

Mining Fight-Back

Turning Bullish – The First Time In Three Years

- **A Bullish Stance** — We move our 12-month sector stance to **Bullish**, from Neutral, our first bullish call in three years; key picks are BHP Billiton, Rio Tinto and Glencore-Xstrata. While we remain concerned about the potential long-term structural demand story for commodities in China, and we are cognisant of a potential seasonal slowdown in the first quarter of this year, our move to bullish reflects better bottom-up fundamentals, particularly from the major miners. We would rather be too early than too late in making this call.
- **Investor sentiment has hit rock bottom** — The mining sector has moved through five stages of grief, namely **Denial**, **Anger**, **Bargaining**, **Depression** and we now think we are in **Acceptance** that the sector has moved into a new norm.
- **Bottom-up fundamentals have improved** — Citi is broadly forecasting a flat commodity price environment and, with commodity prices into cost curves, a reduction in volatility. Improvements in European and US growth are supportive for commodities and weakening commodity currencies are providing a fillip for the miners. Against this backdrop the mining companies are cutting costs, improving balance sheets and aligning with shareholders, which are resulting in an inflection point in the secular trend of EVA creation. We forecast the sector to deliver a CAGR in earnings of around 7% and importantly free cash flow yield is expected to grow at a CAGR of 23.9% until the end of the decade, and broadly dividend yields are now supportive for the sector against the market.
- **Alpha over beta** — We believe alpha drivers of valuation, growth, operational efficiencies, capital structures and self-help will be the dominant themes which mainly plays into the hands of the large diversified miners.
- **Key stock takeaways** — We believe the large diversified miners will outperform the sector in 2014; we favour Rio Tinto (part of [Citi Focus List Europe](#)), BHP Billiton and 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 large-cap miner is Anglo American.

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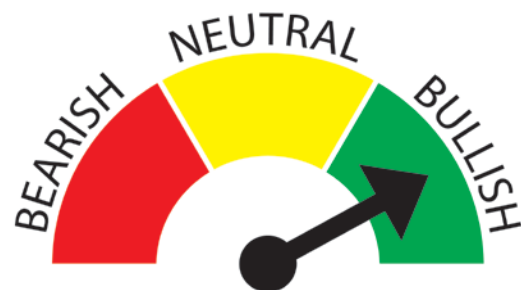
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See [Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures](#).

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Figure 1. Sector Overview



Source: Citi Research

Figure 2. Top Picks

Exposure	Overall Stance	Equities	RIC	CCY	Price 14/01/14	PT	Rating/Risk	1Y ETR	Analyst
Diversified	Overweight	Leader(s)							
		Rio Tinto PLC	RIO.L	GBP	31.68	40.00	Buy	30%	Heath R Jansen
		BHP Billiton PLC	BLT.L	GBP	17.82	21.00	Buy	22%	Heath R Jansen
		Glencore Xstrata PLC	GLEN.L	GBP	3.17	3.70	Buy	20%	Heath R Jansen
		Laggard(s)							
		Anglo American PLC	AAL.L	GBP	12.63	14.00	Neutral	15%	Heath R Jansen
Bulks	Neutral	Leader(s)							
		African Minerals Ltd	AMIQ.L	GBP	2.09	3.00	Buy/High	44%	Michael E Flitton
		African Rainbow Mineral	ARIJ.J	ZAR	195.25	225.00	Buy	18%	Michael E Flitton
		Laggard(s)							
		New World Resources	NWRR.L	GBP	0.73	0.75	Sell/High	3%	Harsh Bardia
		Assore Limited	ASRJ.J	ZAR	343.99	290.00	Sell	-13%	Michael E Flitton
Base Metals	Underweight	Laggard(s)							
		Antofagasta	ANTO.L	GBP	7.89	7.70	Sell	0%	Jatinder Goel, CFA
		FST Quantum Minerals	FQML	GBP	10.33	9.50	Sell	-6%	Michael E Flitton
		Nyrstar	NYR.BR	EUR	2.69	2.00	Sell/High	-20%	Jatinder Goel, CFA
		Leader(s)							
PGMs	Overweight	Lonmin PLC	LML.L	GBP	3.09	4.56	Buy	48%	Jon H Bergtheil
		Aquarius Platinum Ltd	AQP.L	GBP	0.38	0.44	Neutral	15%	Jon H Bergtheil
		Petra Diamonds	PDL.L	GBP	1.20	1.41	Buy	18%	Jon H Bergtheil
		Laggard(s)							
Gold/Silver	Underweight	Petropavlovsk PLC	POG.L	GBP	0.76	0.59	Sell	-22%	Jon H Bergtheil
		African Barrick Gold Plc	ABGL.L	GBP	1.90	1.20	Sell	-37%	Jon H Bergtheil
		Leader(s)							
Steels	Underweight	ArcelorMittal	ISPA.AS	EUR	12.55	13.60	Buy	10%	Michael E Flitton
		Laggard(s)							
		Klöckner & Co.	KCOGn.DE	EUR	10.53	10.50	Neutral	0%	Nitesh Agarwal

Source: Citi Research

Figure 3. European Stock ranking – 5 key factors

UK/Europe	Valuation	Growth	Operating Efficiency	Capital Structure	Self Help	Total
Anglo American PLC						
BHP Billiton PLC						
Glencore						
Rio Tinto PLC						
Vedanta Resources Plc						
Bulks						
African Minerals						
Ferrexpo PLC						
London Mining						
NWR						
Base						
Antofagasta PLC						
Boliden						
First Quantum						
Lundin Mining						
Nyrstar						
Aluminium						
Norsk Hydro ASA						
Precious						
African Barrick Gold						
Aquarius Platinum						
Centamin Egypt						
Fresnillo						
Gem Diamonds						
Hochschild						
Lonmin						
NordGold						
Petra Diamonds						
Petropavlovsk						
Polymetal						
Polyus Gold						
Randgold						

Source: Citi Research

Evolving from Beta to Alpha

- We believe that alpha will be the biggest driver of stock performance in the mining sector in 2014. It is likely we are moving from a top-line commodity-driven environment into a bottom-up company-driven environment and as such we have identified five factors which we believe will be the dominant drivers namely: valuations, growth, operational efficiencies, capital structures and self-help.
- We present these factors by company in Figure 3 and rank each based on whether each category is bearish, neutral or bullish, with a combined ranking given overall.
- In future mining fight-back reports we will endeavour to break down these factors in more detail. In this report we highlight the change occurring in the capital structure of the mining companies, principally moving from a value destructive into a value creation phase, which is arguably not being priced in by the market.

BEARISH NEUTRAL BULLISH

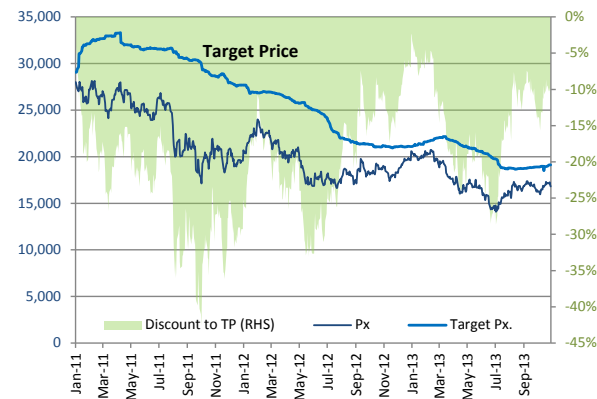
A shift in View

- We have been **cyclically** and **structurally** bearish on the metals and mining sector for the past three years. While we remain concerned about the long term structural demand story for commodities in China, it would be amiss for us not to recognise the changes that have occurred in the sector; firstly the FTSE 350 mining has fallen by 45% over this period, secondly the mining companies are reacting through cost cutting, capital discipline and shareholder alignment, moreover investor sentiment is arguably at all-time lows. Our bullish call on the sector is on a 12-month view.

Links to notes we have published in reference to Figure 5.

1. 13/06/11 [EVA II: Nothing Lasts For-EVA;](#)
2. 30/08/11 [The True P/E;](#)
3. 15/01/12 [Sweating for Success;](#)
4. 21/03/12 [Super Cycle Sunset....;](#)
5. 16/04/12 [Sticking to Our Guns;](#)
6. 24/07/12 [China Rebalance: The Impact On Steel](#)
7. 11/10/12 [EVA Diverging Returns To 2020;](#)
8. 16/11/12 [Big Oil & Big Mining II - Big Spenders;](#)
9. 29/11/12 [The inconvenient truth – Yield;](#)
10. 15/03/13 [Macro Cycle Thoughts – Bear Digs Deeper;](#)
11. 23/04/13 [The Survivor Party;](#)
12. 14/06/13 [Good buy or Goodbye?;](#)
13. 03/07/13 [Diversified Debate 6 – Mining Rehab;](#)
14. 31/08/13 [Diversified Debate VII - Is Mining Austerity Working?;](#)
15. 02/09/13 [Big Oil & Big Mining III - Miners Reinventing, Oils Reinvesting](#)

Figure 4. Target price and share price FTSE 350 Mining



Source: Bloomberg, Citi Research

Figure 5. FTSE 350 Mining Index

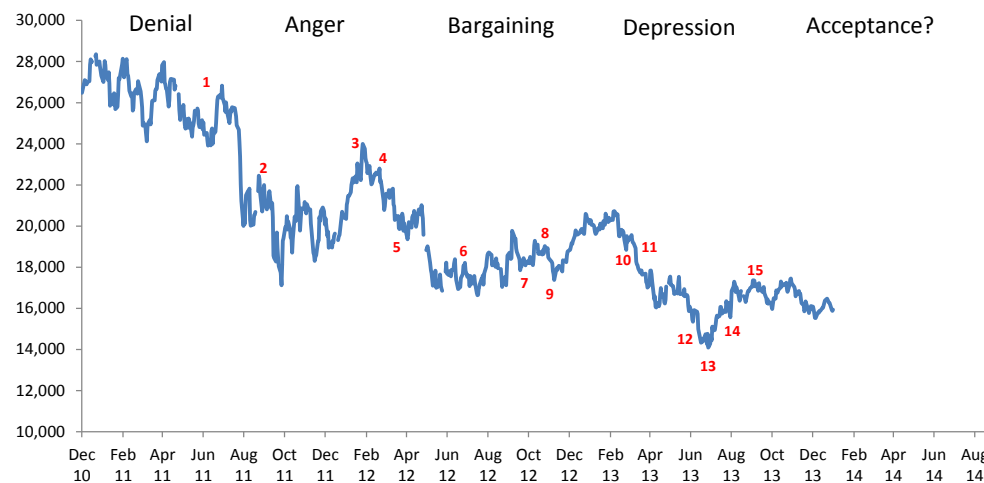


Source: Bloomberg, Citi Research

Investor sentiment has hit rock bottom and started to dig

- We think that the mining sector has moved through five stages of grief, namely: Denial, Anger, Bargaining, Depression and Acceptance. We loosely define those periods in Figure 6.
- 2010 – mid-2011 The **Denial** period: we presented our arguments for the super cycle sunset almost three years ago which was greeted with scepticism from both investors and companies who were very much in the mind-set of stronger for longer and the China led super-cycle.
- Mid-2011 – mid-2012: The **Anger** period which stemmed from shareholders following the write-downs of major M&A which occurred previously along with large capex blowouts and the view from a number of mining companies that they would continue to spend on large growth projects no matter what.
- Mid-2012 – end-2012 – A **Bargaining** period which was led by shareholders and resulted in management changes, a slashing of capex and a focus on costs. In early 2013 market consensus was that the mining sector had made a sea change and the sector could now emerge with a renewed focus on shareholder return.
- 2013 – **Depression**: nevertheless 2013 turned out to be a depressing year for investors in the mining sector with it underperforming the FTSE 100 by around 24% and this was coupled with redemption and liquidation from commodity ETFs and a question on the future of metals and mining as an asset class.
- 2014 – **Acceptance?** We now believe we are moving into a stage of acceptance; target prices have been cut by around 44% over the past three years, commodity price forecasts have also been cut to be more in line with spot commodities and forward curves and generalist interest in the sector have hit rock bottom.

Figure 6. FTSE 350 Mining Index – the 5 Stages of Grief

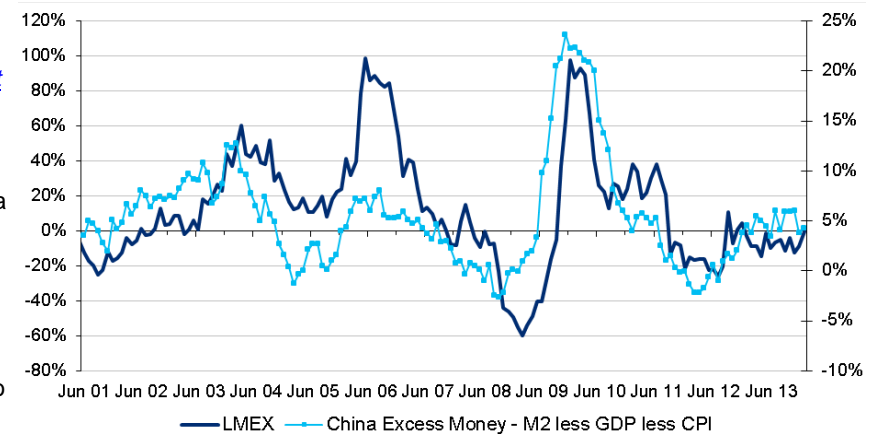


Source: Bloomberg, Citi Research

Demand Story Steady in 2014-2015

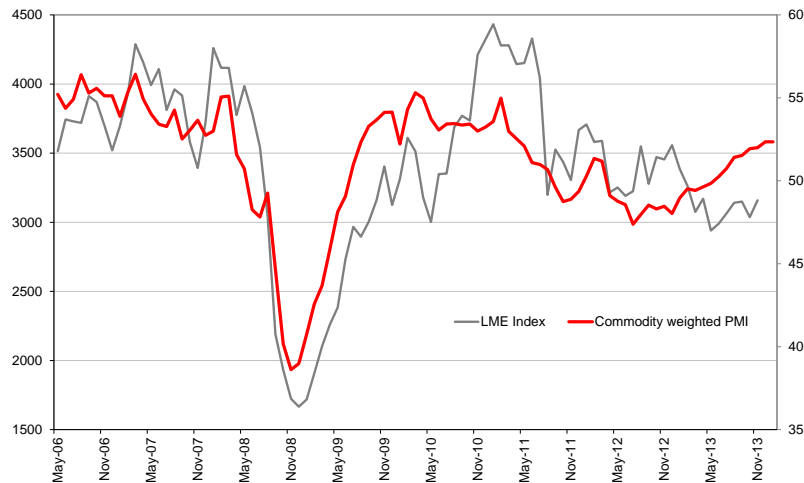
- We would argue that the fundamental commodity demand should remain steady for 2014 and while we are not forecasting major increases in industrial commodities, refer to our report: [Commodities Inflection Point - Still Cyclical, But Not So Super – 2014 Annual Market Outlook](#) 18 November 2012, we believe investors now also generally share this view.
- Nevertheless, macro indicators such as our global PMI indicator are pointing to a positive demand backdrop and our excess monetary supply chart for China is pointing to stable commodity demand.
- As we highlighted in our year ahead piece, [Metals and Mining - Mulled Mine 2014](#), 2 December 2012, we expect the first half of 2014 to be difficult for the sector given liquidity tightening in China; while our overweight call may prove too early we do think that concerns over a Chinese slowdown are arguably priced in as indicated by Citi's economic surprise index versus the miners.

Figure 7. China Excess Monetary Supply M2 – GDP – CPI



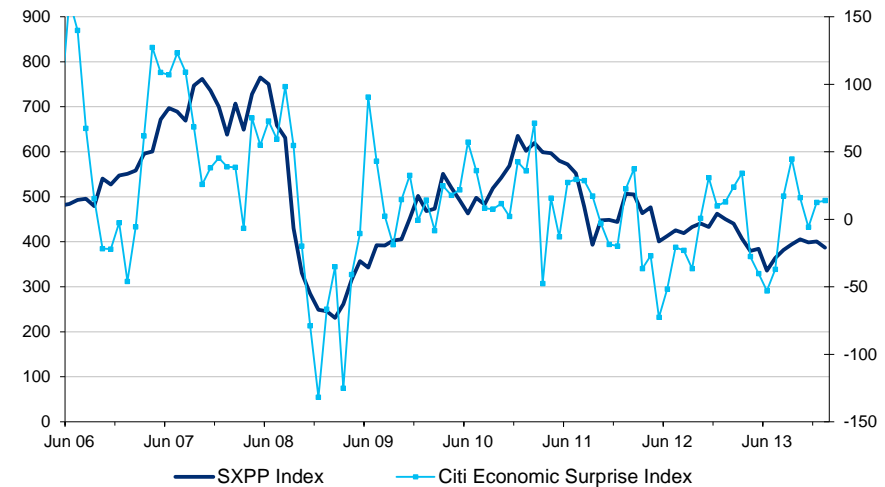
Source: Bloomberg, Citi Research

Figure 8. Commodity Weighted Global PMIs versus LME Index



Source: Bloomberg, Citi Research

Figure 9. SXPP index and Citi economic surprise

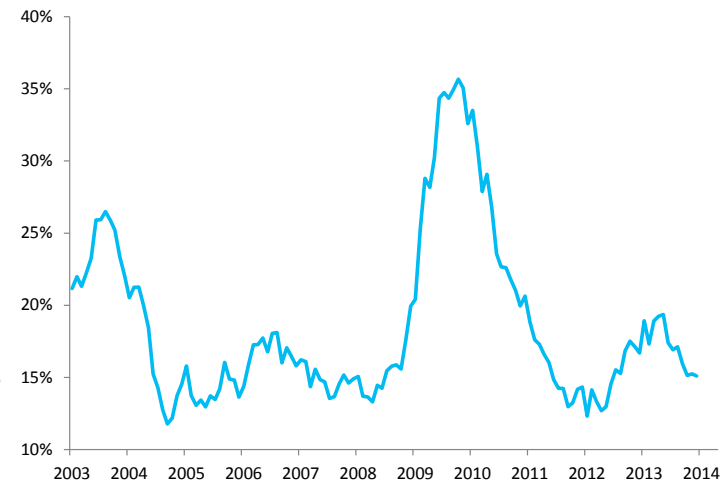


Source: Bloomberg, Citi Research

Seasonally our call may be 2-3 months to early...

