

Blackstone Minerals Ltd (BSX)

Rating: Buy | Risk: High | Price Target: \$1.90

A globally significant green battery metals supplier – Initiation of coverage

Key Information

Current Price (\$ps)	0.43
12m Target Price (\$ps)	1.90
52 Week Range (\$ps)	0.32 - 0.55
Target Price Upside (%)	341.2%
TSR (%)	341.2%
Reporting Currency	AUD
Market Cap (\$m)	143
Sector	Materials
Avg Daily Volume (m)	0.7
ASX 200 Weight (%)	0%

Fundamentals

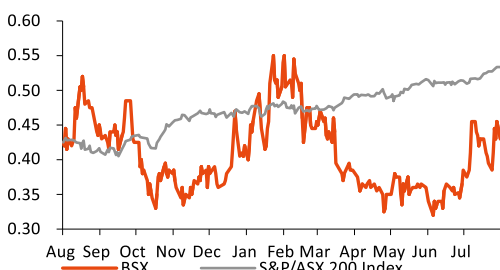
YE 30 Jun (AUD)	FY20A	FY21E	FY22E	FY23E
Sales (\$m)	0	0	0	0
NPAT (\$m)	(8)	(9)	(10)	(43)
EPS (cps)	(4.5)	(3.2)	(2.2)	(4.4)
EPS Growth (%)	(20.3%)	27.6%	33.1%	nm
DPS (cps) (AUD)	0.0	0.0	0.0	0.0
Franking (%)	0%	0%	0%	0%

Ratios

YE 30 Jun	FY20A	FY21E	FY22E	FY23E
P/E (x)	(4.1)	(13.3)	(19.9)	(9.7)
EV/EBITDA (x)	(4.9)	(14.3)	(24.1)	(58.5)
Div Yield (%)	0.0%	0.0%	0.0%	0.0%
Payout Ratio (%)	0.0%	0.0%	0.0%	0.0%

Price Performance

YE 30 Jun	1 Mth	2 Mth	3 Mth	1 Yr
Relative (%)	7.9%	19.6%	14.1%	(15.6%)
Absolute (%)	11.7%	22.9%	22.9%	8.9%
Benchmark (%)	3.8%	3.3%	8.8%	24.5%



Price performance indexed to 100

Source:

Major Shareholders

Deutsche Balaton	18.0%
Board & Management	12.0%
EcoPro	12.0%
Fidelity	6.0%

Michael Clark | Analyst

+61 3 9268 1148

michael.clark@shawandpartners.com.au

Andrew Hines | Head of Research

+61 3 9268 1178

andrew.hines@shawandpartners.com.au

Event

We initiate coverage on Blackstone Minerals with a Buy recommendation and A\$1.90ps price target. Blackstone is a battery metals company building an integrated upstream and downstream processing business in Vietnam to produce Nickel-Cobalt-Manganese (NCM) battery precursor products for Asia's lithium-ion battery industry.

The company's key relationships are with globally relevant, tier 1 Korean battery manufacturers (i.e. EcoPro). We assume a Final Investment Decision 2HCY22 and a phased ramp-up of operations, with first production in CY24 and steady state in CY25.

