Research

Figure 9. Mining as a % of FTSE100

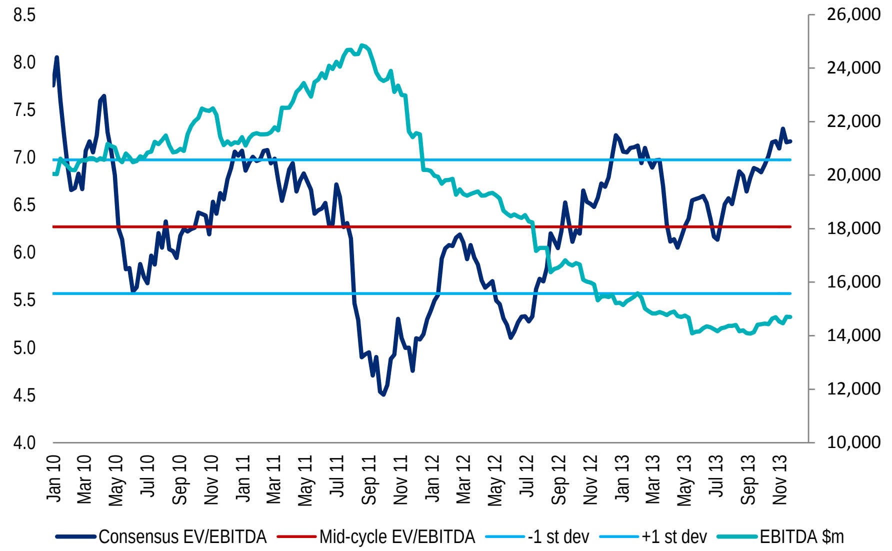


Source: Datastream, Citi Research

Steel versus Mining

- Steels have outperformed the miners in 2014, due largely to a multiple uplift rather than earnings upgrades. Interestingly EBITDA for the European steel sector troughed in May 2013, approximately a year before the miners, and despite EBITDA remaining flat since then, the sector has benefited from a multiple uplift on a European risk-on trade.

Figure 10. European Steel sector EV/EBITDA and EBITDA

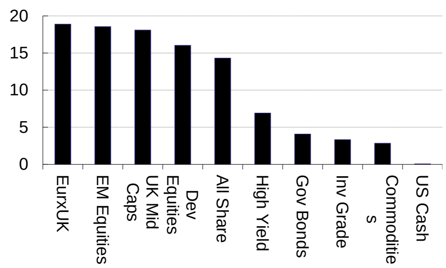


Source: Company data, Bloomberg, Citi Research

Market risk on — leaders and laggards

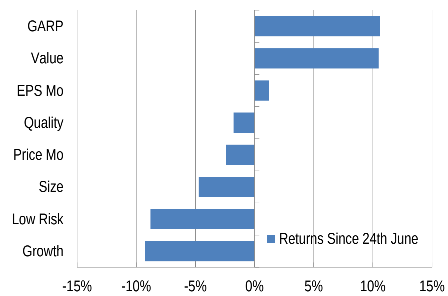
It has paid investors to take on risk in most areas in the past few months. Figure 11 shows the performance of key asset classes since 24th June this year. Europe ex-UK equities have been the best-performing major asset class during this time and are up c20% in the last few months; a healthy return gap over c0% cash. EM equities and UK mid-caps have followed close behind. There is a big return drop-off to other asset classes, where high yield, i.e. fixed income risk, leads the also-rans.

Figure 11. Asset returns, Since 24th June



Source: Datastream

Figure 12. Style performance



Source: Citi Research

2014 – The year that will be

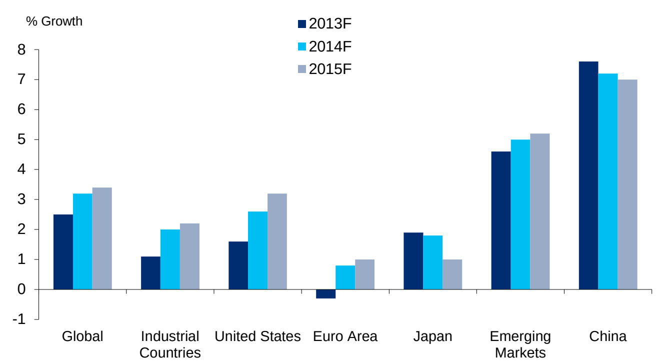
- We think that 2014 is likely to be a better year for the mining equities vs. the commodities. Broadly, Citi's house view is neutral to bearish on industrial commodity prices. Nevertheless, we think the mining equities are likely to deliver higher volume growth in 2014, cut costs and capex, which are likely to result in improvements in free cash flow yield and earnings. The sector is setting itself up for outperformance in 2015E, but our view is that the market is unlikely to pay up for this inflection until the middle of 2014.

- Citi's economists expect improving economic global growth of 2.2% for 2014 and 3.4% for 2015, vs. 2.5% in 2013. Higher growth is forecast to be uneven in both developed economies (DM) and emerging markets (EM).

- Risks remain and the major uncertainty in 2014 that is likely to impact the miners pertains to China's ability to carry out its economic transition and how EM countries deal with sluggish world trade growth and fiscal and current account imbalances, leaving EM countries that count on exports vulnerable. The deterioration in public and private sector debt, built-up as policy-makers struggled to sustain growth in recent years, is becoming harder to rectify, potentially triggering downgrades in sovereigns. Citi sees downside risks to EM growth.

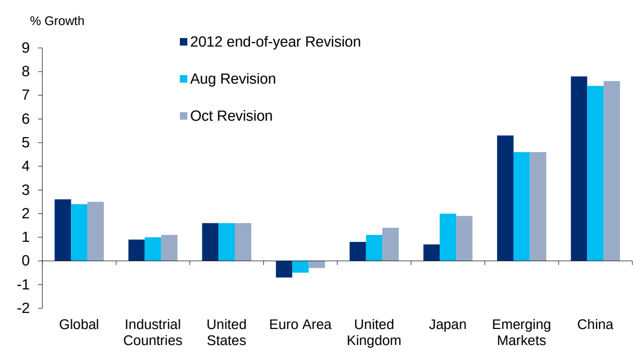
- This modest growth outlook should lead to modest commodity demand growth just as supply projects years in the making hit the market. A slowdown in the sanctioning of new supply projects should lead to market tightness down the road, especially in industrial metals and potentially bulks, thereby sowing the seeds of the next commodity upturn; however, this is unlikely to occur before 2016E.