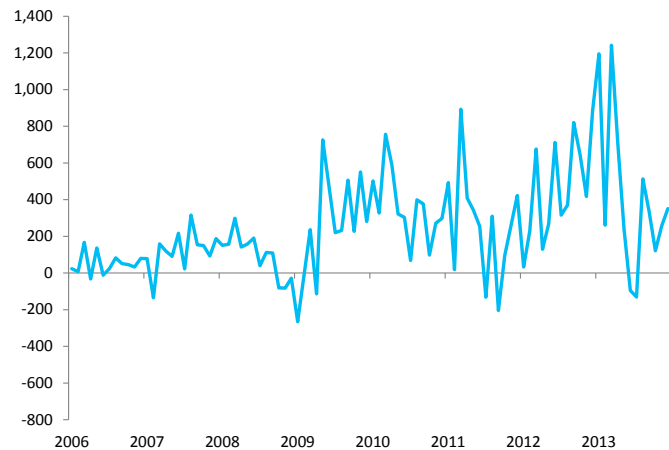
- We expect to experience a seasonal slowdown post Chinese New Year given the recent credit conditions in China.
- Chinese credit growth in November and December has been relatively stable, despite the SHIBOR spike and negative media headlines. Bank deposit growth has been weak and money supply growth was essentially stable.
- Conversations with industry participants by our China Commodities strategist Ivan Szpakowski have suggested that commodity traders and producers conditions remain relatively tight, but the larger companies remain able to obtain new credit.
- Our Chinese economist expects the PBOC to loosen monetary policy to hit GDP targets, which could provide a catalyst for a sector rally into the end of 2014.

Figure 10. Real YoY Change in Stock of Social Financing



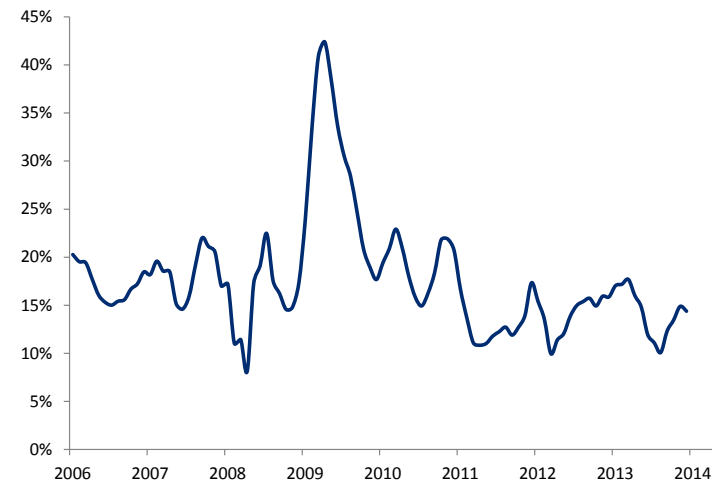
Source: Bloomberg, Citi Research

Figure 11. Chinese foreign currency loans, letters of credit, corporate bonds, trust loans (RMB Billions).



Source: Bloomberg, Citi Research

Figure 12. China Money Supply Growth 3m/3m seasonally adjusted

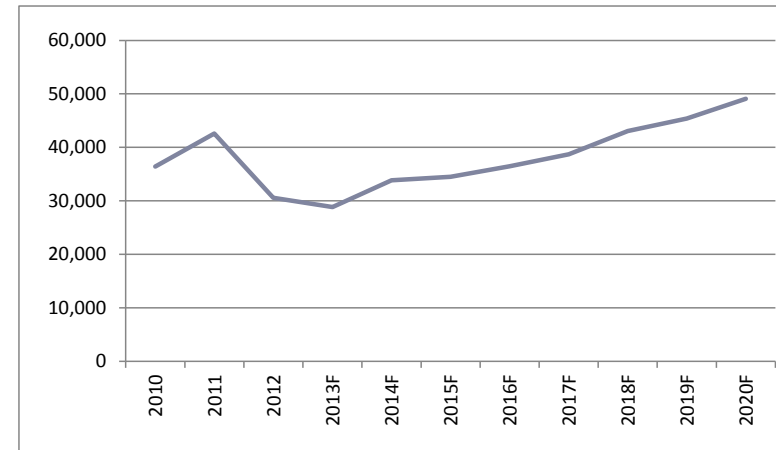


Source: Bloomberg, Citi Research

...however fundamental earnings and cash flow are improving

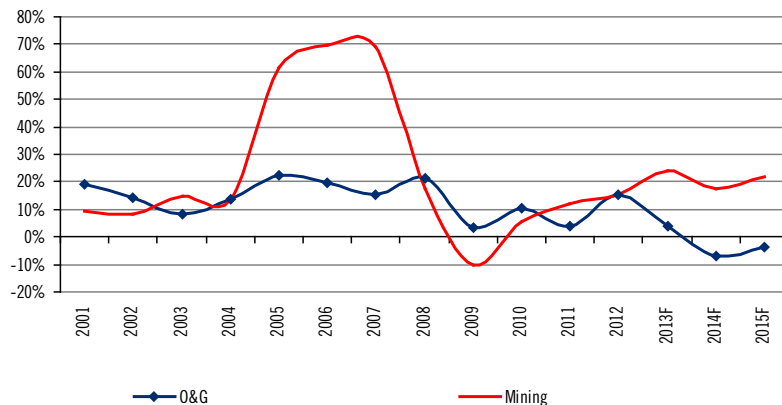
- As we have highlighted in previous reports we expect the mining sector to behave in a similar manner to the period during the 1990s, where under a stable commodity environment the companies delivered a balance of value added growth and yield.
- We forecast the sector to deliver a CAGR in earnings of 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 cutbacks in capex.
- 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 13. Earnings growth US\$m



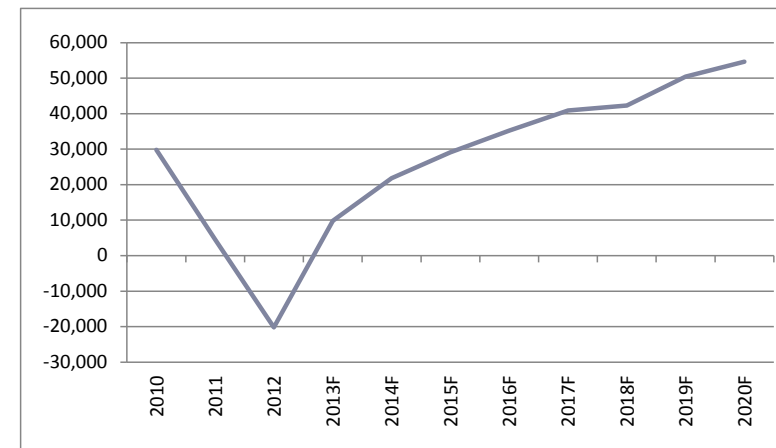
Source: DataCentral, Citi Research

Figure 14. Return on incremental invested capital



Source: DataCentral, Citi Research

Figure 15. Free cash flow US\$m

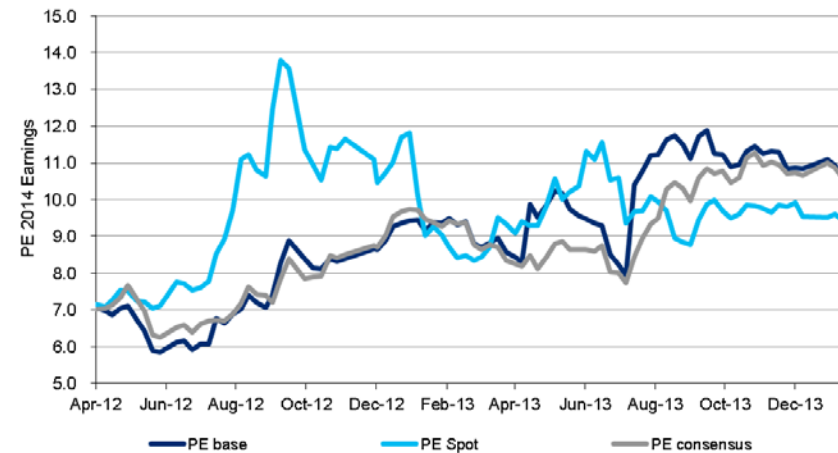


Source: DataCentral, Citi Research

Earnings revisions now positive

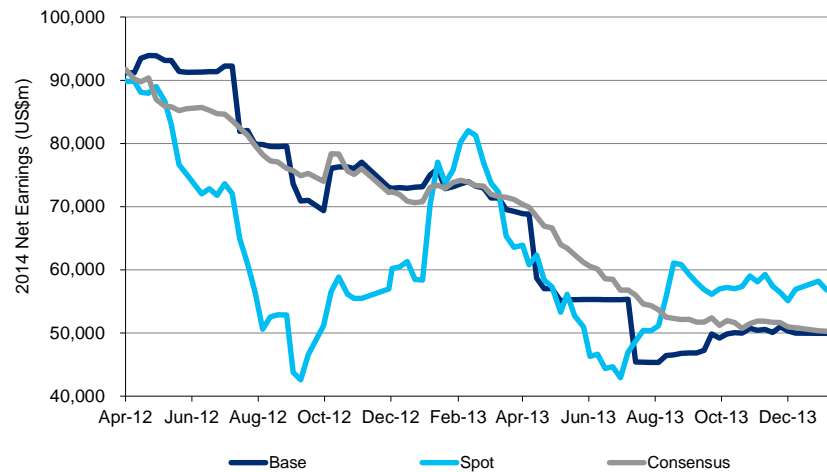
- Interestingly for the first time in three years the earnings momentum for the sector has become positive. This is a function of downward revisions to consensus commodity price forecasts with spot commodities trading above those forecasts and secondly the weakening of commodity-based currencies.

Figure 16. Sector PE multiples



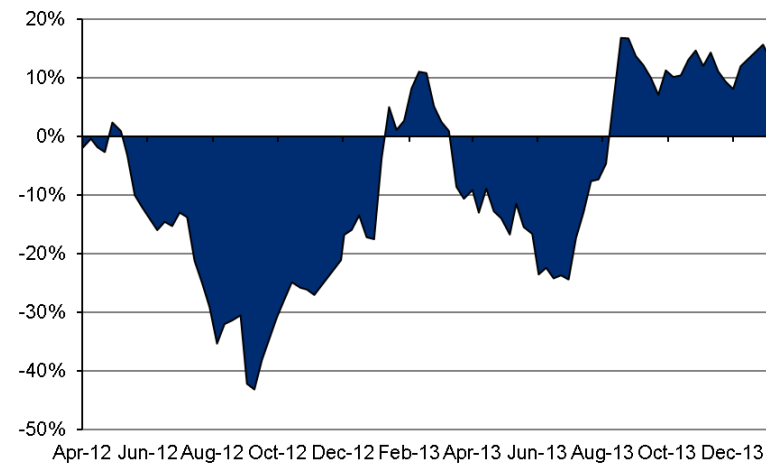
Source: DataCentral, Citi Research

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



Source: DataCentral, Citi Research

Figure 18. 2014 Spot V Consensus % divergence

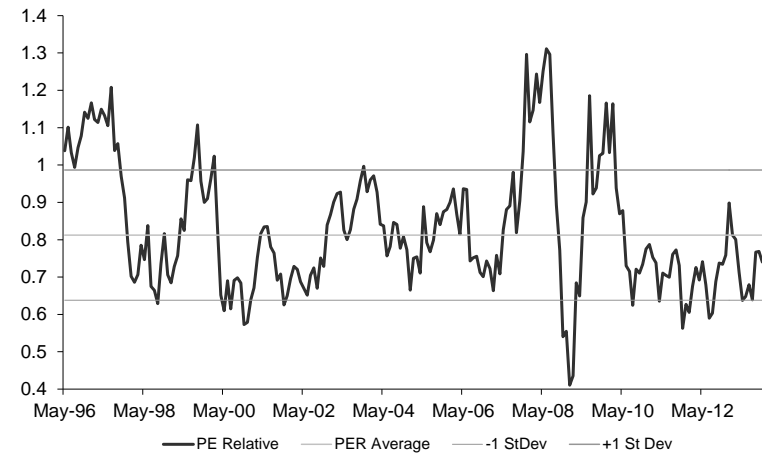


Source: DataCentral, Citi Research

Valuations look relatively compelling

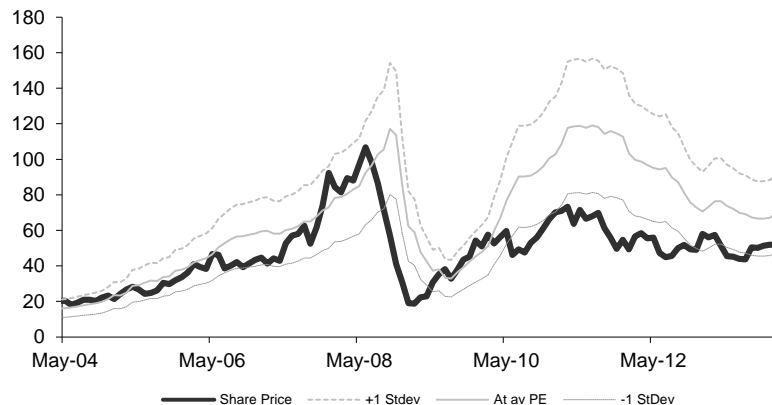
- Against the broader equity markets the metals and mining companies are generally trading at a PE and PER discount.
- In the case of Rio Tinto it is trading at nearly a 1 standard deviation discount to its historical long-term trading range.

Figure 19. Rio Tinto PE relative to the UK market +/-1 St Dev



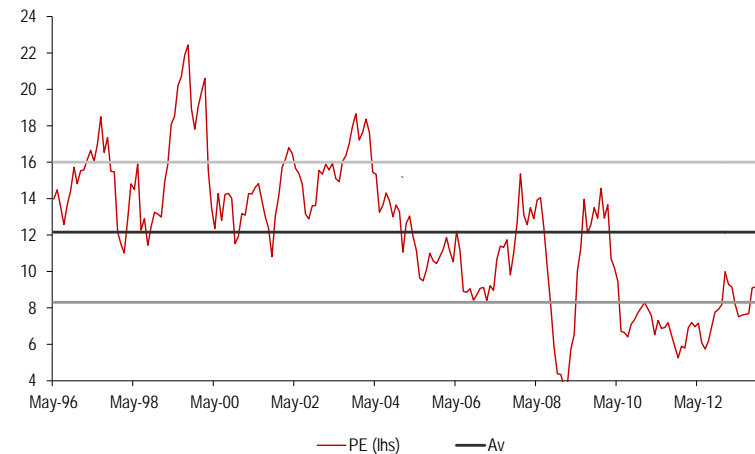
Source: Citi Research, DataStream

Figure 20. Rio Tinto Share price and forward PE bands



Source: Citi Research, DataStream

Figure 21. PE absolute Rio Tinto

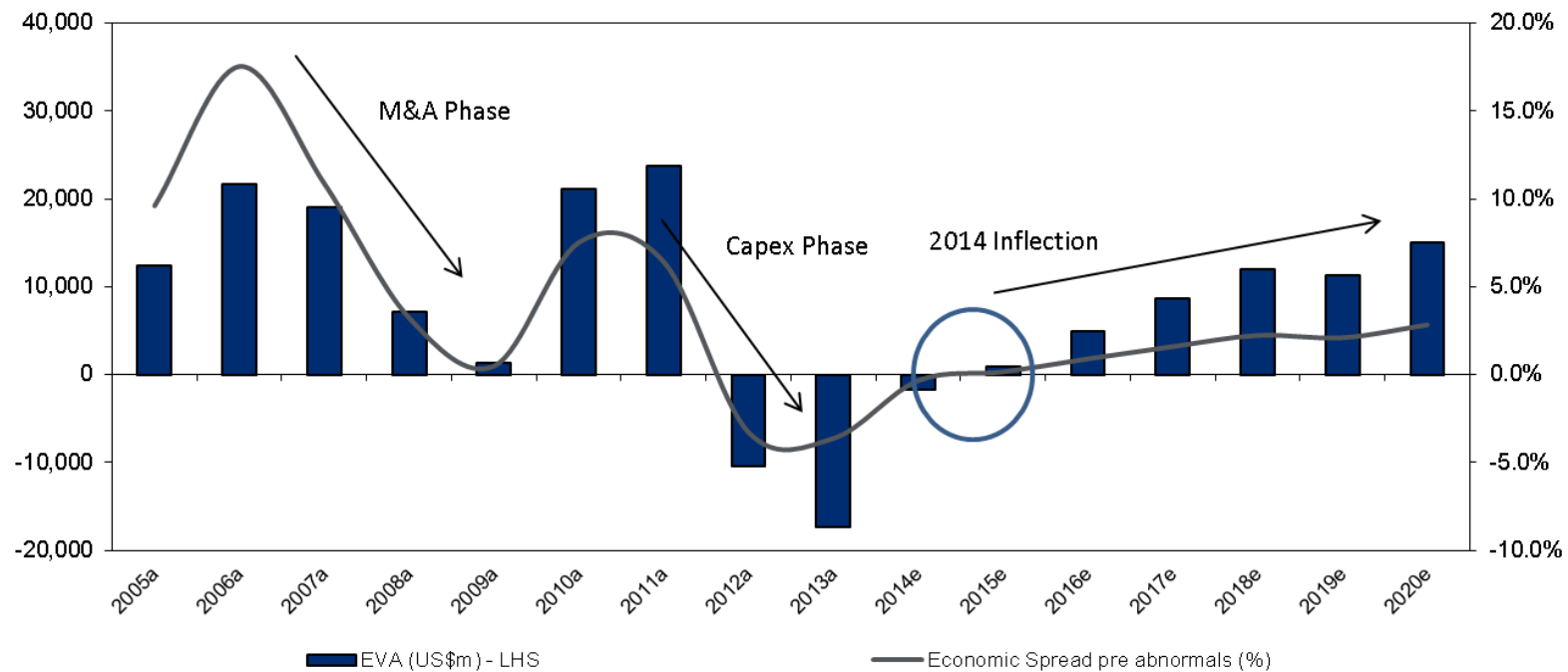


Source: Citi Research, DataStream

Capital structures improving

- One of the major arguments to our bearish view, over the past three years, has been the value destruction that has occurred in the industry from capex and M&A. We now expect that this is reversing.
- We believe that the appetite for both capex and M&A has diminished for the sector, which is a function of both a lack of support from the debt and equity markets. This is resulting in the sector moving into EVA creation (ROIC – WACC) territory and a positive upswing for the first time since the upswings in commodity prices that commenced in 2005 and 2009.

