

Mini primer: Commodity leverage cheat sheets

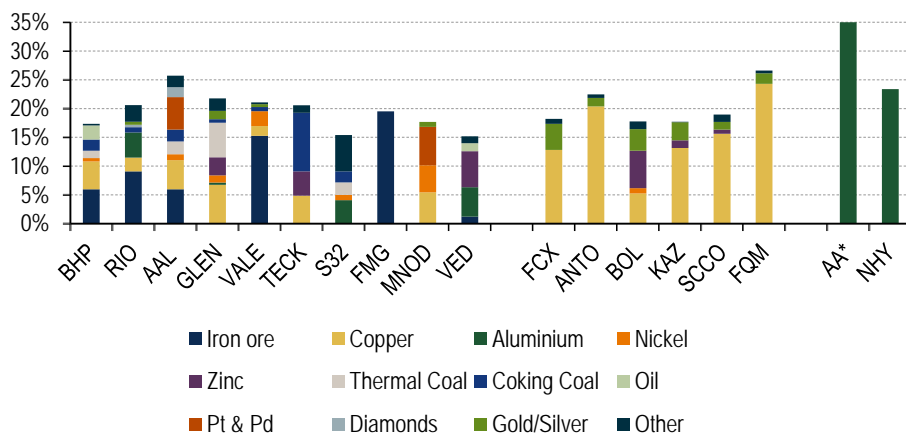
Industry Overview

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Keeping it simple: Who has leverage to what?

We analyse a selection of mining companies showing EBITDA and earnings leverage to 10% moves in commodity prices. We present the results in both tables and in “stacked bar” graphs. We think the stacked bar graphs are useful as they get away from the tricky issue of looking at leverage to a single commodity in isolation. Here is the EBITDA leverage chart. Full size inside & an earnings leverage version too!

The Killer Chart: EBITDA change for a 10% move in key commodity prices



Source: BofA Merrill Lynch Global Research estimates *Note: AA EBITDA sensitivity of 41%.

China = increased correlations between commodities

With China having emerged as the marginal consumer of most mined commodities, we observe increased correlations between mined commodities. As such, we think that diversified miner commodity leverage needs to be looked at in totality. Could there be some diversification benefit? Sure, and we've written about this previously. But again, we think that this diversification benefit may be less than originally imagined.

Financial leverage: Balance sheets matter too!

While less of an issue than the dark days of 2015, financial leverage still matters, driving leverage to the upside and down. See inside for shorthand financial leverage summary charts. Large cap balance sheets range from 0.2x EBITDA (RIO) to 1.7x EBITDA (GLEN) for 2018E. If we look at Debt/EV, this ranges from 4% (RIO) to 25% (GLEN) for 2018E.

EBITDA margins = shorthand for asset “quality”?

Many large mining companies discuss the “quality” of their Tier 1 assets. That said, they don't necessarily mention the drag on their overall portfolio of their non-Tier 1 assets. We think that EBITDA margin is a useful indicator of operational leverage and lets us readily see structural differences between businesses (e.g. iron ore vs. aluminium!). See inside for our EBITDA margin trends charts.

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Comparable company valuations

