

## PILBARA MINERALS LTD (PLS)

### Stage 1 under offtake with strong counter party

Pilbara Minerals Ltd (PLS) has announced that Ganfeng has executed an off-take agreement for 160ktpa of spodumene (6.0%) for 10-years (plus 2 by 5 five year options). This means that Stage 1 (2Mtpa) of PLS's production is now under offtake (balance is with General Lithium), which is a big positive given the scale of the project (Stage 1 is ~45kt LCE) suggested offtakes were a risk.

Pricing is on a CIF basis (cost plus insurance and freight), and is reset every 6 months by a pricing formula based on the price of lithium carbonate with downside protections.

### Financing is the next step

Ganfeng has also agreed to firm participation of not less than US\$20 million as an investor to complete Stage 1 (but not exceed 4.9% of PLS with a 12 month standstill).

Assuming no cash flow from the DSO product, we estimate that PLS requires ~\$180m of additional capital to complete Stage 1 (of which Ganfeng has announced it will contribute US\$20m & General Lithium should contribute A\$18m based on previous announcements). We have previously estimated that the DSO could generate \$100m of free cash flow, however the delays to production suggest we cannot rely on DSO as a source of funds. We have added in another equity raising in our valuation to be conservative, but we note that pre-payments or unconventional debt financing are possibilities instead, particularly now that offtake is secured.

### Stage 2 could be more valuable than we assume

We have been placing a large risk discount on Stage 2 given the production volumes implied, and therefore risks to completing offtake. However, the Ganfeng offtake announcement is very encouraging given Ganfeng has also agreed to help debt fund or off-take pre-payment for Stage 2 expansion (4Mtpa), and up to 50% of Stage 2 production (maximum 150,000tpa of Stage 2 expanded production in total) to be provided in off-take. We still emphasise the value of stage 1 in our valuation, and attribute \$375m (~23cps) to Stage 2.

### Move to Speculative Buy (from Buy)

We move to a Speculative Buy (from Buy) given PLS is not yet fully funded and we have seen in delays in China outbound capital flow approvals across the mining sector. The upside to our price target remains substantial though. If financing is cheaper than we assume (ie less dilution), then it is possible our price target will be revised higher. If financing is in line with our assumptions, we will likely increase our recommendation back to Buy. The speculative aspect to our recommendation is simply due to the outside possibility that finance is more expensive than we assume due to capital market volatility.

3 May 2017

Share Price	\$0.400
Valuation	\$0.78
Price Target (12 month)	\$0.95

#### Brief Business Description:

Very large spodumene development in WA

#### Hartleys Brief Investment Conclusion

Very large deposit that looks highly economic.

#### Chairman & MD

Tony Kiernan (Non-exec Chair.)

Ken Brinsden (MD)

#### Major Shareholders

Mineral Resources (8.2% ord, 7.3% dil.)

General Lithium (0.0% ord, 3.6% dil.)

Ganfeng (0.0% ord, 4.7% dil.)

#### Company Address

Level 2, 88 Colin St,  
West Perth, WA, 6005

#### Issued Capital

	1276.6m
- fully diluted	1431.6m

#### Market Cap

	A\$510.7m
- fully diluted	A\$572.7m

#### Cash (31 Mar 17a)

A\$65.6m

#### Debt (31 Mar 17a)

A\$0.0m

#### EV

A\$445.1m

#### EV/Resource Spod.

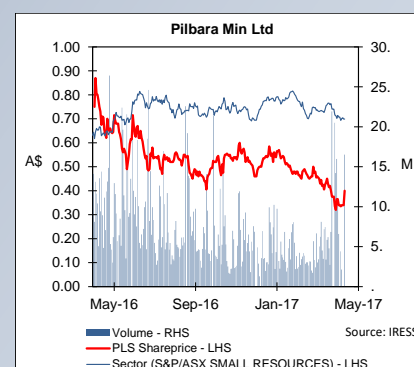
A\$13.7/t

#### EV/Reserve Spod.

A\$30.4/t

	Prelim. (A\$m)	FY19e	FY20e	FY21e
Prod (Li Spod. eq)	0.350	0.351	0.355	
Op Cash Flw	147.3	160.0	119.0	
Norm NPAT	159.1	141.4	93.9	
CF/Share (cps)	10.1	8.8	5.8	
EPS (cps)	13.3	11.5	7.5	
P/E	3.9	4.5	6.9	

	Mt	LizO	Spod.
Resources (Li:O)	156.3	1.25%	32.6
Reserve (Li:O)	69.8	1.26%	14.7



Trent Barnett

Head of Research

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Hartleys has assisted in the completion of part of a capital raising in the past 12 months for Pilbara Mines Limited.