Highlights

- Blackstone owns a 90% interest in the Ta Khoa Nickel-Cu-PGE Project. The Ta Khoa Project is located 160km west of Hanoi in the Son La Province of Vietnam. The project includes the Ban Phuc nickel mine, which operated from 2013 to 2016 but is now on care and maintenance. Blackstone intends to restart and expand the mining operations at Ta Khoa and is currently completing an Upstream Business Unit Pre-Feasibility Study (PFS).
- Blackstone has leveraged its ownership of the nickel resources into a partnership with some of South Korea's largest battery metals companies including EcoPro to construct a downstream processing business. Blackstone recently released a Downstream Business Unit PFS for a 400ktpa refinery with an NPV₈ of US\$2.01b and an IRR of 67% that will produce 85.6ktpa of NCM811 precursor.
- Our base case model of the Upstream Business Unit has a post-tax NPV₁₀ of US\$193m and an IRR of 25%. Our model assumes;
 - Open cut mine pit requiring a development capital expenditure of US\$250m.
 - 11-year life-of-mine at ~200kt/yr Ni/Co concentrate production from an ore fed at 6Mtpa and a head grade of 0.5% Ni / 0.01% Co / 0.06% Cu.
 - All-in average life-of-mine sustaining costs of ~US\$4.30/lb Ni (2021 Real).
- Our model of the Downstream Business Unit is broadly consistent with the PFS and has an NPV₁₀ of ~US\$1,400m, IRR of 52% and development capex of US\$490m. Key features include;
 - A 11-year refinery life producing ~88ktpa NCM811 battery precursor product sold at a 120% payability. This is based off the existing mine-life and potential feedstock sourcing agreements but is likely to extend well beyond 10 years.
 - Refinery feed approximately 50/50 from Ta Khoa and third-party sources purchased at a 75% payability.
 - All-in average sustaining costs of ~US\$11,000/t NCM811 (2021 Real).
- Key features of the project that make the economics so attractive are the relatively low capital intensity, the premium product, access to low-cost hydropower, tax advantages and low cost labour.
- Blackstone has now moved to a Definitive Feasibility Study and construction of a pilot plant and is aiming for a Final Investment Decision in 2022.

Recommendation

We initiate coverage on Blackstone Minerals with a Buy recommendation and A\$1.90ps price target. We have set our price target at a fully diluted DCF valuation of a ~6Mtpa open pit mine and 400ktpa nickel concentrate refinery. The company is targeting a Final Investment Decision in 2HCY22, following construction of a pilot plant, Definitive Feasibility Studies, and financing.

Blackstone Minerals Ltd

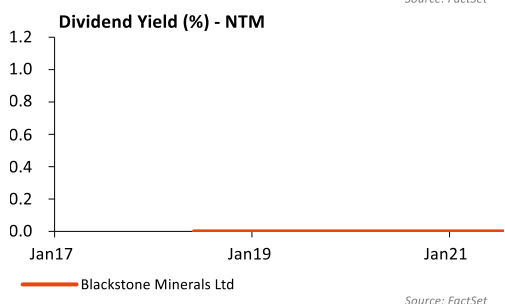
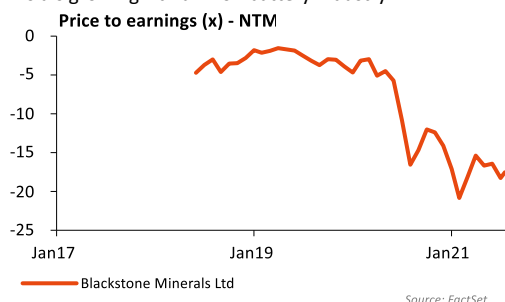
Materials

FactSet: BSX-AU / Bloomberg: BSX AU

Key Items	Data
Recommendation	BUY
Risk	HIGH
Price (\$ps)	0.43
Target Price (\$ps)	1.90
52 Week Range (\$ps)	0.32 - 0.55
Shares on Issue (m)	332
Market Cap (\$m)	143
Enterprise Value (\$m)	136
TSR (%)	341.2%

Company Description

Blackstone Minerals (ASX: BSX / OTCQX: BLSTF / FRA: B9S) is focused on building an integrated upstream and downstream processing business in Vietnam that produces Nickel: Cobalt: Manganese (NCM) Precursor products for Asia's growing Lithium-ion battery industry.