Table 1: Comparable company valuations

Company	Symbol	BofAML QRQ	Shr Price	Ccy	EPS			PER-Calendarized			NPV	P/NPV	ND/Eq	FCF Yield			EV/EBITDA			DY	Mkt Cap	ND 2016A
					2016	2017E	2018E	2016	2017E	2018E				2016	2017E	2018E	2016	2017E	2018E			
<u>Diversified / Majors</u>																						
BHP Billiton PLC	BHPBF	BUY (B-1-7)	GBP 1486	USD	0.23	1.26	0.98	51.1x	17.5x	19.0x	1705	0.9x	43.5%	2.8%	11.3%	7.7%	10.2x	6.2x	6.8x	4.3%	102.4	26.1
Rio Tinto Plc	RTPPF	BUY (B-1-8)	GBP 3735.5	USD	2.84	3.82	4.19	16.3x	12.7x	11.6x	4437	0.8x	22.3%	6.3%	7.3%	7.9%	7.8x	6.4x	6.1x	4.7%	87.0	10.2
Anglo American	AAUKF	NEUT (C-2-8)	GBP 1417	USD	1.72	2.08	1.65	10.2x	8.8x	11.1x	2147	0.7x	35.9%	10.5%	11.7%	10.9%	6.6x	5.5x	6.1x	4.5%	23.6	8.7
Glencore Plc	GLCNF	NEUT (C-2-7)	GBP 367.1	USD	0.14	0.27	0.21	32.4x	17.5x	23.0x	359	1.0x	70.1%	3.8%	9.1%	8.3%	9.4x	7.5x	7.5x	2.2%	67.8	30.7
Vedanta	VDNRF	BUY (C-1-7)	GBP 879	USD	-1.42	-0.02	0.99	nm	nm	5.3x	639	1.4x	107.0%	23.1%	-0.5%	7.9%	7.7x	5.7x	4.5x	4.8%	3.1	7.3
Vale ON	VALE	BUY (C-1-8)	USD 11.3	USD	0.77	0.97	1.28	14.7x	11.6x	8.8x	11.3	1.0x	61.2%	-9.5%	7.8%	11.4%	8.7x	6.2x	6.1x	0.0%	58.2	25.1
South32 Ltd	SHTLF	UNDE (B-3-8)	AUD 3.02	USD	0.03	0.22	0.17	48.7x	12.6x	13.2x	2.37	1.3x	-3.3%	5.0%	14.4%	8.1%	12.0x	5.3x	6.8x	4.3%	12.8	-0.3
Fortescue Metals	FSUMF	BUY (C-1-8)	AUD 5.93	USD	0.30	0.68	0.40	10.6x	9.3x	11.2x	7.11	0.8x	61.7%	14.0%	24.0%	1.0%	6.6x	4.0x	6.2x	7.7%	14.7	5.2
Teck Resources Ltd	TECK	BUY (C-1-7)	USD 25.46	CAD	1.91	3.80	3.15	17.9x	8.3x	10.0x	14.10	1.8x	39.4%	6.0%	14.9%	13.6%	6.9x	4.6x	5.4x	0.6%	14.7	5.2
<u>Bulk Commodity Producers</u>																						
Eramet	ERMAF	BUY (C-1-9)	EUR 56.15	EUR	-1.63	4.06	2.73	nm	13.8x	20.6x	73	0.8x	37.7%	-6.5%	3.8%	5.3%	6.5x	3.4x	3.9x	0.0%	1.8	0.7
Ferrexpo	FEEXF	UNDE (C-3-8)	GBP 312.7	USD	0.32	0.60	0.38	12.1x	6.7x	10.6x	132	2.4x	182.3%	12.0%	11.7%	10.2%	7.9x	5.8x	7.9x	1.7%	2.4	0.6
Anglo Pacific	AGPIF	BUY (B-1-7)	GBP 138.5	GBP	15.60	13.59	10.91	8.9x	10.2x	12.7x	100	1.4x	-1.8%	4.4%	-1.4%	9.7%	7.6x	9.1x	7.8x	5.1%	0.3	0.0
Kumba	KUMBF	BUY (C-1-9)	ZAR 217.87	ZAR	26.97	24.51	20.69	8.1x	8.9x	10.5x	121.57	1.8x	-16.9%	16.1%	11.5%	12.1%	4.1x	4.5x	5.0x	9.4%	5.4	-0.5
Exxaro	EXXAF	NEUT (C-2-8)	ZAR 128.95	ZAR	13.02	15.98	13.62	9.9x	8.1x	9.5x	119.88	1.1x	3.8%	5.5%	0.8%	-0.3%	8.0x	6.6x	7.2x	3.4%	3.5	0.1
African Rainbow Mins	AFBOF	NEUT (C-2-7)	ZAR 110.35	ZAR	4.93	11.79	5.19	15.9x	15.3x	24.9x	130.53	0.8x	17.2%	-1.0%	7.3%	1.4%	7.6x	5.7x	6.6x	2.0%	1.8	0.3
<u>Base Metals</u>																						
Antofagasta	ANFGF	UNDE (B-3-8)	GBP 1061	USD	0.31	0.41	0.52	42.5x	33.4x	26.2x	731	1.45x	12.6%	0.6%	1.2%	4.2%	10.8x	9.3x	8.5x	1.5%	13.6	1.1
