

Metro Mining (MMI)

Rating: Buy | Risk: High | Price Target: \$0.24

Set the Controls for the Heart of the Sun – Initiation of coverage, Price target \$0.24ps

Key Information

Current Price (\$ps)	0.15
12m Target Price (\$ps)	0.24
52 Week Range (\$ps)	0.10 - 0.17
Target Price Upside (%)	59.0%
TSR (%)	59.0%
Reporting Currency	AUD
Market Cap (\$m)	208
Sector	Materials
ASX 200 Weight (%)	0.01%

Fundamentals

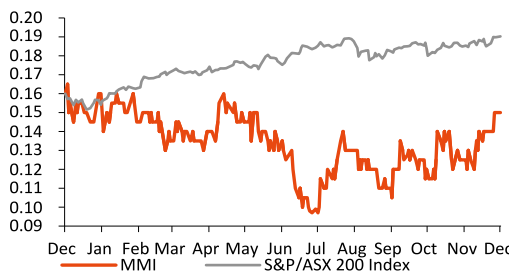
YE 31 Dec (AUD)	FY18A	FY19E	FY20E	FY21E
Sales (\$m)	93	194	218	313
NPAT (\$m)	9	7	12	39
EPS (cps)	0.7	0.5	0.9	2.8
EPS Growth (%)	146.4%	(23.8%)	63.8%	232.5%
DPS (cps) (AUD)	0.0	0.0	0.0	2.0
Franking (%)	100%	100%	100%	100%

Ratios

YE 31 Dec	FY18A	FY19E	FY20E	FY21E
P/E (x)	23.5	28.9	17.6	5.3
EV/EBITDA (x)	25.1	9.4	7.4	3.0
Div Yield (%)	0.0%	0.0%	0.0%	13.3%
Payout Ratio (%)	0.0%	0.0%	0.0%	70.7%

Price Performance

YE 31 Dec	1 Mth	2 Mth	3 Mth	1 Yr
Relative (%)	17.1%	19.3%	38.5%	(25.2%)
Absolute (%)	20.0%	25.0%	42.9%	(6.3%)
Benchmark (%)	2.9%	5.7%	4.4%	18.9%



Price performance indexed to 100

Source:

Major Shareholders

Greenstone Resources LLP	19.7%
Balanced Property Pty Ltd.	15.8%
BlackRock Investment Management (UK) Ltd	10.6%
DADI Engineering Development Co. Ltd.	5.6%
Renaissance Asset Management Pty Ltd.	5.3%

Event

We initiate coverage on Metro Mining (MMI) with a Buy recommendation and A\$0.24ps price target. Metro Mining is a bauxite producer from its Bauxite Hills operation in far north Queensland. The company successfully commenced operations in 2018, is on track to produce 3.5Mt in 2019 and is expanding production to 6Mtpa in 2021. Bauxite is predominantly used as the feedstock for alumina production, which itself is predominantly used to produce aluminium.

Metro Mining is trading at a 50% discount to our discounted cash flow valuation, and once the expansion is complete the share price is likely to trade towards our valuation. We also expect the company to begin paying dividends in 2021.

Highlights

- The bauxite market is well supported by strong demand growth from China as Chinese alumina refineries increasingly rely on imported bauxite as domestic production declines. Chinese production of bauxite peaked in 2018.
- Metro Mining's Bauxite Hills project is well placed to supply the growing Chinese market due to the proximity to markets. As a low value product, freight costs make up almost half the cost of delivered bauxite to China.
- Metro Mining has successfully delivered the first stage of the Bauxite Hills project on time and on budget.
- Metro Mining has recently released a Definitive Feasibility Study to expand production from 3.5Mtpa to 6.0Mtpa in 2021. This will result in a significant step-up in free cash flow generation due to higher production and the associated economies of scale reduction in unit costs.
- The expansion to 6Mtpa is being funded by a A\$47.5m loan facility from the Northern Australia Infrastructure Facility (NAIF).
- We anticipate Metro Mining paying its maiden dividend of 2cps in 2021. This equates to a 13% dividend yield at today's price.
- Once the expansion is complete, Metro Mining will be trading on a PE multiple of 5.3x, an EV/EBITDA multiple of 3.0x and a free cash flow yield of 20%.

Recommendation

We initiate coverage on Metro Mining (MMI) with a Buy recommendation, A\$0.30ps valuation and A\$0.24ps price target. We have set our price target at a 20% discount to valuation to reflect the risks in MMI's expansion plans.

Catalysts for the stock to reach our price target include;

- A final decision to go ahead with the 6Mtpa expansion, expected later in 2019.
- Delivering strong operational performance, the December quarterly will be released in late Jan 2020.
- Delivery of the expansion project through the course of 2020.

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Metro Mining

Materials

FactSet: MMI-AU / Bloomberg: MMI AU

Key Items

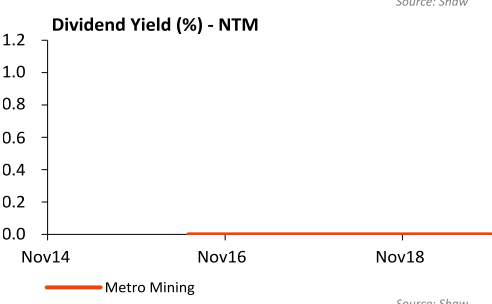
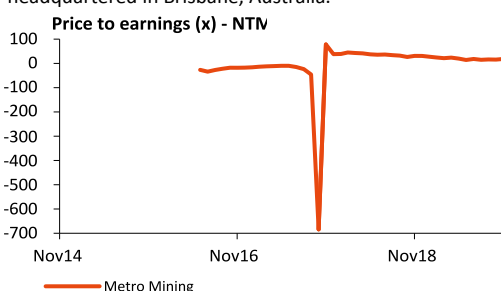
Key Items	Data
Recommendation	BUY
Risk	HIGH
Price (\$ps)	0.15
Target Price (\$ps)	0.24
52 Week Range (\$ps)	0.10 - 0.17
Shares on Issue (m)	1,385
Market Cap (\$m)	208
Enterprise Value (\$m)	224
TSR (%)	59.0%

Valuation NPV

Valuation NPV	Data
Valuation (\$m)	0
Valuation per share (cps) (AUD)	0.00

Company Description

Metro Mining Ltd. is engaged in the exploration of coal and bauxite. It holds interest in Bauxite Hills and Coal projects. The company was founded on January 6, 2006 and is headquartered in Brisbane, Australia.



Financial Year End: 31 December

Investment Summary (AUD)	FY18A	FY18A	FY19E	FY20E	FY21E
EPS (Reported) (cps)	(1.0)	0.7	0.5	0.9	2.8
EPS (Underlying) (cps)	(1.5)	0.7	0.5	0.9	2.8
EPS (Underlying) Growth (%)	nm	146.4%	(23.8%)	63.8%	232.5%
PE (Underlying) (x)	(14.6)	23.5	28.9	17.6	5.3
EV / EBIT (x)	(18.4)	37.9	13.2	10.0	3.6
EV / EBITDA (x)	(20.2)	25.1	9.4	7.4	3.0
DPS (cps) (AUD)	0.0	0.0	0.0	0.0	2.0
Dividend Yield (%)	0.0%	0.0%	0.0%	0.0%	13.3%
Franking (%)	100%	100%	100%	100%	100%
Payout Ratio (%)	0.0%	0.0%	0.0%	0.0%	70.7%
Free Cash Flow Yield (%)	(21.1%)	0.0%	2.2%	(18.0%)	20.5%
Profit and Loss (AUD) (m)	FY18A	FY18A	FY19E	FY20E	FY21E
Sales	25	93	194	218	313
Sales Growth (%)		268.5%	108.1%	12.6%	43.4%
Other Operating Income	0	0	0	0	0
EBITDA	(13)	9	24	30	74
EBITDA Margin (%)	(52.8%)	10.0%	12.2%	13.9%	23.7%
Depreciation & Amortisation	(1)	(3)	(7)	(8)	(12)
EBIT	(15)	6	17	22	62
EBIT Margin (%)	(58.1%)	6.7%	8.7%	10.2%	19.9%
Net Interest	(3)	(4)	(7)	(6)	(6)
Pretax Profit	(17)	2	10	17	56
Tax	0	7	(3)	(5)	(17)
Tax Rate (%)	0.0%	326.9%	(30.0%)	(30.0%)	(30.0%)
NPAT Underlying	(12)	9	7	12	39
Significant Items	(5)	0	0	0	0
NPAT Reported	(17)	9	7	12	39
Cashflow (AUD) (m)	FY18A	FY18A	FY19E	FY20E	FY21E
EBIT	(15)	6	17	22	62
Tax Paid	0	0	0	0	(5)
Net Interest	0	0	0	0	0
Change in Working Capital	0	0	(6)	(1)	(12)
Depreciation & Amortisation	1	3	7	8	12
Operating Cashflow	(4)	4	18	29	58
Capex	(49)	(4)	(2)	(56)	(5)
Acquisitions and Investments	0	0	0	0	0
Disposal of Fixed Assets/Investments	(6)	0	0	0	0
Other	(0)	(0)	(11)	(10)	(10)
Investing Cashflow	(55)	(4)	(13)	(66)	(15)
Free Cashflow	(54)	0	5	(37)	42
Equity Raised / Bought Back	49	4	0	0	0
Dividends Paid	0	0	0	0	(14)
Change in Debt	24	0	3	30	0
Other	(6)	(5)	(7)	(6)	(7)
Financing Cashflow	67	(0)	(4)	24	(20)
Net Change in Cash	8	(0)	1	(13)	22
Balance Sheet (AUD) (m)	FY18A	FY18A	FY19E	FY20E	FY21E
Cash	23	23	24	11	33
Accounts Receivable	12	21	43	48	69
Inventory	2	2	5	6	9
Other Current Assets	8	7	7	7	7
PPE	137	139	142	195	187
Total Assets	184	201	230	276	313
Accounts Payable	16	20	39	44	55
Short Term Debt	8	8	8	8	8
Long Term Debt	29	31	34	64	64
Total Liabilities	65	71	94	128	140
Ratios	FY18A	FY18A	FY19E	FY20E	FY21E
ROE (%)	(12.3%)	7.5%	5.4%	8.3%	24.3%
Gearing (%)	10.6%	10.9%	11.7%	29.2%	18.4%
Net Debt / EBITDA (x)	(1.1)	1.7	0.8	2.0	0.5

* Metro Mining changed to a December balance date in 2018, the first set of FY18 data is for the 12 months to June 2018, the second set of FY18 data is for the six months to Dec-2018