Financial Year End: 30 June

Investment Summary (AUD)	FY19A	FY20A	FY21E	FY22E	FY23E
EPS (Reported) (cps)	(3.7)	(3.9)	(3.2)	(2.2)	(4.4)
EPS (Underlying) (cps)	(3.7)	(4.5)	(3.2)	(2.2)	(4.4)
EPS (Underlying) Growth (%)	n/a	(20.3%)	27.6%	33.1%	nm
PE (Underlying) (x)	(2.2)	(4.1)	(13.3)	(19.9)	(9.7)
EV / EBIT (x)	(3.7)	(4.8)	(14.3)	(24.1)	(58.5)
EV / EBITDA (x)	(3.7)	(4.9)	(14.3)	(24.1)	(58.5)
DPS (cps) (AUD)	0.0	0.0	0.0	0.0	0.0
Dividend Yield (%)	0.0%	0.0%	0.0%	0.0%	0.0%
Franking (%)	0%	0%	0%	0%	0%
Payout Ratio (%)	0.0%	0.0%	0.0%	0.0%	0.0%
Profit and Loss (AUD) (m)	FY19A	FY20A	FY21E	FY22E	FY23E
Sales	0	0	0	0	0
Sales Growth (%)	n/a	360.0%	(100.0%)	n/a	n/a
Other Operating Income	0	1	1	0	0
EBITDA	(4)	(8)	(10)	(10)	(10)
EBITDA Margin (%)	nm	nm	nm	nm	nm
Depreciation & Amortisation	0	(0)	0	0	0
EBIT	(4.1)	(8.4)	(9.5)	(10.0)	(10.0)
EBIT Margin (%)	nm	nm	nm	nm	nm
Net Interest	0	0	0	0	(33)
Pretax Profit	(4)	(8)	(9)	(10)	(43)
Tax	0	0	0	(0)	0
Tax Rate (%)	0.0%	0.0%	0.0%	0.9%	0.0%
NPAT Underlying	(4)	(8)	(9)	(10)	(43)
Significant Items	0	(1)	0	0	0
NPAT Reported	(4)	(8)	(9)	(10)	(43)
Cashflow (AUD) (m)	FY19A	FY20A	FY21E	FY22E	FY23E
EBIT	(4)	(8)	(10)	(10)	(10)
Tax Paid	0	0	0	0	(0)
Net Interest	0	0	0	0	0
Change in Working Capital	0	0	0	(5)	0
Depreciation & Amortisation	0	0	0	0	0
Other	3	6	0	0	(33)
Operating Cashflow	(1)	(2)	(9)	(14)	(43)
Capex	0	(0)	0	(73)	(493)
Acquisitions and Investments	(3)	(4)	(5)	(5)	(5)
Disposal of Fixed Assets/Investments	0	0	0	0	0
Other	0	0	0	1	17
Investing Cashflow	(3)	(5)	(5)	(77)	(482)
Equity Raised / Bought Back	2	13	21	82	390
Dividends Paid	0	0	0	0	0
Change in Debt	0	0	0	0	533
Other	0	0	0	0	0
Financing Cashflow	2	13	21	82	923
Net Change in Cash	(3)	6	7	(9)	398
Balance Sheet (AUD) (m)	FY19A	FY20A	FY21E	FY22E	FY23E
Cash	0	7	14	4	403
Accounts Receivable	0	2	2	0	0
Inventory	0	0	0	0	0
Other Current Assets	0	0	0	0	0
PPE	0	12	12	85	578
Total Assets	11	29	41	107	1,004
Accounts Payable	0	7	7	0	0
Short Term Debt	0	0	0	0	0
Long Term Debt	0	0	0	0	533
Total Liabilities	3	11	11	4	548
Ratios	FY19A	FY20A	FY21E	FY22E	FY23E
ROE (%)	n/a	(58.4%)	(39.3%)	(14.8%)	(15.6%)
Gearing (%)	(3.0%)	(57.9%)	(84.8%)	(4.4%)	22.5%
Net Debt / EBITDA (x)	0.1	0.8	1.4	0.4	(13.1)

