

14 Aug 2017

IRONBARK ZINC LTD (IBG)

At spot zinc could generate >\$200m EBITDA pa

Ironbark Zinc Limited is developing the very large, fully permitted, Citronen zinc project in Greenland. Due to the scale of the project (large production and long mine life), the upside leverage to zinc prices is very significant.

Hartleys estimates pre-tax NPV₁₂ A\$600m on current prices

We assume ~US\$500m of capex spent over two years (includes working capital). Using our zinc price profile (which is now lower than spot) our pre-tax NPV₁₂ is ~\$200m (~25cps after assumed dilution). At spot prices, our pre-tax valuation is ~\$600m, and we estimate the project would generate an average of A\$200m EBITDA pa (and higher than average in first years).

We have seen credible forecasts for zinc to peak near US\$1.80/lb. While forecasters do not anticipate zinc could remain at such levels for long, we estimate that IBG could generate A\$500-600m EBITDA pa if zinc held that level in the early years of production. At such prices, capital payback would be <2 years. Hence, even a relatively brief extreme zinc spike is material.

Citronen is fully permitted, awaiting financing.

Project development is at an advanced stage with a pre-feasibility study released in 2009 followed by a BFS/DFS (and lowered capex) in early 2013. With subsequent cost deflation, we expect the DFS can be improved. The project already has all approvals. The Company has a MoU with China Non-Ferrous for financing, but it is also pursuing non-China alternatives. Our valuation assumes traditional equity dilution and bank finance.

Retain Speculative Buy

We retain our Speculative Buy recommendation. IBG offers significant leverage to rising zinc prices. As we have recently seen with gold, cobalt and lithium developers, small market cap companies can hide significant value of potential projects. We believe now that zinc prices and resource sentiment have improved, the market should recognise the potential significance of the Citronen project.

Current zinc prices are now high enough, in our view, for the equity market to consider funding the project (NPV is approximately equal to capex). Our price target implies ~A\$160m mkt cap. Zinc price volatility is a substantial risk.

Fig. 1: Significant zinc price leverage

Zinc Price per lb		Base Case (aggressive dilution)		Lower Bull Case (100% equity funded)		Maximum Bull Case (100% debt funded)	
AUD*	USD	IBG Val. (A\$/shr)	New Shares (m)	IBG Val. (A\$/shr)	New Shares (m)	IBG Val. (A\$/shr)	New Shares (m)
0.76	0.60	n/a	n/a	n/a	n/a	0	0
0.89	0.70	n/a	n/a	n/a	n/a	0	0
1.01	0.80	n/a	n/a	n/a	n/a	0	0
1.14	0.90	\$ 0.02	10938	\$ 0.02	23337	\$ 0.19	0
1.27	1.00	\$ 0.16	1690	\$ 0.17	2787	\$ 0.38	0
1.39	1.10	\$ 0.26	1111	\$ 0.33	1501	\$ 0.58	0
1.52	1.20	\$ 0.35	898	\$ 0.50	1027	\$ 0.77	0
1.64	1.30	\$ 0.44	787	\$ 0.68	780	\$ 0.97	0
1.77	1.40	\$ 0.52	719	\$ 0.86	630	\$ 1.16	0
1.90	1.50	\$ 0.60	674	\$ 1.04	528	\$ 1.36	0
2.02	1.60	\$ 0.68	641	\$ 1.23	454	\$ 1.56	0
2.15	1.70	\$ 0.76	616	\$ 1.41	399	\$ 1.75	0
2.28	1.80	\$ 0.84	596	\$ 1.60	355	\$ 1.95	0
2.40	1.90	\$ 0.91	580	\$ 1.79	320	\$ 2.13	0
2.53	2.00	\$ 0.99	567	\$ 1.98	292	\$ 2.33	0

AUD/USD* 0.79

Source: Hartleys Research

Share Price	\$0.080
Valuation	\$0.25
Price Target (12 month)	\$0.30

Brief Business Description:

Very large zinc development project in Greenland

Hartleys Brief Investment Conclusion

Deposit is large and implies long mine life. Economic on spot prices and consensus estimates, very profitable at industry (the upper end of sell-side consensus) forecasted prices.