Figure 13. Citi Economics' Forecasts for Selected Countries and Regions



Source: Citi Research

Figure 14. Citi Economics' 2013 Forecasts Revisions

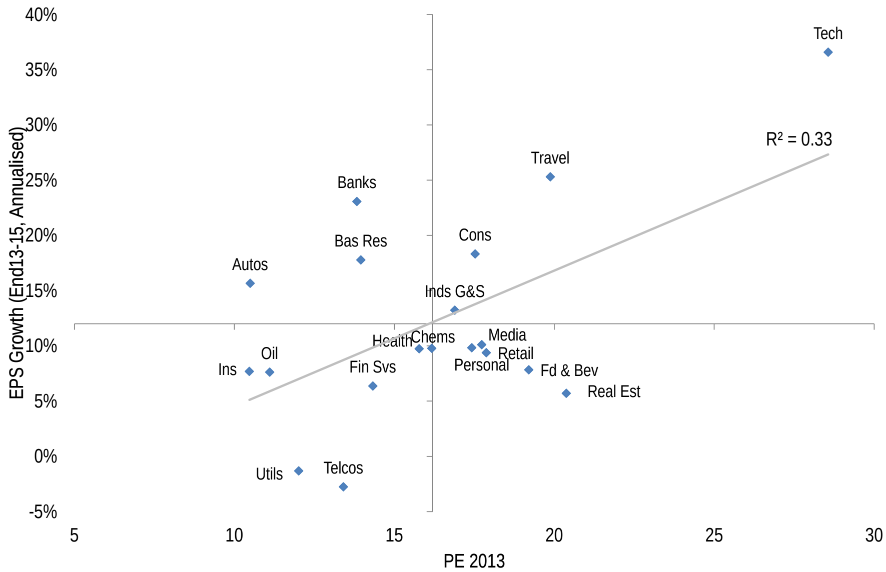


Source: Citi Research

- We believe that stabilizing global macro conditions will progressively end the current earnings downgrade cycle for the metals and mining sector. We are not suggesting that there is a new upgrade cycle to come, just that it is more likely that analysts' earnings estimates are hit in the next 2-3 years compared with the previous 2-3 years.

- The metals and mining sector now compares favourably on PE versus other European sectors when measured against 2014-15E compound earnings growth (Citi forecasts).

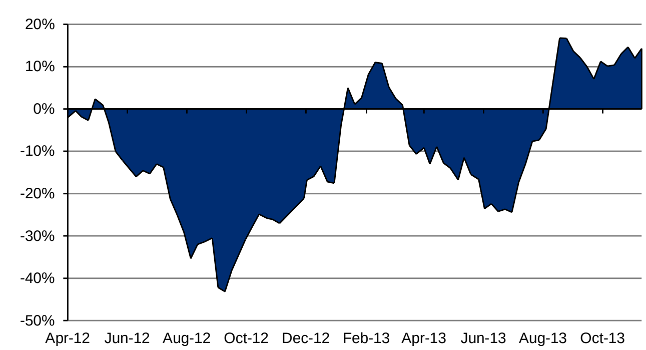
Figure 15. European Sector — EPS Growth vs P/E 2013E



Source: Citi Research estimates

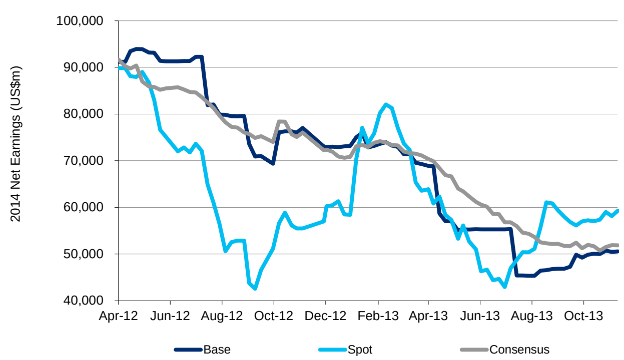
- Interestingly, spot versus consensus earnings is pointing to earnings upgrades of around 10% for the sector, which is the first time in the past two years. The sector is trading at a 10% discount to the market and shows a huge spread, with Rio Tinto trading at a 1 st dev discount to the market.

Figure 16. Earnings revisions spot vs. consensus (%)



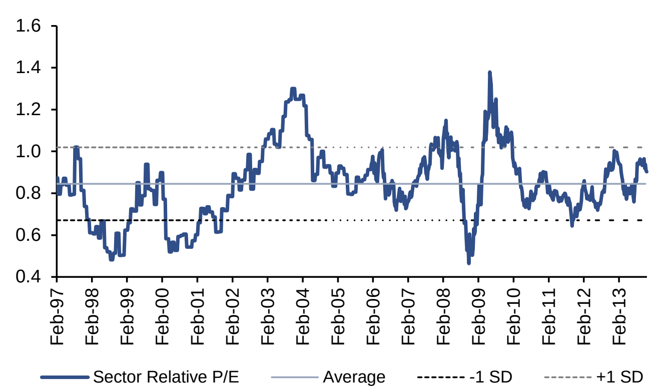
Source: Citi Research, IBES

Figure 17. 2014E Net Earnings (US$m)