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Metro Mining Key financials

Profit & Loss	FY18	FY19	FY20f	FY21f	FY22f	Company Information				
Revenue	93	194	218	313	321	Financial Year End Date				31 Dec
Expenses	-84	-170	-188	-239	-244	Share Price				0.15
Underlying EBITDA	9	24	30	74	77	Market Capitalisation				208
Depreciation & Amort	-3	-7	-8	-12	-12	Valuation				0.30
Underlying EBIT	6	17	22	62	65	Recommendation				Buy
Net Interest	-4	-7	-6	-6	-5					
Profit Before Tax	2	10	17	56	60					
Tax	7	-3	-5	-17	-18					
NPAT (Underlying)	9	7	12	39	42					
Exceptional items	0	0	0	0	0					
NPAT (reported)	9	7	12	39	42					
Balance Sheet	FY18	FY19	FY20f	FY21f	FY22f	Per Share Data (c)				
Cash	23	24	11	33	35	Shares (m)	1,384	1,384	1,384	1,384
Net Receivables	21	43	48	69	70	Normalised EPS	0.7	0.5	0.9	2.8
Other	9	12	13	16	16	Dividends	0.0	0.0	0.0	2.0
Current Assets	53	79	72	118	121	Dividend Yield (%)	0.0%	0.0%	0.0%	13.3%
Property, Plant & Equipment	139	142	195	187	189	Book Value	0.1	0.1	0.1	0.1
Other	9	9	9	9	9	Normalised P/E	20.5	28.9	17.6	5.3
Non Current Assets	148	151	204	196	198	EV/EBITDA (underlying)	22.4	9.5	8.9	3.3
Total Assets	201	230	276	313	319					
Trade Creditors	20	39	44	55	57					
Borrowings	3	3	3	3	3					
Other	9	9	9	9	9					
Current Liabilities	32	51	55	67	68					
Borrowings	31	34	64	64	54					
Other	8	8	8	8	8					
Non Current Liabilities	39	43	73	73	63					
Net Assets	129	137	148	174	188					
Shareholder Capital	176	176	176	176	176					
Retained earnings	-56	-49	-37	-12	3					
Minorities/others	9	9	9	9	9					
Total Equity	129	137	148	174	188					
Cash Flow	FY18	FY19	FY20f	FY21f	FY22f	DCF Valuation @ 10% WACC				
Receipts	84	194	218	313	321					
Payments	-80	-170	-188	-239	-244					
Other Operating Cash Flow	0	-6	-1	-17	-17					
Operating Cash Flow	4	18	29	58	60					
Capex	-1	-2	-56	-5	-5					
Other Investing Cash Flow	-3	-11	-10	-10	-10					
Investing Cash Flow	-4	-13	-66	-15	-15					
Dividends Paid	0	0	0	-14	-28					
Net Borrowings	0	3	30	0	-10					
Other	0	-7	-6	-7	-6					
Financing Cash flow	0	-4	24	-20	-43					
Total Cash Change	0	1	-13	22	2					
						Assumptions				
						FY18	FY19	FY20f	FY21f	FY22f
						Prices				
						A\$/US\$	0.73	0.69	0.70	0.75
						Bauxite (US\$/t)	54	51	49	51
						Bauxite (A\$/t)	73	74	70	67
						Operating Metrics				
						FY18	FY19	FY20f	FY21f	FY22f
						Bauxite sales (kt)	1,638	3,400	4,000	6,000
						Average price (A\$/t)	57	57	55	52
						Average cost (A\$/t)	51	50	47	40
						EBITDA margin (A\$/t)	6	7	8	12
						Financial metrics (%)				
						FY18	FY19	FY20f	FY21f	FY22f
						EBITDA margin	10.0%	12.2%	13.9%	23.7%
						EBIT margin	6.7%	8.7%	10.2%	19.9%
						ROIC	3.1%	7.9%	7.6%	21.0%
						Return on Assets	4.9%	3.3%	4.6%	13.3%
						Return on Equity	7.5%	5.4%	8.3%	24.3%
						Balance sheet metrics				
						FY18	FY19	FY20f	FY21f	FY22f
						Net Debt (m)	16	18	61	39
						ND / ND+E	10.9%	11.7%	29.2%	18.4%

Executive Summary

We initiate coverage on Metro Mining (MMI) with a Buy recommendation, A\$0.30ps valuation and a A\$0.24ps price target. We have set our price target at a 20% discount to valuation to reflect the risks in MMI's expansion plans.

Metro Mining is a bauxite producer from its Bauxite Hills operation in far north Queensland. The company successfully commenced operations in 2018 and is expanding production to 6Mtpa in 2021.

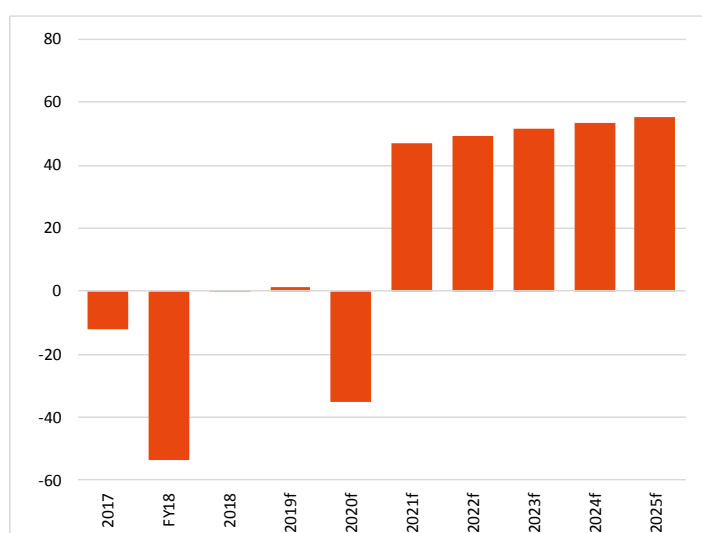
Core drivers & catalysts

- The bauxite market is well supported by strong demand growth from China as Chinese alumina refineries increasingly rely on imported bauxite as domestic production declines. Chinese production of bauxite peaked in 2018.
- Metro Mining's Bauxite Hills project is well placed to supply the growing Chinese market due to the proximity to markets. As a low value product, freight costs make up almost half the cost of delivering bauxite to China.
- Metro Mining has recently released a Definitive Feasibility Study to expand production from 3.5Mtpa to 6.0Mtpa in 2021. This will result in a significant step-up in free cash flow generation due to higher production and the associated economies of scale reduction in unit costs.
- We anticipate Metro Mining paying its maiden dividend of 2cps in 2021. This equates to a 13% dividend yield at today's share price.
- Once the expansion is complete, Metro Mining will be trading on a PE multiple of 5.3x, an EV/EBITDA multiple of 3.2x and a free cash flow yield of 20%.

Key risks

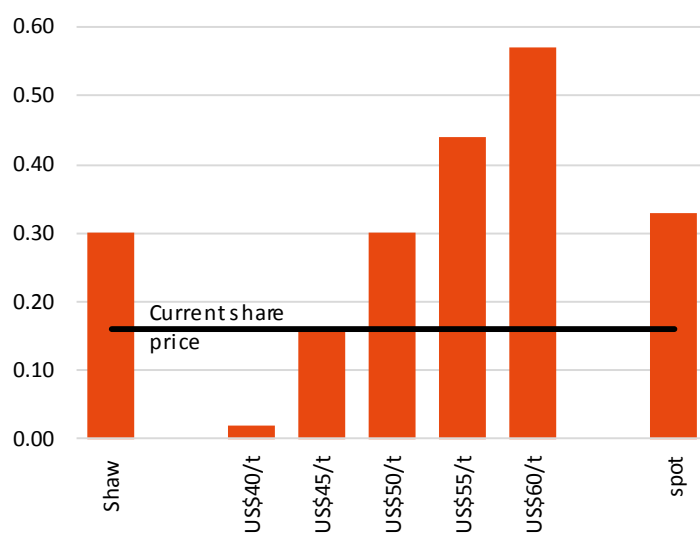
- The bauxite market is currently modestly over-supplied due to the strong growth from Guinea which is backed by Chinese investment. There is a risk that MMI will not be able to sell its expanded production, or be forced to discount the price.
- The aluminium market is currently depressed globally and many smelters are assessing their viability. Further capacity closures will impact demand for alumina and bauxite.
- Metro Mining is expanding its operation from 3.5Mt to 6.0Mt. The mining and barging component of the expansion is straight-forward, but MMI is intending to use a Floating Terminal (FT) to load ocean going vessels. There are design and operating risks with the FT. It may cost more than expected to build, and it may not operate as expected.

Figure 1: Free cash flow (A\$m)



Source: Company data & Shaw and Partners analysis

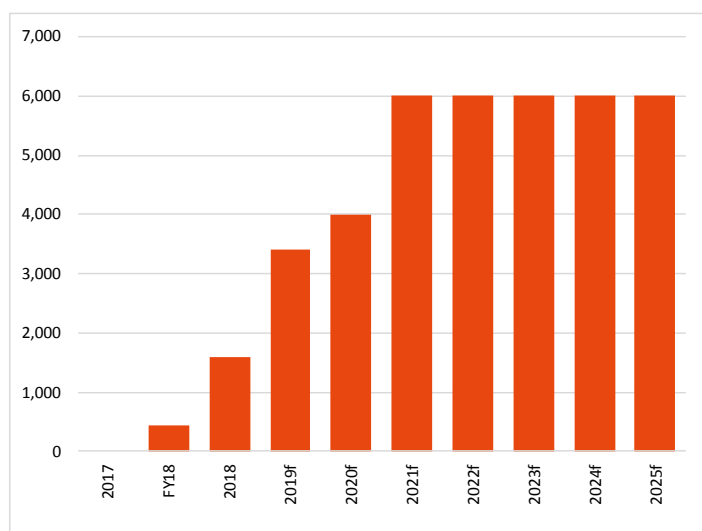
Figure 2: Valuation sensitivity to bauxite prices



Source: Company data & Shaw and Partners analysis

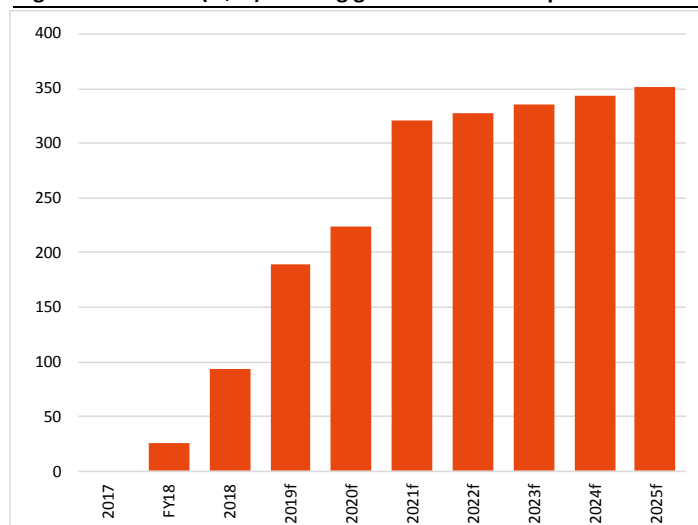
Metro Mining in Charts

Figure 3: Production (kt) – ramping up to 6mtpa in 2021



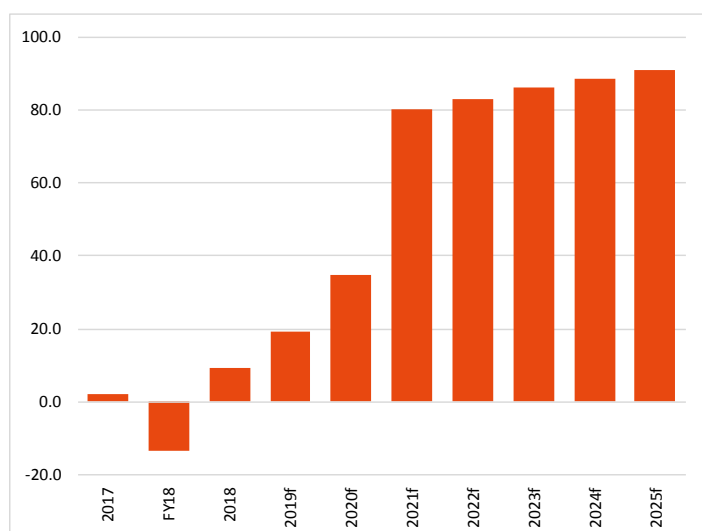
Source: Company data & Shaw and Partners analysis