Figure 22. EVA creation European mining sector

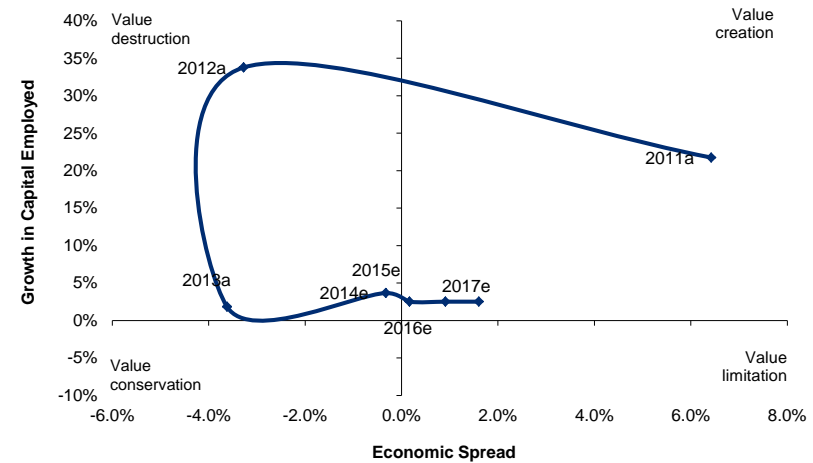


Source: DataCentral, Citi Research

A U-turn on returns

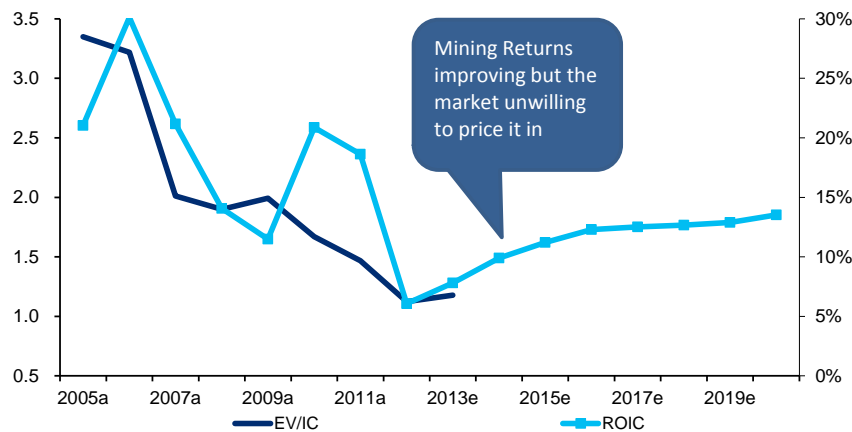
- We forecast the sector to move from a value destruction phase into value creation and we would argue that this is yet to be priced by the market when comparing EV/IC against expected returns.

Figure 23. Growth in capital employed versus economic spread



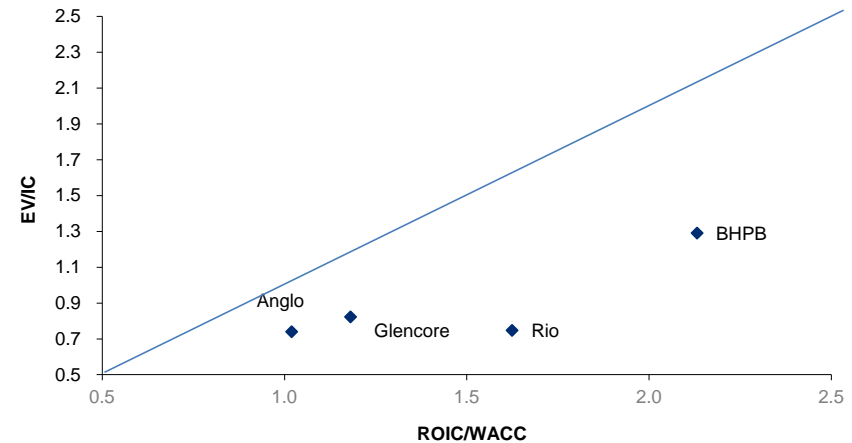
Source: DataCentral, Citi Research

Figure 24. EV/IC versus returns



Source: DataCentral, Citi Research

Figure 25. EV/IC versus ROIC/WACC

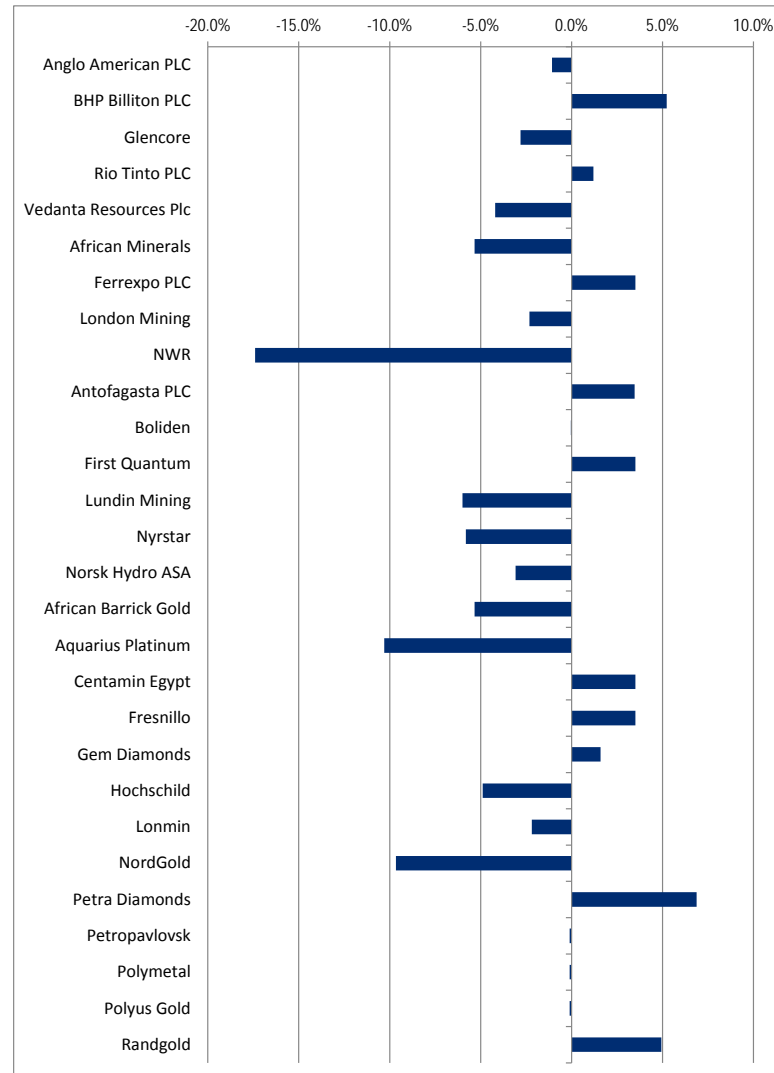


Source: DataCentral, Citi Research

EVA diverging - a stock-picking sector

- We have compared the expected EVA creation from 2013 to 2020. What is interesting is the large divergence in the expected returns when comparing the mining companies.
- Overall we would argue that the major diversified miners are the biggest winner as a group, with the standout being BHP Billiton.
- In contrast the pure-play mining companies generally struggle to deploy capital efficiently, either they lack the available opportunities and/or the projects are being forced up the capital structure either through higher operating costs or capex costs. While in an upswing in commodity prices we would argue that investors should own the high cost, most leveraged producer we now believe that in a constant or steady commodity price environment investors should own the most efficient lowest cost producers.

Figure 26. European Metals and Mining EVA creation from 2013 to 2020

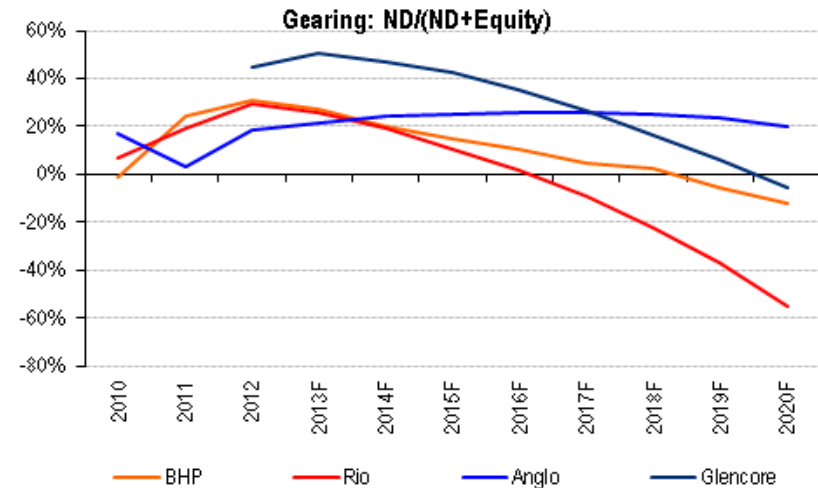


Source: Citi Research

Balance sheets improving

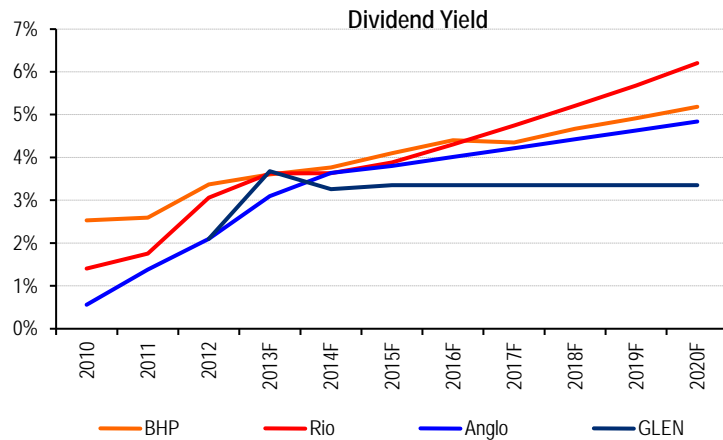
- Importantly with a cut back in capex, we forecast the gearing levels of the major miners to dramatically improve over the next 18 months.
- This could pave the way for higher dividend and cash returns from the companies.

Figure 27. Gearing improving



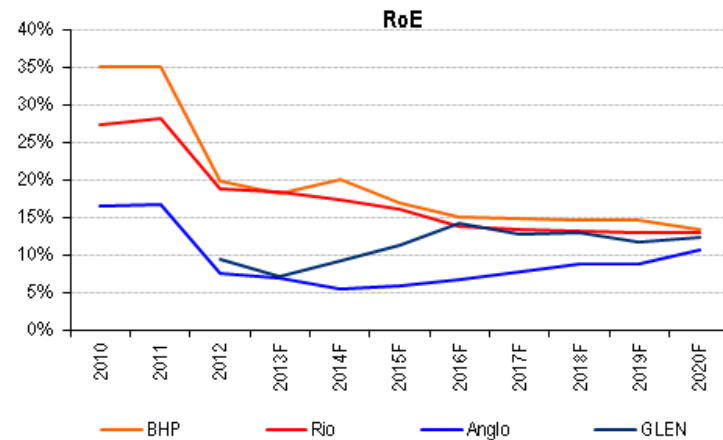
Source: Company reports, Citi Research

Figure 28. Dividend yield increasing



Source: Company reports, Datastream, Citi Research

Figure 29. ROE steady

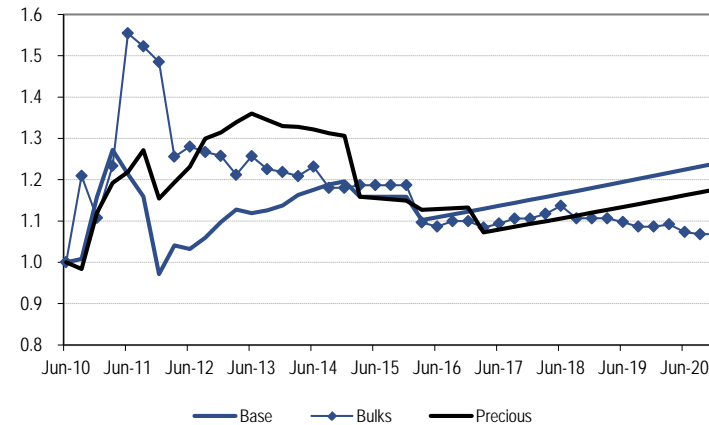


Source: Company reports, Citi Research

Commodity prices unlikely to be the driver

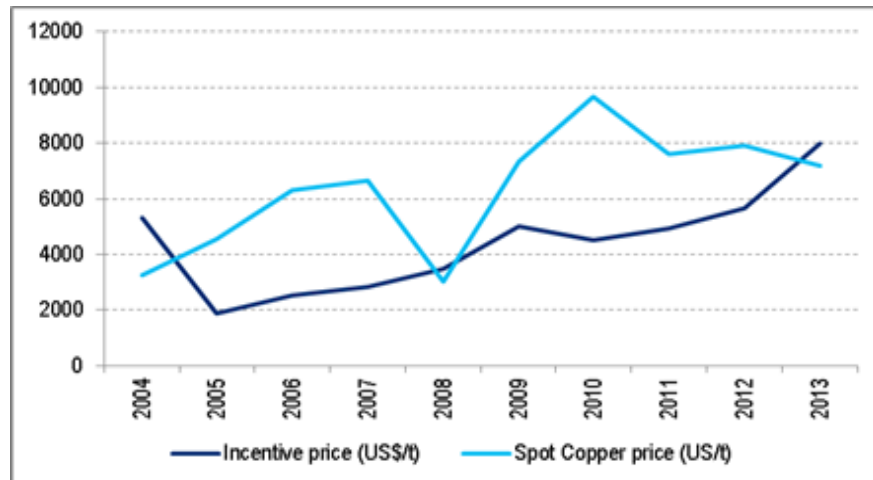
- Our change of view is driven primarily from an alpha call on the individual companies rather than a strong view on commodity prices. Our price forecasts are generally for flat commodity prices in real terms.
- Citi's commodity price expectations over the next two years reflect our belief that the market will move into surplus.
- However, depending on the commodity we do not expect surpluses to be a long-term feature; we expect the postponement of a number of announced projects 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.