Chairman & MD

Peter Bennetto (Non Executive Chairman)

Jonathan Downes (Managing Director)

Major Shareholders

Nyrstar Int 18.5%

Glencore 8.9%

Company Address

Level 1, 350 Hay St

Subiaco, WA, 6008

Issued Capital

539.4m

- fully diluted 558.4m

Market Cap A\$43.2m

- fully diluted A\$44.7m

Cash (30 Jun 17a) A\$2.5m

Debt (30 Jun 17a) A\$0.0m

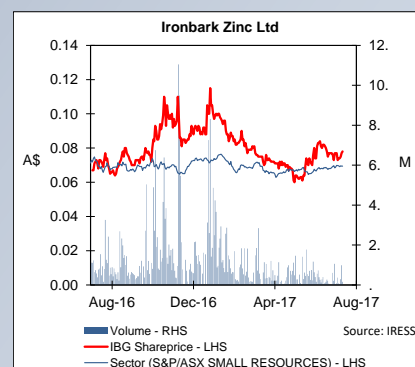
EV A\$40.7m

EV/Resource Zn A\$0.0035/lb

EV/Reserve Zn -

Prelim. (A\$m)	FY19e	FY20e	FY21e
Prod (kt Zn eq)	0.0	0.0	84.0
Op Cash Flw	-11.9	-22.2	43.9
Norm NPAT	-20.9	-49.6	17.3
CF/Share (cps)	-0.7	-1.4	0.5
EPS (cps)	-1.0	-1.8	0.6
P/E	-11.0	-5.9	16.8

	Zn	Pb
Resources (Billion lb)	11.7	1.3
Reserves (Billion lb)	0.0	0.0



Trent Barnett

Head of Research

Ph: +61 8 9268 3052

E: trent_barnett@hartleys.com.au

Hartleys has completed a capital raising in the past 12 months for Ironbark Zinc Limited ("Ironbark"), for which it has earned fees. Hartleys has provided corporate advice within the past 12 months and continues to provide corporate advice to Ironbark, for which it has earned fees and continues to earn fees. Analyst has a beneficial interest in IBG. See back page for details.