Figure 4: Revenue (A\$m) – strong growth in line with production



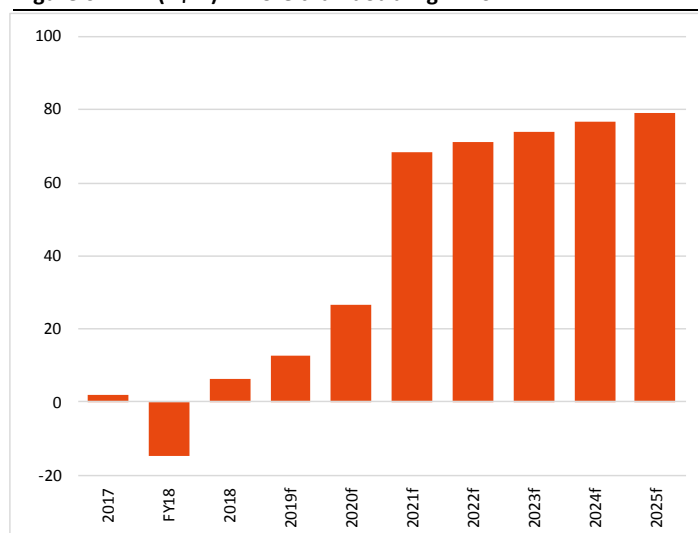
Source: Company data & Shaw and Partners analysis

Figure 5: EBITDA (A\$m) – growth boosted by lower unit costs



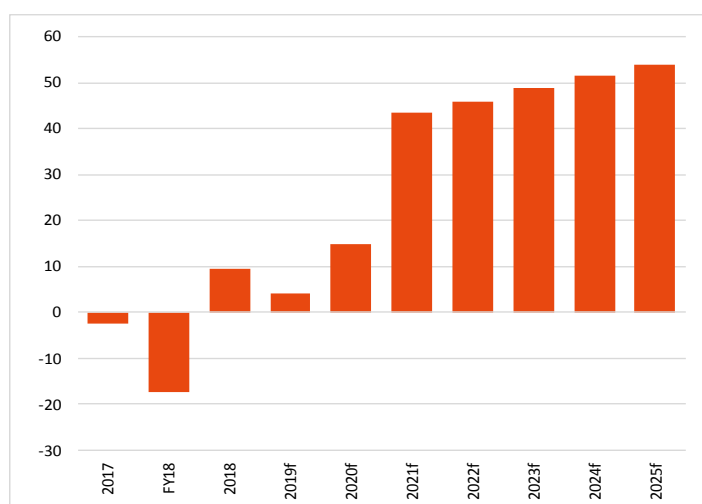
Source: Company data & Shaw and Partners analysis

Figure 6: EBIT (A\$m) – more than doubling in 2021



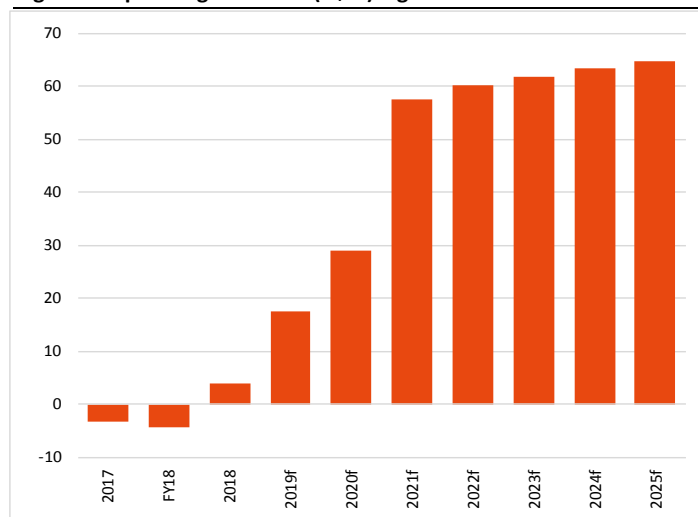
Source: Company data & Shaw and Partners analysis

Figure 7: NPAT (A\$m) – PE multiple drops to 4x in 2021



Source: Company data & Shaw and Partners analysis

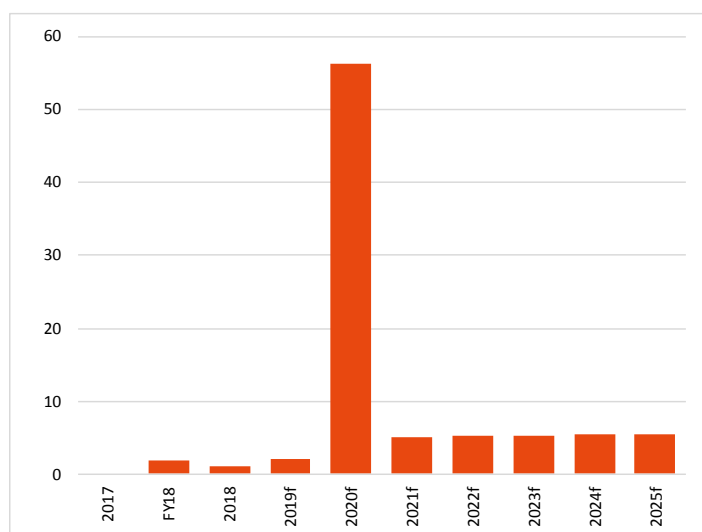
Figure 8: Operating cash flow (A\$m) – growth in line with EBITDA



Source: Company data & Shaw and Partners analysis

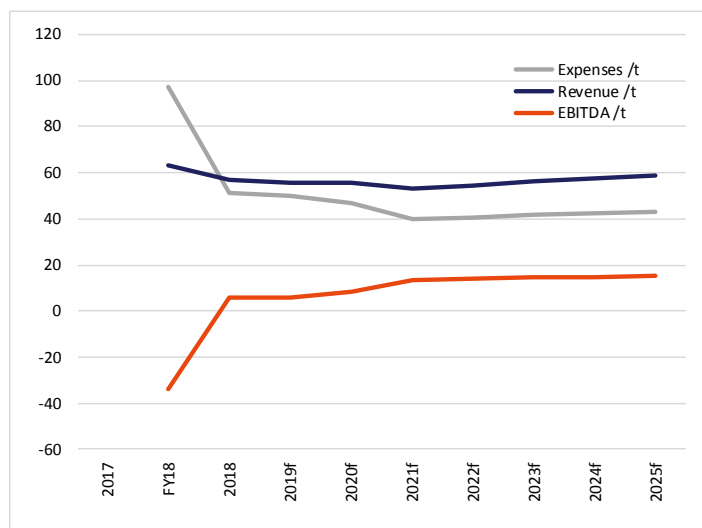
* Metro Mining changed to a December balance date in 2018, the data for 2018 is for the six months to Dec-2018

Figure 9: Capex (A\$m) – expansion capex in 2020



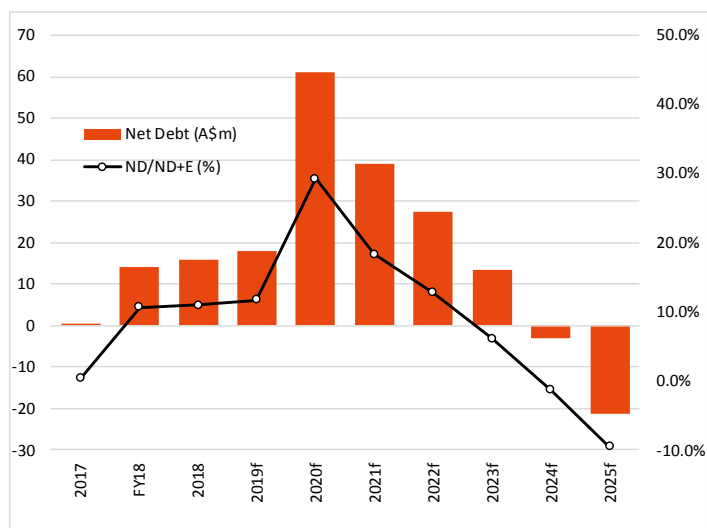
Source: Company data & Shaw and Partners analysis

Figure 11: Pricing, costs and margin (A\$/t)



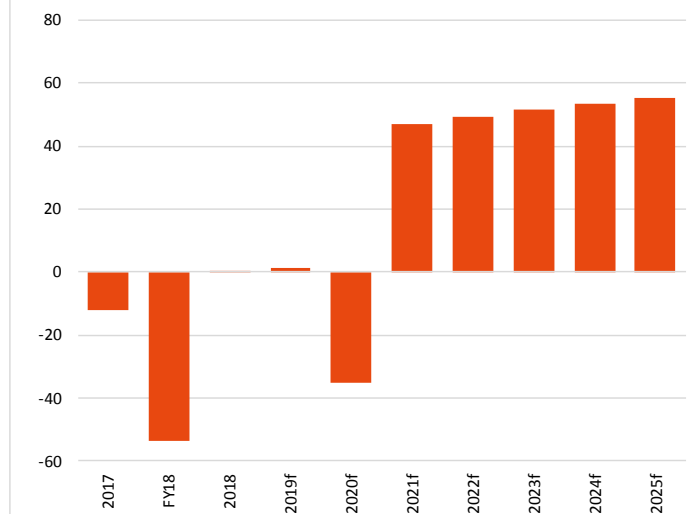
Source: Company data & Shaw and Partners analysis

Figure 13: Net debt and gearing (A\$m, %)



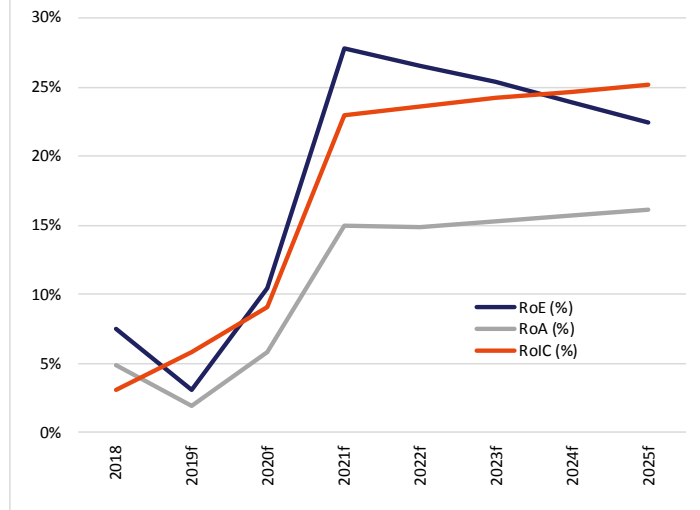
Source: Company data & Shaw and Partners analysis

Figure 10: Free cash flow (A\$m) – negative in 2020, but only briefly



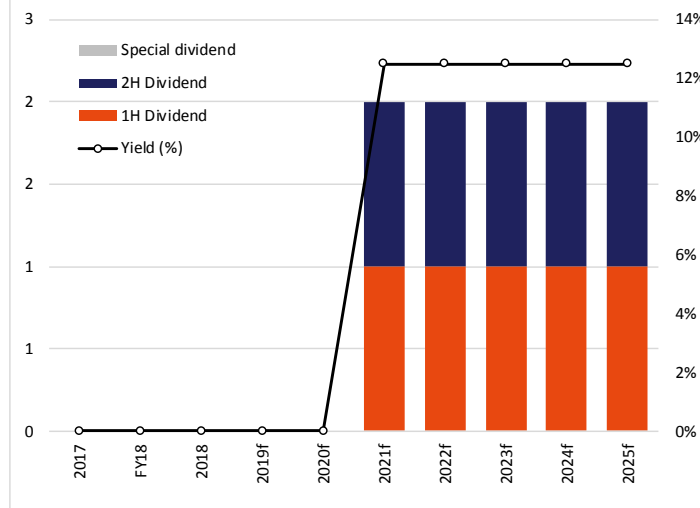
Source: Company data & Shaw and Partners analysis

Figure 12: Returns (%)



Source: Company data & Shaw and Partners analysis

Figure 14: Dividends and yield (A\$cps, %)



Source: Company data & Shaw and Partners analysis

The Global Bauxite Market

Bauxite 101

Bauxite is a naturally occurring material which is predominantly used as a feedstock for the manufacture of alumina, which in turn is predominantly used to produce aluminium. It takes around 5t of bauxite to produce 2t of alumina to produce 1t of aluminium.