Figure 30. Citi Commodity Price Index – base bulks and precious



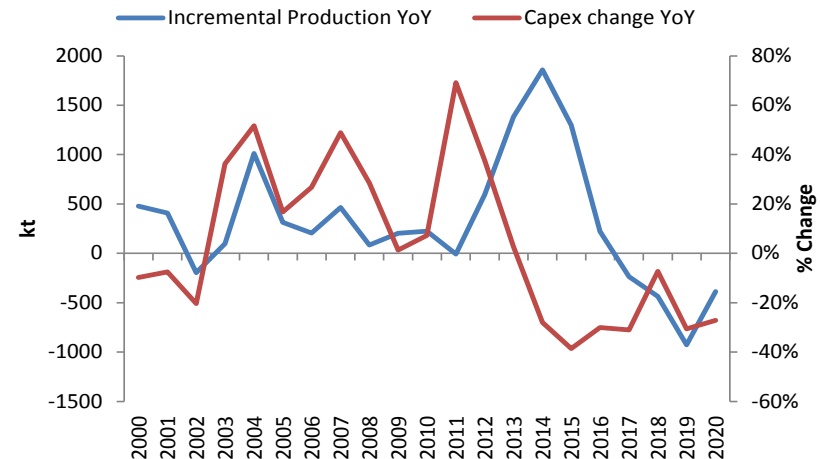
Source: Bloomberg, Citi Research

Figure 31. Incentive price v/s Spot Copper price



Source: Bloomberg, Wood Mackenzie, Citi Research

Figure 32. Copper incremental production and capex changes

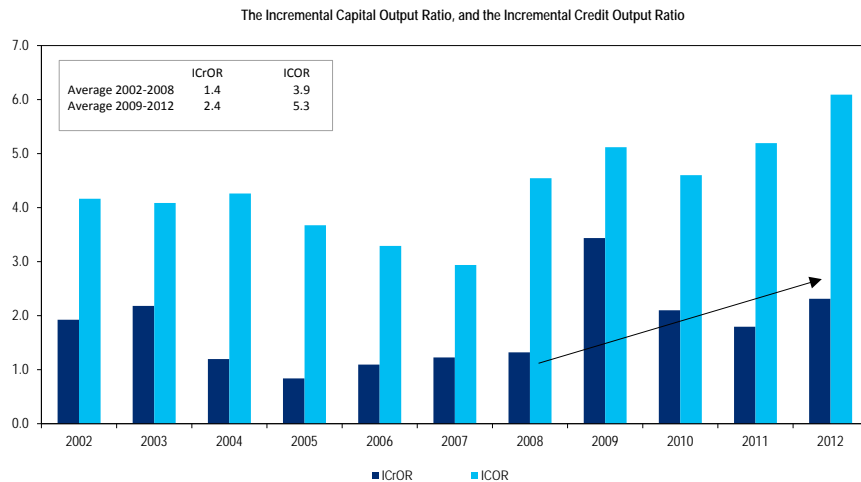


Source: Wood Mackenzie, Citi Research

Risk of rebalancing ever-present but timing uncertain

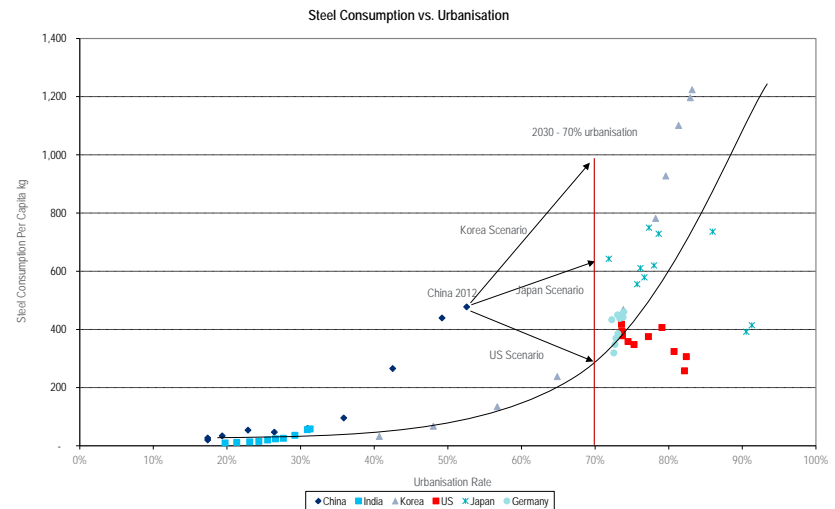
- We have written numerous pieces over the last two years on the risks around the transition of China's economy away from investment and towards consumption; *China Rebalance: The Impact On Steel, The Great China Steel Debate: Urbanisation and Steel Intensity, Copper vs. Steel: Demand & Price Implications In A Consumer Driven China.*
- We remain of the view that such a rebalancing represents substantial downside risk to the sustainability of commodity consumption. China is consuming at a rate well beyond that of developed nations, driven by an explosion in credit issuance. In turn this has driven declining returns on investment which is ultimately likely to be a catalyst for a rebalancing away to more profitable avenues of growth. Given the tight linkage between credit and commodity consumption this suggests significant risk for prices.
- However, there is little visibility over the timing of this transition. In addition we believe this message has now been widely disseminated into the market and is now largely reflected in equities. The risk of rebalancing is high over the medium term, however in any given year, including 2014, it is relatively low in our view.

Figure 34. Investment efficiency has fallen amidst a rise in credit dependence



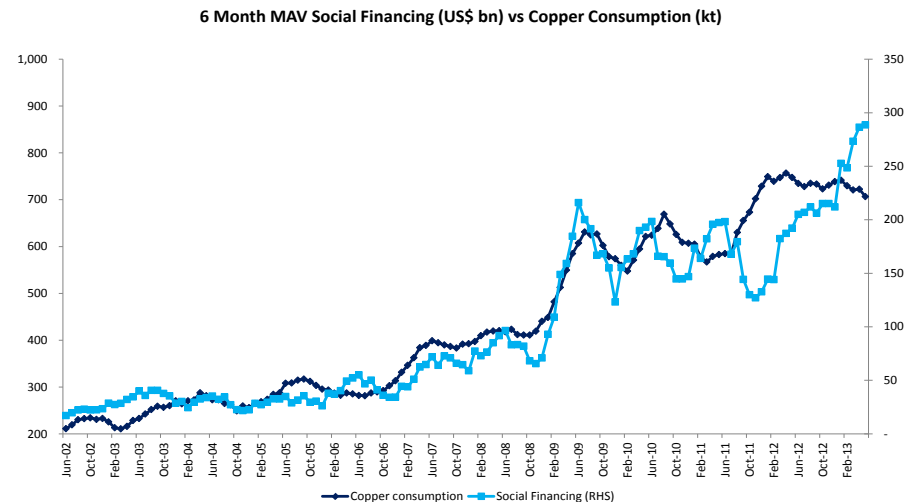
Source: Citi Research; ICOR is Investment/GDP divided by GDP growth; ICrOR is Credit/GDP divided by GDP growth

Figure 33. Steel demand has run ahead of urbanisation trends suggesting significant downside



Source: World Steel, CRU, United Nations, Citi Research

Figure 35. There appears to be a strong relationship between commodity demand and credit



Source: PBOC, Bloomberg, Citi Research

Figure 36. PE Multiples

PE Multiples	RIC	Rating	Listing	Price	Target	Citi Base Case					Spot Fx/Prices					IBES Consensus				
Calendar Years			Ccy	12/1/14		2013E	2014E	2015E	2016E	13E-16E CAGR	2013E	2014E	2015E	2016E	13E-16E CAGR	2013E	2014E	2015E	2016E	13E-16E CAGR
Diversified																				
Anglo American PLC	AAL.L	Neutral	GBP	12.50	14.00	10.5	13.5	12.3	10.5	0%	9.8	10.8	11.5	11.7	-6%	11.7	10.6	8.8	7.2	18%
BHP Billiton PLC	BLT.L	Neutral	GBP	17.81	21.00	11.5	9.9	10.2	10.5	3%	11.0	9.1	8.7	8.4	9%	12.3	11.0	10.5	9.9	8%
Glencore Xstrata	GLEN.L	Buy	GBP	3.19	3.70	18.1	15.0	10.9	8.2	30%	17.2	13.8	12.3	11.3	15%	17.7	13.9	10.4	7.7	32%
Norilsk	NKELYq.L	Neutral	USD	15.87	13.70	10.9	10.7	8.6	9.4	5%	11.1	11.5	15.8	36.5	-33%	12.9	11.1	9.5	6.9	23%
Rio Tinto PLC	RIO.L	Buy	GBP	31.40	40.00	9.8	8.8	8.4	8.8	4%	9.6	8.2	6.4	6.1	16%	10.2	9.1	8.1	8.7	5%
Vedanta Resources	VED.L	Neutral	GBP	8.72	10.00	16.9	12.9	9.0	7.3	33%	13.6	7.5	6.0	6.4	29%	18.6	13.8	10.0	4.9	56%
Weighted Average						11.4	10.3	9.9	10.0	4%	11.0	9.3	8.7	9.5	9%	11.8	10.4	9.3	8.6	10%
Bulks																				
African Minerals	AMi.L	Buy	GBP	1.96	3.00	40.3	5.9	16.1	64.5	-15%	26.2	3.9	4.0	3.6	94%	28.3	5.7	8.6	11.1	37%
Ferrexpo PLC	FXPO.L	Buy	GBP	1.75	2.10	7.4	5.3	13.1	32.1	-39%	6.2	3.5	3.4	3.2	25%	6.7	7.5	9.3	7.6	-4%
London Mining	LOND.L	Buy	GBP	1.03	1.70	13.0	6.0	nm	nm	na	9.9	2.5	1.4	0.9	119%	13.0	3.2	3.5	3.4	57%
New World Resources	NWRR.L	Sell	GBP	0.75	0.75	nm	nm	nm	nm	na	nm	nm	nm	nm	na	nm	nm	nm	nm	na
Base Metals																				
Antofagasta PLC	ANTO.L	Sell	GBP	7.82	7.70	15.3	17.4	15.2	10.9	12%	14.5	13.4	13.2	12.2	6%	15.5	15.9	15.6	11.6	10%
Boliden	BOL.ST	Neutral	SEK	97.45	95.00	20.3	13.3	7.9	6.1	50%	18.9	10.3	8.9	7.8	34%	20.0	13.6	9.3	8.3	34%
First Quantum Minerals	FQM.L	Sell	GBP	10.31	9.50	17.3	16.8	10.0	5.5	47%	17.0	15.0	10.5	7.4	32%	18.2	15.5	9.5	6.9	38%
Lundin Mining	LUMIsdb.L	Neutral	SEK	28.17	29.60	20.7	27.2	17.4	8.2	36%	19.2	17.8	26.0	21.2	-3%	19.7	14.7	9.4	14.0	12%
Nyrstar	NYR.BR	Sell	EUR	2.66	2.00	nm	nm	nm	nm	na	nm	nm	nm	nm	na	nm	nm	23.5	5.5	na
Aluminium																				
Norsk Hydro	NHY.OL	Neutral	NOK	27.55	27.00	37.7	32.0	18.6	14.6	37%	40.7	59.3	45.3	49.6	-6%	39.5	26.4	15.7	11.3	52%
UC Rusal	0486.HK	Sell	HKD	2.36	2.00	nm	nm	30.4	na	na	nm	nm	nm	16.9	na	nm	12.7	7.1	2.9	na
Precious Metals																				
African Barrick Gold	ABGL.L	Sell	GBP	1.87	1.20	17.1	38.5	12.8	9.6	21%	18.7	38.0	24.2	19.4	-1%	16.5	19.4	13.2	11.4	13%
Aquarius Platinum Plc	AQP.L	Neutral	GBP	0.39	0.44	nm	56.1	12.5	7.6	na	125.4	nm	nm	nm	na	nm	18.1	8.0	na	na
Centamin Egypt	CEY.L	Neutral	GBP	0.47		4.0	4.3	4.3	5.5	-10%	4.1	4.3	4.5	7.1	-17%	4.5	7.4	7.0	5.9	-9%
Fresnillo Plc	FRES.L	Sell	GBP	6.79	6.19	21.5	24.3	20.3	18.1	6%	22.3	25.5	27.6	24.8	-4%	24.1	25.7	19.9	2.5	113%
Gem Diamonds	GEMD.L	Buy	GBP	1.57	1.82	18.5	16.1	9.9	8.3	30%	nm	14.5	9.5	8.1	na	19.9	13.4	10.7	16.4	7%
Hochschild Mining	HOCM.L	Sell	GBP	1.34	1.13	nm	31.4	4.9	4.8	na	nm	42.4	7.1	7.6	na	nm	122.2	10.5	na	na
Lonmin Plc	LML.L	Buy	GBP	3.00	4.56	24.3	23.7	22.2	16.1	15%	24.4	27.5	50.5	56.4	-24%	23.7	19.2	13.3	na	na
Nordgold	NORDNg.L	Neutral	USD	1.51	1.58	30.2	nm	8.9	12.6	34%	41.9	nm	nm	nm	na	nm	6.9	16.2	45.8	na
Petra Diamonds	PDL.L	Buy	GBP	1.21	1.41	16.6	10.5	6.6	4.7	52%	14.9	10.8	7.0	5.1	42%	17.3	12.2	8.8	6.8	36%
Petropavlovsk PLC	POG.L	Sell	GBP	0.68	0.56	nm	2.7	1.8	1.9	na	nm	2.9	2.8	3.2	na	nm	nm	nm	24.8	na
Polymetal	POLYP.L	Sell	GBP	5.30	4.54	14.3	12.5	8.6	8.2	21%	14.5	13.3	12.1	12.3	6%	19.6	12.1	10.8	9.9	26%
Polyus Gold	PGILL.L	Sell	GBP	1.90	1.62	18.4	34.8	26.1	24.1	-9%	18.7	34.1	37.2	36.3	-20%	18.9	24.7	17.4	12.4	15%
Randgold Resources	RRS.L	Sell	GBP	37.12	35.45	20.5	18.5	15.0	17.4	5%	20.9	19.0	20.1	26.1	-7%	21.3	16.6	14.0	12.8	18%
South Africa																				
African Rainbow	ARIJ.J	Buy	ZAR	187	225	18.6	9.9	9.9	9.8	24%	15.0	6.9	6.6	6.7	31%	10.1	9.5	9.6	9.5	2%
Assore	ASRJ.J	Sell	ZAR	339	290	7.8	8.4	9.8	11.1	-11%	7.1	6.0	5.6	5.5	9%	9.5	9.8	11.1	11.7	-7%
Exxaro	EXXJ.J	Neutral	ZAR	147	150	11.6	12.2	14.3	14.4	-7%	10.4	8.5	7.7	6.9	15%	10.3	9.5	8.4	8.4	7%
Kumba Iron Ore Ltd	KIOJ.J	Neutral	ZAR	416	420	8.7	9.4	13.7	20.5	-25%	7.9	6.7	6.6	6.7	6%	8.9	10.0	12.0	12.0	-9%

Source: DataCentral

Figure 37. EV/EBITDA

EV/EBITDA	RIC	Rating	Listing	Price	Target	Citi Base Case					Spot Fx/Prices					IBES Consensus				
Calendar Years			Ccy	12/01/14		2013E	2014E	2015E	2016E	13E-16E CAGR	2013E	2014E	2015E	2016E	13E-16E CAGR	2013E	2014E	2015E	2016E	13E-16E CAGR
Diversified																				
Anglo American PLC	AAL.L	Neutral	GBP	12.50	14.00	5.1	5.5	5.3	4.7	3%	5.0	4.8	4.8	4.6	2%	5.1	5.2	4.6	5.8	-4%
BHP Billiton PLC	BLT.L	Neutral	GBP	17.81	21.00	6.5	5.8	5.8	5.7	4%	6.6	5.3	4.9	4.5	14%	6.6	5.9	5.6	5.1	9%
Glencore Xstrata	GLE.N.L	Buy	GBP	3.19	3.70	10.6	9.0	7.2	5.5	24%	10.3	8.6	7.8	7.1	13%	10.7	8.8	7.1	5.5	25%
Norilsk	NKELYq.L	Neutral	USD	15.87	13.70	7.3	7.1	6.1	6.5	4%	7.4	7.5	9.2	13.9	-19%	7.4	7.2	6.5	6.4	5%
Rio Tinto PLC	RIO.L	Buy	GBP	31.40	40.00	6.3	5.3	4.8	4.6	10%	6.0	5.0	3.7	3.1	25%	6.7	5.9	5.2	4.8	12%
Vedanta Resources	VED.L	Neutral	GBP	8.72	10.00	5.6	5.2	5.0	4.4	9%	5.4	4.7	4.5	4.2	9%	5.6	5.1	4.6	4.0	12%
Weighted Average						6.5	6.0	5.7	5.5	5%	6.5	5.5	5.1	5.0	11%	6.7	6.1	5.5	5.2	8%
Bulks																				
African Minerals	AMiQ.L	Buy	GBP	1.96	3.00	5.0	1.4	2.2	2.1	33%	4.5	0.9	0.5	nm	na	5.3	1.7	2.0	2.0	38%
Ferrexpo PLC	FXPO.L	Buy	GBP	1.75	2.10	5.1	3.9	6.1	8.3	-15%	4.6	2.6	2.0	1.3	51%	5.1	5.1	5.3	4.7	2%
London Mining	LOND.L	Buy	GBP	1.03	1.70	5.3	2.9	4.2	4.8	4%	5.0	2.0	1.2	0.3	147%	6.0	3.4	4.0	4.5	10%
New World Resources	NWRR.L	Sell	GBP	0.75	0.75	nm	nm	139.9	33.3	na	nm	nm	nm	nm	na	nm	19.5	8.2	9.0	na
Base Metals																				
Antofagasta PLC	ANTO.L	Sell	GBP	7.82	7.70	4.4	5.4	4.9	3.7	6%	4.2	4.4	4.4	4.0	2%	4.7	5.2	4.8	3.9	7%
Boliden	BOL.ST	Neutral	SEK	97.45	95.00	7.3	6.1	4.3	3.2	31%	7.3	5.4	4.5	3.8	24%	7.4	6.1	4.8	4.3	19%
First Quantum Minerals	FQM.L	Sell	GBP	10.31	9.50	10.4	9.5	6.8	3.8	40%	10.3	8.5	6.7	4.6	30%	10.1	9.3	6.7	5.3	24%
Lundin Mining	LUMIsdb.S	Neutral	SEK	28.17	29.60	5.8	7.1	3.2	1.4	59%	5.6	5.6	4.2	3.5	17%	4.1	4.4	2.3	1.4	44%
Nyrstar	NYR.BR	Sell	EUR	2.66	2.00	6.6	7.2	6.2	5.2	8%	6.4	4.7	5.7	6.0	2%	7.2	6.1	5.6	5.8	7%
Aluminium																				
Norsk Hydro	NHY.OL	Neutral	NOK	27.55	27.00	10.3	9.1	7.0	6.2	18%	11.6	11.7	10.6	10.8	3%	10.7	9.1	6.9	7.8	11%
UC Rusal	0486.HK	Sell	HKD	2.36	2.00	20.9	24.4	15.7	17.5	6%	22.5	69.4	52.9	14.1	17%	18.3	17.0	10.9	7.1	37%
Precious Metals																				
African Barrick Gold	ABGL.L	Sell	GBP	1.87	1.20	4.5	5.2	3.6	3.2	12%	4.7	5.2	4.9	5.0	-2%	4.8	4.7	3.6	3.3	13%
Aquarius Platinum Plc	AQP.L	Neutral	GBP	0.39	0.44	7.2	9.1	4.0	3.0	34%	6.8	10.7	13.3	43.3	-46%	8.7	6.8	4.0	1.9	67%
Centamin Egypt	CEY.L	Neutral	GBP	0.47		3.2	2.7	1.8	1.2	39%	3.3	2.8	2.2	1.7	25%	3.2	3.1	1.9	1.2	39%
Fresnillo Plc	FRES.L	Sell	GBP	6.79	6.19	10.2	10.3	8.7	7.5	11%	10.4	10.6	10.5	9.3	4%	9.8	10.5	8.4	12.1	-7%
Gem Diamonds	GEMD.L	Buy	GBP	1.57	1.82	6.1	6.1	4.0	3.2	25%	6.1	5.8	3.9	3.1	25%	6.1	5.3	4.3	4.6	10%
Hochschild Mining	HOCM.L	Sell	GBP	1.34	1.13	6.5	8.2	3.7	3.2	27%	6.5	8.8	4.8	4.6	12%	6.5	8.6	4.6	na	na
Lonmin Plc	LML.L	Buy	GBP	3.00	4.56	8.4	7.4	7.5	6.3	10%	8.5	8.3	10.9	11.3	-9%	8.3	6.7	5.3	4.4	23%
Nordgold	NORDNq.L	Neutral	USD	1.51	1.58	3.5	3.5	2.2	1.7	26%	3.6	3.7	2.9	2.6	12%	3.1	2.9	2.7	2.6	6%
Petra Diamonds	PDL.L	Buy	GBP	1.21	1.41	8.3	6.3	4.5	3.2	37%	7.8	6.4	4.5	3.2	35%	7.8	6.1	4.8	3.6	29%
Petropavlovsk PLC	POG.L	Sell	GBP	0.68	0.56	5.7	6.1	5.6	4.7	7%	5.8	6.2	7.3	6.5	-4%	4.9	6.1	5.9	5.4	-3%
Polymetal	POLYP.L	Sell	GBP	5.30	4.54	6.8	6.5	4.7	4.0	19%	6.8	6.8	6.0	5.7	6%	7.4	6.6	5.4	4.9	14%
Polyus Gold	PGILL.L	Sell	GBP	1.90	1.62	11.2	13.7	11.1	9.4	6%	11.3	13.9	13.8	12.5	-3%	10.9	11.7	8.7	7.2	15%
Randgold Resources	RRS.L	Sell	GBP	37.12	35.45	10.6	7.9	6.2	6.4	18%	10.3	7.7	7.2	7.8	10%	11.3	9.0	6.9	6.3	21%
South Africa																				
African Rainbow	ARIJ.J	Buy	ZAR	187	225	4.8	4.7	4.4	4.1	6%	4.4	3.5	3.0	2.7	18%	5.2	4.6	4.3	3.9	10%
Assore	ASRJ.J	Sell	ZAR	339	290	6.1	5.9	6.5	7.0	-4%	5.6	4.3	3.6	3.2	20%	7.0	6.9	7.3	7.2	-1%
Exxaro	EXXJ.J	Neutral	ZAR	147	150	24.0	19.5	14.3	11.3	29%	22.5	16.7	13.2	10.3	30%	19.9	17.8	14.6	8.1	35%
Kumba Iron Ore Ltd	KIOJ.J	Neutral	ZAR	416	420	4.7	5.1	7.2	9.9	-22%	4.3	3.7	3.6	3.6	5%	4.8	5.4	6.3	6.4	-9%