KAZ Minerals Plc	KZMYF	BUY (C-1-9)	GBP 875	USD	0.40	0.77	1.26	26.8x	14.7x	9.0x	618	1.4x	497.9%	-8%	2%	3.7%	22.4x	9.0x	6.9x	0.0%	5.1	2.7
First Quantum	YFM	UNDE (C-3-8)	CAD 15.23	USD	0.24	0.12	0.56	47.3x	102.2x	21.9x	16	1.0x	42.6%	-5%	-6%	2.0%	14.9x	13.1x	10.0x	0.1%	8.5	4.4
KGHM	KGHPF	UNDE (C-3-7)	PLN 128	PLN	-21.86	9.41	12.23	nm	13.6x	10.5x	236	0.5x	45.5%	3.8%	4.9%	9.1%	8.6x	6.6x	5.6x	2.4%	7.2	1.7
Freeport-McMoRan	FCX	UNDE (C-3-9)	USD 15.07	USD	0.23	0.75	1.25	65.5x	20.1x	12.1x	9	1.6x	127.3%	4.2%	7.5%	8.4%	8.3x	8.7x	6.9x	0.0%	21.9	11.8
Southern Copper	SCCO	UNDE (C-3-8)	USD 41.3	USD	0.97	1.41	2.00	42.6x	29.3x	20.7x			94.9%	-0.5%	3.2%	2.5%	17.0x	14.1x	11.8x	1.0%	31.9	5.6
Norilsk Nickel	NILSY	BUY (C-1-8)	USD 16.87	USD	1.61	1.47	1.85	10.5x	11.5x	9.1x	8	2.2x	116.8%	6.8%	0.8%	7.4%	8.0x	7.7x	6.8x	8.7%	26.5	4.6
Norsk Hydro	NHYKF	NEUT (B-2-7)	NOK 56.95	NOK	1.83	3.73	5.17	31.2x	15.3x	11.0x	65	0.9x	-6.8%	2.7%	1.6%	1.9%	11.2x	7.5x	5.6x	2.2%	14.9	-0.7
Alcoa Corp.	AA	BUY (C-1-9)	USD 45.04	USD	-1.34	3.15	3.50	nm	14.3x	12.9x			7.7%	-8.5%	10.1%	14.1%	14.8x	7.1x	6.7x		8.4	
Nyrstar	XPANF	BUY (C-1-9)	EUR 6.032	EUR	-2.63	-1.30	-0.25	nm	nm	nm	0	15.0x	159.0%	-74%	-53.5%	3.8%	8.2x	5.8x	5.8x	0.0%	0.7	0.9
Boliden	BDNNF	NEUT (C-2-7)	SEK 283.4	SEK	15.49	17.65	19.32	18.3x	16.1x	14.7x	133	2.1x	29.2%	3.9%	2.8%	5.3%	8.8x	8.1x	7.6x	2.1%	9.7	0.9
Lundin Mining	YLUN	NEUT (B-2-7)	CAD 9.72	USD	0.13	0.22	0.33	55.8x	nm	23.7x	40	0.2x	7.4%	3.3%	5.6%	5.5%	10.5x	7.8x	7.5x	1.2%	5.7	0.3
Aurubis	AIAGF	UNDE (B-3-7)	EUR 75.239	EUR	3.63	4.35	3.79	19.9x	17.9x	19.8x	27.2	2.8x	2.1%	2.8%	2.4%	6.4%	10.3x	8.4x	9.1x	1.7%	4.0	0.0
Median - Industrial Miners								18.3x	13.8x	12.1x		1.2x	38.5%	3.8%	5.2%	7.5%	8.4x	6.6x	6.8x	2.1%		
<u>Precious</u>																						
Polymetal Int	XPMYF	NEUT (C-2-7)	GBP 898	USD	0.93	1.05	1.36	12.0x	11.1x	8.5x	808	1.1x	135.6%	5.2%	2.6%	10.6%	8.4x	8.2x	6.7x	3.6%	5.0	1.3
Petropavlovsk	PPLKF	NEUT (C-2-9)	GBP 7.44	USD	0.01	0.02	0.03	9.0x	4.8x	3.3x	23.4	0.3x	108.9%	7.6%	8.6%	-4.7%	4.6x	4.0x	3.3x	0.0%	0.3	0.6
Fresnillo plc	FNLPF	NEUT (C-2-7)	GBP 1664	USD	0.45	0.67	0.81	45.4x	32.3x	26.5x	668	2.5x	-4.2%	2.9%	0.9%	1.0%	15.3x	14.6x	10.7x	1.5%	15.9	-0.1
Randgold	RGORF	BUY (B-1-7)	GBP 8070	USD	2.64	3.27	4.56	37.7x	31.9x	22.9x	4659	1.7x	-13.8%	3.6%	2.6%	5.2%	16.3x	13.4x	11.4x	1.8%	9.8	-0.5
Acacia Mining	ABGLF	UNDE (C-3-9)	GBP 202.2	USD	0.23	0.37	0.81	10.8x	7.2x	3.2x	298	0.7x	-11.7%	11.6%	-5.4%	53.1%	2.1x	2.4x	1.3x	0.0%	1.1	-0.2
Centamin	CELTF	BUY (C-1-8)	GBP 158.3	USD	0.19	0.10	0.13	10.5x	20.1x	16.4x	129	1.2x	-26.2%	13.0%	6.4%	6.4%	5.2x	5.6x	4.6x	1.9%	2.3	-0.4