Contents

Blackstone Minerals financial summary	4
Executive Summary – Integrated Battery Metals Processor	5
Core drivers and key catalysts.....	6
Company overview in charts and tables	7
Key risks.....	11
Commodity analysis	12
The origins of lithium ion batteries	16
How a lithium ion battery works.....	16
The importance of nickel in batteries	17
BSX producing a NCM811 precursor product	18
Ta Khoa Project – green battery metals proximate to target markets	19
Ta Khoa Project History.....	21
Blackstone’s progress since acquiring Ta Khoa in 2019/20	22
Upstream – Geology and Mineral Resource	23
Downstream - process flowsheet development	24
Financial modelling assumptions and risks	26
Balance Sheet and Cash Flow	28
Valuation and Price Target	31
Appendix A: Key Personnel.....	32
Board of Directors	32
Management Team	32

Blackstone Minerals financial summary

Profit & Loss	FY19	FY20	FY21f	FY22f	FY23f	Company Information	
Revenue	0.0	0.0	0.0	0.0	0.0	Financial Year End Date	30 June
Expenses	-4.0	-7.2	-9.5	-10.0	-10.0	Share Price	0.43
Underlying EBITDA	-4.0	-7.1	-9.5	-10.0	-10.0	Market Capitalisation	143
Depreciation & Amort	0.0	-0.2	0.0	0.0	0.0	Valuation	1.90
Underlying EBIT	-4.1	-7.3	-9.5	-10.0	-10.0	Recommendation	Buy
Net Interest	0.0	0.0	0.1	0.3	-33.2		
Profit Before Tax	-4.1	-7.4	-9.4	-9.7	-43.2	Per Share Data (c)	FY19 FY20 FY21f FY22f FY23f
Tax	0.0	0.0	0.0	-0.1	0.0	Shares (m)	123 252 332 576 1,376
NPAT (Underlying)	-4.1	-7.4	-9.4	-9.8	-43.2	Normalised EPS	-3.7 -4.5 -3.2 -2.2 -4.4
Exceptional items	0.0	-1.0	0.0	0.0	0.0	Dividends	0.0 0.0 0.0 0.0 0.0
NPAT (reported)	-4.1	-8.4	-9.4	-9.8	-43.2	Dividend Yield (%)	0.0% 0.0% 0.0% 0.0% 0.0%
						Book Value	0.09 0.07 0.09 0.18 0.34
						Normalised P/E	-4.7 -4.1 -13.3 -19.9 -9.7
						EV/EBITDA (underlying)	-3.7 -5.6 -14.3 -24.1 -58.5
Balance Sheet	FY19	FY20	FY21f	FY22f	FY23f	Valuation	US\$m A\$m A\$ps
Cash	0.3	6.8	13.9	4.4	402.8	Ta Khoa Upstream	193 257 0.18
Net Receivables	0.2	2.2	2.2	0.0	0.0	Exploration / Other Upstream	26 35 0.03
Other	0.0	0.0	0.0	0.0	0.0	Dow nstream Business Unit	1,397 1,863 1.34
Current Assets	0.5	9.0	16.1	4.4	402.8	Net cash	10 14 0.01
Property, Plant & Equipment	0.0	11.5	11.5	84.6	577.9	Cash from options & equity raise	364 485 0.35