Source: DataCentral

Figure 38. EPS

EPS				2013E						2014E						2015E						2016E					
Calendar Years				Base	Spot	Cons.	Spot vs. base	Base vs. cons.	Spot vs. cons.	Base	Spot	Cons.	Spot vs. base	Base vs. cons.	Spot vs. cons.	Base	Spot	Cons.	Spot vs. base	Base vs. cons.	Spot vs. cons.	Base	Spot	Cons.	Spot vs. base	Base vs. cons.	Spot vs. cons.
Diversified																											
Anglo American PLC	USD	AAL.L		1.97	2.09	1.77	6%	12%	19%	1.53	1.90	1.95	24%	-22%	-2%	1.67	1.79	2.35	7%	-29%	-24%	1.97	1.76	2.87	-10%	-31%	-39%
BHP Billiton PLC	USD	BLT.L		2.56	2.66	2.40	4%	7%	11%	2.96	3.24	2.66	9%	11%	22%	2.87	3.37	2.79	18%	3%	21%	2.80	3.48	2.98	24%	-6%	17%
Glencore Xstrata	USD	GLEN.L		0.29	0.31	0.30	5%	-2%	3%	0.35	0.38	0.38	9%	-7%	1%	0.48	0.43	0.51	-11%	-5%	-16%	0.64	0.47	0.68	-27%	-6%	-32%
Norilsk	USD	NKELYq.L		1.45	1.43	1.24	-2%	17%	16%	1.48	1.38	1.43	-7%	4%	-3%	1.85	1.01	1.67	-46%	11%	-40%	1.68	0.43	2.30	-74%	-27%	-81%
Rio Tinto PLC	USD	RIO.L		5.27	5.39	5.08	2%	4%	6%	5.87	6.29	5.66	7%	4%	11%	6.17	8.13	6.36	32%	-3%	28%	5.87	8.50	5.92	45%	-1%	44%
Vedanta Resources	USD	VED.L		0.85	1.06	0.77	25%	10%	37%	1.11	1.90	1.04	72%	7%	83%	1.60	2.41	1.44	51%	11%	67%	1.98	2.26	2.90	14%	-32%	-22%
Bulks																											
African Minerals	USD	AMIQ.L		0.08	0.12	0.11	54%	-30%	8%	0.55	0.82	0.57	49%	-3%	45%	0.20	0.80	0.38	302%	-47%	113%	0.05	0.90	0.29	1709%	-83%	212%
Ferrexpo PLC	USD	FXPO.L		0.39	0.46	0.43	19%	-10%	7%	0.54	0.82	0.39	53%	40%	114%	0.22	0.85	0.31	287%	-29%	176%	0.09	0.90	0.38	899%	-76%	137%
London Mining	USD	LOND.L		0.13	0.17	0.13	32%	0%	32%	0.28	0.69	0.53	145%	-47%	30%	0.11	1.19	0.49	1178%	-122%	142%	0.31	1.80	0.50	681%	-162%	260%
New World	EUR	NWRR.L		-1.18	-1.22	-1.21	-3%	3%	0%	-0.76	-0.87	-0.50	-15%	-53%	-76%	0.95	-1.14	-0.30	-21%	-214%	-278%	0.92	-1.21	-0.23	-32%	-300%	-428%
Base Metals																											
Antofagasta PLC	USD	ANTO.L		0.84	0.89	0.83	6%	1%	7%	0.74	0.96	0.81	30%	-9%	18%	0.85	0.97	0.83	15%	3%	18%	1.18	1.05	1.11	-11%	6%	-5%
Boliden	SEK	BOL.ST		4.79	5.14	4.87	7%	-2%	6%	7.34	9.42	7.17	28%	2%	31%	12.30	10.99	10.53	-11%	17%	4%	16.05	12.50	11.68	-22%	37%	7%
First Quantum	USD	FQM.L		0.98	1.00	0.93	2%	5%	7%	1.01	1.13	1.09	12%	-8%	4%	1.70	1.62	1.79	-5%	-5%	-10%	3.10	2.29	2.46	-26%	26%	-7%
Lundin Mining	USD	LUMISdb.ST		0.21	0.23	0.22	7%	-5%	2%	0.16	0.24	0.30	52%	-46%	-18%	0.25	0.17	0.46	-33%	-46%	-64%	0.53	0.20	0.31	-61%	71%	-34%
Nyrstar	EUR	NYR.BR		-0.61	-0.54	-0.63	12%	4%	15%	-0.51	-0.03	-0.30	94%	-72%	91%	0.23	-0.17	0.11	26%	-304%	-251%	0.02	-0.34	0.49	-1588%	-104%	-170%
Aluminium																											
Norsk Hydro	NOK	NHY.OL		0.73	0.68	0.70	-7%	5%	-3%	0.86	0.46	1.05	-46%	-18%	-56%	1.48	0.61	1.76	-59%	-16%	-65%	1.89	0.55	2.45	-71%	-23%	-77%
UC Rusal	USD	0486.HK		-0.05	-0.05	0.00	-3%	nm	nm	0.02	-0.04	0.02	95%	-183%	-263%	0.01	-0.02	0.04	-343%	-77%	-156%	-	0.02	0.11	nm	nm	-83%
Precious Metals																											
African Barrick Gold	USD	ABGL.L		0.18	0.16	0.19	-9%	-4%	-12%	0.08	0.08	0.16	1%	-50%	-49%	0.24	0.13	0.23	-47%	3%	-46%	0.32	0.16	0.27	-50%	19%	-41%
Aquarius Platinum Plc	USD	AQP.L		0.00	0.01	-0.00	nm	102%	367%	0.01	0.00	0.04	-97%	-68%	-99%	0.05	-0.05	0.08	-196%	-36%	-161%	0.08	-0.09	na	-202%	na	na
Centamin Egypt	USD	CEY.L		0.19	0.19	0.17	-2%	11%	9%	0.18	0.18	0.10	0%	73%	73%	0.18	0.17	0.11	-5%	65%	57%	0.14	0.11	0.13	-23%	8%	-17%
Fresnillo Plc	USD	FRES.L		0.52	0.50	0.46	-3%	12%	8%	0.46	0.44	0.44	-5%	6%	1%	0.55	0.41	0.56	-26%	-2%	-28%	0.62	0.45	4.47	-27%	-86%	-90%
Gem Diamonds	USD	GEMD.L		0.14	0.14	0.13	0%	8%	8%	0.16	0.18	0.19	11%	-17%	-8%	0.26	0.27	0.24	5%	8%	13%	0.31	0.32	0.16	2%	96%	101%
Hochschild Mining	USD	HOCM.L		0.05	-0.06	-0.09	-29%	42%	25%	0.07	0.05	0.02	-26%	289%	189%	0.45	0.31	0.21	-31%	114%	47%	0.46	0.29	na	-37%	na	na
Lonmin Plc	USD	LML.L		0.20	0.20	0.21	-1%	-3%	-3%	0.21	0.18	0.26	-14%	-19%	-30%	0.22	0.10	0.37	-56%	-40%	-74%	0.31	0.09	na	-71%	na	na
Nordgold	USD	NORDnq.L		0.05	0.04	-0.12	-28%	143%	131%	0.07	-0.08	0.22	-21%	-132%	-139%	0.17	-0.00	0.09	-103%	83%	-105%	0.12	0.00	0.03	-97%	264%	-91%
Petra Diamonds	USD	PDL.L		0.12	0.13	0.12	12%	4%	16%	0.19	0.18	0.16	-3%	16%	12%	0.30	0.29	0.23	-5%	32%	26%	0.42	0.39	0.29	-8%	44%	33%
Petropavlovsk PLC	USD	POGL		-0.05	-0.23	-0.28	-366%	82%	18%	0.41	0.39	0.19	-5%	316%	305%	0.61	0.40	-0.11	-34%	650%	465%	0.60	0.34	0.05	-43%	1233%	665%
Polymetal	USD	POLYP.L		0.61	0.60	0.45	-2%	37%	35%	0.70	0.66	0.72	-6%	-3%	-9%	1.02	0.72	0.81	-29%	26%	-11%	1.07	0.71	0.88	-34%	21%	-19%
Polyus Gold	USD	PGL.L		0.17	0.17	0.17	-1%	2%	1%	0.09	0.09	0.13	2%	-29%	-28%	0.12	0.08	0.18	-30%	-33%	-53%	0.13	0.09	0.25	-34%	-49%	-66%
Randgold Resources	USD	RRL.L		2.99	2.93	2.88	-2%	4%	2%	3.31	3.22	3.70	-3%	-10%	-13%	4.09	3.04	4.38	-26%	-7%	-31%	3.51	2.34	4.77	-33%	-26%	-51%
South Africa																											
African Rainbow	ZAR	ARJ.J		10.05	12.45	18.57	24%	-46%	-33%	18.96	27.05	19.66	43%	-4%	38%	18.84	28.18	19.48	50%	-3%	45%	19.02	27.93	19.78	47%	-4%	41%
Assore	ZAR	ASRJ.J		43.54	47.80	35.78	10%	22%	34%	40.47	56.70	34.70	40%	17%	63%	34.64	60.32	30.42	74%	14%	98%	30.63	61.58	29.08	101%	5%	112%
Exxaro	ZAR	EXXJ.J		12.64	14.09	14.27	11%	-11%	-1%	12.01	17.35	15.55	44%	-23%	12%	10.30	19.18	17.57	86%	-41%	9%	10.19	21.27	17.41	109%	-41%	22%
Kumba Iron Ore Ltd	ZAR	KIOJ.J		47.87	52.57	46.47	10%	3%	13%	44.21	61.88	41.78	40%	6%	48%	30.45	63.48	34.52	108%	-12%	84%	20.32	62.45	34.78	207%	-42%	80%

Source: DataCentral

Figure 39. PE Ratios

PE Ratios		2013E					2014E					2015E					2016E				
		Base	Spot	Cons.	Spot vs. base	Spot vs. cons.	Base	Spot	Cons.	Spot vs. base	Spot vs. cons.	Base	Spot	Cons.	Spot vs. base	Spot vs. cons.	Base	Spot	Cons.	Spot vs. base	Spot vs. cons.
Calendar Years																					
Diversified																					
Anglo American PLC	AAL.L	10.5	9.8	11.7	-6%	-16%	13.5	10.8	10.6	-20%	2%	12.3	11.5	8.8	-7%	31%	10.5	11.7	7.2	12%	63%
BHP Billiton PLC	BLT.L	11.5	11.0	12.3	-4%	-10%	9.9	9.1	11.0	-9%	-18%	10.2	8.7	10.5	-15%	-17%	10.5	8.4	9.9	-20%	-15%
Glencore Xstrata	GLEN.L	18.1	17.2	17.7	-5%	-3%	15.0	13.8	13.9	-8%	-1%	10.9	12.3	10.4	13%	19%	8.2	11.3	7.7	37%	46%
Norilsk	NKELYq.L	10.9	11.1	12.9	2%	-14%	10.7	11.5	11.1	7%	3%	8.6	15.8	9.5	84%	66%	9.4	36.5	6.9	286%	429%
Rio Tinto PLC	RIO.L	9.8	9.6	10.2	-2%	-6%	8.8	8.2	9.1	-7%	-10%	8.4	6.4	8.1	-24%	-22%	8.8	6.1	8.7	-31%	-30%
Vedanta Resources	VED.L	16.9	13.6	18.6	-20%	-27%	12.9	7.5	13.8	-42%	-45%	9.0	6.0	10.0	-34%	-40%	7.3	6.4	4.9	-12%	29%
Bulks																					
African Minerals	AMliq.L	40.3	26.2	28.3	-35%	-7%	5.9	3.9	5.7	-33%	-31%	16.1	4.0	8.6	-75%	-53%	64.5	3.6	11.1	-94%	-68%
Ferrexpo PLC	FXPO.L	7.4	6.2	6.7	-16%	-7%	5.3	3.5	7.5	-35%	-53%	13.1	3.4	9.3	-74%	-64%	32.1	3.2	7.6	-90%	-58%
London Mining	LOND.L	13.0	9.9	13.0	-24%	-24%	6.0	2.5	3.2	-59%	-23%	nm	1.4	3.5	na	-59%	nm	0.9	3.4	na	-72%
New World Resources	NWRR.L	nm	nm	nm	na	na	nm	nm	nm	na	na	nm	nm	nm	na	na	nm	nm	nm	na	r
Base Metals																					
Antofagasta PLC	ANTO.L	15.3	14.5	15.5	-5%	-6%	17.4	13.4	15.9	-23%	-15%	15.2	13.2	15.6	-13%	-15%	10.9	12.2	11.6	12%	5%
Boliden	BOL.ST	20.3	18.9	20.0	-7%	-5%	13.3	10.3	13.6	-22%	-24%	7.9	8.9	9.3	12%	-4%	6.1	7.8	8.3	28%	-7%
First Quantum Minerals	FQM.L	17.3	17.0	18.2	-2%	-7%	16.8	15.0	15.5	-11%	-4%	10.0	10.5	9.5	5%	11%	5.5	7.4	6.9	35%	7%
Lundin Mining	LUMIsdb.ST	20.7	19.2	19.7	-7%	-2%	27.2	17.8	14.7	-34%	21%	17.4	26.0	9.4	49%	176%	8.2	21.2	14.0	159%	52%
Nyrstar	NYR.BR	nm	nm	nm	na	na	nm	nm	nm	na	na	nm	nm	23.5	na	na	nm	nm	5.5	na	r
Aluminium																					
Norsk Hydro	NHY.OL	37.7	40.7	39.5	8%	3%	32.0	59.3	26.4	85%	125%	18.6	45.3	15.7	143%	188%	14.6	49.6	11.3	241%	341%
UC Rusal	O486.HK	nm	nm	nm	na	na	nm	nm	12.7	na	na	30.4	nm	7.1	na	na	na	16.9	2.9	na	483%
Precious Metals																					
African Barrick	ABGL.L	17.1	18.7	16.5	9%	14%	38.5	38.0	19.4	-1%	96%	12.8	24.2	13.2	88%	84%	9.6	19.4	11.4	101%	70%
Aquarius Platinum Plc	AQP.L	nm	125.4	nm	na	na	56.1	nm	18.1	na	na	12.5	nm	8.0	na	na	7.6	nm	na	na	r
Centamin Egypt	CEY.L	4.0	4.1	4.5	2%	-8%	4.3	4.3	7.4	0%	-42%	4.3	4.5	7.0	5%	-36%	5.5	7.1	5.9	29%	20%
Fresnillo	FRES.L	21.5	22.3	24.1	4%	-8%	24.3	25.5	25.7	5%	-1%	20.3	27.6	19.9	36%	39%	18.1	24.8	2.5	37%	891%
Gem Diamonds	GEMD.L	18.5	nm	19.9	na	na	16.1	14.5	13.4	-10%	8%	9.9	9.5	10.7	-5%	-12%	8.3	8.1	16.4	-2%	-50%
Hochschild	HOCM.L	nm	nm	nm	na	na	31.4	42.4	122.2	35%	-65%	4.9	7.1	10.5	46%	-32%	4.8	7.6	na	59%	r
Lonmin Plc	LMI.L	24.3	24.4	23.7	1%	3%	23.7	27.5	19.2	16%	44%	22.2	50.5	13.3	128%	281%	16.1	56.4	na	250%	r
Nordgold	NORDNg.L	30.2	41.9	nm	39%	na	nm	nm	6.9	na	na	8.9	nm	16.2	na	na	12.6	nm	45.8	na	r
Petra Diamonds	PDL.L	16.6	14.9	17.3	-10%	-14%	10.5	10.8	12.2	3%	-11%	6.6	7.0	8.8	5%	-21%	4.7	5.1	6.8	8%	-25%
Petropavlovsk	POGL	nm	nm	nm	na	na	2.7	2.9	nm	5%	na	1.8	2.8	nm	51%	na	1.9	3.2	24.8	74%	-87%
Polymetal	POLYP.L	14.3	14.5	19.6	2%	-26%	12.5	13.3	12.1	6%	10%	8.6	12.1	10.8	41%	12%	8.2	12.3	9.9	50%	24%
Polyus Gold	PGIL.L	18.4	18.7	18.9	1%	-1%	34.8	34.1	24.7	-2%	38%	26.1	37.2	17.4	43%	114%	24.1	36.3	12.4	51%	193%
Randgold Resources	RRS.L	20.5	20.9	21.3	2%	-2%	18.5	19.0	16.6	3%	15%	15.0	20.1	14.0	35%	44%	17.4	26.1	12.8	50%	104%
South Africa																					
African Rainbow	ARIJ.J	18.6	15.0	10.1	-19%	49%	9.9	6.9	9.5	-30%	-27%	9.9	6.6	9.6	-33%	-31%	9.8	6.7	9.5	-32%	-29%
Assore	ASRJ.J	7.8	7.1	9.5	-9%	-25%	8.4	6.0	9.8	-29%	-39%	9.8	5.6	11.1	-43%	-50%	11.1	5.5	11.7	-50%	-53%
Exxaro	EXXJ.J	11.6	10.4	10.3	-10%	1%	12.2	8.5	9.5	-31%	-10%	14.3	7.7	8.4	-46%	-8%	14.4	6.9	8.4	-52%	-18%
Kumba Iron Ore Ltd	KIOJ.J	8.7	7.9	8.9	-9%	-12%	9.4	6.7	10.0	-29%	-32%	13.7	6.6	12.0	-52%	-46%	20.5	6.7	12.0	-67%	-44%