## SUMMARY MODEL

Pilbara Min Ltd PLS						Share Price \$0.400	
<b>Key Market Information</b>							
Share Price						\$0.400	
Market Capitalisation - ordinary						A\$573m	
Net cash						A\$66m	
Market Capitalisation - fully diluted						A\$573m	
EV						A\$507m	
Issued Capital						1276.6m	
Options (inc General Lithium placements)						155.0	
Issued Capital (diluted for options)						1431.6m	
Issued Capital (diluted inc. options and new capital)						1631.6m	
<b>12month price target</b>						\$0.95	
<b>P&amp;L</b>	<b>Unit</b>	<b>30 Jun 17</b>	<b>30 Jun 18</b>	<b>30 Jun 19</b>	<b>30 Jun 20</b>	<b>30 Jun 21</b>	
Net Revenue	A\$m	0.0	140.0	368.5	348.4	275.9	
Total Costs	A\$m	-2.4	-53.4	-136.4	-135.3	-130.4	
EBITDA	A\$m	-2.4	86.6	232.1	213.1	145.5	
- margin			62%	63%	61%	53%	
Depreciation/Amort	A\$m	-4.7	-10.2	-16.1	-16.2	-16.2	
EBIT	A\$m	-7.0	76.4	216.0	196.9	129.3	
Net Interest	A\$m	-2.3	-4.5	-2.7	-0.6	1.2	
Pre-Tax Profit	A\$m	-9.4	71.9	213.3	196.3	130.5	
Tax Expense	A\$m	0.0	0.0	-54.2	-55.0	-36.5	
Normalised NPAT	A\$m	-9.4	71.9	159.1	141.4	93.9	
Abnormal Items	A\$m	0.0	0.0	0.0	0.0	0.0	
Reported Profit	A\$m	-9.4	71.9	159.1	141.4	93.9	
Minority	A\$m	0.0	0.0	0.0	0.0	0.0	
Profit Attrib	A\$m	-9.4	71.9	159.1	141.4	93.9	
<b>Balance Sheet</b>	<b>Unit</b>	<b>30 Jun 17</b>	<b>30 Jun 18</b>	<b>30 Jun 19</b>	<b>30 Jun 20</b>	<b>30 Jun 21</b>	
Cash	A\$m	193.1	79.7	196.6	336.2	434.8	
Other Current Assets	A\$m	0.2	17.4	45.6	43.1	34.2	
Total Current Assets	A\$m	193.3	97.1	242.2	379.3	469.0	
Property, Plant & Equip.	A\$m	-5.7	212.2	196.0	179.9	163.7	
Exploration	A\$m	20.4	20.8	21.2	21.6	22.0	
Investments/other	A\$m	1.2	1.2	1.2	1.2	1.2	
Tot Non-Curr. Assets	A\$m	16.0	234.2	218.5	202.7	186.9	
Total Assets	A\$m	209.2	331.3	460.6	582.0	655.9	
Short Term Borrowings	A\$m	-	-	-	-	-	
Other	A\$m	0.1	0.2	0.4	0.4	0.4	
Total Curr. Liabilities	A\$m	0.1	0.2	0.4	0.4	0.4	
Long Term Borrowings	A\$m	100.0	70.0	40.0	20.0	-	