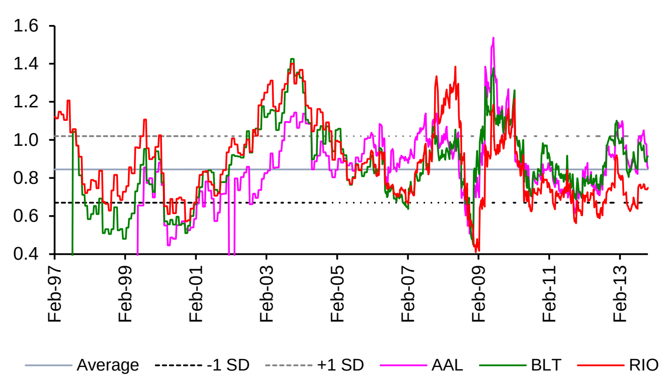
Source: Citi Research

Figure 18.PE relative to UK market



Source: Citi Research

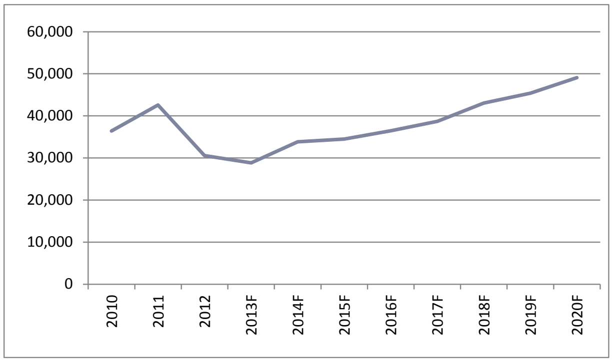
Figure 19. PE relative large miners



Source: Citi Research

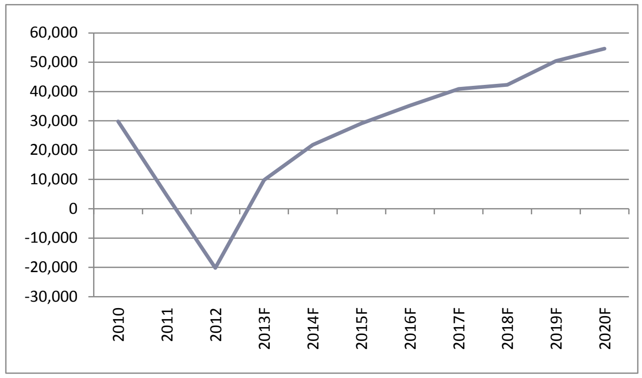
- We forecast the sector to deliver a CAGR in earnings of around 7% until the end of the decade, driven principally by volume growth and cost cutting rather than by commodity prices. Importantly, we forecast free cash flow yield to grow at a CAGR of 23.9% until the end of the decade, which is a function of cut-backs in capex.

Figure 20. Earnings growth US$m



Source: Company reports, Citi Research estimates

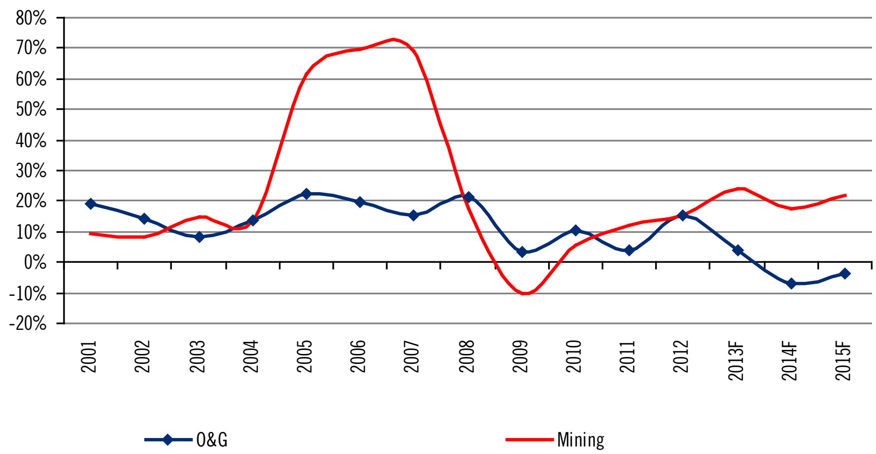
Figure 21. Free cash flow US$m



Source: Company reports, Citi Research estimates

- Return on incremental invested capital (ROIIC) is improving for the mining companies despite our outlook for flat to declining prices. The major driver is reduced capex spend and improvements in cash flow.

Figure 22. Return on Incremental invested Capital (ROIIC)

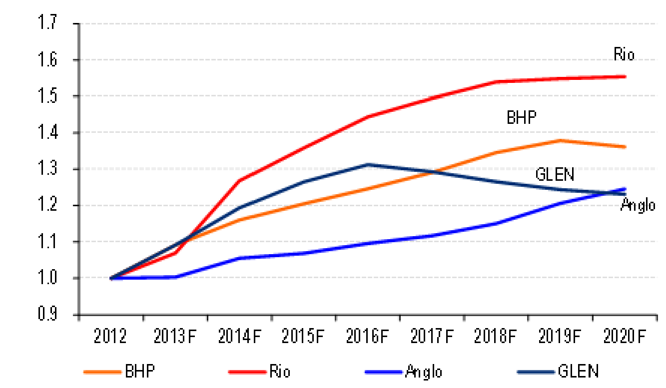


Source: Company reports, Citi Research estimates

Cash flow and volumes growth major alpha driver

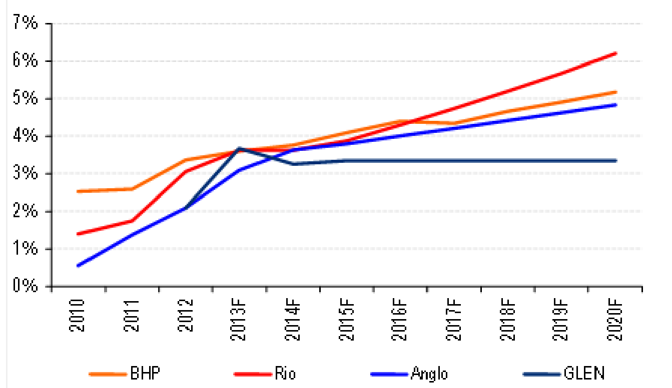
- Overall Citi forecasts a CAGR in volume growth of 3.1% until the end of the decade; however, the volume growth is skewed nearer term. We forecast BHPB to deliver YoY volume growth of 6%, Rio Tinto 19%, Anglo American 5% and Glencore Xstrata 9.4% in 2014 over 2013.