Hochschild	HCHDF	BUY (C-1-7)	GBP 291.7	USD	0.09	0.09	0.26	40.0x	41.3x	14.4x	178	1.6x	23.6%	9.9%	6.4%	13.8%	6.7x	6.9x	5.0x	0.9%	1.9	0.2
AngloGold Ashanti	AULGF	BUY (C-1-7)	ZAR 137.58	USD	0.34	0.18	1.17	29.2x	60.0x	9.1x	163	0.8x	71.3%	11.0%	-0.1%	9.7%	4.2x	5.4x	3.7x	0.4%	4.4	2.0
Gold Fields	GFIOF	UNDE (C-3-7)	ZAR 59.42	ZAR	3.46	2.72	4.52	17.2x	21.8x	13.1x	44	1.3x	36.2%	9.4%	-1.5%	7.6%	3.2x	3.8x	3.1x	1.6%	3.6	1.3
Sibanye-Stillwater	SBGLF	NEUT (C-2-8)	ZAR 21.07	ZAR	3.98	-2.65	2.05	5.3x	nm	10.3x	22	0.9x	47.9%	9.5%	-1.2%	8.1%	2.6x	3.6x	2.1x	0.0%	1.5	0.6
Harmony	HGMCF	BUY (C-1-7)	ZAR 27.9	ZAR	2.18	0.82	4.67	23.4x	19.9x	4.4x	28	1.0x	3.8%	17.1%	-1.0%	1.5%	2.8x	6.2x	2.4x	3.0%	0.9	0.1
Anglo Platinum	AGPPF	NEUT (C-2-9)	ZAR 352.7	ZAR	7.13	5.24	9.29	49.5x	67.3x	37.9x	287	1.2x	18.1%	6.9%	1.8%	0.4%	11.8x	16.4x	13.3x	0.0%	7.3	0.5
Impala Platinum	IMPUF	UNDE (C-3-9)	ZAR 41	ZAR	0.12	-1.21	-3.26	nm	nm	nm	24	1.7x	4.3%	-3.3%	-6.6%	-13.3%	12.3x	15.1x	53.6x	0.0%	2.2	0.2
Northam Platinum	NMPNF	UNDE (C-3-9)	ZAR 50.42	ZAR	-0.97	-1.25	-1.32	nm	nm	nm	39	1.3x	57.7%	-1.3%	-2.5%	-3.7%	50.7x	46.3x	25.7x	0.0%	2.0	0.3
Lonmin Plc	LNMIF	UNDE (C-3-9)	GBP 87.5	USD	-0.36	-0.13	-0.14	nm	nm	nm	10	8.6x	-11.5%	-10.2%	-30.9%	-27.1%	4.2x	12.4x	14.8x	0.0%	0.3	-0.2
Royal Bafokeng Plat.	XRVBF	NEUT (C-2-9)	ZAR 32.35	ZAR	0.87	-0.72	-1.48	37.3x	nm	nm	37	0.9x	-2.7%	-8.9%	-33.2%	-19.0%	18.9x	29.7x	20.1x	0.0%	0.5	0.0
ALROSA	XCFFF	BUY (C-1-8)	RUB 77	RUB	17.84	12.57	13.58	4.3x	6.1x	5.7x	135	0.6x	43.6%	17.6%	16.7%	15.5%	3.5x	4.3x	4.1x	8.2%	9.8	1.8
Petra Diamonds	PDMDF	BUY (B-1-9)	GBP 92.1	USD	0.10	0.09	0.15	12.7x	10.7x	6.6x	150	0.6x	68.7%	-28.4%	-27.5%	3.4%	8.2x	6.6x	5.0x	0.0%	0.6	0.4
Gem Diamonds	GMDMF	BUY (B-1-9)	GBP 80	USD	0.07	0.01	0.07	14.7x	81.9x	14.2x	122	0.7x	-1.5%	-19.8%	-22.7%	-13.5%	4.0x	8.0x	4.5x	0.0%	0.1	0.0
Lucara Diamond Corp	XDVAF	BUY (C-1-7)	SEK 17.3	USD	0.22	0.12	0.16	8.8x	18.7x	14.0x	13	1.3x	-26.7%	9.6%	4.1%	8.3%	4.2x	7.7x	5.8x	3.5%	0.8	-0.1
Median - Precious								14.7x	20.1x	11.7x		1.2x	11.2%	7.3%	-0.5%	4.3%	4.9x	7.3x	5.0x	0.2%		
<u>Steel</u>																						
ArcelorMittal	AMSYF	UNDE (B-3-9)	EUR 22.8	USD	1.75	2.77	2.56	13.8x	9.8x	10.6x	28	0.8x	34.2%	1.0%	4.0%	9.0%	7.5x	6.0x	6.1x	0.0%	27.7	11.1
Thyssenkrupp	TYEKF	NEUT (B-2-7)	EUR 25.056	EUR	0.52	1.25	1.57	40.9x	19.0x	15.6x	26	1.0x	134.4%	0.2%	-3.4%	4.9%	9.6x	9.2x	9.1x	0.6%	16.9	3.9
Voestalpine	VLPNF	BUY (B-1-7)	EUR 42.85	EUR	2.92	2.91	3.28	14.7x	13.5x	12.6x	39	1.1x	61.3%	0.0%	1.1%	1.6%	9.0x	8.3x	7.5x	2.6%	8.9	3.9
Salzgitter	SZGPF	UNDE (B-3-7)	EUR 37.235	EUR	1.00	2.20	2.28	37.4x	16.9x	16.3x	15	2.5x	4.6%									