Other	10.3	8.4	12.9	17.8	22.8	Corporate costs	-11 -15 -0.01
Non Current Assets	10.3	19.9	24.4	102.5	600.8	Total Valuation	1,979 2,639 1.90
Total Assets	10.8	29.0	40.5	106.9	1,003.6		
Trade Creditors	0.2	6.8	6.8	0.0	0.0	Assumptions	FY19 FY20 FY21f FY22f FY23f
Borrow ings	0.0	0.1	0.1	0.1	0.1	Prices	
Other	0.1	0.9	0.9	0.9	0.9	A\$/US\$	0.71 0.67 0.75 0.75 0.75
Current Liabilities	0.3	7.9	7.9	1.0	1.0	Cobalt (US\$/t)	43,775 33,465 41,370 54,123 58,335
Borrow ings	0.0	0.0	0.0	0.0	533.3	Copper (US\$/lb)	278 259 370 377 349
Other	0.0	3.1	3.1	3.1	3.0	Nickel (US\$/lb)	565 641 715 786 759
Non Current Liabilities	0.0	3.1	3.1	3.1	536.3		
Net Assets	10.5	18.0	29.6	102.8	466.3	Operating Metrics	FY19 FY20 FY21f FY22f FY23f
Shareholder Capital	23.4	38.2	59.2	141.2	531.2	Ore processed (ktpa)	0 0 0 0 0
Retained earnings	-13.5	-21.4	-30.6	-40.2	-82.6	Nickel concentrate (kt)	0 0 0 0 0
Minorities/others	0.6	1.2	1.1	1.9	17.7	Contained nickel (kt)	0 0 0 0 0
Total Equity	10.5	18.0	29.6	102.8	466.3	Contained cobalt (kt)	0 0 0 0 0
						Contained copper (kt)	0 0 0 0 0
						Average price (US\$/t ore)	0 0 0 0 0
						Average cost (US\$/t ore)	0 0 0 0 0
						Average margin (US\$/t ore)	0 0 0 0 0
Cash Flow	FY19	FY20	FY21f	FY22f	FY23f	Financial metrics (%)	FY19 FY20 FY21f FY22f FY23f
Receipts	0.0	0.0	0.0	0.0	0.0	EBITDA margin	0.0% 0.0% 0.0% 0.0% 0.0%
Payments	-1.5	-2.5	-9.5	-10.0	-10.0	EBIT margin	0.0% 0.0% 0.0% 0.0% 0.0%
Other Operating Cash Flow	0.1	0.5	0.1	-4.3	-33.3	ROIC	0.0% 0.0% 0.0% 0.0% 0.0%
Operating Cash Flow	-1.4	-2.0	-9.4	-14.3	-43.3	Return on Assets	-37.6% -42.1% -27.1% -13.3% -7.8%
Capex	0.0	-0.4	0.0	-73.1	-493.3	Return on Equity	-38.7% -58.6% -39.6% -14.8% -15.2%
Other Investing Cash Flow	-2.9	-4.3	-4.5	-4.0	11.7		
Investing Cash Flow	-2.9	-4.6	-4.5	-77.1	-481.7	Balance sheet metrics	FY19 FY20 FY21f FY22f FY23f
Dividends Paid	0.0	0.0	0.0	0.0	0.0	Net Debt (m)	0 -7 -14 -4 131
Net Borrow ings	0.0	0.0	0.0	0.0	533.3	ND / ND+E	n/a n/a -10.6% -1.8% 18.1%
Share capital raised	1.6	13.1	21.0	82.0	390.0		
Other	0.0	0.0	0.0	0.0	0.0		
Financing Cash flow	1.6	13.1	21.0	82.0	923.3		
Total Cash Change	-2.7	6.5	7.1	-9.4	398.4		