Figure 23. Volume growth of the majors starting to kick in 2014



Source: Company reports, Citi Research estimates

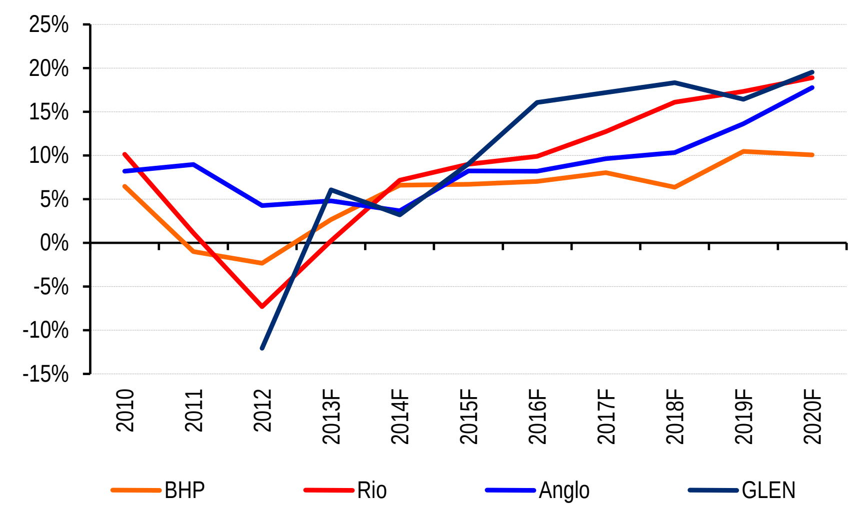
Figure 24. Dividend Yield growth



Source: Company reports, Citi Research estimates

- On a free cash flow basis, we expect Rio Tinto to deliver the highest FCF yield in 2014, with the baton passing to Glencore by 2015.

Figure 25. Free cash flow yield



Source: Company reports, Citi Research estimates

- Cost reductions are likely to come through in 2014E, with the major miners targeting or delivering cost reductions of between 4-8% on their total cost base.

Figure 26. Cost cutting targets of major miners

Company	Annual Target ($m)	% of 2012 Cost Base	Timeline	Comments
Anglo American	1,300	5.4%	2016	$300m value leakage by reallocating phasing of projects, $500m overhead (including $200m platinum), commercial model value $400m and supply chain benefit of $100m
BHP Billiton				No explicit target, $2.7bn achieved in FY2013
Glencore Xstrata	2,007	4.3%	2014	$450m marketing, $175m financing, $1,382m cost savings
Rio Tinto	3,000	8.5%	2014	Cumulative $5bn over 2013/2014 of which $3bn is sustainable

Source: Company reports, Citi Research

Commodity prices unlikely to inflect in 2014E

Chinese growth to slow in coming months

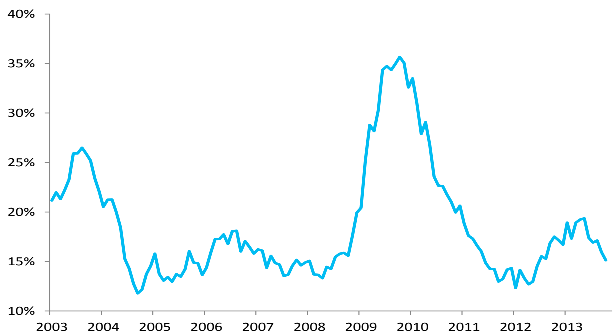
- **While Chinese growth improved in Q3, we expect slower growth in the coming months as a result of tight credit conditions**. After the SHIBOR crisis in June, credit loosened somewhat in August but has tightened progressively since. With growth having rebounded and CPI rising as a result of spiking vegetable prices, monetary policy is unlikely to ease in the coming months. China's financial regulators are also among the strongest reform advocates and are likely to use this opportunity to push for difficult financial sector reforms.

- **Rapidly increasing housing prices, particularly in tier 1 cities, are also beginning to prompt a new round of real estate cooling measures**, including more restrictive mortgage lending and deposit requirements as well as limitations on purchases in Shanghai and Beijing. Significant additional cooling measures are likely in 2014, which is likely to lead to weaker real estate construction, growth rates of which have not picked up commensurately with the increase in prices and sales.

- **The local government investment and financing model, which underpins much of China's infrastructure and real estate industries, has also come under pressure from the new government and is likely to lead to structurally slower spending growth from local governments in the coming years.** China's Premier recently announced a ban "in principle" on local governments establishing new companies; state media have carried prominent critiques of local government development models based around growth at all costs; and a new audit of local government debt has recently been concluded.

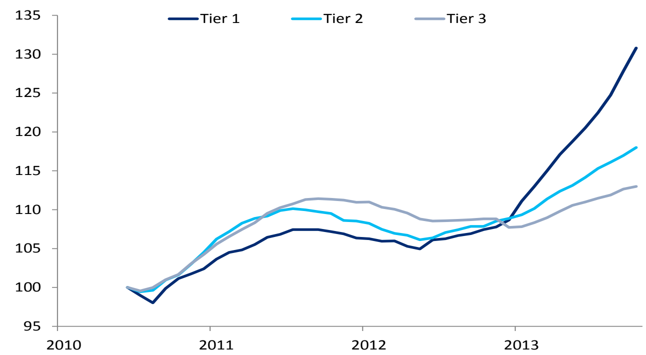
- **Factor price reforms also continue to move forward, with crude oil, natural gas, and electricity all seeing reforms in 2013.** Next year is likely to see further moves towards more market based pricing, aided by a rapid expansion in domestic commodity futures contracts and liberalizations of import and export regimes for commodities such as iron ore, crude oil, and refined oil products. This should steadily push domestic pricing to be more reflective of spot market dynamics as well as international prices.