Other	A\$m	-	-	-	-	-	
Total Non-Curr. Liabil.	A\$m	100.0	70.0	40.0	20.0	-	
Total Liabilities	A\$m	100.1	70.2	40.4	20.4	0.4	
Net Assets	A\$m	109.1	261.1	420.2	561.6	655.5	
Net Debt	A\$m	-93.1	-9.7	-156.6	-316.2	-434.8	
<b>Cashflow</b>	<b>Unit</b>	<b>30 Jun 17</b>	<b>30 Jun 18</b>	<b>30 Jun 19</b>	<b>30 Jun 20</b>	<b>30 Jun 21</b>	
Operating Cashflow	A\$m	-2.4	69.4	204.2	215.5	154.4	
Income Tax Paid	A\$m	0.0	0.0	-54.2	-55.0	-36.5	
Interest & Other	A\$m	-2.3	-4.5	-2.7	-0.6	1.2	
Operating Activities	A\$m	-4.7	65.0	147.3	160.0	119.0	
Property, Plant & Equip.	A\$m	0.0	-228.0	0.0	0.0	0.0	
Exploration and Devel.	A\$m	-0.4	-0.4	-0.4	-0.4	-0.4	
Other	A\$m	0.0	0.0	0.0	0.0	0.0	
Investment Activities	A\$m	-0.4	-228.4	-0.4	-0.4	-0.4	
Borrowings	A\$m	100.0	-30.0	-30.0	-20.0	-20.0	
Equity or "tbc capital"	A\$m	0.0	80.0	0.0	0.0	0.0	
Dividends Paid	A\$m	0.0	0.0	0.0	0.0	0.0	
Financing Activities	A\$m	100.0	50.0	-30.0	-20.0	-20.0	
Net Cashflow	A\$m	94.9	-113.4	116.9	139.6	98.6	
<b>Shares</b>	<b>Unit</b>	<b>30 Jun 17</b>	<b>30 Jun 18</b>	<b>30 Jun 19</b>	<b>30 Jun 20</b>	<b>30 Jun 21</b>	
Ordinary Shares - End	m	1276.6	1552.7	1584.2	1624.2	1624.2	
Ordinary Shares - W'ted	m	1212.3	1414.7	1568.5	1604.2	1624.2	
Diluted Shares - W'ted	m	1363.6	1524.2	1624.2	1624.2	1624.2	
<b>Ratio Analysis</b>	<b>Unit</b>	<b>30 Jun 17</b>	<b>30 Jun 18</b>	<b>30 Jun 19</b>	<b>30 Jun 20</b>	<b>30 Jun 21</b>	
Cashflow Per Share	A\$ cps	-0.4	4.6	9.4	10.0	7.3	
Cashflow Multiple	x	-103.3	8.7	4.3	4.0	5.5	
Earnings Per Share	A\$ cps	-0.8	5.1	10.1	8.8	5.8	
Price to Earnings Ratio	x	-51.8	7.9	3.9	4.5	6.9	
Dividends Per Share	AUD	-	-	-	-	-	
Dividend Yield	%	0.0%	0.0%	0.0%	0.0%	0.0%	
Net Debt / Net Debt + Equity %		-580%	-4%	-59%	-129%	-197%	
Interest Cover	X	na	17.1	81.0	340.2	na	
Return on Equity	%	na	28%	38%	25%	14%	
Analyst: Trent Barnett +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							