Mark-to-market

Table 2: Mark to market valuations

CompanyRecPrice			Base Case 2017E							Spot scenario										Consensus			
																				BofAML			
			EPS	EBITDA	PER	EV/ EBITDA	FCF	yield		EPS	Chg	EBITDA	Chg	PER	EV/ EBITDA	FCF	Chg	yield		EBITDA	EBITDA	Cons	vs. Spot vs.Cons
BHP Billiton	BUY (B-1-7)	GBP 1486	1.26	19322	17.5x	6.5x	9746	10%	2.05	62%	26199	36%	10.8x	4.8x	13316	37%	13%	20211	6.2x	-4%	30%		
Rio Tinto	BUY (B-1-8)	GBP 3735.5	3.82	16307	12.7x	6.4x	6388	7%	5.87	54%	22009	35%	8.2x	4.8x	10142	59%	12%	17683	5.9x	-8%	24%		
Anglo American	NEUT (C-2-8)	GBP 1417	2.08	7267	8.8x	5.5x	2789	12%	3.82	84%	11225	54%	4.8x	3.6x	4563	64%	19%	7683	5.2x	-5%	46%		
Glencore	NEUT (C-2-7)	GBP 367.1	0.27	13024	17.5x	7.5x	6195	9%	0.49	80%	17586	35%	9.7x	5.5x	8184	32%	12%	13682	7.1x	-5%	29%		
Vale	BUY (C-1-8)	USD 11.3	0.97	13008	11.6x	5.9x	4555	8%	1.65	70%	17564	35%	6.8x	4.3x	nm	nm	nm	14679	5.2x	-11%	20%		
Vedanta	BUY (C-1-7)	GBP 879	0.73	3823	nm	4.8x	183	6%	1.14	55%	4623	21%	nm	3.9x	959	423%	30%	3417	5.3x	12%	35%		
Teck Resources	BUY (C-1-7)	USD 25.46	3.80	5168	8.3x	3.6x	2728	15%	7.57	99%	8118	57%	4.2x	2.3x	nm	nm	nm	5441	3.4x	-5%	49%		
Ferrexpo	UNDE (C-3-8)	GBP 312.7	0.60	511	6.7x	5.8x	276	12%	0.83	37%	672	32%	4.9x	4.4x	382	38%	16%	508	5.9x	1%	32%		
Antofagasta	UNDE (B-3-8)	GBP 1061	0.41	1888	33.4x	9.3x	164	1%	0.90	120%	3095	64%	15.2x	5.7x	1193	628%	9%	1995	8.8x	-5%	55%		
First Quantum Min	UNDE (C-3-8)	CAD 15.23	0.12	1093	102.2x	13.1x	-496	-6%	0.54	352%	1532	40%	22.6x	9.4x	-405	nm	-5%	1109	12.9x	-1%	38%		
Kaz Minerals	BUY (C-1-9)	GBP 875	0.77	867	14.7x	9.0x	108	2%	1.43	84%	1256	45%	7.9x	6.2x	322	197%	6%	842	9.3x	3%	49%		
Eramet	BUY (C-1-9)	EUR 56.15	4.06	710	13.8x	3.4x	56	4%	8.11	99%	847	19%	6.9x	2.9x	83	49%	6%	673	3.6x	6%	26%		
Norsk Hydro	NEUT (B-2-7)	NOK 56.95	3.73	17812	15.3x	7.5x	1842	2%	4.94	33%	21932	23%	11.5x	6.1x	2487	35%	2%	16473	8.1x	8%	33%		
Nyrstar	BUY (C-1-9)	EUR 6.032	-1.30	272	nm	5.8x	-302	-53%	2.32	nm	354	30%	nm	4.5x	-244	nm	-43%	266	5.9x	3%	33%		
Boliden	NEUT (C-2-7)	SEK 283.4	17.65	10708	16.1x	8.1x	2195	3%	20.69	17%	11775	10%	13.7x	7.4x	2518	15%	3%	12760	6.8x	-16%	-8%		
Norilsk Nickel	BUY (C-1-8)	USD 16.87	1.47	4014	11.5x	7.7x	223	1%	2.22	51%	5562	39%	7.6x	5.6x	1071	380%	4%	3996	7.8x	0%	39%		
Lundin Mining	NEUT (B-2-7)	CAD 9.72	0.22	803	35.6x	7.8x	316	6%	0.71	222%	1274	59%	11.1x	4.9x	553	75%	10%	919	6.8x	-13%	39%		
Freeport-McMoRan	NEUT (C-2-9)	USD 15.07	0.75	4652	20.1x	8.7x	1648	8%	1.57	110%	6633	43%	9.6x	6.1x	nm	nm	nm	5185	7.8x	-10%	28%		
Anglo Platinum	NEUT (C-2-9)	ZAR 352.7	5.24	6566	67.3x	16.4x	1744	2%	23.12	341%	13200	101%	15.3x	8.1x	2688	54%	3%	8001	13.4x	-18%	65%		
Impala Platinum	NEUT (C-2-7)	GBP 898	-2.24	1405	nm	34.3x	-2898	-10%	1.20	nm	4718	236%	nm	10.2x	-1550	nm	-5%	3994	12.1x	-65%	18%		
Polymetal Int	BUY (B-1-7)	GBP 8070	1.05	782	11.1x	8.2x	130	3%	1.24	18%	818	5%	9.4x	7.8x	nm	nm	nm	758	8.4x	3%	8%		
Randgold	BUY (B-1-7)	GBP 8070	3.27	702	31.9x	13.4x	255	3%	3.66	12%	760	8%	28.6x	12.4x	286	12%	3%	681	13.9x	3%	12%		
Petropavlosk	NEUT (C-2-9)	GBP 7.44	0.02	233	4.8x	4.0x	27	9%	0.02	11%	247	6%	4.3x	3.8x	30	10%	9%	209	4.5x	11%	18%		
Fresnillo plc	NEUT (C-2-7)	GBP 1664	0.67	1083	32.3x	14.6x	138	1%	0.68	1%	1094	1%	31.8x	14.5x	149	8%	1%	1127	14.0x	-4%	-3%		
Acacia	UNDE (C-3-9)	GBP 202.2	0.37	366	7.2x	2.4x	-58	-5%	0.42	16%	404	10%	6.2x	2.2x	-24	nm	-2%	344	2.5x	7%	18%		
Centamin	BUY (C-1-8)	GBP 158.3	0.10	348	20.1x	5.6x	152	6%	0.12	14%	377	8%	17.7x	5.2x	164	8%	7%	328	5.9x	6%	15%		
Hochschild	BUY (C-1-7)	GBP 291.7	0.09	318	41.3x	6.9x	122	6%	0.11	16%	330	4%	35.6x	6.7x	132	8%	7%	313	7.0x	2%	6%		
AngloGold Ashanti	BUY (C-1-7)	ZAR 137.58	0.18	1192	60.0x	5.4x	-5	0%	0.49	180%	1380	16%	21.4x	4.7x	117	nm	3%	1162	5.6x	3%	19%		
Median - industrial			15.0x7.0x5.7%							80%35%8.9x4.9x58.8%8.8%										6.5x-5%33%			
Median - precious			31.9x7.6x2.2%							16%8%17.7x7.2x9.0%2.8%										7.7x3%16%			