Ironbark Zinc Ltd IBG						Share Price \$0.080		14 August 2017 Speculative Buy				
Key Market Information						Share Price		Company Information				
Share Price						\$0.080		Peter Bennetto (Non Executive Chairman) Level 1, 350 Hay St Subiaco, WA, 6008				
Market Capitalisation - ordinary						A\$45m		David Kelly (Non Exec, Glencore representative) Ph +61 8 6461 6350				
Net Debt (cash)						-\$2m		Jason Dunning (Non Exec, Nyrstar representative) Fax +61 8 6210 1872				
Market Capitalisation - fully diluted						A\$45m		www.ironbarkgold.com.au				
EV						A\$42m						
Issued Capital						539.4m						
Options						19.0						
Issued Capital (diluted for options)						558.4m						
Issued Capital (diluted inc. options and new capital)						2135.9m						
12month price target						\$0.30						
P&L						Unit	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22		
Net Revenue						A\$m	0.0	0.0	247.7	571.7		
Total Costs						A\$m	-2.6	-2.7	-152.9	-322.0		
EBITDA						A\$m	-2.6	-2.7	94.8	249.7		
- margin							-	-	38%	44%		
Depreciation/Amort						A\$m	-8.9	-27.4	-56.7	-71.6		
EBIT						A\$m	-11.5	-30.1	38.1	178.1		
Net Interest						A\$m	-9.3	-19.4	-20.8	-20.9		
Pre-Tax Profit						A\$m	-20.9	-49.6	17.3	157.2		
Tax Expense						A\$m	0.0	0.0	0.0	-39.8		
Normalised NPAT						A\$m	-20.9	-49.6	17.3	117.4		
Abnormal Items						A\$m	0.0	0.0	0.0	0.0		
Reported Profit						A\$m	-20.9	-49.6	17.3	117.4		
Minority						A\$m	0.0	0.0	0.0	0.0		
Profit Attrib						A\$m	-20.9	-49.6	17.3	117.4		
Balance Sheet						Unit	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22		
Cash						A\$m	647.1	290.4	68.1	217.2		
Other Current Assets						A\$m	0.2	0.2	30.7	70.6		
Total Current Assets						A\$m	647.2	290.5	98.8	287.8		
Property, Plant & Equip.						A\$m	24.2	330.9	540.0	468.4		
Exploration						A\$m	96.8	97.2	97.6	98.0		
Investments/other						A\$m	1.2	1.2	1.2	1.2		
Tot Non-Curr. Assets						A\$m	122.2	429.3	638.8	567.6		
Total Assets						A\$m	769.4	719.8	737.6	855.4		
Short Term Borrowings						A\$m	-	-	-	-		
Other						A\$m	0.1	0.1	0.5	0.9		
Total Curr. Liabilities						A\$m	0.1	0.1	0.5	0.9		
Long Term Borrowings						A\$m	359.9	359.9	359.9	359.9		
Other						A\$m	-	-	-	-		
Total Non-Curr. Liabil.						A\$m	359.9	359.9	359.9	359.9		
Total Liabilities						A\$m	360.0	360.0	360.4	360.8		
Net Assets						A\$m	409.5	359.9	377.2	494.6		
Net Debt						A\$m	-287.2	69.5	291.8	142.7		
Cashflow						Unit	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22		
Operating Cashflow						A\$m	-2.6	-2.7	64.7	210.2		
Income Tax Paid						A\$m	0.0	0.0	0.0	-39.8		
Interest & Other						A\$m	-9.3	-19.4	-20.8	-20.9		
Operating Activities						A\$m	-11.9	-22.2	43.9	149.5		
Property, Plant & Equip.						A\$m	-52.6	-334.1	-265.8	0.0		
Exploration and Devel.						A\$m	-0.4	-0.4	-0.4	-0.4		
Other						A\$m	0.0	0.0	0.0	0.0		
Investment Activities						A\$m	-53.0	-334.5	-266.2	-0.4		
Borrowings						A\$m	359.9	0.0	0.0	0.0		
Equity or "tbc capital"						A\$m	359.9	0.0	0.0	0.0		
Dividends Paid						A\$m	0.0	0.0	0.0	0.0		
Financing Activities						A\$m	719.8	0.0	0.0	0.0		
Net Cashflow						A\$m	654.8	-356.7	-222.3	149.1		
Shares						Unit	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22		
Ordinary Shares - End						m	3641.0	3641.0	3641.0	3641.0		
Ordinary Shares - W'ted						m	2861.8	3641.0	3641.0	3641.0		
Diluted Shares - W'ted						m	2861.8	3641.0	3641.0	3641.0		
Ratio Analysis						Unit	30 Jun 19	30 Jun 20	30 Jun 21	30 Jun 22		
Cashflow Per Share						A\$ cps:	-0.4	-0.6	1.2	4.1		
Cashflow Multiple						x	-19.2	-13.1	6.6	1.9		
Earnings Per Share						A\$ cps:	-0.7	-1.4	0.5	3.2		
Price to Earnings Ratio						x	-11.0	-5.9	16.8	2.5		
Dividends Per Share						AUD	-	-	-	-		
Dividend Yield						%	0.0%	0.0%	0.0%	0.0%		
Net Debt / Net Debt + Equity						%	-235%	16%	44%	22%		
Interest Cover						X	na	na	1.8	8.5		
Return on Equity						%	na	na	5%	24%		
Directors								Top Shareholders				