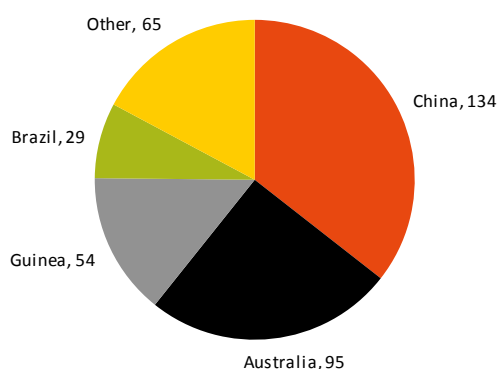
Bauxite is classified according to its intended commercial application; metallurgical, cement, fertiliser, abrasive, chemical or refractory. The vast majority (~85%) of bauxite mined globally is classified as metallurgical and is converted to alumina (Al_2O_3) for the production of aluminium metal.

The quality of bauxite as a feedstock for alumina production is determined largely by its grade (% alumina) and by amount of impurities, particularly reactive silica. Higher amounts of reactive silica require increased consumption of caustic in the refining process and significantly add to alumina refining costs.

A market in transition

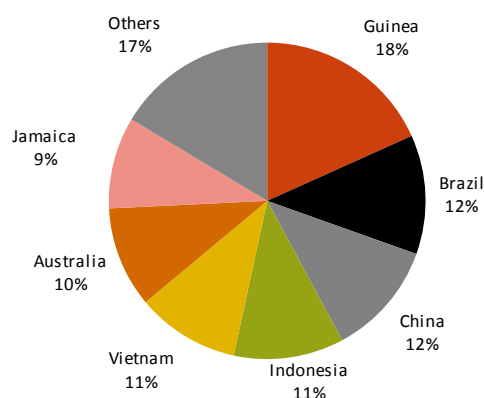
Global bauxite production in 2018 was around 375Mt, with the seaborne global trade flow around 115Mt. China was the world's largest producer at 134Mt, followed by Australia on 95Mt and Guinea on 54Mt.

Figure 15: 2018 Bauxite production (mt)



Source: CM Group

Figure 16: World bauxite reserves (% of total)



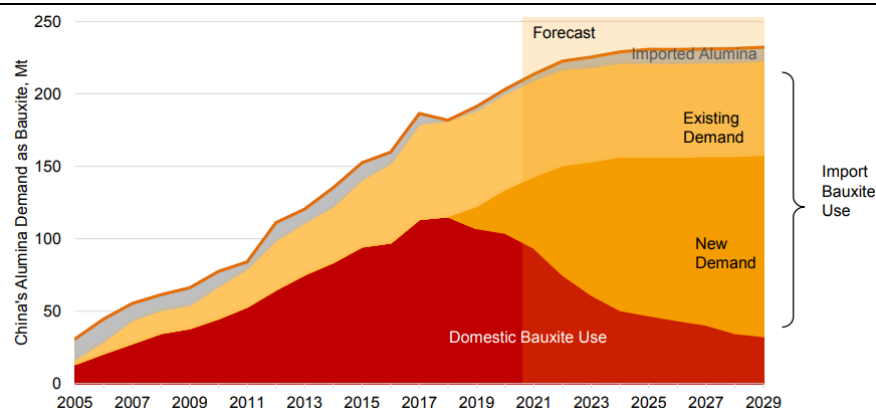
Source: Alumina Ltd, Sep-19 presentation

The aluminium, alumina and bauxite industries have been through substantial change in the past 20 years as a result of four major trends;

1. **The emergence of China** as a major consumer and producer of bauxite, alumina and aluminium. In 2000, China only produced around 14% of the world's aluminium, today China accounts for well over half of the world's production. China is currently the world's largest producer of bauxite, although it has begun to exhaust its reserves of quality bauxite in much the same way as it did with iron ore in the 2000's.
2. **The disaggregation of the industry.** The value chain from bauxite to alumina to aluminium is becoming increasingly disaggregated with 3rd party sales of bauxite and alumina to Chinese and other customers. Historically, the industry was largely integrated with companies such as Rio Tinto, Alcoa and Norsk Hydro producing aluminium from their own sourced bauxite and alumina. As a result, the prices of bauxite and alumina have begun to trade on their own supply/demand fundamentals.

3. **Increased demand for imported bauxite from China.** The quality of China's domestic bauxite production has begun to decline, and so Chinese alumina refineries have begun to source bauxite from outside China. In 2018, China imported around 83Mt out of a total seaborne bauxite of 115Mt. This was seen as a significant opportunity for Australian and Brazilian exports, but the opportunity has been less than expected due to the emergence of Guinea. Chinese domestic production is expected to continue to decline and China will become further reliant on imports.

Figure 17: Chinese bauxite consumption – increased reliance on imports (Mt)



Source: CM Group, Alumina Ltd presentation Aug-19

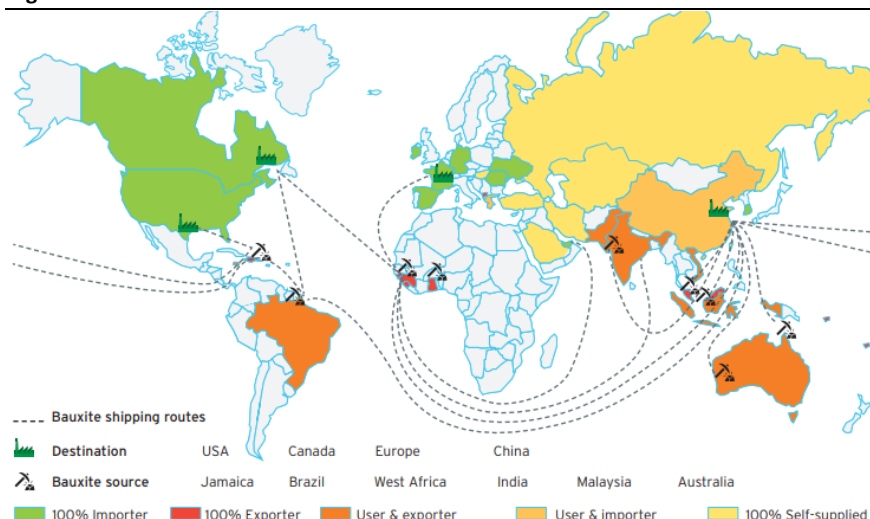
4. **The emergence of Guinea as a bauxite producer** and world's largest exporter. The growth in Guinean exports has been phenomenal in the past five years due to Chinese investment. Guinea is expected to grow from just 0.5Mt of exports in 2015, to 60Mt in 2019 and 80Mt by 2021. In 2017, a consortium of Chinese companies 'lent' the Guinean government US\$20b for infrastructure projects in return for bauxite concessions. The growth in Guinea is not over, and as a result, the bauxite market is expected to remain modestly over-supplied in the near term.

Figure 18: Global bauxite trade 2018 (Mt)

Exporter	Importer	Mt
Guinea	China	36.8
Australia	China	28.9
Indonesia	China	10.1
Brazil	China	2.4
Solomon Islands	China	1.6
Malaysia	China	1.0
Other	China	2.7
Guinea	Spain	4.0
Guinea	Ukraine	3.7
Guinea	Ireland	3.1
Guinea	Germany	2.7
Guinea	Other	2.2
Jamaica	U.S.	3.1
Brazil	Canada	2.4
Brazil	Ireland	1.6
Other		9.5
Total Seaborne		115.5
China Portion		83.4

Source: CM Group

Figure 19: World bauxite trade flows



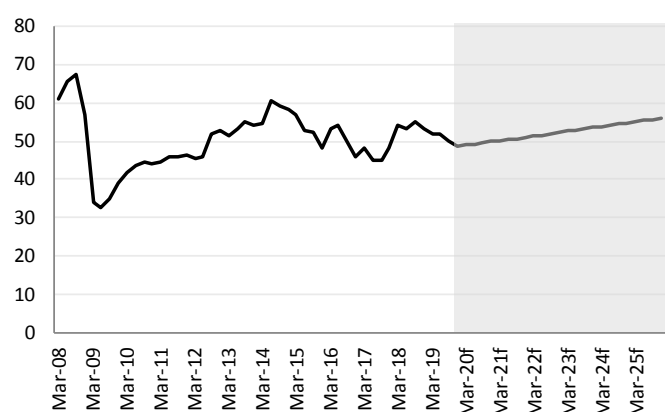
Source: CM Group

Bauxite price history and outlook

As noted above, the price of bauxite has begun to trade on its own supply/demand fundamentals, although given the vast bulk of bauxite is used to produce alumina, the markets remain strongly linked. The price is now largely driven by the CBIX price index which is a value in use adjusted price index monitored by CM Group. It is similar to the Metal Bulletin or Platts price index for iron ore in that the index is formed by recent transactions with CM Group triangulating between data from buyers and sellers.

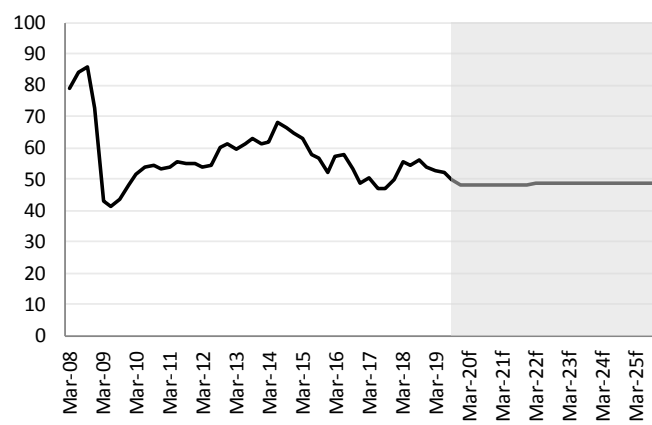
Over the past decade, bauxite has averaged US\$50/t, or US\$57/t in real 2019\$. The past decade high was US\$68/t at the tail end of the initial China boom, and the low was US\$32/t in the global financial crisis. The price recovered post the GFC and was trending higher until the emergence of Guinean exports in 2015.