Figure 27. Tight credit conditions are likely to lead to slower growth in early 2014, with the government showing no signs of loosening
Real YoY change in the stock of social financing



Source: PBoC, Citi Research

Figure 28. Rapidly rising housing prices are once again prompting a government response, which is likely to intensify in 2014
New housing prices, indexed



Source: Soufun, WIND, Citi Research

Urbanization policies to shape commodities demand

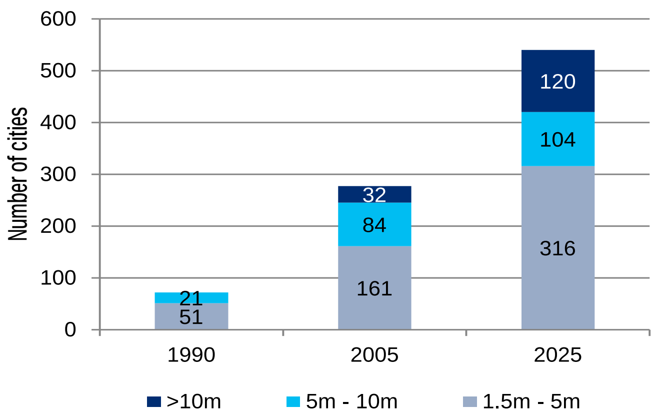
- **As the largest driver of Chinese commodities demand, policy decisions related to urbanization are some of the most important areas to watch going forward, particularly given the emphasis placed on the issue over the past year**. In particular, we believe land reforms, residence permit (*hukou*) liberalization, and the expansion of social services provided to migrants will have a large impact on the pace and character of urbanization going forward.

- **One feature of reforms to date has been the faster reform of urbanization policies in smaller cities, incentivizing migration to these destinations rather than the typical tier 1 and tier 2 hubs for migrants.** While such policies are designed to prevent overcrowding, they lead to more commodity-intensive development given the lower population densities of such cities. Moreover, Chinese urban development has been driven to a large degree by the outward expansion of cities, motivated in part by local governments seeking to collect revenue from land development.

- **Should the government shift to a focus on higher-density expansion in existing cities, infrastructure requirements would ease and the per capita commodity consumption of urbanization would fall significantly, as would the elasticity of commodity demand to GDP growth**. Such more densely populated cities could be leveraged as strong engines of growth through economics of scale in production and delivery of services, and investments would yield higher returns via higher population densities (e.g. focusing on mass public transit, which facilitates mobility at low energy intensity). Having a critical mass of people also encourages the diffusion of knowledge and technology, promoting consumption.

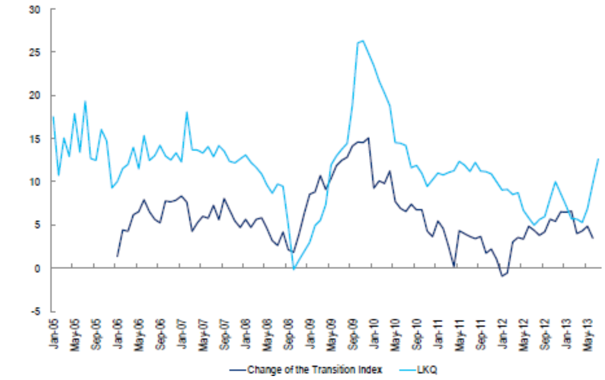
- **Reforms are also targeted at transitioning from industrial to services-led growth**. For power demand, de-emphasizing investments in industrial growth is likely to more than offset any gains from urbanization, with a similar pattern likely for oil, with slower growth in product demand related to industrial uses.

Figure 29. The number of mid and large sized cities has surged in the last 20 years, but more mega cities are likely to emerge in the next 20



Source: McKinsey, Citi Research

Figure 30. China's recent recovery is still based on old growth model, and transition is yet to come



Source: Citi Research

Notes: LKQ is the Keqiang index used by the current Premier to measure real economic progress. Citi's in-house transition index measures China's transition process. The index is estimated based on shares of investment, manufacturing and credit vs. GDP, along with other measures. Positive change means away from transition.

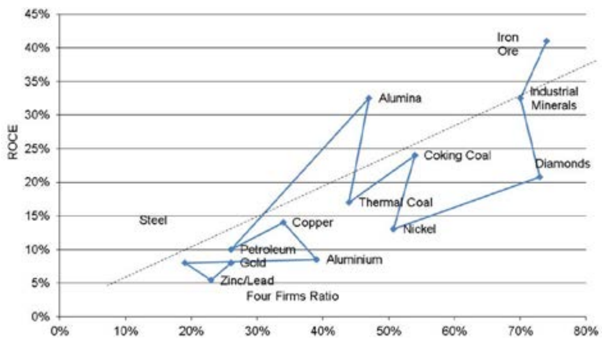
How long and deep is the super-cycle sunset for commodities?

- **The Industrial Commodity complex is likely to end the year lower in the first synchronized downturn since 2008**; where prices for the base metals, bulk and precious metals are all likely to close down YoY. Arguably, Citi's view of the Super Cycle Sunset – namely lower demand, increased supply and reduced pricing power – is playing out; the big question for investors is how long and how deep will this journey be, and will the industrial commodities see green shoots in 2014? Alas we think the answer is unlikely to be positive in 2014 as Citi's fundamental analysis points to a continued downturn before some recovery in selective commodities in 2015 (largely in the base metals). Citi forecasts the bulk and precious commodities to remain under pressure in the medium to longer term.

- **The main reason is supply** – Citi forecasts the industrial commodities to remain in oversupply in 2014, with growing surpluses in the bulk commodities in 2015 and 2016. This is a function partly of slower global demand, in particular in China, but more importantly of increased supply stemming from the large capex spend, together with the fragmentation of industry consolidation and therefore pricing power over the past six to seven years.