Peter Bennetto (Non Executive Chairman)								Ordinary				
Jonathan Downes (Managing Director)								m sh. %				
David Kelly (Non Exec, Glencore representative)								Nyrstar Int 100.0 18.5%				
Jason Dunning (Non Exec, Nyrstar representative)								Glencore 48.0 8.9%				
Gary Comb (Non Exec.)												
Reserves & Resources								Production Summary				
Citronen - High Grade						M+I	5% cut	22.6	6.7%	0.5%		
Citronen - High Grade						Inf	5% cut	7.3	6.2%	0.5%		
Citronen - High Grade						Total	5% cut	29.9	6.6%	0.5%		
Citronen - High Grade						Reserve	5% cut	none				
Citronen - Global						M+I	2% cut	94.3	4.1%	0.4%		
Citronen - Global						Inf	2% cut	37.7	3.8%	0.4%		
Citronen - Global						Total	2% cut	132.0	4.0%	0.4%		
Citronen - Global						Reserve	2% cut	none				
Unbeneficiated Mill Throughput						Mt	0.00	0.00	1.64	3.28		
Processed Mill Throughput						Mt	0.00	0.00	1.10	2.20		
Mined grade Zn						%	0.0%	0.0%	6.4%	7.4%		
Produced Zn						kt	0.0	0.0	93.9	219.1		
Payable Zn						kt	0.0	0.0	79.8	186.3		
Payable Zn Equiv						kt	0.0	0.0	84.0	194.7		
M&I Resource Mid Grade Conversion						%	89.3%	203.4%	215.4%	236.9%		
Mine Life						yr			13.75	12.75		
Assumed Mining Inventory						Mt	46.0	46.0	45.1	41.9		
Assumed Mining Inventory - Zn grade						%	5.2%	5.2%	5.2%	5.0%		
Assumed Mining Inventory - Pb grade						%	0.5%	0.5%	0.5%	0.5%		
Capex							- 52.6	- 334.1	- 265.8	-		
Costs						Unit	Jun 19	Jun 20	Jun 21	Jun 22		
Cost per milled tonne						\$A/t			84.0	88.6		
EBITDA / tonne milled ore						\$A/t			57.7	76.1		
Total cost per milled tonne									93.1	98.1		
Total Cash Costs (as per P&L)						\$A/lb Zn eq			0.83	0.75		
C1: Operating Cash Cost = (a)						\$A/lb Zn eq			0.74	0.68		
(a) + Royalty = (b)						\$A/lb Zn eq			0.81	0.74		
C2: (a) + depreciation & amortisation = (c)						\$A/lb Zn eq			1.05	0.85		
(a) + actual cash for development = (d)						\$A/lb Zn eq			2.18	0.68		
AISC: (c) + Royalty						\$A/lb Zn eq			1.12	0.91		
(d) + Royalty						\$A/lb Zn eq			2.25	0.74		
AISC: (c) + Royalty						\$US/lb Zn eq			0.86	0.71		
Price Assumptions						Unit	Jun 19	Jun 20	Jun 21	Jun 22		
AUDUSD						US\$/A\$	0.76	0.76	0.77	0.78		
Zinc						US\$/lb	1.18	1.10	1.07	1.03		
Lead						US\$/lb	0.93	0.92	0.90	0.90		
Hedging						Unit	Jun 19	Jun 20	Jun 21	Jun 22		
none												
Sensitivity Analysis								Valuation				
Base Case								0.25				
Spot Prices								0.61 (142.5%)				
Spot USD/AUD 0.79, Zinc \$1.31/lb, Lead \$1.06/lb.								69.6 (301.5%)				
AUDUSD +/-10%								0.23 / 0.27 (-7.4% / 8.6%) 14.5 / 20.8 (-16.3% / 19.9%)				
Zinc +/-10%								0.39 / 0.07 (55.2% / -71.8%) 36.7 / -2.1 (111.8% / -111.8%)				
Lead +/-10%								0.26 / 0.24 (3.1% / -3.1%) 18.4 / 16.3 (6.2% / -6.2%)				
Production +/-10%								0.40 / 0.05 (59.9% / -80.8%) 38.6 / -3.9 (122.5% / -122.5%)				
Operating Costs +/-10%								0.12 / 0.36 (-53.3% / 43.8%) 3.5 / 31.2 (-79.7% / 79.7%)				
Unpaid Capital (excluding convertible notes which are assumed to be never used)												
Year Expires						No. (m)	\$m	Avg price	% ord			
30-Jun-17						0.0	0.0	0.00	0%			
30-Jun-18						19.0	3.4	0.18	4%			
30-Jun-19						0.0	0.0	0.00	0%			
30-Jun-20						0.0	0.0	0.00	0%			
30-Jun-21						0.0	0.0	0.00	0%			
30-Jun-22						0.0	0.0	0.00	0%			
TOTAL						19.0	3.4	0.18	4%			
Valuation						\$m	\$/shr					
100% Citronen (pre-tax NAV at disc. rate of 12%)						590	0.28					
Other Assets/Exploration						30	0.01					
Forwards						0	0.00					
Corporate Overheads						-13	-0.01					
Net Cash (Debt)						2	0.00					
Convertible notes (assumed converted to equity)						0	0.00					
Tax (NPV future liability)						-77	-0.04					
Options & Other Equity						2	0.00					
Total						534	0.25					
Analyst: Trent Barnett								14 Aug 17				
+61 8 9268 3052												
tbc capital could be equity or debt. Our valuation is risk-adjusted for how this may be obtained.												
Sources: IRESS, Company Information, Hartleys Research												