Source: DataCentral

Figure 40. EBITDA (m)

EBITDA (m)			Base		Spot	2013E	Spot vs. base	Spot vs. cons.	Base	Spot	2014E	Spot vs. base	Spot vs. cons.	Base	Spot	2015E	Spot vs. base	Spot vs. cons.	Base	Spot	2016E	Spot vs. base	Spot vs. cons.
Calendar Years						Cons.					Cons.					Cons.					Cons.		
Diversified																							
Anglo American PLC	USD	AAL.L	8,570	8,854	8,608	3%	3%		8,339	9,424	8,935	13%	5%	8,828	9,593	10,042	9%	-4%	10,039	10,068	8,124	0%	24'
BHP Billiton PLC	USD	BLT.L	30,378	29,654	29,802	-2%	0%		32,847	35,240	32,136	7%	10%	32,248	36,749	33,467	14%	10%	31,858	37,947	35,453	19%	7'
Glencore Xstrata	USD	GLEN.L	11,817	12,150	11,694	3%	4%		13,641	14,259	13,986	5%	2%	16,604	15,438	16,708	-7%	-8%	20,190	16,165	20,335	-20%	-21'
Norilsk	USD	NKELYq.L	4,240	4,198	4,217	-1%	0%		4,469	4,267	4,410	-5%	-3%	5,343	3,574	4,947	-33%	-28%	5,048	2,498	5,094	-51%	-51'
Rio Tinto PLC	USD	RIO.L	20,647	21,302	19,187	3%	11%		23,431	24,870	21,204	6%	17%	24,652	30,635	22,432	24%	37%	23,743	31,709	23,032	34%	38'
Vedanta Resources	USD	VED.L	4,662	4,782	4,681	3%	2%		5,027	5,474	5,193	9%	5%	5,271	5,701	5,653	8%	1%	5,775	5,835	6,321	1%	-8'
Bulks																							
African Minerals	USD	AMIQ.L	280	309	263	10%	17%		700	915	569	31%	61%	451	967	494	114%	96%	344	1,063	363	209%	193'
Ferrexpo PLC	USD	FXPO.L	467	520	473	11%	10%		580	790	440	36%	80%	343	810	398	136%	103%	251	844	440	236%	92'
London Mining	USD	LOND.L	94	99	83	6%	20%		193	263	164	36%	60%	151	355	158	135%	125%	131	409	138	212%	196'
New World Resources	EUR	NWRR.L	61	73	33	-19%	-123%		30	72	51	-140%	-240%	9	64	154	-806%	-141%	45	67	167	-248%	-140'
Base Metals																							
Antofagasta PLC	USD	ANTO.L	2,654	2,756	2,469	4%	12%		2,265	2,743	2,318	21%	18%	2,495	2,759	2,588	11%	7%	3,175	2,900	2,998	-9%	-3'
Boliden	SEK	BOL.ST	4,891	4,850	4,799	-1%	1%		5,662	6,398	5,642	13%	13%	7,665	7,188	6,822	-6%	5%	9,049	7,788	6,742	-14%	16'
First Quantum Minerals	USD	FQM.L	1,403	1,422	1,453	1%	-2%		1,827	2,029	1,854	11%	9%	2,719	2,702	2,766	-1%	-2%	4,553	3,760	3,263	-17%	15'
Lundin Mining	USD	LUMIsdb.ST	188	195	267	4%	-27%		185	222	302	20%	-26%	371	273	510	-26%	-47%	536	267	563	-50%	-53'
Nyrstar	EUR	NYR.BR	190	194	173	2%	12%		197	288	230	46%	25%	276	284	307	3%	-7%	361	297	320	-18%	-7'
Aluminium																							
Norsk Hydro	NOK	NHY.OL	7,136	6,286	6,848	-12%	-8%		8,054	6,249	8,071	-22%	-23%	10,186	6,780	10,339	-33%	-34%	11,229	6,721	8,913	-40%	-25'
UC Rusal	USD	0486.HK	710	657	811	-7%	-19%		597	213	854	-64%	-75%	918	286	1,323	-69%	-78%	811	1,060	1,992	31%	-47'
Precious Metals																							
African Barrick Gold	USD	ABGL.L	265	255	248	-4%	3%		227	227	250	0%	-9%	303	237	304	-22%	-22%	346	254	333	-27%	-24'
Aquarius Platinum Plc	USD	AQP.L	66	69	54	5%	27%		55	48	73	-13%	-34%	102	38	104	-63%	-63%	119	13	190	-89%	-93'
Centamin Egypt	USD	CEY.L	231	228	232	-1%	-2%		227	223	200	-2%	12%	253	211	234	-17%	-10%	284	227	286	-20%	-21'
Fresnillo	USD	FRES.L	791	777	826	-2%	-6%		834	812	818	-3%	-1%	989	827	1,026	-16%	-19%	1,085	895	675	-18%	33'
Gem Diamonds	USD	GEMD.L	69	69	69	0%	0%		78	82	90	5%	-10%	111	113	104	2%	9%	125	126	85	1%	47'
Hochschild	USD	HOCM.L	173	174	173	1%	0%		180	169	172	-6%	-2%	369	295	296	-20%	0%	381	290	na	-24%	r
Lonmin Plc	USD	LMI.L	333	329	336	-1%	-2%		373	334	407	-10%	-18%	375	262	524	-30%	-50%	445	255	630	-43%	-60'
Nordgold	USD	NORDNg.L	351	339	398	-4%	-15%		327	314	394	-4%	-20%	464	351	371	-24%	-6%	452	322	305	-29%	6'
Petra Diamonds	USD	PDL.L	137	144	146	5%	-2%		192	183	200	-5%	-8%	276	263	259	-5%	1%	365	340	319	-7%	7'
Petropavlovsk	USD	POG.L	282	279	329	-1%	-15%		252	245	250	-3%	-2%	269	208	255	-23%	-19%	307	230	267	-25%	-14'
Polymetal	USD	POLYP.L	670	665	617	-1%	8%		637	616	633	-3%	-3%	793	638	685	-20%	-7%	790	610	650	-23%	-6'
Polyus Gold	USD	PGIL.L	878	865	901	-1%	-4%		742	729	869	-2%	-16%	922	749	1,178	-19%	-36%	1,070	824	1,400	-23%	-41'
Randgold Resources	USD	RRS.L	535	552	502	3%	10%		676	694	593	3%	17%	790	692	707	-12%	-2%	761	640	770	-16%	-17'
South Africa																							
African Rainbow	ZAR	ARIJ.J	8,258	8,942	7,742	8%	15%		8,145	10,398	8,204	28%	27%	8,214	10,730	8,242	31%	30%	8,193	10,428	8,578	27%	22'
Assore	ZAR	ASRJ.J	7,017	7,633	6,163	9%	24%		6,847	9,189	5,926	34%	55%	5,932	9,591	5,244	62%	83%	5,235	9,582	5,129	83%	87'
Exxaro	ZAR	EXXJ.J	2,590	2,749	3,128	6%	-12%		3,390	3,821	3,729	13%	2%	4,782	4,781	4,688	0%	2%	6,104	5,967	8,542	-2%	-30'
Kumba Iron Ore Ltd	ZAR	KIOJ.J	29,851	32,548	29,239	9%	11%		27,507	37,534	25,815	36%	45%	19,757	38,331	22,359	94%	71%	14,516	38,587	22,728	166%	70'

Source: DataCentral

Figure 41. EV/EBITDA

EV/EBITDA		2013E					2014E					2015E					2016E				
Calendar Years	Diversified	Base	Spot	Cons.	Spot vs. base	Spot vs. cons.	Base	Spot	Cons.	Spot vs. base	Spot vs. cons.	Base	Spot	Cons.	Spot vs. base	Spot vs. cons.	Base	Spot	Cons.	Spot vs. base	Spot vs. cons.
Diversified																					
Anglo American PLC	AAL.L	5.1	5.0	5.1	-3%	-3%	5.5	4.8	5.2	-12%	-6%	5.3	4.8	4.6	-10%	3%	4.7	4.6	5.8	-2%	-21'
BHP Billiton PLC	BLT.L	6.5	6.6	6.6	2%	0%	5.8	5.3	5.9	-8%	-10%	5.8	4.9	5.6	-15%	-12%	5.7	4.5	5.1	-21%	-12'
Glencore Xstrata	GLEN.L	10.6	10.3	10.7	-3%	-4%	9.0	8.6	8.8	-4%	-2%	7.2	7.8	7.1	8%	9%	5.5	7.1	5.5	28%	29'
Norilsk	NKELYQ.L	7.3	7.4	7.4	1%	1%	7.1	7.5	7.2	5%	4%	6.1	9.2	6.5	52%	41%	6.5	13.9	6.4	115%	117'
Rio Tinto PLC	RIO.L	6.3	6.0	6.7	-3%	-10%	5.3	5.0	5.9	-7%	-15%	4.8	3.7	5.2	-23%	-30%	4.6	3.1	4.8	-32%	-34'
Vedanta Resources	VED.L	5.6	5.4	5.6	-3%	-2%	5.2	4.7	5.1	-9%	-6%	5.0	4.5	4.6	-9%	-3%	4.4	4.2	4.0	-3%	6'
Bulks																					
African Minerals	AMIQ.L	5.0	4.5	5.3	-10%	-15%	1.4	0.9	1.7	-34%	-46%	2.2	0.5	2.0	-75%	-72%	2.1	nm	2.0	na	r
Ferrexpo PLC	FXPO.L	5.1	4.6	5.1	-11%	-10%	3.9	2.6	5.1	-32%	-48%	6.1	2.0	5.3	-67%	-62%	8.3	1.3	4.7	-84%	-72'
London Mining	LOND.L	5.3	5.0	6.0	-6%	-17%	2.9	2.0	3.4	-33%	-43%	4.2	1.2	4.0	-72%	-70%	4.8	0.3	4.5	-93%	-93'
New World Resources	NWRR.L	nm	nm	nm	na	na	nm	nm	19.5	na	na	139.9	nm	8.2	na	na	33.3	nm	9.0	na	r
Base Metals																					
Antofagasta PLC	ANTO.L	4.4	4.2	4.7	-4%	-11%	5.4	4.4	5.2	-19%	-17%	4.9	4.4	4.8	-12%	-8%	3.7	4.0	3.9	8%	2'
Boliden	BOL.ST	7.3	7.3	7.4	1%	-1%	6.1	5.4	6.1	-12%	-12%	4.3	4.5	4.8	6%	-6%	3.2	3.8	4.3	18%	-12'
First Quantum Minerals	FQM.L	10.4	10.3	10.1	-1%	2%	9.5	8.5	9.3	-10%	-9%	6.8	6.7	6.7	-1%	1%	3.8	4.6	5.3	21%	-13'
Lundin Mining	LUMISDB.ST	5.8	5.6	4.1	-4%	36%	7.1	5.6	4.4	-21%	29%	3.2	4.2	2.3	34%	84%	1.4	3.5	1.4	143%	155'
Nyrstar	NYR.BR	6.6	6.4	7.2	-2%	-11%	7.2	4.7	6.1	-35%	-24%	6.2	5.7	5.6	-9%	2%	5.2	6.0	5.8	16%	3'
Aluminium																					
Norsk Hydro	NHY.OL	10.3	11.6	10.7	13%	8%	9.1	11.7	9.1	29%	29%	7.0	10.6	6.9	52%	54%	6.2	10.8	7.8	74%	38'
UC Rusal	0486.HK	20.9	22.5	18.3	8%	23%	24.4	69.4	17.0	185%	307%	15.7	52.9	10.9	238%	386%	17.5	14.1	7.1	-19%	98'
Precious Metals																					
African Barrick Gold	ABGL.L	4.5	4.7	4.8	4%	-2%	5.2	5.2	4.7	0%	11%	3.6	4.9	3.6	35%	36%	3.2	5.0	3.3	55%	49'
Aquarius Platinum Plc	AQP.L	7.2	6.8	8.7	-6%	-22%	9.1	10.7	6.8	18%	56%	4.0	13.3	4.0	229%	234%	3.0	43.3	1.9	1359%	2235'
Centamin Egypt	CEY.L	3.2	3.3	3.2	2%	2%	2.7	2.8	3.1	3%	-10%	1.8	2.2	1.9	24%	15%	1.2	1.7	1.2	42%	43'
Fresnillo Plc	FRES.L	10.2	10.4	9.8	2%	6%	10.3	10.6	10.5	3%	1%	8.7	10.5	8.4	20%	25%	7.5	9.3	12.1	23%	-23'
Gem Diamonds	GEMD.L	6.1	6.1	6.1	0%	0%	6.1	5.8	5.3	-5%	10%	4.0	3.9	4.3	-2%	-8%	3.2	3.1	4.6	-2%	-33'
Hochschild Mining	HOCM.L	6.5	6.5	6.5	0%	0%	8.2	8.8	8.6	7%	2%	3.7	4.8	4.6	31%	5%	3.2	4.6	na	44%	r
Lonmin Plc	LMI.L	8.4	8.5	8.3	1%	2%	7.4	8.3	6.7	12%	23%	7.5	10.9	5.3	46%	104%	6.3	11.3	4.4	80%	155'
Nordgold	NORDNQ.L	3.5	3.6	3.1	4%	18%	3.5	3.7	2.9	5%	26%	2.2	2.9	2.7	34%	8%	1.7	2.6	2.6	49%	0'
Petra Diamonds	PDL.L	8.3	7.8	7.8	-6%	0%	6.3	6.4	6.1	1%	5%	4.5	4.5	4.8	0%	-6%	3.2	3.2	3.6	0%	-13'
Petrovavlovsk PLC	POG.L	5.7	5.8	4.9	1%	18%	6.1	6.2	6.1	3%	2%	5.6	7.3	5.9	30%	24%	4.7	6.5	5.4	39%	21'
Polymetal	POLYP.L	6.8	6.8	7.4	1%	-7%	6.5	6.8	6.6	4%	3%	4.7	6.0	5.4	29%	11%	4.0	5.7	4.9	41%	16'
Polyus Gold	PGIL.L	11.2	11.3	10.9	2%	4%	13.7	13.9	11.7	2%	19%	11.1	13.8	8.7	25%	59%	9.4	12.5	7.2	33%	74'
Randgold Resources	RRS.L	10.6	10.3	11.3	-3%	-9%	7.9	7.7	9.0	-2%	-14%	6.2	7.2	6.9	17%	4%	6.4	7.8	6.3	22%	23'
Bulks																					
African Rainbow	ARIJ.J	4.8	4.4	5.2	-8%	-14%	4.7	3.5	4.6	-25%	-24%	4.4	3.0	4.3	-30%	-30%	4.1	2.7	3.9	-34%	-30'
Assore	ASRJ.J	6.1	5.6	7.0	-9%	-20%	5.9	4.3	6.9	-28%	-38%	6.5	3.6	7.3	-44%	-50%	7.0	3.2	7.2	-54%	-55'
Exxaro	EXXJ.J	24.0	22.5	19.9	-7%	13%	19.5	16.7	17.8	-14%	-6%	14.3	13.2	14.6	-8%	-10%	11.3	10.3	8.1	-9%	28'
Kumba Iron Ore Ltd	KIOJ.J	4.7	4.3	4.8	-9%	-11%	5.1	3.7	5.4	-28%	-33%	7.2	3.6	6.3	-50%	-44%	9.9	3.6	6.4	-63%	-43'