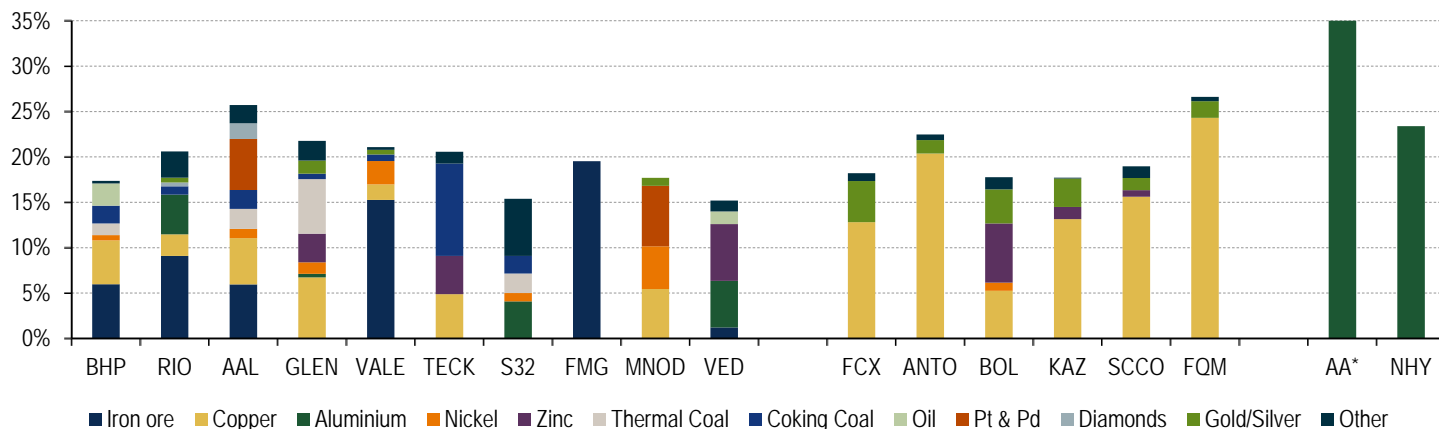
Source: BofA Merrill Lynch Global Research estimates. Note: Spot prices applied to full 2017 volumes to get 12 months "earnings power" valuation

Framing commodity leverage

We analyse a selection of mining companies showing EBITDA and earnings leverage to 10% moves in commodity prices. We present the results in both tables and in “stacked bar” graphs. We think the stacked bar graphs are useful as they get away from the tricky issue of looking at leverage to a single commodity in isolation. Here is the EBITDA leverage chart.

Killer Chart#1: EBITDA delta for 10% move

Chart 1: EBITDA delta for 10% move in commodity price assumptions in 2018



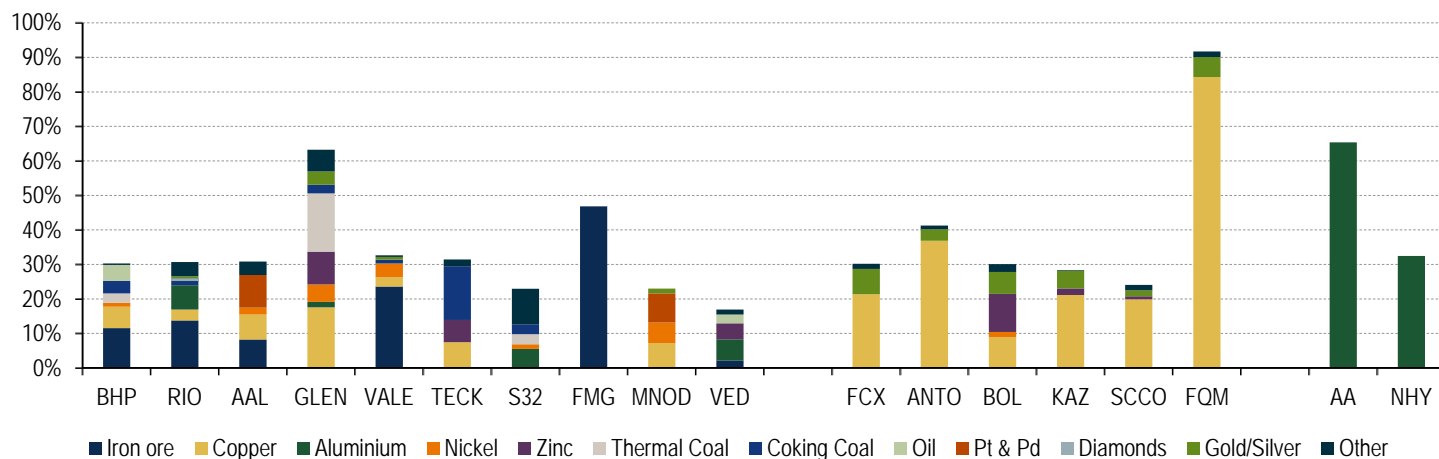
Source: BofA Merrill Lynch Global Research estimates *Note: Alcoa (AA) has a sensitivity of 41%.

China = increased correlations between commodities

With China having emerged as the marginal consumer of most mined commodities, we observe increased correlations between mined commodities. As such, we think that diversified miner commodity leverage needs to be looked at in totality. Could there be some diversification benefit? Sure, and we’ve written about this previously. In practice the “covariance” term would reduce the overall apparent leverage to a basket of commodities. But again, we think that this diversification benefit may be less than originally imagined.