Figure 20: Bauxite price (US\$/t)



Source: CM, company reports, Shaw and Partners analysis

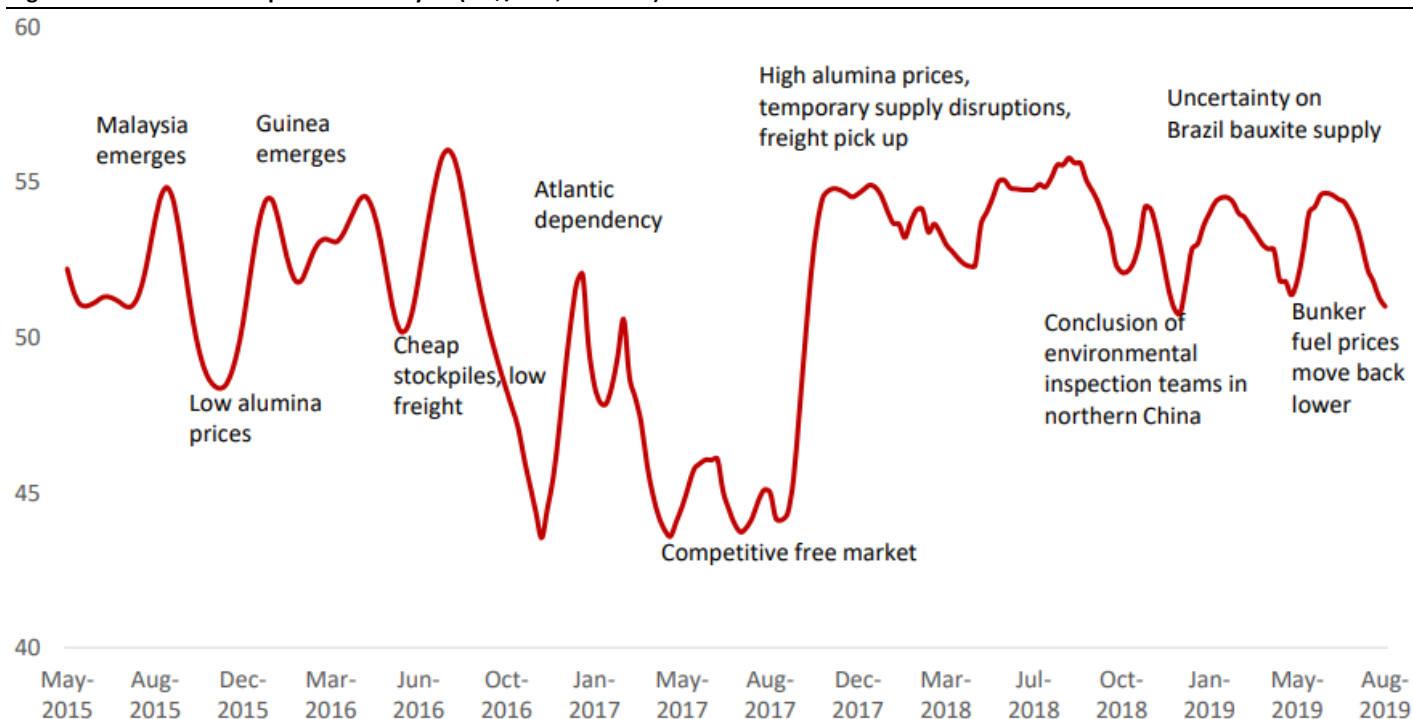
Figure 21: Bauxite price (US\$/t real 2019\$)



Source: CM, company reports, Shaw and Partners analysis

For the past four years the bauxite price has been range bound between US\$45/t and US\$55/t with the spot price today at about US\$50/t.

Figure 22: Recent bauxite price and catalysts (US\$/dmt, cif China)



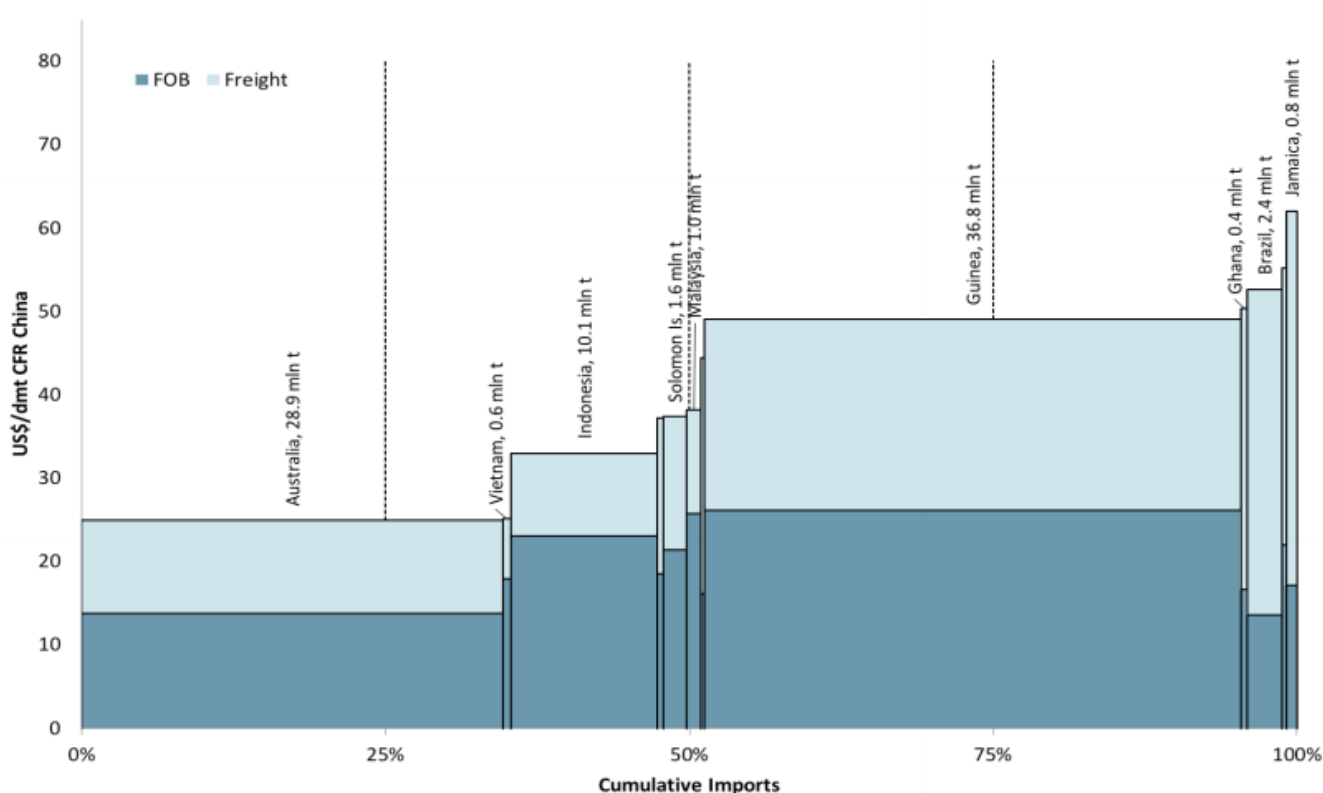
Source: CRU, Bauxite price index, Alumina Ltd presentation Aug-19

In our view, the bauxite price is likely to trade within the recent range of US\$45/t to US\$55/t whilst Guinean production is supplying the marginal tonne into the Chinese market.

Chinese demand for imported bauxite is expected to continue to grow, but supply growth from Guinea is likely to meet this demand until at least 2022/23. There may be an opportunity for the price to escalate beyond 2023 as Chinese demand continues to grow, but in our view, bauxite is not a scarce commodity and any surge in price is likely to be short lived as supply responds.

According to CM group, an industry cost curve puts Guinean exports at a delivered cost to China of ~US\$50/t. So the price of bauxite is unlikely to trade significantly below US\$50/t for extended periods. In our forecasts we assume a long term sustainable bauxite price of US\$50/t (real 2019\$).

Figure 23: Seaborne bauxite cost curve (US\$/t) – unadjusted for value in use



Source: CM Group

Metro mining achieved bauxite price

Metro mining is planning to produce about 3.5Mt of bauxite in 2019, of which approximately 2.2Mt will be sold under a long-term off-take to Xinfu. This contract extends into 2020. Under this contract, prices received are linked to an RMB denominated alumina price index. As such, Metro Mining will be exposed to moves in the more volatile alumina price, and is currently achieving a price below the CBIX index.

For the past 2 years, MMI's average price achievement has been 89% of the CBIX index.

Figure 24: Metro Mining price achievement (US\$/t)

Price achievement	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19
Achieved price (A\$/wmt)	-	63	53	61	-	57	56	-
Achieved price (US\$/wmt)	-	47	38	42	-	40	38	-
Achieved price (US\$/dmt)	-	53	44	48	-	46	43	-
CBIX index (US\$/dmt)	54	53	55	53	52	52	50	49
Metro price achievement (%)		100%	79%	91%		88%	86%	

Source: Company reports, Shaw and Partners analysis

Metro Mining Operations

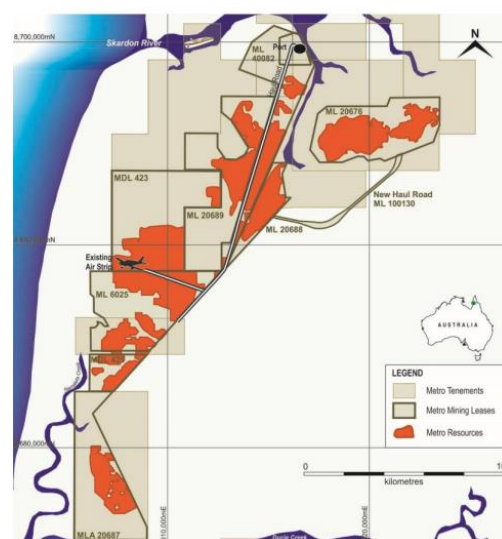
Metro Mining's Bauxite Hills mine, is located 95kms north of Weipa on Western Cape York where the company holds a total tenement package covering approximately 1,900 square kilometres.