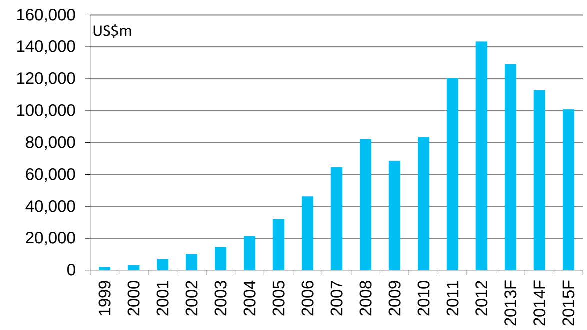
- **Aggressive consolidation in the mining industry between 1995-2006 drove up industry returns without increasing supply to the market**. The decade witnessed the creation of the global diversified miners who controlled large shares of the industrial commodity markets. In the majority of commodities the largest four firms controlled more than 40% of the market shares for the underlying industrial commodities, which resulted in higher Return on Capital Employed (ROCE) for the industry. Nevertheless, the super-cycle upswing in demand drove prices up, in some cases well above the cost of production and incentivized a dramatic and unprecedented capex response from the industry.

Figure 31. 2006 four firms ratio & ROCE



Source: Company Reports, Citi Research

Figure 32. Global metals and mining capex

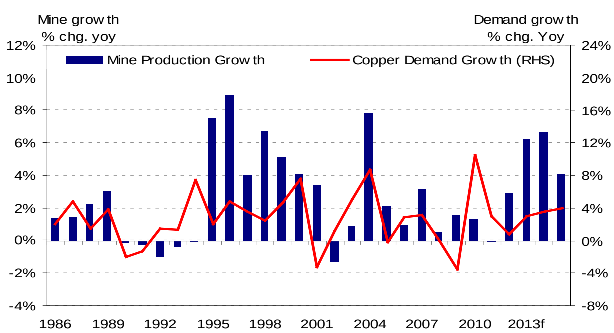


Source: Company Reports, Citi Research estimates

Accelerating mine supply should keep the market capped in 2014E and 2015E

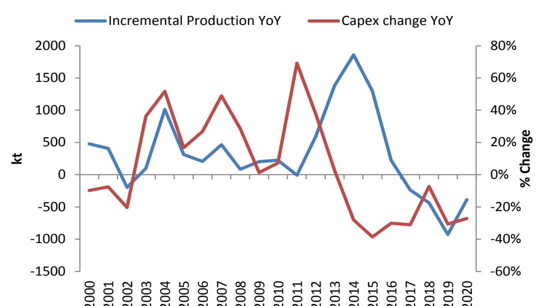
- **Taking copper as an example, Citi expects a supply response to occur in the short term driven primarily by the start-up of a number of greenfield copper mines** in Chile, Peru and Mongolia. A majority of these are due to come into production in the 2012-2014 time-frame and account for c14% of the global mine production.
- **It is also worth noting that copper supply tends to arrive in waves, approximately every 8-10 years**, which represents a long lagged response to periods of higher prices and capex responses.
- **Citi's price expectations over the next two years reflect our belief that the market will move into significant surplus over the next two to three years.** However, we do not expect surpluses to be a long-term feature of the copper market, with the current surplus and lower price environment setting off a chain reaction, which is likely to drive the market back into deficit in the latter part of the current decade. Indeed, we expect the postponement of a number of announced project postponements, as lower prices over the next two-three years act to discourage investment, particularly as projects face significantly higher Capex costs than in the past. As a result, we expect the copper market to return to deficit by 2018.

Figure 33. Mine supply growth comes in waves



Source: Wood Mackenzie, Citi Research estimates

Figure 34. Copper incremental production and capex changes



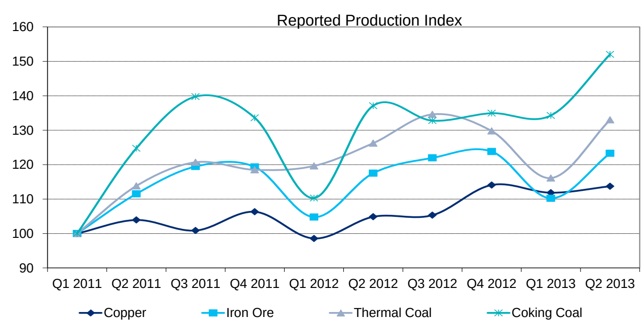
Source: Wood Mackenzie, Citi Research estimates (2013-2020)

Normalizing of returns

- **In the past quarter there has been a dramatic increase in the supply response across the commodities. After a long period of disappointments, the industry is now reacting and in Citi's view supply certainty is increasing.** Copper is not the only commodity experiencing a supply response; Citi tracks the quarterly supply response from 140 metals and mining companies globally, representing 70-90% of world supply. The view on growing supply is against consensus, which has assumed supply undershoots – it seems the market has built-in supply disruptions into their base case S&D balances.

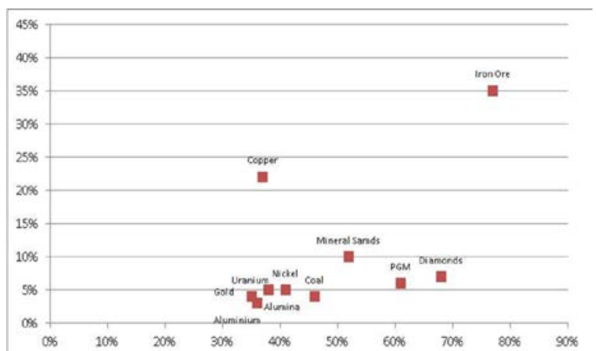
- **The supply response is a direct result of the high capex spend over the last decade.** The industrial commodity markets have become more fragmented as new marginal players have entered the markets and this has resulted in lower returns and capacity utilisation for the industry.