Killer Chart#2: Net earnings delta for 10% move

Chart 2: Net income delta for 10% in commodity prices

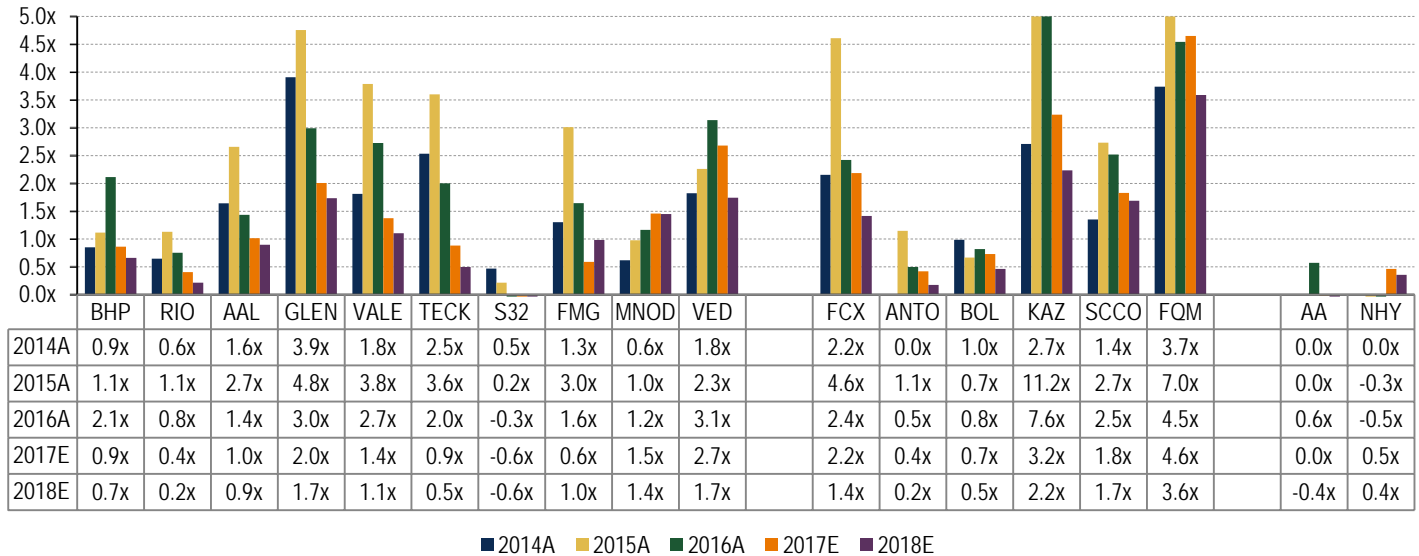


Source: BofA Merrill Lynch Global Research estimates

Financial leverage: Balance sheets

While less of an issue than the dark days of 2015, financial leverage still matters, driving leverage to the upside and downside. Large cap balance sheets range from 0.2x EBITDA (RIO) to 1.7x EBITDA (GLEN) for 2018E. If we look at Debt/EV, this ranges from 4% (RIO) to 25% (GLEN) for 2018E.