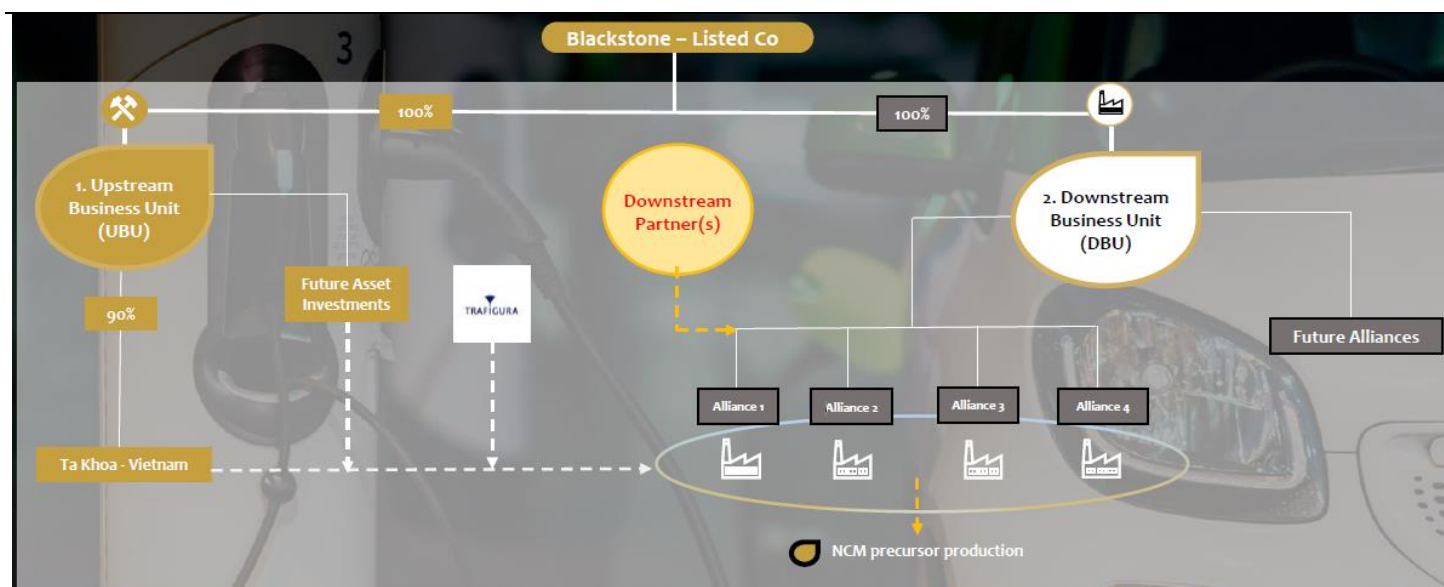
Source: Company reports, Shaw and Partners analysis