PRICE TARGET

Our price target is a blended valuation based on a scenario of different of commodity price assumptions and capital raising prices. We have a price target of 30cps (from 33cps).

Fig. 2: Price Target Methodology

Price Target Methodology	Weighting	Spot	12 mth out
NPV base case, assuming significant equity dilution	40%	\$0.25	\$0.28
NPV at spot commodity and fx prices	15%	\$0.61	\$0.67
AUD zinc price calls (1.9Mt over 12yrs, avg strike @A\$0.94/lb)	5%	\$0.57	\$0.57
Net cash	35%	\$0.00	\$0.00
NPV using spot fx, but zinc prices at US\$1.30/lb, <u>no equity dilution</u>	5%	\$0.97	\$1.09
Risk weighted composite		\$0.27	
12 Months Price Target		\$0.30	
Shareprice - Last		\$0.080	
12 mth total return (% to 12mth target + dividend)		269%	

Source: Hartleys Estimate

Source: Hartleys

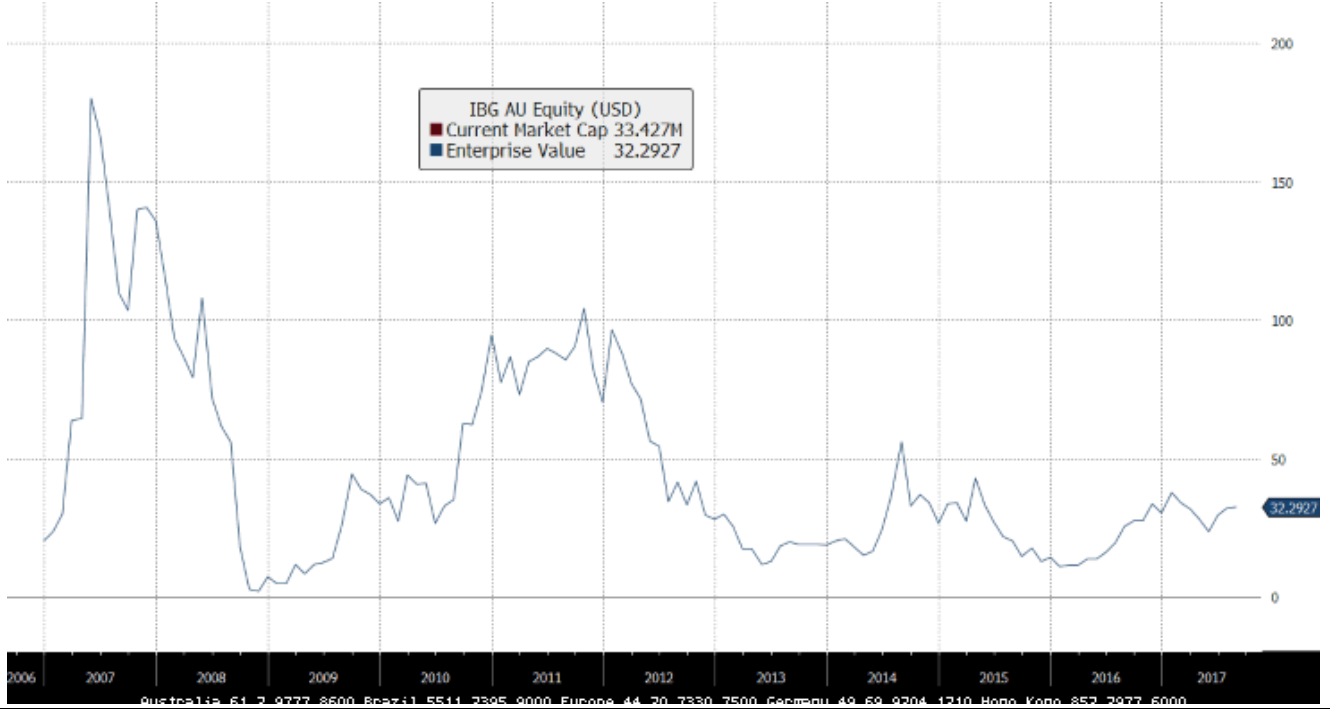
Fig. 3: High leverage to zinc prices