Figure 25: Project location



Source: Metro Mining

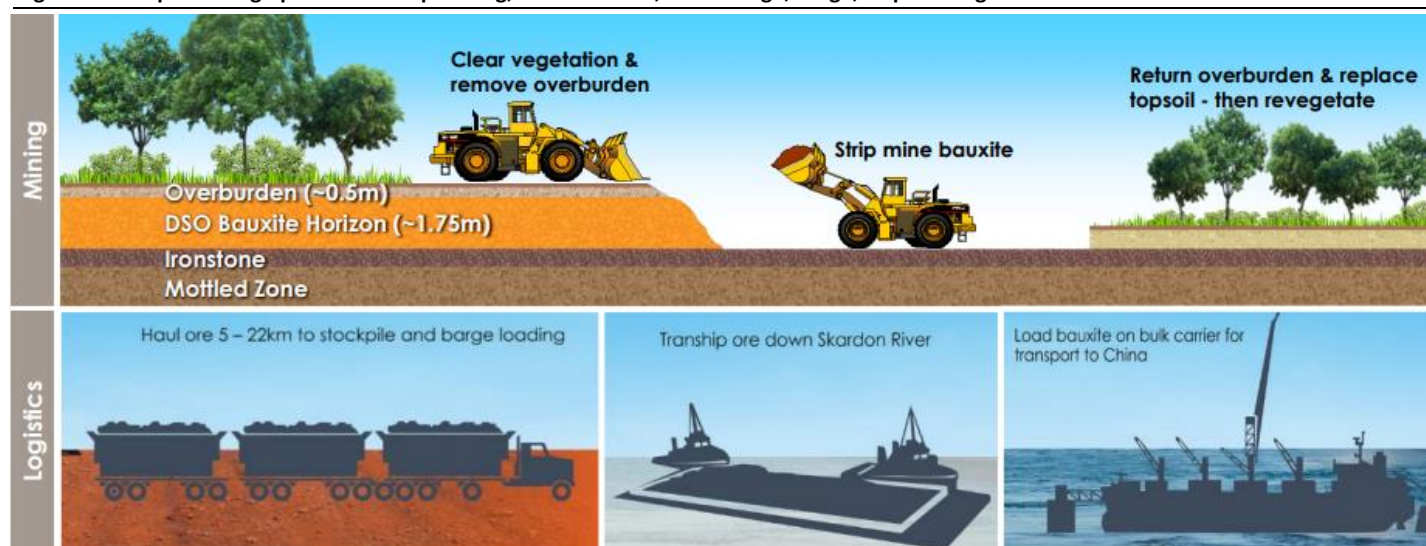
Figure 26: Mining leases



Source: Metro Mining

It is a very simple mining operation. Bauxite is mined by front-end loaders, trucked to a port infrastructure area, screened to a max product size of 100mm and fed onto the Barge Loading Facility and into barges. Barges are towed down the Skardon River to an anchorage point at sea where the bauxite is transhipped to freight vessels. Mining operations are undertaken only in the dry season from April to November.

Figure 27: Simple mining operation – strip mining, rehabilitation, ore haulage, barge, ship-loading



Source: Metro Mining corporate presentation

Expansion to 6Mtpa

Metro Mining recently reported the results of a Definitive Feasibility Study to take the operation from its current 3.5Mtpa production rate to 6.0Mtpa. The current reserve is 110Mt, so the mine life will be 19 years at the new production rate.

The key features of the expansion include;

- Expansion to 4Mtpa in 2020 and 6Mtpa in 2021 (wet metric tonnes).
- The use of a Floating Terminal (FT) to speed up ship loading and allow the loading of ungeared vessels including Cape Size vessels.
- Total capital costs of A\$51.4m including contingency
- An expected reduction in annual unit operating costs of 18%

Metro Mining has estimated that the project payback is only 18mths.

The main feature of the expansion project is the design and installation of the FT. Metro Mining has commissioned Rocktree Consulting to design the FT with the final design expected to be completed in November 2019. The preferred design is likely to be a 100m barge, equipped with two cranes and a materials handling conveyor and stacker system that will have the ability to load up to 40,000tpd of bauxite.

The advantage of the FT is that it will allow Metro Mining to take advantage of chartering Cape Size vessels to realise significant freight savings (estimated at a \$3-4/t saving), whilst maintaining customer flexibility with the ability to still load smaller OGVs.

Figure 28: Example of a Floating Terminal



Source: Metro Mining corporate presentation

Earnings Drivers

We expect a significant jump in Metro Mining's earnings in 2021 to A\$39m from just A\$9m in 2018.

As for all resource companies, there are three primary drivers of earnings – price, volume and cost. Metro Mining's volumes are expected to increase due to the ramp up of production with the commissioning of the Floating Terminal.

We are expecting bauxite prices to remain relatively stable at around US\$50/dmt (CBIX) with Metro Mining continuing to achieve 88% of the CBIX price. We may be under-estimating price achievement in 2022 once the contract with Xinfu expires.

Total unit costs have averaged A\$51/wmt in the six months to Dec-18, but have trended down in 2019 as production has increased. Metro Mining reported total site operating costs (excluding overheads) of A\$40/wmt in the September quarter.

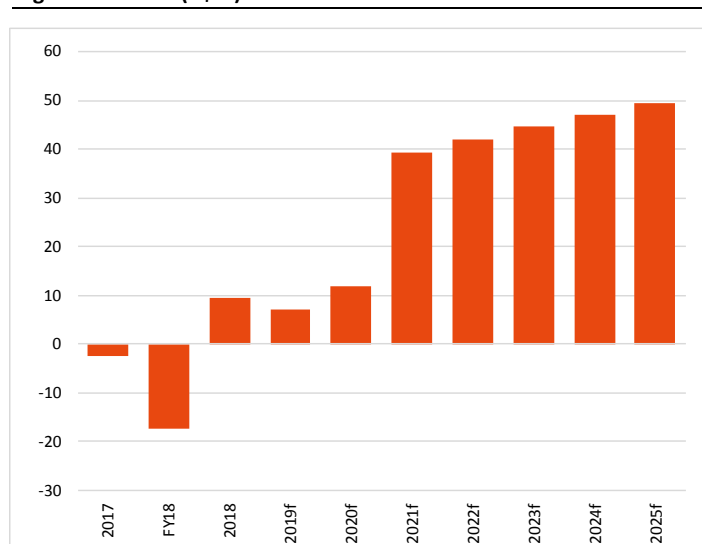
We expect costs to further reduce in 2021 due to the economies of scale of taking production from 3.5Mt to 6.0Mt. Metro Mining has estimated that the expansion will reduce unit costs by about 18%.

Figure 29: Metro Mining P&L (A\$m)

Profit & Loss	2017	FY18	2018	2019f	2020f	2021f	2022f	2023f	2024f	2025f
Production (kt)	0	399	1,638	3,400	4,000	6,000	6,000	6,000	6,000	6,000
Revenue	0	25	93	194	218	313	321	328	336	344
per tonne		63	57	57	55	52	53	55	56	57
Other income	9	0	0	0	0	0	0	0	0	0
Operating expenses	0	-26	-71	-148	-163	-201	-205	-209	-213	-218
Royalties	0	-3	-9	-19	-20	-31	-32	-33	-34	-34
Admin & other expenses	-7	-10	-3	-3	-4	-6	-6	-6	-7	-7
Total costs	-7	-39	-84	-170	-188	-239	-244	-249	-254	-259
per tonne		97	51	50	47	40	41	41	42	43
EBITDA	2	-13	9	24	30	74	77	80	82	84
Depreciation & Amortisation	0	-1	-3	-7	-8	-12	-12	-12	-12	-12
EBIT	2	-15	6	17	22	62	65	68	70	72
Net Finance Expense	-4	-3	-4	-7	-6	-6	-5	-4	-3	-2
Profit before tax	-2	-17	2	10	17	56	60	64	67	70
Income tax (expense)/benefit	0	0	7	-3	-5	-17	-18	-19	-20	-21
Reported NPAT	-2	-17	9	7	12	39	42	45	47	49

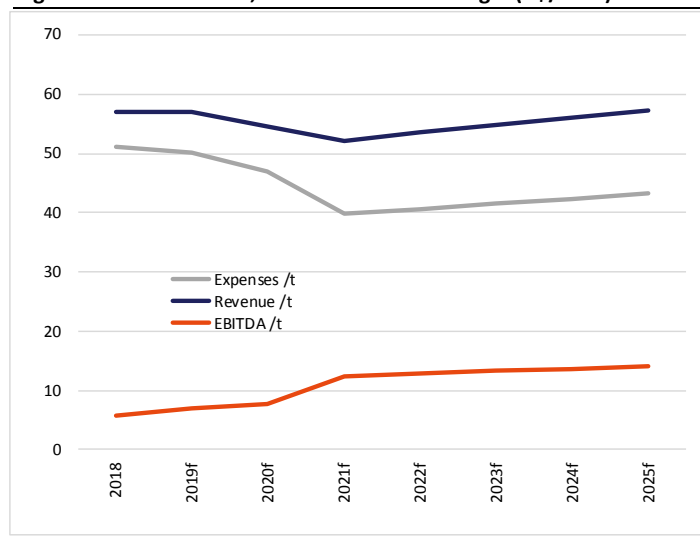
Source: Company reports, Shaw and Partners analysis

Figure 30: NPAT (A\$m)



Source: Company reports, Shaw and Partners analysis

Figure 31: Unit revenue, costs and EBITDA margin (A\$/wmt)

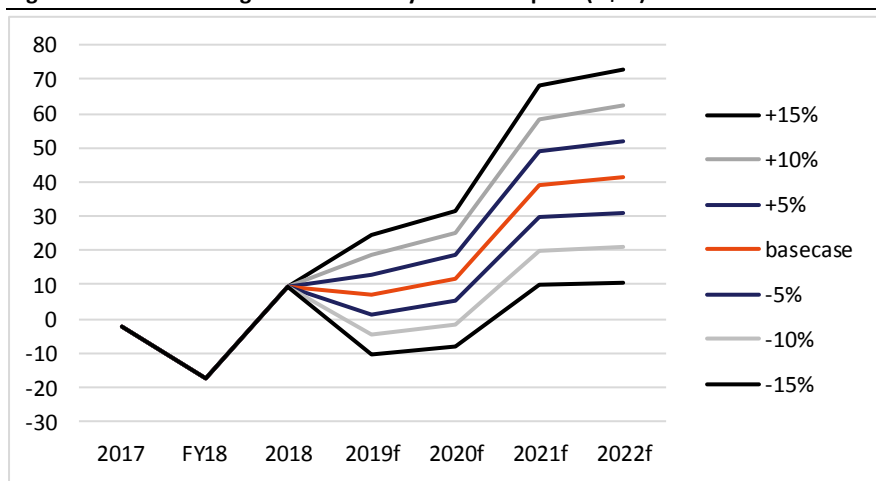


Source: Company reports, Shaw and Partners analysis

Other than the growth in production, the main driver of Metro Mining's profitability will be movements in the bauxite price and the company's operating cost performance.

In figure 32 we show our forecast of Metro Mining's NPAT to percentage movements in the bauxite price away from our base case forecast, which is largely flat at around US\$50/t (CBIX). Every 5% move on the bauxite price is worth around A\$10m to NPAT.

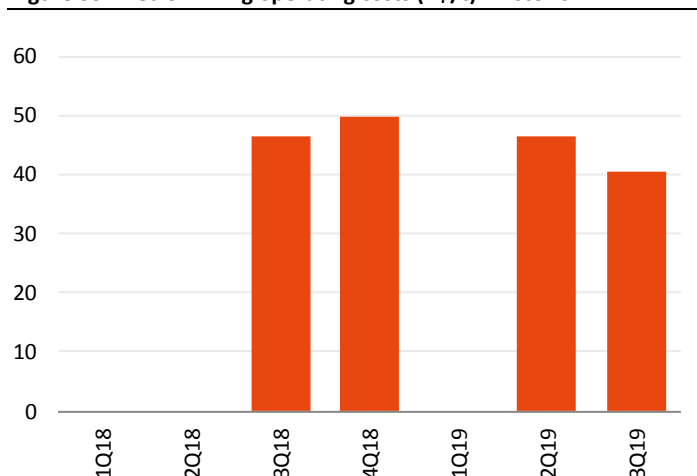
Figure 32: Metro Mining NPAT sensitivity to bauxite price (A\$m)



Source: Company reports, Shaw and Partners analysis

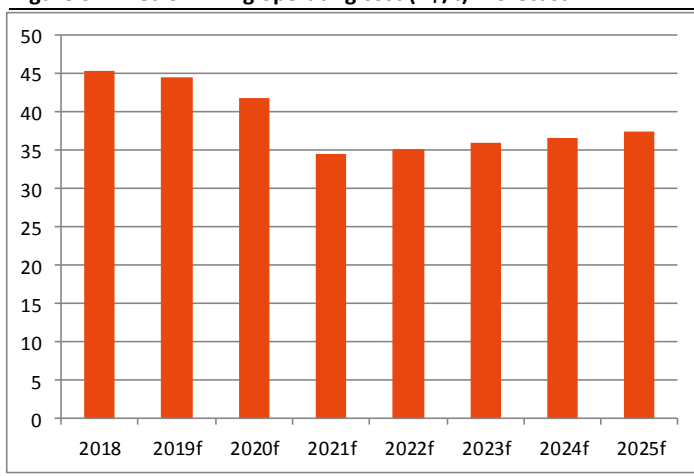
Metro Mining is already showing leverage to volume in its quarterly cost performance. Costs in 3Q19 dropped to A\$40.4/t from A\$46.4/t in the previous quarter as production increased from 880kt to 1,420kt.