3 May 2017 Speculative Buy							
<b>Directors</b>			<b>Company Information</b>				
Tony Kiernan (Non-exec Chair.)			Level 2, 88 Colin St.				
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John Young (Exec., Technical)			Ph +61 8 6266 6266				
Neil Biddle (Non-exec)			Fax +61 8 6266 6266				
Nick Cernotta (Non-exec)							
Stephen Scudamore (Non-exec)			<a href="http://www.pilbaraminerals.com.au">www.pilbaraminerals.com.au</a>				
Brian Lynn (CFO)							
<b>Top Shareholders</b>		<b>Ord</b>	<b>Dil</b>				
		%	%				
Mineral Resources		8.2%	7.3%				
General Lithium		0.0%	3.6%				
Gangfeng		0.0%	4.7%				
<b>Reserves &amp; Resources</b>		<b>Mt</b>	<b>Li %</b>	<b>Ta:Os</b>			
Pilgangoora	M+I	95.2	1.32%	130			
Pilgangoora	Inf	61.1	1.13%	125			
Pilgangoora	<b>Total</b>	<b>156.3</b>	<b>1.25%</b>	<b>128</b>			
Pilgangoora	<b>Reserve</b>	<b>69.8</b>	<b>1.26%</b>	<b>132</b>			
<b>Global</b>	<b>Total</b>	<b>156.3</b>	<b>1.25%</b>	<b>128</b>			
<b>Global</b>	<b>Reserve</b>	<b>69.8</b>	<b>1.26%</b>	<b>132</b>			
<b>Production Summary</b>		<b>Unit</b>	<b>Jun 17</b>	<b>Jun 18</b>	<b>Jun 19</b>	<b>Jun 20</b>	<b>Jun 21</b>
Processed Mill Throughput	Mt		0.75	2.00	2.00	2.00	
Mined grade Li	%			1.3%	1.3%	1.3%	
Produced Spodumene - Technical	Mt		0.000	0.000	0.000	0.000	
Produced Spodumene - Battery	Mt		0.126	0.335	0.335	0.335	
Produced Tantalite	Mlb pa		0.075	0.201	0.201	0.201	
Produced Spodumene - Battery Eq	Mt		0.131	0.350	0.351	0.355	
LCE equiv (0.135x Spod)	ktpa		17.7	47.3	47.4	47.9	
Mine Life	yr		39.75	38.75	37.75	36.75	
Assumed Mining Inventory	Mt		71.0	69.0	67.0	65.0	
Assumed Mining Inventory - Li grade	%		1.22%	1.22%	1.21%	1.21%	
Assumed Mining Inventory - Tant grade	ppm		130	130	130	130	
Capex		0.0	-228.0	0.0	0.0	0.0	
<b>Costs</b>		<b>Unit</b>	<b>Jun 17</b>	<b>Jun 18</b>	<b>Jun 19</b>	<b>Jun 20</b>	<b>Jun 21</b>
Cost per milled tonne	\$A/t		51.6	50.2	50.2	50.2	
EBITDA / tonne milled ore	\$A/t		115.4	116.1	106.5	72.7	
Total cost per milled tonne			71.3	68.2	67.7	65.2	
Total Cash Costs	\$A/t Spod. Batt. eq		407.2	389.5	385.5	367.3	
C1: Operating Cash Cost = (a)	\$A/t Spod. Batt. eq		294.6	287.0	286.2	282.9	