Zinc Price per lb		Base Case (aggressive dilution)		Lower Bull Case (100% equity funded)		Maximum Bull Case (100% debt funded)	
AUD*	USD	IBG Val. (A\$/shr)	New Shares (m)	IBG Val. (A\$/shr)	New Shares (m)	IBG Val. (A\$/shr)	New Shares (m)
0.76	0.60		n/a		n/a		0
0.89	0.70		n/a		n/a		0
1.01	0.80		n/a		n/a		0
1.14	0.90	\$ 0.02	10938	\$ 0.02	23337	\$ 0.19	0
1.27	1.00	\$ 0.16	1690	\$ 0.17	2787	\$ 0.38	0
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1.90	1.50	\$ 0.60	674	\$ 1.04	528	\$ 1.36	0
2.02	1.60	\$ 0.68	641	\$ 1.23	454	\$ 1.56	0
2.15	1.70	\$ 0.76	616	\$ 1.41	399	\$ 1.75	0
2.28	1.80	\$ 0.84	596	\$ 1.60	355	\$ 1.95	0
2.40	1.90	\$ 0.91	580	\$ 1.79	320	\$ 2.13	0
2.53	2.00	\$ 0.99	567	\$ 1.98	292	\$ 2.33	0

AUD/USD* 0.79

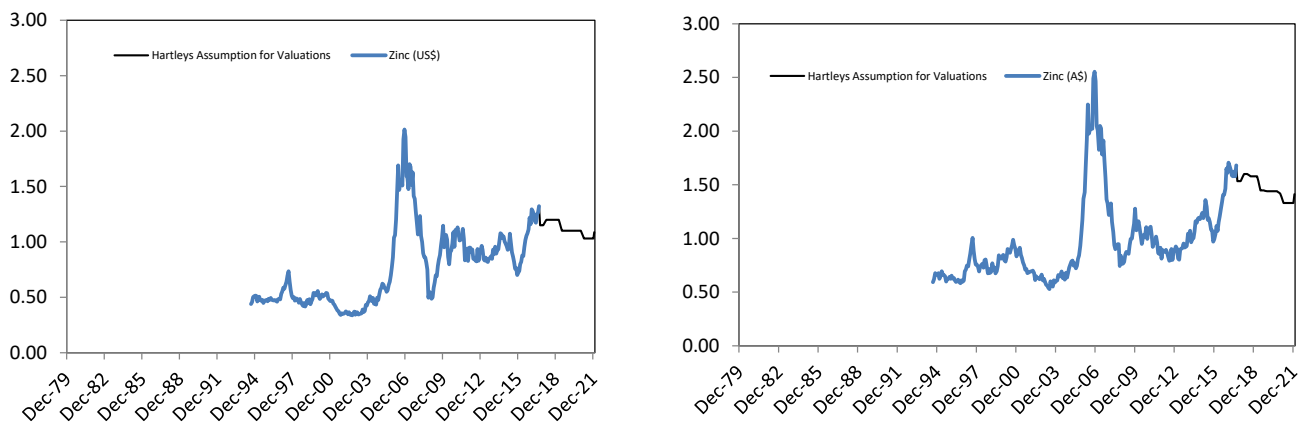
Source: Hartleys Research

Fig. 4: Historic peak and low Enterprise Value (Blue)