Figure 33: Metro Mining operating costs (A\$/t) - historic



Source: Company reports, Shaw and Partners analysis

Figure 34: Metro Mining operating cost (A\$/t) - forecast



Source: Company reports, Shaw and Partners analysis

Balance sheet

Metro Mining has modest levels of debt – A\$44m gross debt and A\$33m of net debt at 30-Jun-2019. Metro Mining's cash flow is second half weighted due to the lack of production in the March quarter and so we expect net debt to reduce to A\$18m at year end 2019.

The expansion to 6.0Mt is being funded by a \$47.5m loan facility from the Northern Australia Infrastructure Facility (NAIF) which is in the process of being finalised. We expect net debt to peak at A\$61m at the end of 2020 which would leave the company with gearing of 29%. We consider that level of gearing too high for a single asset, single commodity company, but it is manageable and is likely to be paid down relatively quickly.

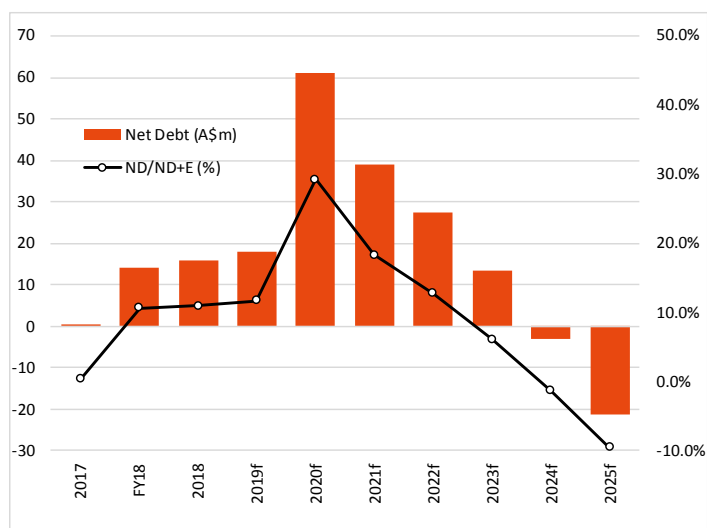
Even with the assumption that dividends will commence in 2021, the company is likely to be debt free by 2025.

Figure 35: Metro Mining Balance Sheet (A\$m)

BALANCE SHEET (A\$m)	2017	FY18	2018	2019f	2020f	2021f	2022f	2023f	2024f	2025f
Cash and cash equivalents	15	23	23	24	11	33	35	39	35	34
Trade and other receivables	1	12	21	43	48	69	70	72	74	75
Inventories	0	2	2	5	6	9	9	9	9	9
Other	0	8	7	7	7	7	7	7	7	7
Total current assets	16	45	53	79	72	118	121	127	125	126
Property, plant and equipment	77	137	139	142	195	187	189	191	193	196
Exploration and evaluation expendi	7	2	2	2	2	2	2	2	2	2
Deferred tax assets	2	0	7	7	7	7	7	7	7	7
Total non-current assets	86	139	148	151	204	196	198	200	202	205
TOTAL ASSETS	102	184	201	230	276	313	319	327	328	330
Trade and other payables	5	16	20	39	44	55	57	58	59	60
Lease liabilities	0	3	3	3	3	3	3	3	3	3
Provisions	15	8	9	9	9	9	9	9	9	9
Total current liabilities	20	27	32	51	55	67	68	69	71	72
Borrowings	0	29	31	34	64	64	54	44	24	4
Total non-current liabilities	1	38	39	43	73	73	63	53	33	13
TOTAL LIABILITIES	21	65	71	94	128	140	131	122	103	84
NET ASSETS	81	119	129	137	148	174	188	205	224	246
Net Debt	0	14	16	18	61	39	28	13	-3	-21
Gearing (ND/ND+E)	0%	11%	11%	12%	29%	18%	13%	6%	-1%	-10%

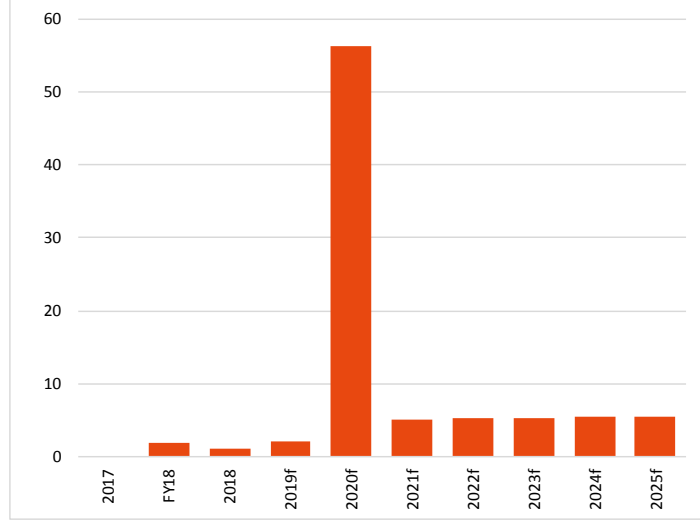
Source: Company reports, Shaw and Partners analysis

Figure 36: Net debt & gearing (%)



Source: Company reports, Shaw and Partners analysis

Figure 37: Capex (A\$m)



Source: Company reports, Shaw and Partners analysis

Cash flow and Dividends

In our view, the chart which best summarises the upside for investors in Metro Mining is the free cash flow chart. Although the company is expected to be free cash positive in 2019, it is not until after the expansion is funded in 2020 that the free cash flow picture begins to look highly attractive in 2021. If our projections are accurate, Metro Mining will be trading on a free cash flow yield in excess of 25% at the current share price. In reality, we expect substantial share price appreciation to reflect the cash generation.

The free cash flow will initially be used for debt reduction, but at this stage we anticipate that Metro Mining will pay its maiden dividend in 2021. We assume a total dividend of A\$0.02ps.

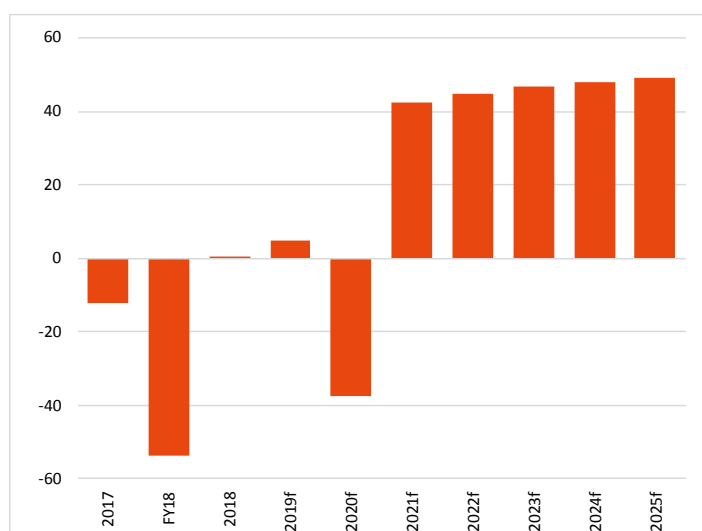
Post the expansion, we are assuming a dividend payout ratio of 60% which equates to an annual dividend of A\$0.02ps which we assume will be equally split 1H/2H. At the current share price, that equates to a dividend yield of 15%.

Figure 38: Metro Mining cash flow (A\$m)

CASH FLOW (A\$m)	2017	FY18	2018	2019f	2020f	2021f	2022f	2023f	2024f	2025f
Operating activities										
Receipts from customers	0	18	84	194	218	313	321	328	336	344
Payments to suppliers and employee	-4	-23	-80	-170	-188	-239	-244	-249	-254	-259
Income taxes paid	0	0	0	0	0	-5	-17	-18	-19	-20
Net cash flow from operating activities	-3	-4	4	18	29	58	60	62	63	65
Investing activities										
Payments for PPE	0	-2	-1	-2	-56	-5	-5	-5	-5	-6
Other	-53	-53	-3	-11	-10	-10	-10	-10	-10	-10
Net cash flow from investing activities	-53	-55	-4	-13	-66	-15	-15	-15	-15	-16
Free cash flow	-12	-54	0	5	-37	42	45	47	48	49
Financing activities										
Proceeds from borrowings	64	39	0	3	30	0	0	0	0	0
Repayments of borrowings	-51	-15	0	0	0	0	-10	-10	-20	-20
Dividends paid	0	0	0	0	0	-14	-28	-28	-28	-28
Other	56	43	0	-7	-6	-7	-6	-5	-4	-3
Net cash flow from financing activities	69	67	0	-4	24	-20	-43	-43	-52	-51
Net increase/(decrease) in cash	13	8	0	1	-13	22	2	4	-4	-2

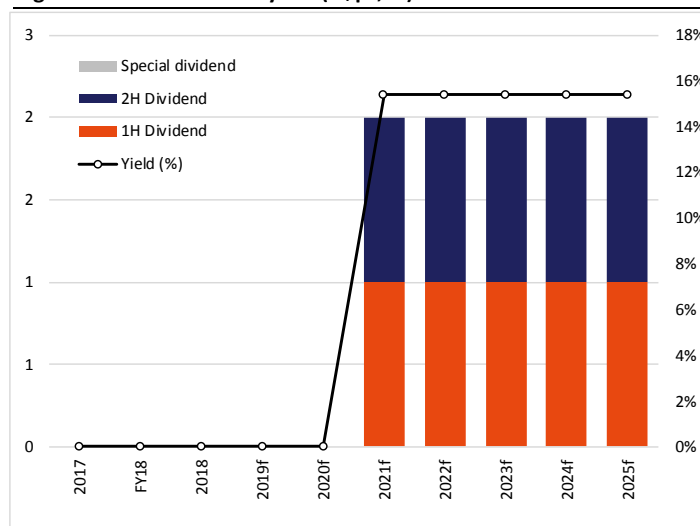
Source: Company reports, Shaw and Partners analysis

Figure 39: Free cash flow (A\$m)



Source: Company reports, Shaw and Partners analysis

Figure 40: Dividends and yield (A\$ps, %)



Source: Company reports, Shaw and Partners analysis

Valuation

Our preferred valuation technique is a discounted cash flow (DCF) valuation with post-tax operational cash flows discounted at Metro Mining's weighted average cost of capital of 10%.