(a) + Royalty = (b)	\$A/t Spod. Batt. eq		371.2	362.5	357.3	337.9	
C2: (a) + depreciation & amortisation = (c)	\$A/t Spod. Batt. eq		372.1	333.1	332.2	328.5	
(a) + actual cash for development = (d)	\$A/t Spod. Batt. eq		2,034.6	288.1	287.3	284.1	
AISC: (c) + Royalty	\$A/t Spod. Batt. eq		448.6	408.6	403.3	383.5	
(d) + Royalty	\$A/t Spod. Batt. eq		2,111.1	363.7	358.4	339.0	
<b>Price Assumptions</b>		<b>Unit</b>	<b>Jun 17</b>	<b>Jun 18</b>	<b>Jun 19</b>	<b>Jun 20</b>	<b>Jun 21</b>
AUDUSD	US\$/A\$		0.73	0.75	0.76	0.76	0.77
Spodumene - Chemical (ie Battery)	US\$/t		715	815	800	758	600
Tantalite	US\$/t		60	60	60	60	60
<b>Hedging</b>		<b>Unit</b>	<b>Jun 17</b>	<b>Jun 18</b>	<b>Jun 19</b>	<b>Jun 20</b>	<b>Jun 21</b>
none							
<b>Sensitivity Analysis</b>		<b>Valuation</b>		<b>FY21 NPAT</b>			
<b>Base Case</b>		<b>0.78</b>		<b>93.9</b>			
Spot Prices		1.23 (58.1%)		174.6 (85.9%)			
Spot USD/AUD 0.75, Chemical Spod \$850/t, Tant. \$60/lb.							
AUDUSD +/-10%		0.66 / 0.92 (-15.4% / 18.8%)		77.0 / 114.7 (-18.1% / 22.1%)			
Spodumene - Technical +/-10%		0.78 / 0.78 (0.0% / 0.0%)		93.9 / 93.9 (0.0% / 0.0%)			
Spodumene - Chemical +/-10%		0.90 / 0.65 (16.0% / -16.0%)		111.5 / 76.4 (18.7% / -18.7%)			
Tantalite +/-10%		0.78 / 0.77 (1.0% / -1.0%)		95.1 / 92.8 (1.2% / -1.2%)			
Production +/-10%		0.90 / 0.65 (16.2% / -16.2%)		111.7 / 76.1 (19.0% / -19.0%)			
Operating Costs +/-10%		0.73 / 0.83 (-6.4% / 6.4%)		86.6 / 101.2 (-7.8% / 7.8%)			
<b>Unpaid Capital</b>							
<b>Year Expires</b>		<b>No. (m)</b>	<b>\$m</b>	<b>Avg price</b>	<b>% ord</b>		
30-Jun-17		7.4	4.6	0.61	1%		
30-Jun-18		76.1	33.6	0.44	6%		
30-Jun-19		31.5	12.6	0.40	2%		
30-Jun-20		40.0	22.9	0.57	3%		
30-Jun-21		0.0	0.0	0.00	0%		
<b>TOTAL</b>		<b>155.0</b>	<b>73.7</b>	<b>0.48</b>	<b>12%</b>		
<b>Valuation</b>		<b>\$m</b>	<b>\$/shr</b>				
100% Pilgangoora (pre-tax NAV at disc. rate of 12%)		1071	0.66				
Other Assets/Exploration		487	0.30				
Forwards		0	0.00				
Corporate Overheads		-73	-0.04				
Net Cash (Debt)		66	0.04				
Tax (NPV future liability)		-315	-0.19				
Options & Other Equity		32	0.02				
<b>Total</b>		<b>1267</b>	<b>0.78</b>				