Source: DataCentral

Figure 42. NPV

NPV	Ccy	RIC	Rating	Price 15/01/13	Target	Premium (Discount)								
						NPV per share		Spot vs. Base	Share Price LST CCY	USD	Price/NPV		Spot	
						Base	Spot				Base	Spot	Base	Spot
Diversified														
Anglo American PLC	GBP	AAL.L	Neutral	13.22	14.00	22.54	23.44	4%	13.22	21.73	59%	56%	-41%	-44%
BHP Billiton PLC	GBP	BLT.L	Neutral	17.80	21.00	19.20	19.90	4%	17.80	29.26	93%	89%	-7%	-11%
Glencore Xstrata	GBP	GLEN.L	Buy	3.19	3.70	4.70	3.90	-17%	3.19	5.24	68%	82%	-32%	-18%
Norilsk	USD	NKELYq.L	Neutral	16.55	13.70	13.79	4.32	-69%	16.55	16.55	120%	383%	20%	283%
Rio Tinto PLC	GBP	RIO.L	Buy	32.10	40.00	37.95	38.67	2%	32.10	52.77	85%	83%	-15%	-17%
Vedanta Resources	GBP	VED.L	Neutral	8.65	10.00	11.70	9.70	-17%	8.65	14.21	74%	89%	-26%	-11%
Bulks														
African Minerals	GBP	AMIQ.L	Buy	2.10	3.00	3.15	5.30	68%	2.10	3.46	67%	40%	-33%	-60%
Ferrexpo PLC	GBP	FXPO.L	Buy	1.69	2.10	1.10	4.80	336%	1.69	2.78	154%	35%	54%	-65%
London Mining	GBP	LOND.L	Buy	1.06	1.70	0.91	3.68	304%	1.06	1.73	116%	29%	16%	-71%
New World Resources	GBP	NWRR.L	Sell	0.74	0.75	0.77	0.74	-196%	0.74	1.21	95%	-99%	-5%	-199%
Base Metals														
Antofagasta PLC	GBP	ANTO.L	Sell	7.83	7.70	6.80	7.10	4%	7.83	12.87	115%	110%	15%	10%
Boliden	SEK	BOL.ST	Neutral	97.90	95.00	134.29	115.44	-14%	97.90	15.22	73%	85%	-27%	-15%
First Quantum Mineral	GBP	FQM.L	Sell	10.33	9.50	17.74	15.37	-13%	10.33	16.98	58%	67%	-42%	-33%
Lundin Mining	SEK	LUMIsdb.ST	Neutral	27.86	29.60	31.50	25.90	-18%	27.86	4.33	88%	108%	-12%	8%
Nyrstar	EUR	NYR.BR	Sell	2.72	2.00	4.70	4.10	-13%	2.72	3.72	58%	66%	-42%	-34%
Aluminium														
Norsk Hydro	NOK	NHY.OL	Neutral	27.79	27.00	36.40	22.20	-39%	27.79	4.57	76%	125%	-24%	25%
UC Rusal	HKD	0486.HK	Sell	2.35	2.00	2.52	1.84	-27%	2.35	0.30	93%	128%	-7%	28%
Precious Metals														
African Barrick Gold	GBP	ABGL.L	Sell	1.88	1.20	1.20	0.92	-23%	1.88	3.09	157%	205%	57%	105%
Aquarius Platinum Plc	GBP	AQP.L	Neutral	0.38	0.44	0.54	0.33	-39%	0.38	0.63	71%	117%	-29%	17%
Centamin Egypt	GBP	CEY.L	Neutral	0.47		0.55	0.51	-8%	0.47	0.77	85%	92%	-15%	-8%
Fresnillo Plc	GBP	FRES.L	Sell	6.91	6.19	6.19	5.78	-7%	6.91	11.35	112%	120%	12%	20%
Gem Diamonds	GBP	GEMD.L	Buy	1.60	1.82	1.79	1.85	3%	1.60	2.62	89%	86%	-11%	-14%
Hochschild Mining	GBP	HOCM.L	Sell	1.38	1.13	1.13	0.87	-23%	1.38	2.26	122%	158%	22%	58%
Lonmin Plc	GBP	LMI.L	Buy	3.01	4.56	4.31	3.45	-20%	3.01	4.96	70%	87%	-30%	-13%
Nordgold	USD	NORDNq.L	Neutral	1.50	1.58	1.58	1.07	-33%	1.50	1.50	95%	141%	-5%	41%
Petra Diamonds	USD	PDL.L	Sell	1.19	1.41	1.41	1.52	8%	1.19	1.96	85%	78%	-15%	-22%
Petropavlovsk PLC	GBP	POG.L	Sell	0.71	0.59	0.66	0.19	-71%	0.71	1.17	108%	378%	8%	278%
Polymetal	GBP	POLYP.L	Sell	5.15	4.54	4.54	4.02	-11%	5.15	8.46	113%	128%	13%	28%
Polyus Gold	GBP	PGIL.L	Sell	1.88	1.62	1.62	1.57	-3%	1.88	3.08	116%	119%	16%	19%
Randgold Resources	GBP	RRS.L	Sell	37.48	35.45	35.45	33.65	-5%	37.48	61.62	106%	111%	6%	11%
South Africa														
African Rainbow	ZAR	ARIJ.J	Buy	199	225	202	206	2%	199	13.42	98%	97%	-2%	-3%
Assore	ZAR	ASRJ.J	Sell	345	290	264	337	28%	345	23.31	131%	103%	31%	3%
Exxaro	ZAR	EXXJ.J	Neutral	151	150	131	198	51%	151	10.22	116%	77%	16%	-23%
Kumba Iron Ore Ltd	ZAR	KIOJ.J	Neutral	433	420	234	420	80%	433	39.99	185%	103%	85%	3%

Source: DataCentral

Figure 43. FCF Yield

FCF Yield														
		2013E		Spot vs.	2014E		Spot vs.	2015E		Spot vs.	2016E		Spot vs.	Market
Calendar Years		Base	Spot	Base	Base	Spot	Base	Base	Spot	Base	Base	Spot	Base	Cap
Diversified														
Anglo American PLC	AAL.L	19%	20%	3%	4%	6%	57%	9%	13%	42%	9%	12%	31%	28,712
BHP Billiton PLC	BLT.L	4%	4%	0%	7%	8%	13%	7%	9%	30%	7%	10%	33%	167,816
Glencore Xstrata	GLEN.L	3%	4%	14%	3%	2%	-18%	9%	8%	-12%	15%	12%	-23%	69,762
Norilsk	NKELYq.L	5%	5%	-3%	5%	5%	-12%	6%	5%	-26%	7%	1%	-85%	25,114
Rio Tinto PLC	RIO.L	3%	4%	8%	9%	10%	9%	12%	16%	38%	12%	17%	44%	98,112
Vedanta Resources	VED.L	30%	33%	11%	24%	35%	43%	41%	50%	22%	69%	70%	2%	3,833
Bulks														
African Minerals	AMIQ.L	-21%	-20%	5%	11%	22%	96%	6%	36%	492%	32%	80%	153%	1,070
Ferrexpo PLC	FXPO.L	-4%	-3%	32%	12%	20%	68%	10%	29%	182%	4%	31%	753%	1,700
London Mining	LOND.L	-44%	-42%	4%	-29%	-9%	67%	-29%	40%	240%	3%	123%	4176%	234
New World Resources	NWRR.L	-23%	-23%	-1%	-99%	-113%	-14%	-108%	-131%	-22%	-99%	-135%	-36%	239
Base Metals														
Antofagasta PLC	ANTO.L	2%	2%	21%	1%	3%	241%	3%	6%	64%	13%	11%	-10%	12,707
Boliden	BOL.ST	-6%	-6%	0%	5%	6%	18%	10%	11%	9%	17%	14%	-16%	26,654
First Quantum Minerals	FQM.L	-18%	-18%	-1%	-21%	-20%	1%	-10%	-7%	29%	15%	12%	-22%	10,040
Lundin Mining	LUMIsdb.ST	5%	5%	8%	-23%	-16%	30%	14%	9%	-38%	41%	23%	-45%	977
Nyrstar	NYR.BR	-22%	-20%	6%	-34%	-21%	39%	-77%	-69%	10%	-27%	-33%	-20%	452
Aluminium														
Norsk Hydro	NHY.OL	2%	3%	20%	3%	2%	-27%	7%	5%	-33%	7%	3%	-63%	57,001
UC Rusal	0486.HK	2%	2%	37%	12%	5%	-54%	9%	-2%	-121%	9%	9%	-9%	4,624
Precious Metals														
African Barrick Gold	ABGL.L	-21%	-21%	-1%	0%	0%	2%	7%	3%	-64%	-1%	-9%	-621%	1,263
Aquarius Platinum Plc	AQP.L	17%	19%	10%	-9%	-14%	-63%	28%	1%	-96%	19%	-14%	-174%	311
Centamin Egypt	CEY.L	-5%	-6%	-6%	18%	17%	-2%	22%	20%	-6%	15%	11%	-25%	845
Fresnillo Plc	FRES.L	0%	0%	-24%	-1%	-1%	-11%	3%	2%	-28%	7%	6%	-22%	8,247
Gem Diamonds	GEMD.L	-19%	-19%	0%	-16%	-15%	3%	8%	8%	4%	15%	15%	1%	357
Hochschild Mining	HOCM.L	-35%	-35%	-2%	-37%	-38%	-3%	16%	10%	-39%	22%	14%	-35%	808
Lonmin Plc	LMI.L	2%	2%	-26%	-1%	-3%	-130%	0%	-3%	-1305%	5%	-1%	-114%	2,820
Nordgold	NORDNq.L	14%	14%	-2%	18%	17%	-5%	30%	27%	-11%	45%	32%	-29%	571
Petra Diamonds	PDL.L	-8%	-6%	21%	-10%	-7%	23%	0%	2%	424%	9%	10%	20%	1,020
Petropavlovsk PLC	POG.L	-23%	-23%	1%	41%	41%	0%	11%	6%	-45%	29%	6%	-78%	221
Polymetal	POLYP.L	5%	5%	0%	10%	10%	-5%	15%	11%	-25%	16%	12%	-27%	3,402
Polyus Gold	PGIL.L	-7%	-7%	-1%	-1%	-1%	-11%	1%	0%	-117%	4%	2%	-47%	9,496
Randgold Resources	RRS.L	-4%	-4%	-3%	6%	6%	-2%	9%	7%	-19%	9%	7%	-20%	5,643
South Africa														
African Rainbow	ARIJ.J	5%	5%	11%	8%	11%	40%	10%	14%	37%	10%	14%	37%	40,478
Assore	ASRJ.J	9%	9%	6%	7%	9%	39%	7%	11%	59%	6%	11%	91%	47,357
Exxaro	EXXJ.J	-1%	0%	86%	-1%	2%	349%	2%	8%	232%	3%	9%	190%	52,682
Kumba Iron Ore Ltd	KIOJ.J	14%	15%	8%	13%	18%	39%	10%	20%	97%	5%	16%	243%	133,946

Source: Citi Research

Figure 44. Earnings (m)

Earnings (m)				2013E				2014E				2015E				2016E			
Calendar Years				Base	Spot	Cons	Spot vs. base	Base	Spot	Cons	Spot vs. base	Base	Spot	Cons	Spot vs. base	Base	Spot	Cons	Spot vs. base
Diversified																			
Anglo American PLC	USD	AAL.L		1,722	1,889	1,543	10%	1,958	2,446	2,497	25%	2,150	2,300	3,027	7%	2,526	2,266	3,685	-10%
BHP Billiton PLC	USD	BLT.L		13,292	13,292	12,438	0%	15,878	17,223	14,278	8%	15,081	17,962	14,683	19%	14,827	18,535	15,760	25%
Glencore Xstrata	USD	GLEN.L	-	5,548	- 5,341	- 5,663	4%	4,874	5,257	5,264	8%	6,555	5,865	6,896	-11%	8,903	6,449	9,487	-28%
Norilsk	USD	NKELYq.L		2,292	2,259	1,952	-1%	2,342	2,186	2,260	-7%	2,923	1,592	2,634	-46%	2,654	688	3,633	-74%
Rio Tinto PLC	USD	RIO.L		7,186	7,418	6,923	3%	10,800	11,583	10,414	7%	11,358	14,977	11,715	32%	10,806	15,658	10,889	45%
Vedanta Resources	USD	VED.L	-	36	24	- 33	167%	240	465	225	94%	453	683	409	51%	559	640	820	14%
Bulks																			
African Minerals	USD	AMIQ.L		44	65	63	47%	333	490	342	47%	127	505	239	298%	39	567	226	1355%
Ferrexpo PLC	USD	FXPO.L		229	271	253	18%	316	483	226	53%	127	500	178	293%	54	527	228	876%
London Mining	USD	LOND.L		18	23	18	28%	38	92	72	143%	15	159	67	1161%	41	242	66	689%
New World Resources	EUR	NWRR.L	-	570	- 578	- 586	-1%	202	- 231	- 132	-15%	253	- 303	- 81	-20%	244	- 321	- 61	-32%
Base Metals																			
Antofagasta PLC	USD	ANTO.L		831	876	823	5%	727	946	799	30%	833	961	809	15%	1,161	1,037	1,090	-11%
Boliden	SEK	BOL.ST		1,438	1,535	1,368	7%	2,008	2,577	2,175	28%	3,364	3,005	3,548	-11%	4,390	3,420	3,193	-22%
First Quantum Minerals	USD	FQM.L		479	488	456	2%	597	674	647	13%	1,012	964	1,067	-5%	1,842	1,361	1,462	-26%
Lundin Mining	USD	LUMIsdb.ST		127	132	133.65	0.04	92	142	170.20	0.55	145	98	267	- 0.33	309	120	181	- 0.61
Nyrstar	EUR	NYR.BR	-	128	- 116	- 133	9%	80	- 6	- 46	92%	36	- 28	18	22%	5	- 53	121	-964%
Aluminium																			
Norsk Hydro	NOK	NHY.OL		18	- 92	17	-609%	1,494	696	1,815	-53%	2,838	1,053	3,365	-63%	3,846	1,132	4,975	-71%
UC Rusal	USD	O486.HK	-	684	- 737	-	-8%	230	- 593	276	-158%	216	- 368	929	-271%	27	274	na	913%
Precious Metals																			
African Barrick Gold	USD	ABGL.L		76	68	79	-11%	33	33	66	1%	99	52	97	-47%	131	65	111	-50%
Aquarius Platinum Plc	USD	AQP.L		0	2	- 1	12015%	5	0	17	-97%	24	- 23	38	-196%	39	- 40	na	-202%
Centamin Egypt	USD	CEY.L		206	203	185	-1%	199	196	115	-2%	197	186	119	-6%	151	118	140	-22%
Fresnillo Plc	USD	FRES.L		377	367	336	-3%	338	323	320	-4%	403	299	412	-26%	455	332	3,280	-27%
Gem Diamonds	USD	GEMD.L		19	19	18	2%	23	25	28	7%	37	38	34	2%	43	44	22	2%
Hochschild Mining	USD	HOCM.L	-	18	- 22	- 31	-21%	27	19	7	-29%	165	113	77	-31%	168	106	na	-37%
Lonmin Plc	USD	LMI.L		109	108	112	-1%	125	102	154	-18%	127	56	212	-56%	174	50	na	-71%
Nordgold	USD	NORDNq.L		17	13	- 40	-24%	26	- 31	82	-18%	62	- 2	34	-103%	42	1	12	-97%
Petra Diamonds	USD	PDL.L		61	70	59	14%	101	96	87	-5%	157	150	119	-5%	219	203	152	-7%
Petropavlovsk PLC	USD	POG.L	-	10	- 46	- 57	-360%	81	77	- 38	-5%	120	80	22	-33%	118	68	9	-42%
Polymetal	USD	POLYP.L		250	245	182	-2%	285	268	295	-6%	416	295	331	-29%	434	290	357	-33%
Polyus Gold	USD	PGIL.L		503	495	491	-2%	279	271	394	-3%	351	248	527	-29%	398	255	775	-36%
Randgold Resources	USD	RRS.L		276	270	265	-2%	306	298	342	-3%	378	280	405	-26%	324	216	441	-33%
South Africa																			
African Rainbow	ZAR	ARIJ.J		2,180	2,701	4,029	24%	4,135	5,900	4,289	43%	4,110	6,147	4250	50%	4,149	6,092	4315	47%
Assore	ZAR	ASRJ.J		4,387	4,827	3,605	10%	4,177	5,852	3,581	40%	3,575	6,226	3140	74%	3,161	6,356	3002	101%
Exxaro	ZAR	EXXJ.J		4,494	4,766	5,074	6%	4,251	6,152	5,503	45%	3,647	6,802	6223	87%	3,607	7,543	6163	109%
Kumba Iron Ore Ltd	ZAR	KIOJ.J		15,422	16,950	14,972	10%	14,264	19,967	13,481	40%	9,826	20,483	11,141	108%	6,558	20,149	11,226	207%

Source: Citi Research

Figure 45. FCF(m)