Executive Summary – Integrated Battery Metals Processor

We initiate coverage on Blackstone Minerals with a Buy recommendation and A\$1.90ps price target. BSX is a battery metal development company focussed on the Asian market. The company is preparing for the start-up of mining and refining operations in Vietnam.

BSX is an industrial business – producing nickel rich Nickel-Cobalt-Manganese battery precursor in a nickel/cobalt refinery via the purchase of third-party feedstocks to augment their own upstream mine supply. The company's key relationships are with globally relevant Korean battery manufacturers (i.e. EcoPro). We assume a Final Investment Decision 2HCY22 and a phased ramp-up of operations, with first production in CY24 and steady state in CY25.

Figure 1: Blackstone business model – integrated upstream and downstream business units



Source: Company reports

Figure 2: Location of the Upstream and potential locations of the Downstream Ta Khoa Refinery (industrial zones)



Source: Company reports

Core drivers and key catalysts

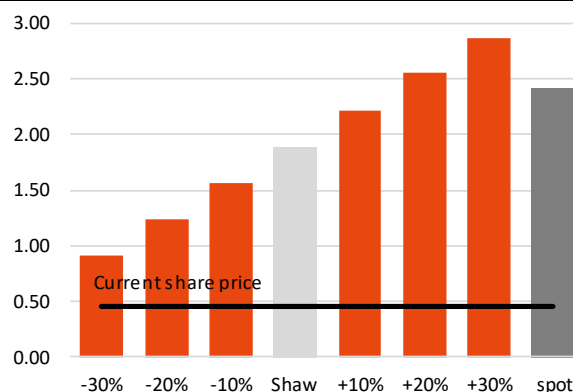
- Blackstone Minerals is a **battery metals development company** focussed on the Asian market (South Korea). Blackstone is proposing a restart open pit mine at Ban Phuc, with greater upstream processing and new, extensive downstream processing to produce a precursor battery product. The **company already has relationships with some of the biggest players in the battery metals space, including EcoPro.**
- In our view the Upstream and Downstream projects have **outstanding financial metrics** funded by a combination of project finance and equity. Using our base case commodity price deck:
 - We model redevelopment of a 6Mtpa **Ta Khoa Nickel Project** with a post-tax **NPV₁₀ of US\$193m and IRR of 25%.** The existing mine and infrastructure are permitted and on care and maintenance. Key features of our upstream analysis – broadly consistent with the upside case of the scoping study completed late 2020 – include:
 1. Open cut mine pit requiring a development capital expenditure of US\$250m.
 2. 11-year life-of-mine at ~200kt/yr Ni/Co concentrate production from an ore fed at 6Mtpa and a head grade of 0.5% Ni / 0.01% Co / 0.06% Cu.
 3. All-in average life-of-mine sustaining costs of ~US\$4.30/lb Ni (2021 Real).
 - We model the development of a 400ktpa nickel concentrate fed **Ta Khoa Refinery** with an **NPV₁₀ of ~US\$1,400m and IRR of 52%** for a total development capex requirement of US\$490m. Key features of our downstream analysis – broadly consistent with the July-21 Preliminary Feasibility Study - include:
 1. 11-year refinery life producing ~88ktpa NCM811 battery precursor product sold at a 120% payability.
 2. Refinery feed approximately 50/50 from Ta Khoa and third-party sources purchased at a 75% payability.
 3. All-in average sustaining costs of ~US\$11,000/t NCM811 (2021 Real). As a result of our analysis, we have an average EBITDA refinery margin of ~29%.
- Blackstone's operations are in Vietnam. The company is proposing to utilise its existing mine infrastructure and build a hydromet refinery, which (1) Is able to process concentrates considered difficult for conventional smelters. (2) Is able to tolerate higher deleterious elements due to its process. (3) Has a cost advantage, having access to low-cost green hydro power and local labour. (4) Has anticipated tax incentives associated with new investment. (5) Is scalable and modular.
- Growth in electric vehicle sales is driving strong demand for battery metals (e.g. nickel, cobalt, manganese, lithium). Blackstone will produce nickel-cobalt-manganese (NCM) precursor which is fed directly into the cathode manufacturing process. The feedstock will come from its own upstream nickel production, blended with third party feedstock.

Figure 3: BSX valuation (fully diluted)

BSX Valuation - fully diluted	US\$m	A\$m	A\$ps
Ta Khoa Upstream	193	257	0.18
Exploration / Other Upstream	26	35	0.03
Downstream Business Unit	1397	1,863	1.34
Net cash	10	14	0.01
Cash from options & equity raise	364	485	0.35
Corporate costs	-11	-15	-0.01
Total Valuation	1,979	2,639	1.90

Source: Company reports, Shaw and Partners analysis

Figure 4: BSX valuation sensitivity to commodity prices (A\$ps)



Source: Company reports, Shaw and Partners analysis

Company overview in charts and tables

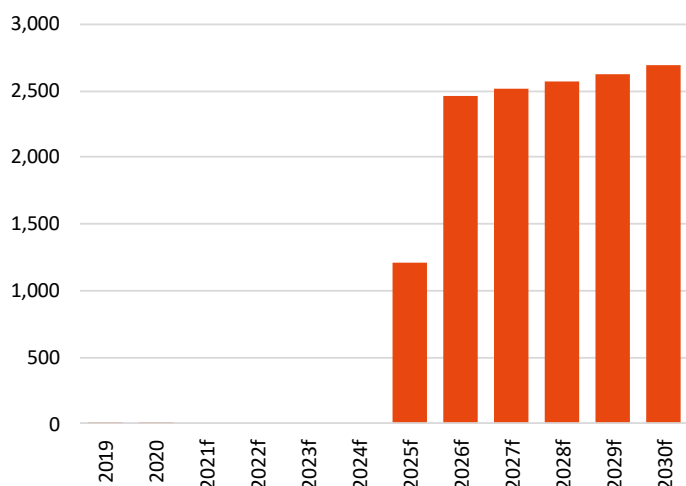
Figure 5: Key assumptions and metrics for the Ta Khoa Project