Figure 35. Supply response is evident



Source: Company Reports, Citi Research

Figure 36. 2012 four firms ratio and ROCE



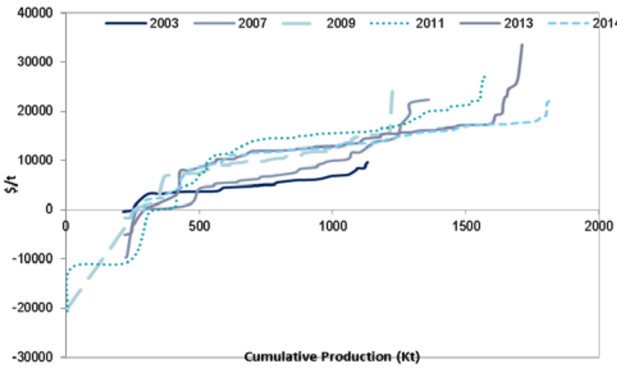
Source: Company Reports, Citi Research

Downward pressures on cost curves should continue in 2014E

- A compounding factor, in looking at price supports for industrial commodities, is that the cost curve support moves depending on input costs, currencies, byproduct credits and energy prices.

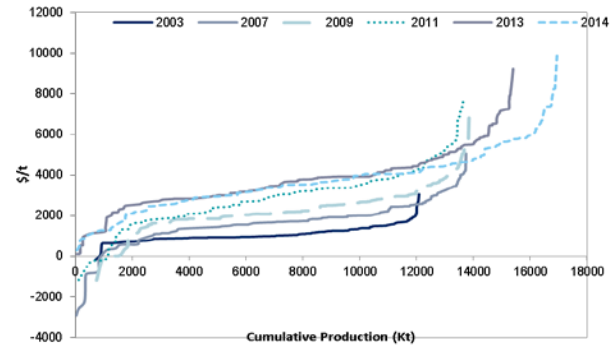
- In a rising volume environment, commodities can work in a deflationary manner. A comparison of the 2013 cost curves with forecast 2014 cost curves shows that the upper end of the cost curves are expected to move to the right, as additional supply enters the markets, and flatten as a function of falling input costs such as salaries, lower energy prices and commodity currencies, thereby exacerbating the downside to floor pricing.

Figure 37. Cash Costs for Nickel (US$/t)



Source: Wood Mackenzie, Citi Research

Figure 38. Cash Costs for Copper (US$/t)



Source: Wood Mackenzie, Citi Research

The industry is responding…

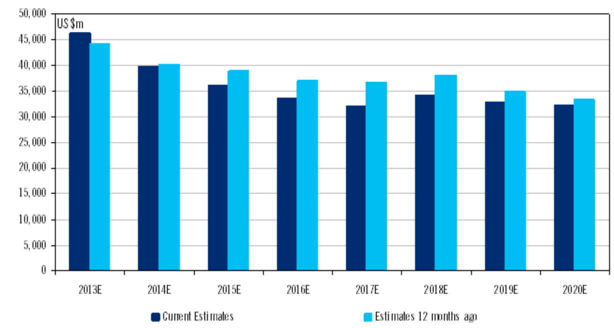
- One critical factor will be the response of the industry to a pricing outcome.
- The large mining companies are all cutting back on capex and largely ruling out M&A. Overall the large mining companies have lowered their forward capex budgets by around $19bn, or around 5% of their total capex plans.
- When comparing the number of growth projects from two years ago to today there is a stark contrast in the number and geographical diversity of the projects and this is likely to have a dramatic impact on the supply response later this decade.
- Citi would argue that the mining companies are not cutting enough to balance the markets in the short term; however, it will tighten S&Ds in the longer term.

Figure 39. Impact on S&D balances to 2020E

	production delayed	2020E supply	%
Iron Ore Mt	205	1675	12%
Copper kt	2135	20847	10%
Met Coal Mt	28	299	9%
Thermal Coal Mt	90	1150	8%

Source: Citi Research

Figure 40. Capex changes US$m – current estimates vs. 12 months ago

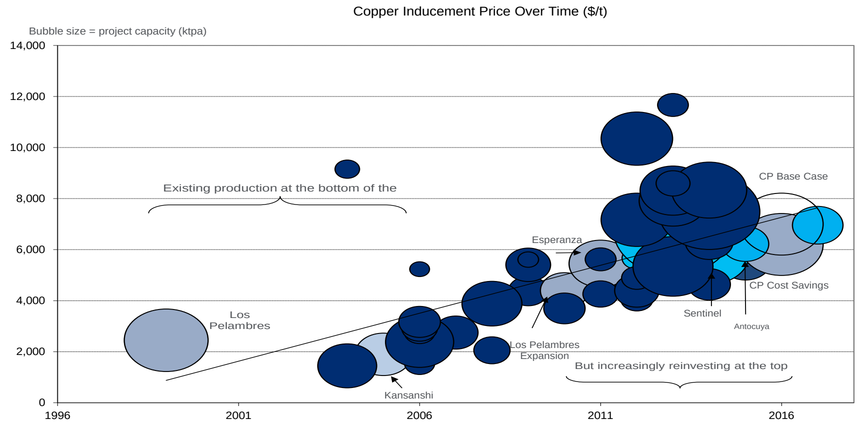


Source: Citi Research

- In comparing capex plans today to then, we see that a lot of marginal projects have been delayed or put back into the concept phase; we calculate that this has reduced supply by around 8-10% of the global volumes expected by 2020, although most of this is occurring in the 2016-2020 timeframe.
- The cut-back in capex plans is in response to falling returns; based on Citi's analysis, the spot copper price has fallen below what is needed to incentivize new production of copper for the first time since 2008. Our analysis of new copper projects suggests that c40% of new supply would need a copper price of around $7,100-$7,300$/t to return its cost of capital.

The potential ramifications of this could be seen in the longer term and the current cut-back in capex could be setting the sector up for the next cycle, but as our examples show (Figure 41) it can take a number of years to digest overcapacity before pricing dynamics return. In conclusion, we think 2014 is arguably too early to see a turnaround in the Industrial Commodity complex.