We then subtract off net debt, an allowance for rehabilitation obligations, development assets and corporate costs. The bulk of Metro Mining's rehabilitation is expensed as it mines and so is incorporated into our DCF valuation of the operations. Metro Mining has undeveloped thermal coal resources in the Surat Basin, but we have conservatively allowed no value for these assets. Metro Mining is in the process of trying to find a buyer for the coal assets.

Our DCF valuation is \$0.30ps and Metro is currently trading at a 50% discount to this valuation.

Figure 41: DCF valuation

Metro Mining Valuation	A\$m	A\$ps
Operations	467	0.34
Net debt	-18	-0.01
Rehabilitation	-7	0.00
Development assets	0	0.00
Corporate costs	-30	-0.02
Total Valuation	413	0.30

Source: Company reports, Shaw and Partners analysis

Figure 42: WACC

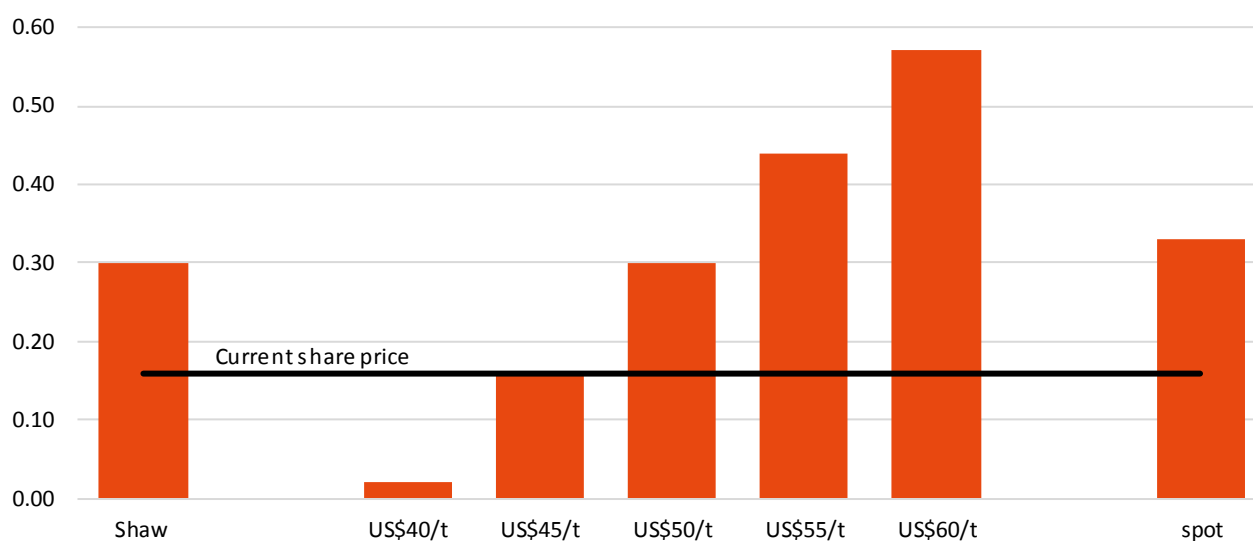
WACC	
Risk Free Rate	4.0%
Equity Risk Premium	6.0%
Beta	1.3
Cost of Equity	11.8%
Target Gearing	20%
Cost of Debt	4.0%
Tax Rate	30%
WACC	10.0%

Source: Company reports, Shaw and Partners analysis

The main valuation sensitivity is to the bauxite price. In figure 43, we outline the Metro Mining DCF valuation at a range of bauxite prices (held flat real in perpetuity) and the current spot price of US\$51/t.

On our analysis, the current share price is pricing Metro Mining as if the bauxite price remained at US\$45/t in perpetuity. Every US\$5/t on the bauxite price adds or subtracts A\$0.14ps to our valuation.

Figure 43: Metro Mining DCF Valuation sensitivity to bauxite (A\$ps v's US\$/t)



Source: Company reports, Shaw and Partners analysis

Key risks

As a small mining company with exposure to a single commodity and a single project, we consider an investment in Metro Mining to be high risk. The key risks include;

- Commodity prices are driven by global growth and the markets expectations of growth. In the current geo-political climate there are numerous risks to global growth expectations which have largely been downgraded in the past two years. Issues such as the US-China strategic and trade war and Brexit may dampen global growth, and hence commodity prices.
- Metro Mining is operating in a region that is exposed to cyclone activity. There are risks that severe storms could damage and incapacitate mining, barge and/or transshipping activities. Metro Mining mitigates these risks by not operating during the March quarter.
- The bauxite market is currently modestly over-supplied due to the strong growth from Guinea which is backed by Chinese investment. There is a risk that MMI will not be able to sell its expanded production, or be forced to discount the price.
- The aluminium market is currently depressed globally and many smelters are assessing their viability. Further capacity closures will impact demand for alumina and bauxite.
- Metro Mining is expanding its operation from 3.5Mt to 6.0Mt. The mining and barging component of the expansion is straight-forward, but MMI is intending to use a Floating Terminal (FT) to load ocean going vessels. There are design and operating risks with the FT. It may cost more than expected to build, and it may not operate as expected.
- Forecasting future commodity prices and operating costs has considerable uncertainty. Our forecasts may prove to be too optimistic on both. If bauxite prices do not remain at around U\$50/t and/or Metro Mining's costs increase faster than we expect then our cash flow forecasts will be too high.
- Smaller companies carry more significant 'key personnel' risk than larger organisations. If senior management depart the company then it could delay projects or exacerbate operational risks.

Appendix: Key Personnel

Board of Directors

Stephen Everett | Chairman

A graduate of chemical engineering from UNSW has more than 40 years Board and Management experience in the resources and construction industries both in Australia and overseas. Mr Everett's vast management experience includes production and project management, marketing, corporate restructuring, debt/equity financing and government relations. His senior executive positions have included Managing Director and Chief Executive Officer of private and publicly listed companies. Mr Everett was formerly Chairman of BeMaX Resources NL, Australian Solomons Gold Limited, JMS Civil and Mining Pty Ltd and IronRidge Resources Limited.

Simon Finnis | Managing Director & CEO

Mr Finnis is an experienced Executive with a 30 year career in underground and open cut mining. Joining Metro as CEO in January 2015, he was appointed to the Board in January 2017. Prior to joining the company Mr Finnis was CEO of Grand Cote Operations in Senegal. Previous roles held by Mr Finnis have included Managing Director of Global Resources Corporation Limited and Chief Operating Officer for the redevelopment of the Gold Ridge Mine in the Solomon Islands. Mr Finnis has extensive experience through feasibility, construction and commissioning of both new and brown fields' operations.

Mark Sawyer | Non-Executive Director

Mr Sawyer is Senior Partner at Greenstone Capital LLP and co-founder of Greenstone Resources LP private equity fund. Mr Sawyer co-founded Greenstone in 2013 after a 19 year career in the mining sector including as co-head of group business development at Xstrata plc, and senior roles at Rio Tinto plc and Cutfield Freeman & Co Ltd. Mr Sawyer, together with Greenstone's co-founder, oversees all aspects of the management of the business. He serves as a Director of Greenstone Management Ltd, the fund's General Partner and is a member and co-Chair of the Investment Committee.

Fiona Murdoch | Independent Non-Executive Director

Ms Murdoch has 28+ years experience in the resources and infrastructure sectors in Australia and Internationally with senior operational roles held with AMCI Investments, MIM Holdings and Xstrata Queensland. Currently, Ms Murdoch serves as a Non-Executive Director for KGL Resources Ltd as well as Chair of KGL's Risk and Audit Committee. In addition, Ms Murdoch serves on the Board of Building Queensland and on the Joint Venture Committee for the West Pilbara Iron Ore Project. She is also a Director of metallurgical services company, Core Resources and its subsidiary Toowong Process. Ms Murdoch has an MBA and Honours Degree in Law.

Philip Hennessy | Independent Non-Executive Director

With a Bachelor of Business and 30+ years corporate experience Mr Hennessy has been involved with all aspects of corporate financing and company reconstruction in a variety of industries including construction, manufacturing, mining, professional & financial services and was KPMG Qld Chair for 13 years. He is an Independent Company Director & Advisor serving on public & private boards across the resources, financial services, property & manufacturing sectors and is a Director of Proton Therapy Australia. Mr Hennessy's knowledge & experience aids Metro in driving good governance, cohesive & effective collaboration and effective processes & communications with shareholders & stakeholders.

Executive Team

Simon Finnis | Managing Director & CEO

Mr Finnis is an experienced Executive with a 30 year career in underground and open cut mining. Joining Metro as CEO in January 2015, he was appointed to the Board in January 2017. Prior to joining the company Mr Finnis was CEO of Grand Cote Operations in Senegal. Previous roles held by Mr Finnis have included Managing Director of Global Resources Corporation Limited and Chief Operating Officer for the redevelopment of the Gold Ridge Mine in the Solomon Islands. Mr Finnis has extensive experience through feasibility, construction and commissioning of both new and brown fields' operations.

Duane Woodbury | Chief Financial Officer

Duane holds a Bachelor of Economics (Honours) Accounting & Finance from Macquarie University and is an Associate of CPA. Duane has 25+ years' experience in the Resource Industry with comprehensive resources knowledge gained through many years working nationally and internationally in various roles including analyst, broker, banker and CFO.

Duane was previously CFO of ASX listed company Kingsgate and has held senior roles with Macquarie Bank in New York and Sydney. Due to Duane's international experience, having worked in the UK, USA and Asia, he also has extensive regulatory experience with the LSE, NYSE, SGX, and HKSE.

Graham Tanner | General Manager Bauxite Hills Mine

Graham is a multi-skilled mining and processing professional with over 25 years' experience in the mining industry having held senior roles working in Western Australia, Northern Territory, Eastern Australia and West Africa.

Graham is responsible for all aspects of the mine's operations and has proven experience in achieving optimum outcomes particularly in the areas of quality performance and safety. Graham is very experienced in fostering safe working environs and the integration of health and safety into all aspects of work practices, ensuring individuals are focused on safety and the creation of safety focused work places.

Mitchell Petrie | Company Secretary

Mitchell is a Chartered Accountant with a Bachelor of Commerce. Until end 2015, Mitchell was a Partner at KPMG, where he headed up the Queensland Risk Advisory practice. Mitchell has provided assurance and advisory services to many National and International participants in the Resource Industry including leadership of the co-sourced assurance services team to Rio Tinto. Mitchell also brings extensive experience in providing services to publicly listed companies and is currently an adjunct lecturer at the Bond University Business School as well as being a member of a number of Governing Boards and Committees in the Public and Private Sector.

Mike O'Brien | Project Director

Mike holds a B.Sc. (Min)(Eng) from the University of Witwatersrand and has a 35 year mining & minerals background including 25+ years extensive management experience with multinational companies Shell Coal and Anglo coal (subsidiary of Anglo American). Mike has worked in operational roles including GM of both a large underground longwall mine and a large opencast mine that included a CSG operation. He's also held senior corporate positions such as GM of Shell Coal's technical group which included responsibility for mining, geological and engineering development.

Mike brings broad industry knowledge and expertise in strategic planning, underpinned by strong skills in operations management and technical evaluation, to the company.

Rating Classification

Buy	Expected to outperform the overall market
Hold	Expected to perform in line with the overall market
Sell	Expected to underperform the overall market
Not Rated	Shaw has issued a factual note on the company but does not have a recommendation

Risk Rating

High	Higher risk than the overall market – investors should be aware this stock may be speculative
Medium	Risk broadly in line with the overall market
Low	Lower risk than the overall market

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