Source: Bloomberg

Fig. 5: Zinc Price assumptions



Source: Hartleys, IRESS

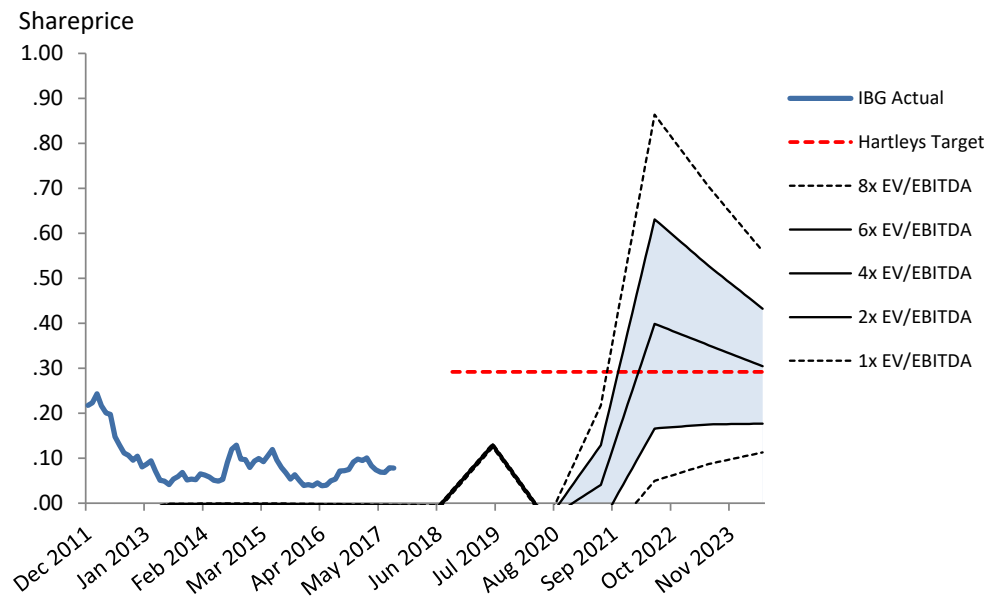
Fig. 6: Key assumptions and risks for valuation

Assumption	Risk of not realising assumption	Downside risk to valuation if assumption is incorrect	Comment
Fourteen year mine life	Low	Upside	The current high grade resource implies a mine life of >15years.
Zinc price fall	Moderate	Substantial	Our zinc price assumptions imply prices fall over coming years.
Large proportion of capex is funded with debt	Moderate to high	Not meaningful	The long mine life should support debt funding
Equity can be raised at prices higher than current	Moderate to high	Substantial	We assume that if the project is developed, it will be because the economics (zinc price) are compelling, and the shareprice will better reflect the fundamental value of Citronen in a high zinc price environment
Conservatively, we don't assume NFC exercises its right to purchase 19.9% of the project.	Moderate	Upside	We assume the project equity is financed by IBG shareholders, and they do not receive an equity injection from any "farm-out"
Limited value for exploration and other projects	Moderate	Upside	The other assets may have exploration success
<i>Conclusion</i>	<i>IBG still has funding risk, which reduces as zinc prices increase (in our view). Consequently, we view IBG as leveraged to strong zinc prices.</i>		