Figure 41. Copper Inducement Price over Time ($/t)



Source: Bloomberg, Wood Mackenzie, Citi Research

Key Commodities Price Outlook – bearish path likely for most commodities in 2014…

Figure 42. Benchmark Commodities Price Outlook*

		Point Prices																			
		0-3M	6-12M		Q3 2013	Q4 2013E	Q1 2014E	Q2 2014E	Q3 2014E	Q4 2014E	Q1 2015E	Q2 2015E	Q3 2015E	Q4 2015E	2012	2013E	2014E	2015E	2016E	2017E	2018E
Energy				**5Y Cyclical**																	
NYMEX WTI	USD/bbl	97.0	92.5	81.0	108.0	99.0	97.0	89.0	97.0	88.0	91.0	83.0	90.0	81.0	94.1	98.9	92.8	86.3	83.0	78.0	80.0
ICE Brent	USD/bbl	100.0	97.5	85.0	112.0	105.0	100.0	95.0	100.0	95.0	95.0	90.0	95.0	90.0	111.7	108.2	97.5	92.5	90.0	85.0	85.0
Henry Hub Natural Gas	USD/MMBtu	3.70	3.80	N/A	3.55	3.60	3.70	3.60	3.70	3.90	4.20	4.50	4.50	4.80	2.75	3.70	3.70	4.50	4.90	4.90	5.50
Base Metals				**LT Price**																	
LME Aluminum	USD/MT	1,730	1,900	2,200	1,827	1,810	1,780	1,820	1,850	1,880	1,925	1,940	1,960	1,975	2,049	1,885	1,835	1,950	2,000	2,100	2,200
LME Copper	USD/MT	6,700	6,400	6,200	7,096	7,100	6,800	6,700	6,600	6,500	6,500	6,600	7,000	7,200	7,945	7,335	6,650	6,825	7,500	7,800	8,000
LME Lead	USD/MT	2,250	2,300	2,200	2,116	2,160	2,250	2,000	2,150	2,300	2,350	2,100	2,200	2,370	2,072	2,165	2,175	2,255	2,350	2,400	2,360
LME Nickel	USD/MT	17,500	18,000	20,000	13,996	14,400	17,000	16,500	17,000	17,500	18,000	18,500	19,000	20,500	17,592	15,210	17,000	19,000	23,000	24,000	24,000
LME Tin	USD/MT	22,500	23,500	20,000	21,284	22,200	22,000	21,500	22,000	24,000	25,000	24,000	23,000	24,000	21,108	22,140	22,375	24,000	25,000	24,000	23,000
LME Zinc	USD/MT	1,800	1,950	2,100	1,896	1,890	1,840	1,850	1,850	1,900	2,000	2,050	2,000	2,150	1,963	1,930	1,860	2,050	2,250	2,300	2,320
Precious Metals				**LT Price**																	
COMEX Gold	USD/T. oz	1,220	1,280	1,050	1,330	1,280	1,250	1,230	1,260	1,280	1,300	1,340	1,360	1,400	1,669	1,417	1,255	1,350	1,370	1,400	1,420
Silver	USD/T. oz	20.0	20.7	16.5	21.5	21.1	20.2	20.0	20.4	20.7	21.2	21.9	22.4	23.2	31.2	24.1	20.3	22.2	22.5	23.0	23.1
Platinum	USD/T. oz	1,500	1,525	1,531	1,453	1,500	1,500	1,475	1,500	1,525	1,575	1,625	1,625	1,675	1,552	1,515	1,500	1,625	1,700	1,750	1,825
Palladium	USD/T. oz	800	860	680	724	750	750	800	800	850	900	900	950	950	645	732	800	925	925	950	950
Bulk Commodities				**5Y Cyclical**																	
Hard Coking Coal (benchmark Asia)	USD/MT	150	160	200	145	155	155	160	160	165	170	170	170	170	211	159	160	170	180	190	200
Thermal Coal Asia (NEWC)	USD/MT	85	80	105	77	73	82	77	75	80	88	84	82	85	94	82	79	85	85	90	100
Iron Ore Spot (TSI)	USD/MT	135	115	81	133	121	130	120	115	115	115	100	95	90	128	132	120	100	90	90	90
Agriculture																					
CBOT Corn	USd/bu	420	390	N/A	512	435	440	450	430	380	420	450	505	505	695	595	425	470	515	N/A	N/A
CBOT Wheat	USd/bu	670	700	N/A	650	685	700	705	685	670	650	640	635	635	750	690	690	640	615	N/A	N/A
CBOT Soybeans	USd/bu	1,265	1,000	N/A	1,405	1,265	1,260	1,250	1,135	1,075	1,050	1,050	1,000	1,100	1,465	1,390	1,180	1,050	1,075	N/A	N/A
CBOT Rice	USD/cwt	15.5	15.3	N/A	15.6	15.5	15.4	15.3	15.4	15.0	14.4	14.2	14.1	14.1	14.9	15.5	15.3	14.2	N/A	N/A	N/A
NYB-ICE Cotton	USd/lb	79.0	77.8	N/A	85.6	80.0	79.0	78.0	80.5	75.0	75.0	75.0	75.0	75.0	80.0	84.0	78.0	75.0	N/A	N/A	N/A
Sugar#11	USd/lb	18.0	18.0	N/A	16.7	18.3	18.0	18.0	18.0	18.0	18.5	18.5	18.5	18.5	21.6	17.5	18.0	18.5	N/A	N/A	N/A
ICE Coffee	USd/lb	105	115	N/A	118	108	100	105	115	115	120	120	120	120	175	125	105	120	N/A	N/A	N/A
ICE Cocoa	USD/MT	2,600	2,700	N/A	2,420	2,700	2,550	2,550	2,700	2,600	2,600	2,600	2,600	2,600	2,348	2,400	2,600	2,600	N/A	N/A	N/A

Source: Citi Research, *subject to revision

Current prices/ratings for other stocks referenced: BHP Billiton PLC (BLT.L; £18.72; 2); Fresnillo Plc (FRES.L; £8.48; 3); Ferrexpo PLC (FXPO.L; £1.83; 1); Glencore Xstrata PLC (GLEN.L; £3.12; 1); Hochschild Mining Plc (HOCM.L; £1.47; 3); London Mining (LOND.L; £1.18; 1); Randgold Resources Ltd (RRS.L; £42.68; 3)

Notes

Appendix A-1

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