FCF (m)				2013E			2014E			2015E			2016E		
Calendar Years				Base	Spot	Spot vs. Base	Base	Spot	Spot vs. Base	Base	Spot	Spot vs. Base	Base	Spot	Spot vs. Base
Diversified															
Anglo American PLC	USD	AAL.L		5,493	5,658	3%	1,127	1,773	57%	2,547	3,608	42%	2,533	3,320	31%
BHP Billiton PLC	USD	BLT.L		7,249	7,249	0%	11,575	13,025	13%	11,723	15,268	30%	12,317	16,375	33%
Glencore Xstrata	USD	GLEN.L		2,351	2,671	14%	2,098	1,710	-18%	5,970	5,255	-12%	10,604	8,169	-23%
Norilsk	USD	NKELYq.L		1,193	1,160	-3%	1,337	1,181	-12%	1,554	1,142	-26%	1,824	271	-85%
Rio Tinto PLC	USD	RIO.L		3,394	3,680	8%	8,882	9,686	9%	11,295	15,535	38%	11,896	17,145	44%
Vedanta Resources	USD	VED.L		1,151	1,273	11%	929	1,331	43%	1,555	1,902	22%	2,632	2,677	2%
Bulks															
African Minerals	USD	AMIQ.L		- 220	- 209	5%	122	240	96%	65	383	492%	338	856	153%
Ferrexpo PLC	USD	FXPO.L		- 71	- 48	32%	203	341	68%	176	496	182%	62	531	753%
London Mining	USD	LOND.L		- 103	- 99	4%	- 68	- 22	67%	- 67	94	240%	7	289	4176%
New World Resources	EUR	NWRR.L		- 55	- 56	-1%	- 237	- 271	-14%	- 258	- 314	-22%	- 237	- 323	-36%
Base Metals															
Antofagasta PLC	USD	ANTO.L		215	260	21%	120	408	241%	427	699	64%	1,611	1,447	-10%
Boliden	SEK	BOL.ST		- 1,546	- 1,553	0%	1,342	1,580	18%	2,648	2,879	9%	4,566	3,849	-16%
First Quantum Minerals	USD	FQM.L		- 1,821	- 1,842	-1%	- 2,076	- 2,054	1%	- 958	- 679	29%	1,491	1,169	-22%
Lundin Mining	USD	LUMISdb.ST		44	47	8%	221	155	30%	140	87	-38%	400	221	-45%
Nyrstar	EUR	NYR.BR		- 97	- 92	6%	- 153	- 93	39%	- 350	- 314	10%	- 124	- 149	-20%
Aluminium															
Norsk Hydro	NOK	NHY.OL		1,381	1,661	20%	1,766	1,293	-27%	4,004	2,683	-33%	3,850	1,436	-63%
UC Rusal	USD	O486.HK		76	105	37%	536	248	-54%	415	- 88	-121%	435	396	-9%
Precious Metals															
African Barrick Gold	USD	ABGL.L		- 261	- 265	-1%	5	6	2%	91	33	-64%	15	- 109	-621%
Aquarius Platinum Plc	USD	AQP.L		53	58	10%	27	43	-63%	86	3	-96%	60	- 45	-174%
Centamin Egypt	USD	CEY.L		- 46	- 49	-6%	150	146	-2%	183	171	-6%	128	96	-25%
Fresnillo Plc	USD	FRES.L		- 14	- 17	-24%	99	110	-11%	208	149	-28%	584	458	-22%
Gem Diamonds	USD	GEMD.L		- 68	- 68	0%	57	55	3%	29	30	4%	54	54	1%
Hochschild Mining	USD	HOCM.L		- 281	- 285	-2%	301	309	-3%	128	78	-39%	174	113	-35%
Lonmin Plc	USD	LMI.L		58	43	-26%	39	90	-130%	7	84	-1305%	138	- 20	-114%
Nordgold	USD	NORDNq.L		80	79	-2%	103	98	-5%	171	153	-11%	257	183	-29%
Petra Diamonds	USD	PDL.L		- 84	- 66	21%	99	76	23%	5	16	424%	89	106	20%
Petropavlovsk PLC	USD	POG.L		- 51	- 51	1%	91	90	0%	25	14	-45%	64	14	-78%
Polymetal	USD	POLYP.L		157	157	0%	353	337	-5%	494	373	-25%	538	394	-27%
Polyus Gold	USD	PGIL.L		- 632	- 639	-1%	95	105	-11%	103	- 17	-117%	422	225	-47%
Randgold Resources	USD	RRS.L		- 205	- 211	-3%	361	353	-2%	510	414	-19%	528	420	-20%
South Africa															
African Rainbow	ZAR	ARIJ.J		1,949	2,159	11%	3,226	4,505	40%	3,990	5,469	37%	4,218	5,790	37%
Assore	ZAR	ASRJ.J		4,215	4,450	6%	3,183	4,414	39%	3,261	5,190	59%	2,743	5,237	91%
Exxaro	ZAR	EXXJ.J		- 540	- 75	86%	- 527	1,314	349%	1,269	4,216	232%	1,590	4,620	190%
Kumba Iron Ore Ltd	ZAR	KIOJ.J		18,480	19,961	8%	17,570	24,426	39%	13,339	26,294	97%	6,317	21,647	243%

Source: Citi Research

Figure 46. Net Debt

Net Debt				Base	Net debt Mkt Cap	2013E Spot	Net debt/ Mkt Cap	Spot vs. Base	Base	2014E Spot	Spot vs. Base	Base	2015E Spot	Spot vs. Base	Base	2016E Spot	Spot vs. Base
Calendar Years																	
Diversified																	
Anglo American PLC	USD	AAL.L		9,549	33%	9,472	33%	-1%	11,665	11,327	-3%	12,217	11,453	-6%	13,098	12,387	-5%
BHP Billiton PLC	USD	BLT.L		27,770	17%	27,770	17%	0%	21,201	19,039	-10%	16,663	10,956	-34%	12,064	2,299	-81%
Glencore Xstrata	USD	GLEN.L		51,171	73%	50,851	73%	-1%	48,494	48,562	0%	44,541	45,324	2%	35,922	39,140	9%
Norilsk	USD	NKELYq.L		5,826	23%	5,858	23%	1%	6,589	6,777	3%	7,135	7,735	8%	7,411	9,564	29%
Rio Tinto PLC	USD	RIO.L		20,273	21%	19,988	20%	-1%	15,485	14,389	-7%	8,527	3,163	-63%	1,226	9,510	-876%
Vedanta Resources	USD	VED.L		8,446	220%	8,352	218%	-1%	8,315	8,008	-4%	7,757	7,293	-6%	6,253	5,789	-7%
Bulks																	
African Minerals	USD	AMIQ.L		195	18%	183	17%	-6%	853	982	-15%	836	1,286	-54%	1,084	2,057	-90%
Ferrexpo PLC	USD	FXPO.L		681	40%	658	39%	-3%	517	356	-31%	380	101	-127%	356	593	-267%
London Mining	USD	LOND.L		264	110%	260	109%	-2%	332	282	-15%	399	189	-53%	392	100	-125%
New World Resources	EUR	NWRR.L		532	222%	532	222%	0%	762	796	5%	1,019	1,110	9%	1,257	1,433	14%
Base Metals																	
Antofagasta PLC	USD	ANTO.L		1,254	-10%	1,273	-10%	-2%	795	965	-21%	584	884	-51%	1,272	1,439	-13%
Boliden	SEK	BOL.ST		8,820	88%	8,827	88%	0%	7,987	7,783	-3%	6,013	5,770	-4%	2,585	2,950	14%
First Quantum Minerals	USD	FQM.L		3,340	33%	3,361	33%	1%	5,519	5,520	0%	6,088	5,820	-4%	4,788	4,810	0%
Lundin Mining	USD	LUMIsdb.ST		117	12%	113	12%	-3%	338	268	-21%	198	182	-8%	202	39	81%
Nyrstar	EUR	NYR.BR		795	176%	789	175%	-1%	962	896	-7%	1,265	1,164	-8%	1,413	1,336	-5%
Aluminium																	
Norsk Hydro	NOK	NHY.OL		10,454	18%	10,174	18%	-3%	10,218	10,410	2%	7,743	9,256	20%	5,423	9,349	72%
UC Rusal	USD	O486.HK		10,208	221%	10,179	220%	0%	9,923	10,183	3%	9,760	10,523	8%	9,577	10,378	8%
Precious Metals																	
African Barrick Gold	USD	ABGL.L		83	-7%	79	-6%	4%	88	85	4%	179	118	34%	151	2	99%
Aquarius Platinum Plc	USD	AQP.L		162	52%	157	50%	-3%	189	200	6%	102	197	93%	42	242	478%
Centamin Egypt	USD	CEY.L		102	-12%	99	-12%	3%	232	226	3%	395	378	4%	508	462	9%
Fresnillo Plc	USD	FRES.L		553	-7%	550	-7%	1%	86	71	16%	17	45	363%	468	318	32%
Gem Diamonds	USD	GEMD.L		8	-2%	8	-2%	0%	49	47	-4%	20	17	-15%	34	38	-10%
Hochschild Mining	USD	HOCM.L		63	8%	67	8%	7%	404	416	3%	301	363	21%	145	262	81%
Lonmin Plc	USD	LMI.L		224	-8%	222	-8%	1%	278	263	6%	223	164	26%	236	152	35%
Nordgold	USD	NORDNq.L		542	95%	543	95%	0%	443	449	1%	276	300	9%	23	120	426%
Petra Diamonds	USD	PDL.L		94	9%	75	7%	-21%	179	136	-24%	199	135	-32%	125	44	-65%
Petropavlovsk PLC	USD	POG.L		1,149	521%	1,148	520%	0%	1,062	1,062	0%	1,037	1,048	1%	973	1,034	6%
Polymetal	USD	POLYP.L		1,137	33%	1,137	33%	0%	761	778	2%	297	435	46%	211	71	134%
Polyus Gold	USD	PGIL.L		7	0%	12	0%	84%	354	366	4%	445	561	26%	267	521	95%
Randgold Resources	USD	RRS.L		132	-2%	126	-2%	4%	453	439	3%	936	825	12%	936	825	12%
South Africa																	
African Rainbow	ZAR	ARIJ.J		1,990	-5%	2,194	-5%	-10%	3,789	5,300	-40%	6,139	9,340	-52%	8,540	13,677	-60%
Assore	ZAR	ASRJ.J		4,577	-10%	4,810	-10%	-5%	6,879	8,347	-21%	9,170	12,622	-38%	10,820	16,907	-56%
Exxaro	ZAR	EXXJ.J		9,592	18%	9,085	17%	-5%	13,542	11,249	-17%	15,717	10,230	-35%	16,187	8,703	-46%
Kumba Iron Ore Ltd	ZAR	KIOJ.J		722	-1%	1,773	-1%	-145%	929	4,023	-333%	297	5,414	-1924%	3,028	2,189	-172%

Source: Citi Research

Figure 47. Gearing (ND/Equity)

Gearing (ND/Equity)		Base	2013E Spot	Spot vs. Base	Base	2014E Spot	Spot vs. Base
Calendar Years							
Diversified							
Anglo American PLC	AAL.L	23%	23%	-1%	28%	26%	-7%
BHP Billiton PLC	BLT.L	37%	37%	0%	24%	22%	-12%
Glencore Xstrata	GLEN.L	93%	92%	-1%	81%	80%	-1%
Norilsk	NKELYq.L	45%	45%	1%	49%	52%	4%
Rio Tinto PLC	RIO.L	35%	34%	-2%	24%	22%	-8%
Vedanta Resources	VED.L	47%	47%	-2%	46%	43%	-5%
Bulks							
African Minerals	AMIQ.L	18%	16%	-8%	-35%	-38%	-7%
Ferrexpo PLC	FXPO.L	40%	38%	-6%	26%	16%	-38%
London Mining	LOND.L	116%	113%	-2%	126%	88%	-31%
New World Resources	NWRR.L	338%	357%	6%	-1711%	-968%	43%
Base Metals							
Antofagasta PLC	ANTO.L	-14%	-14%	-1%	-8%	-10%	-18%
Boliden	BOL.ST	38%	38%	0%	33%	31%	-5%
First Quantum Minerals	FQM.L	36%	36%	1%	53%	52%	-1%
Lundin Mining	LUMIsdb.ST	3%	3%	-3%	9%	7%	-22%
Nyrstar	NYR.BR	81%	80%	-2%	110%	94%	-15%
Aluminium							
Norsk Hydro	NHY.OL	14%	13%	-3%	13%	14%	3%
UC Rusal	O486.HK	110%	110%	0%	111%	119%	8%
Precious Metals							
African Barrick Gold	ABGL.L	-4%	-4%	4%	-4%	-4%	4%
Aquarius Platinum Plc	AQP.L	30%	28%	-4%	36%	39%	10%
Centamin Egypt	CEY.L	-9%	-9%	3%	-18%	-17%	2%
Fresnillo Plc	FRES.L	-23%	-23%	0%	-4%	-3%	16%
Gem Diamonds	GEMD.L	-3%	-3%	0%	15%	14%	-4%
Hochschild Mining	HOCH.L	6%	7%	7%	43%	44%	4%
Lonmin Plc	LMI.L	-7%	-6%	1%	-8%	-7%	5%
Nordgold	NORDNq.L	35%	35%	1%	29%	30%	2%
Petra Diamonds	PDL.L	14%	11%	-23%	23%	17%	-28%
Petropavlovsk PLC	POG.L	402%	404%	1%	471%	483%	3%
Polymetal	POLYP.L	63%	63%	0%	35%	36%	3%
Polyus Gold	PGIL.L	0%	0%	85%	7%	7%	4%
Randgold Resources	RRS.L	-4%	-4%	4%	-14%	-13%	3%
South Africa							
African Rainbow	ARIJ.J	-8%	-8%	-8%	-13%	-18%	-34%
Assore	ASRJ.J	-29%	-29%	-2%	-36%	-39%	-9%
Exxaro	EXXJ.J	26%	24%	-7%	33%	26%	-21%
Kumba Iron Ore Ltd	KIOJ.J	-2%	-5%	-135%	-2%	-9%	-289%

Source: Citi Research

Figure 48. Commodity Prices and FX

Commodity Prices and Fx		Spot vs.		Spot vs.		Spot vs.		Spot vs.		Spot vs.		
Calendar Years	Spot	2H13E	v 2H 13E	2013E	vs 2013E	2014E	vs 2014E	2015E	vs 2015E	2016E	vs 2016E	LT Real
Gold (US\$/oz)	1,246	1,283	-3%	1,406	-11%	1,248	0%	1,350	-8%	1,370	-9%	1,050
Silver (US\$/oz)	19.8	20.8	-5%	23.8	-17%	20.2	-2%	22.2	-11%	19.2	3%	16.5
Platinum (US\$/oz)	1,425	1,478	-4%	1,516	-6%	1,500	-5%	1,625	-12%	1,700	-16%	1,531
Palladium (US\$/oz)	737	740	0%	734	0%	800	-8%	925	-20%	925	-20%	680
Rhodium (US\$/oz)	1,050	1,050	0%	1,106	-5%	1,150	-9%	1,250	-16%	1,650	-36%	2,859
Aluminium (US\$/t)	1,722	1,793	-4%	1,875	-8%	1,830	-6%	1,950	-12%	2,000	-14%	2,200
Copper (US\$/t)	7,330	6,980	5%	7,273	1%	6,550	12%	6,800	8%	7,000	5%	6,200
Nickel (US\$/t)	13,805	14,224	-3%	15,214	-9%	16,375	-16%	19,000	-27%	23,000	-40%	20,000
Zinc (US\$/t)	2,026	1,875	8%	1,914	6%	1,860	9%	2,050	-1%	2,150	-6%	2,100
Lead (US\$/t)	2,095	2,130	-2%	2,155	-3%	2,175	-4%	2,238	-6%	2,250	-7%	2,200
Molybdenum (US\$/lb)	21,500	23,542	-9%	23,941	-10%	26,615	-19%	26,615	-19%	27,007	-20%	25,000
Oil - Brent (US\$/bbl)	107	111	-3%	109	-2%	108	0%	103	5%	99	8%	85
ZAR vs. US\$	10.69	10.07	6%	9.64	11%	10.26	4%	10.48	2%	10.57	1%	10.00
AUS vs. US\$	0.90	0.91	-2%	0.96	-7%	0.88	2%	0.88	2%	0.90	0%	0.93
US\$ vs. GBP	1.65	1.53	8%	1.54	7%	1.50	10%	1.54	7%	1.55	6%	1.75
Iron ore (US\$/t) - CIF China	135	123	9%	130	4%	115	17%	115	17%	115	17%	81
Thermal coal (US\$/t)	84	75	12%	87	-3%	78	7%	85	-2%	95	-12%	105
Coking coal (US\$/t)	138	150	-8%	159	-13%	161	-14%	170	-19%	188	-26%	200

Source: Citi Research



Notes

Citi Research

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

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Citi is providing fairness opinion to Sesa Goa Limited on in the proposed merger of Sterlite Industries and other Vedanta Resources PLC group companies. Citigroup Global Markets Inc. owns a position of 1 million USD or more in the debt securities of Vedanta Resources PLC

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Citigroup Global Markets Inc. or its affiliates beneficially owns 1% or more of any class of common equity securities of Glencore Xstrata PLC, Polyus Gold. This position reflects information available as of the prior business day.

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of Kumba Iron Ore Ltd, Vedanta Resources Plc, Fresnillo Plc, African Barrick Gold Plc, BHP Billiton PLC, Anglo American PLC, Nordgold, Antofagasta.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from Kumba Iron Ore Ltd, Vedanta Resources Plc, New World Resources, Fresnillo Plc, First Quantum Minerals Ltd, Glencore Xstrata PLC, Rio Tinto PLC, ArcelorMittal, African Barrick Gold Plc, Norsk Hydro ASA, BHP Billiton PLC, Norilsk Nickel, Anglo American PLC, Nordgold, Petropavlovsk PLC, Lonmin PLC, African Minerals Ltd.

Citigroup Global Markets Inc. or its affiliates expects to receive or intends to seek, within the next three months, compensation for investment banking services from Glencore Xstrata PLC, ArcelorMittal, Norilsk Nickel, Ferrexpo PLC.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from Kumba Iron Ore Ltd, Klöckner & Co., Vedanta Resources Plc, New World Resources, Polymetal, Fresnillo Plc, First Quantum Minerals Ltd, Glencore Xstrata PLC, Rio Tinto PLC, ArcelorMittal, African Rainbow Minerals, African Barrick Gold Plc, Norsk Hydro ASA, BHP Billiton PLC, Gem Diamonds, Hochschild Mining Plc, Exxaro Resources Limited, Norilsk Nickel, United Company Rusal, Anglo American PLC, Randgold Resources Ltd, Nordgold, Petropavlovsk PLC, Lonmin PLC, Antofagasta, Ferrexpo PLC, African Minerals Ltd in the past 12 months.

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