Chart 3: Net debt to EBITDA trends by company

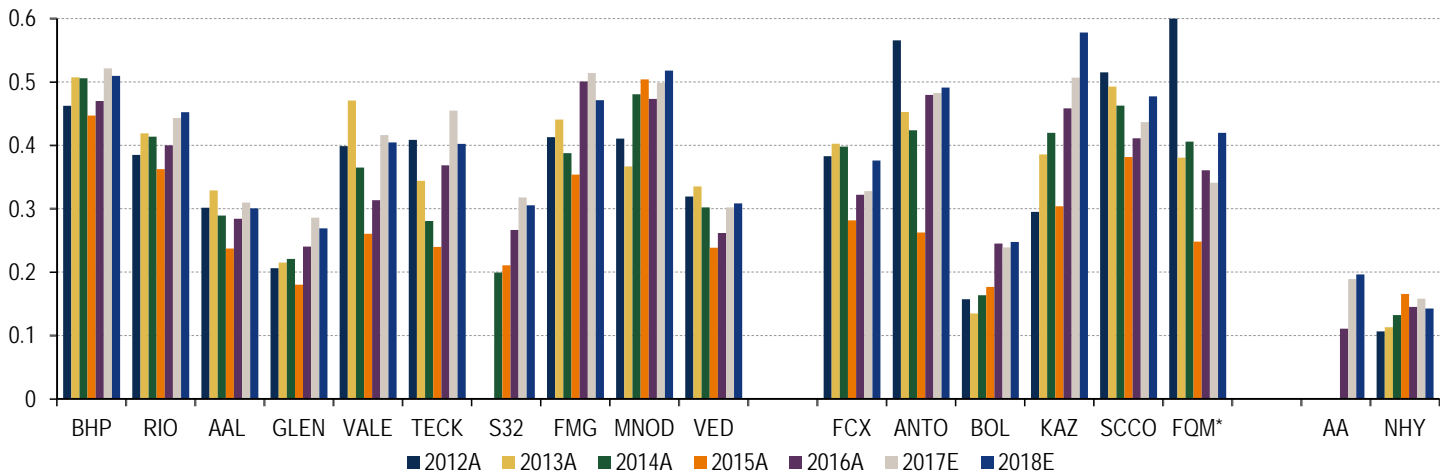


Source: BofA Merrill Lynch Global Research estimates

EBITDA margins = operational gearing

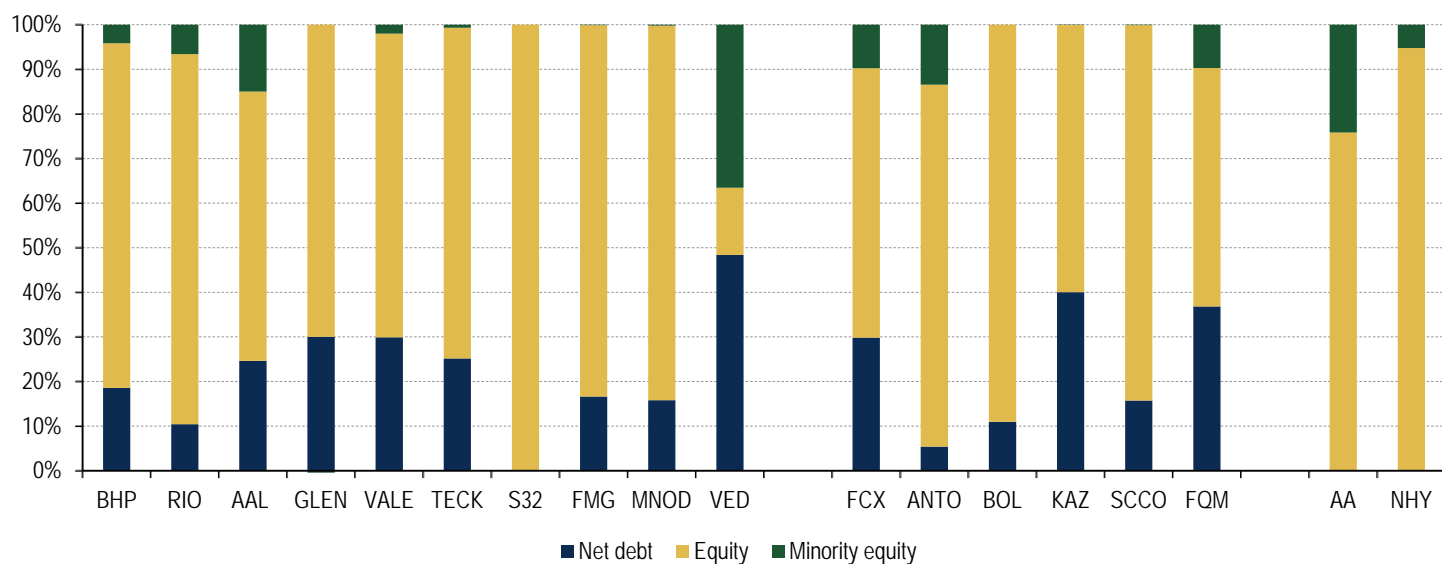
Many large mining companies discuss the “quality” of their Tier 1 assets. That said, they don’t necessarily mention the drag on their overall portfolio of their non-Tier 1 assets. We think that EBITDA margin is a useful indicator of operational leverage and lets us readily see structural differences between businesses (e.g. iron ore vs. aluminium!).

Chart 4: EBITDA Margin trends by company



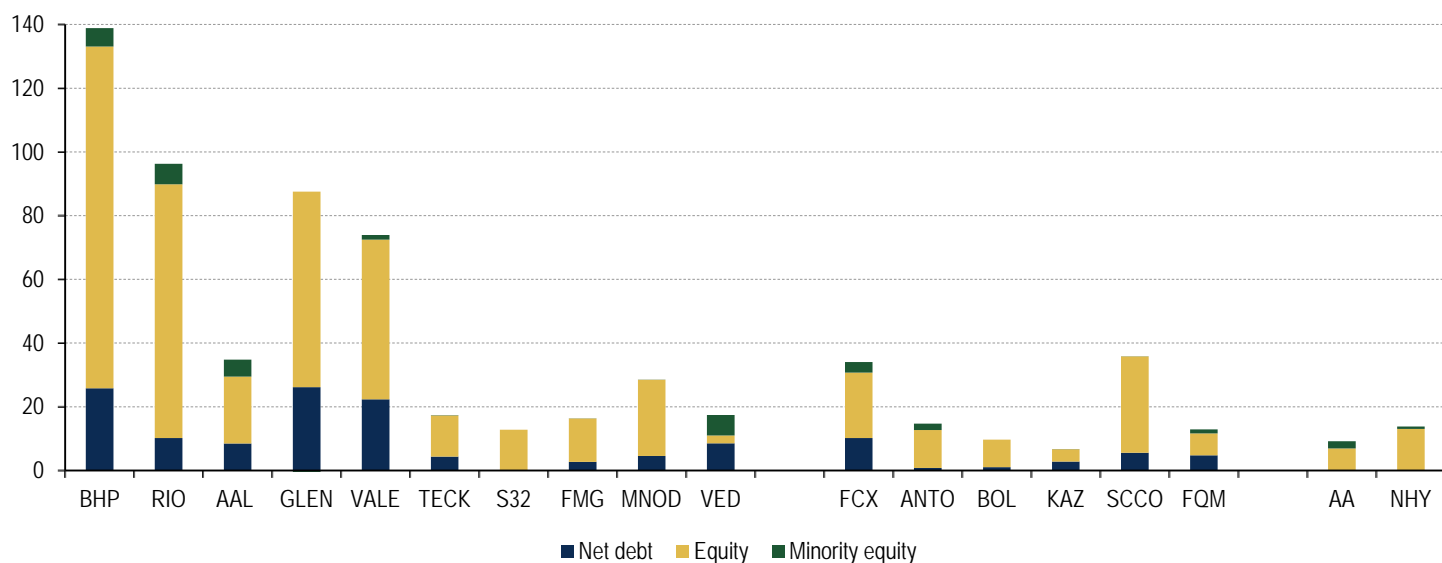
Source: BofA Merrill Lynch Global Research estimates *Note: First Quantum Minerals (FQM) had an EBITDA margin of 80% in 2012.

Chart 5: Capital structure normalized to 100%



Source: BofA Merrill Lynch Global Research estimates

Chart 6: Capital Structure in US\$bn



Source: BofA Merrill Lynch Global Research estimates

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