Source: Hartleys

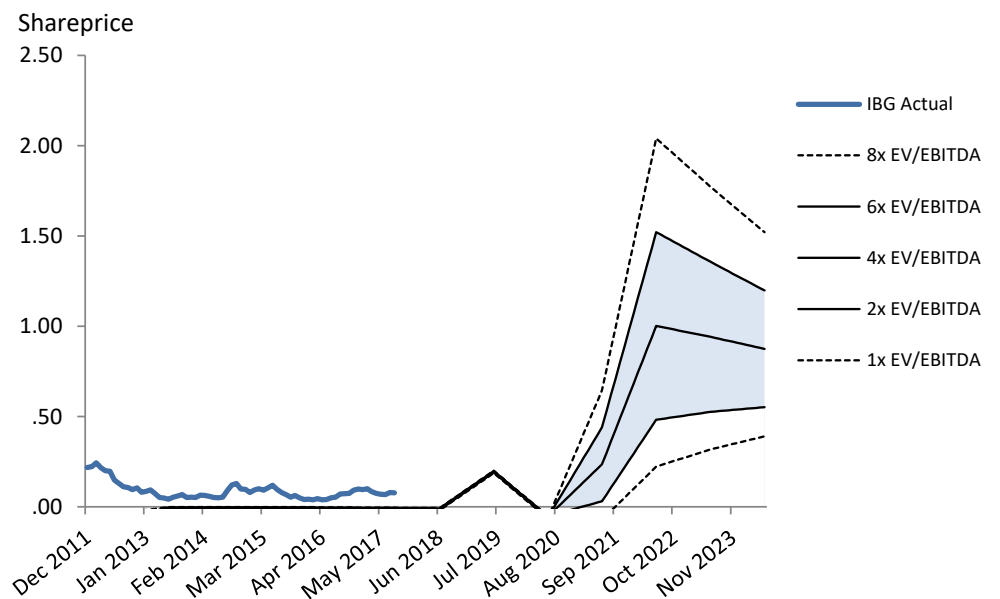
EV/EBITDA BANDS

Fig. 7: Using *Hartleys base case commodity forecasts*



Source: Hartleys Estimates, IRESS

Fig. 8: Using *spot commodity prices*



Source: Hartleys Estimates, IRESS

HARTLEYS CORPORATE DIRECTORY

Research

Trent Barnett	Head of Research	+61 8 9268 3052
Mike Millikan	Resources Analyst	+61 8 9268 2805
John Macdonald	Resources Analyst	+61 8 9268 3020
Paul Howard	Resources Analyst	+61 8 9268 3045
Aiden Bradley	Research Analyst	+61 8 9268 2876
Michael Scantlebury	Junior Analyst	+61 8 9268 2837
Janine Bell	Research Assistant	+61 8 9268 2831

Corporate Finance

Dale Bryan	Director & Head of Corp Fin.	+61 8 9268 2829
Richard Simpson	Director	+61 8 9268 2824
Ben Crossing	Director	+61 8 9268 3047
Ben Wale	Associate Director	+61 8 9268 3055
Stephen Kite	Associate Director	+61 8 9268 3050
Scott Weir	Associate Director	+61 8 9268 2821
Scott Stephens	Associate Director	+61 8 9268 2819
Rhys Simpson	Manager	+61 8 9268 2851

Registered Office

Level 6, 141 St Georges TcePostal Address:

PerthWA 6000 GPO Box 2777
Australia Perth WA 6001
PH:+61 8 9268 2888 FX: +61 8 9268 2800
www.hartleys.com.au info@hartleys.com.au

Note: personal email addresses of company employees are structured in the following manner:firstname.lastname@hartleys.com.au

Hartleys Recommendation Categories

Buy	Share price appreciation anticipated.
Accumulate	Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	No recommendation.
Speculative Buy	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.

Institutional Sales

Carrick Ryan	+61 8 9268 2864
Justin Stewart	+61 8 9268 3062
Simon van den Berg	+61 8 9268 2867
Chris Chong	+61 8 9268 2817
Digby Gilmour	+61 8 9268 2814
Tia Hall	+61 8 9268 3053

Wealth Management

Nicola Bond	+61 8 9268 2840
Bradley Booth	+61 8 9268 2873
Adrian Brant	+61 8 9268 3065
Nathan Bray	+61 8 9268 2874
Sven Burrell	+61 8 9268 2847
Simon Casey	+61 8 9268 2875
Tony Chien	+61 8 9268 2850
Tim Cottee	+61 8 9268 3064
David Cross	+61 8 9268 2860
Nicholas Draper	+61 8 9268 2883
John Featherby	+61 8 9268 2811
Ben Fleay	+61 8 9268 2844
James Gatti	+61 8 9268 3025
John Goodlad	+61 8 9268 2890
Andrew Gribble	+61 8 9268 2842
David Hainsworth	+61 8 9268 3040
Murray Jacob	+61 8 9268 2892
Gavin Lehmann	+61 8 9268 2895
Shane Lehmann	+61 8 9268 2897
Steven Loxley	+61 8 9268 2857
Andrew Macnaughtan	+61 8 9268 2898
Scott Metcalf	+61 8 9268 2807
David Michael	+61 8 9268 2835
Jamie Moullin	+61 8 9268 2856
Chris Munro	+61 8 9268 2858
Michael Munro	+61 8 9268 2820
Ian Parker	+61 8 9268 2810
Matthew Parker	+61 8 9268 2826
Charlie Ransom	+61 8 9268 2868
Mark Sandford	+61 8 9268 3066
David Smyth	+61 8 9268 2839
Greg Soudure	+61 8 9268 2834
Sonya Soudure	+61 8 9268 2865
Dirk Vanderstruyf	+61 8 9268 2855
Samuel Williams	+61 8 9268 3041
Jayme Walsh	+61 8 9268 2828

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