**Fig. 1: Key Assumptions and Risks for valuation**

Assumption	Risk of not realising assumption	Downside risk to valuation if assumption is incorrect	Comment
~36 year mine life	Low	Meaningful	This appears reasonable based on current resources
2mtpa processing	Upside/downside	Moderate	We assume throughput in line with the DFS.
Capex slightly higher than DFS	Low	Upside / downside	We assume capex slightly higher than the DFS
More equity financing	Low	Meaningful	We assume more dilution in our valuation. It is possible the project is financed through unconventional debt or pre-payments though.
Debt funding	Low	Meaningful	We assume the project can have meaningful debt funding
Tantalite recoveries far lower than DFS	Low	Upside	We assume low recoveries in order to be conservative
Speculative value for expansion to 4Mtpa	Low	Upside	We do not model the expansion to 4mtpa explicitly, but do include some meaningful, albeit risked, value.
No value for downstream opportunities	Low	Upside	We assume no explicit value for potential downstream opportunities.
Exploration value	Moderate	Low	We assume modest exploration value.

*Conclusion*

*Spodumene selling prices are the most significant risk. Commissioning and financing are also risks to our valuation.*

Source: Hartleys

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## PRICE TARGET

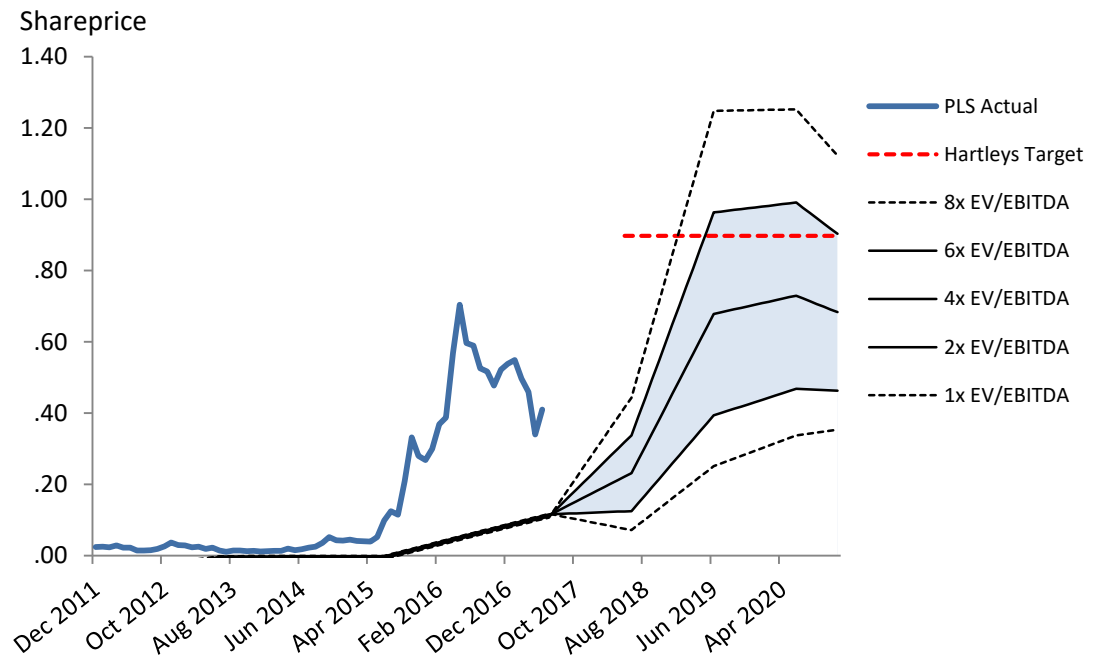
We have reduced our price target slightly to \$0.95 (from \$1.00).

Price Target Methodology	Weighting	Spot	12 mth out
NPV base case	65%	\$0.78	\$0.85
NPV at spot commodity and fx prices	30%	\$1.23	\$1.30
Net cash	5%	\$0.05	\$0.05
<b>Risk weighted composite</b>		<b>\$0.88</b>	
<b>12 Months Price Target</b>		<b>\$0.95</b>	
Shareprice - Last		\$0.400	
<b>12 mth total return (% to 12mth target + dividend)</b>		<b>137%</b>	

Source: Hartleys Estimate

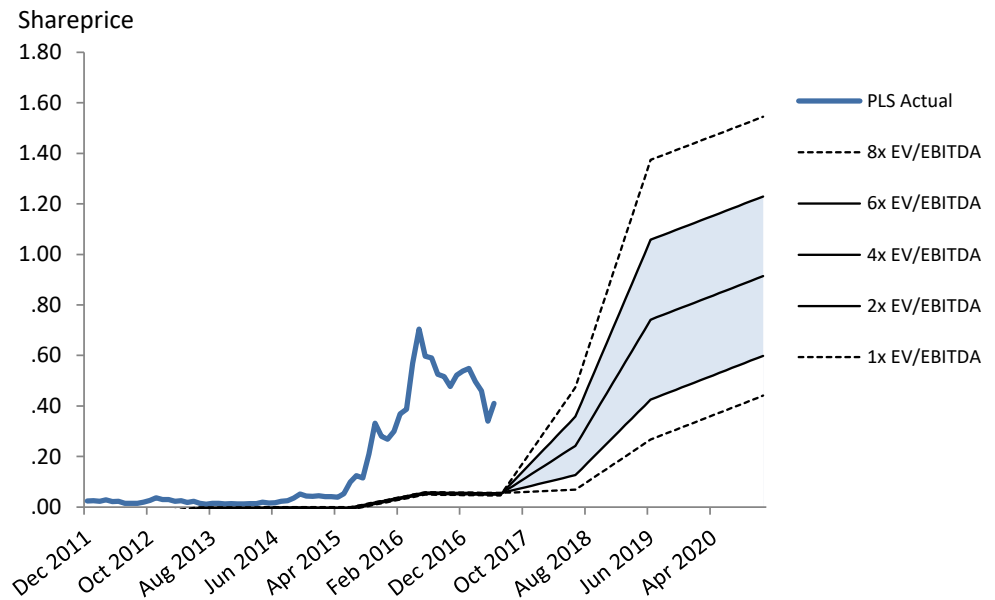
## EV/EBITDA BANDS

**Fig. 2:** Using *Hartleys base case commodity forecasts*



Source: Hartleys Estimates, IRESS

**Fig. 3:** Using *spot commodity prices*



Source: Hartleys Estimates

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*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.

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