Upstream		Downstream		Shaw comment
Financials				The majority of the value (~80%) is in the downstream.
Fully diluted valuation (A\$ps)	0.18		1.34	
Project financials	SS (6ktpa)	Shaw	PFS	Shaw
Development Capex (US\$m)	247	250	491	490
NPV (US\$m) (nominal)	NA	193	2,010	1,397
IRR (%)	NA	25%	67%	52%
EBITDA (US\$m) (2021 Real)	NA	~60	~420	~410
EBITDA margin(%)	NA	32%	33%	29%
Project / mine life (years)	8	11	10	11
Sust. Capex (US\$/t BA equ.)				
Corporate tax (%)	20%		0% -> 5% yr 5 onwards	
Royalty	0.60/lb Ni conc product		NA	
Balance sheet recapitalisation assumptions				
Debt (US\$m)	400			
Equity (US\$m)	300			
Debt / Equity split	57% / 43%			
Peak gearing (ND / ND+E [%])	51%			
Steady state production				
Mill throughput (ktpa)	6,000		NA	
Nickel concentrate (ktpa)	200		400	
NCM 811 precursor (ktpa)	NA		~86	
Commodity price assumptions				
Metals prices	USc/lb		US\$/t	
	PFS	Shaw	PFS	Shaw
Cobalt	2,995	2,905	66,028	64,039
Copper	317	289	6,985	6,376
Nickel	827	716	18,230	15,777
Manganese sulfate (32%)	47	47	1,035	1,035
Cobalt sulfate (21%)	583	610	12,842	13,448
Concentrate and Precursor payability				
Nickel Concentrate payability	0.75			
NCM811 Precursor payability	1.2			
Concentrate and Precursor prices				
	USc/lb		US\$/t	
Nickel Concentrate (/ NCM811)	320	312	7,062	6,876
Nickel Concentrate (/ Ni conc.)	70	68	1,550	1,506
NCM811 Precursor (/ NCM811)	744	689	16,397	15,184

- The company is working on a PFS for the upstream, which is expected for completion 2H21. The U/S Scoping Study included a 200ktpa refinery which renders the U/S economics largely irrelevant following the release of the D/S PFS.				
- Our post-tax NPVs, IRRs and plateau production EBITDA for the D/S are lower than the PFS, primarily due to our commodity price assumptions - lower revenue from the NCM811 precursor.				
- Our WACC assumption is broadly in line with the company - 10% Nominal vs BSX 8% Real.				
We model funding for the Upstream and Downstream projects in one recapitalistion stage - FY23 - provided by a combination of debt/equity.				
Consistent with the company.				
Our metal price assumptions are slightly more conservative than the company. We note that our cobalt sulphate assumption is slightly higher than the company which leads to higher input prices for the refinery.				
Broadly consistent with the company.				
In line with our metal price assumptions, our Nickel concentrate price and NCM811 precursor price assumption is slightly more conservative than the company.				

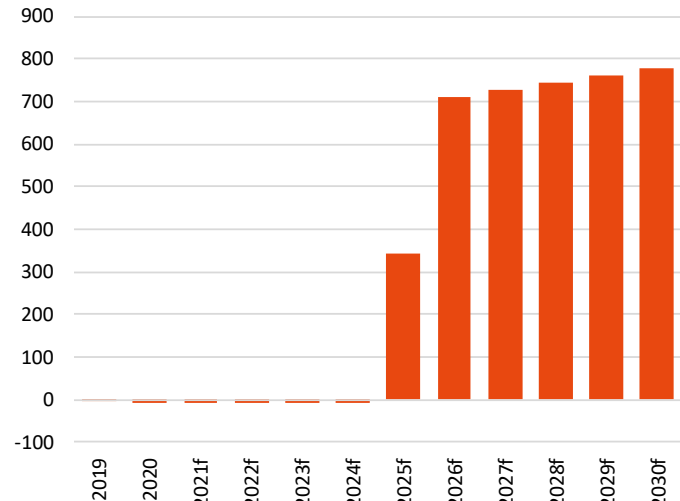
Source: Company reports, Shaw analysis

Figure 6: Revenue (A\$m)



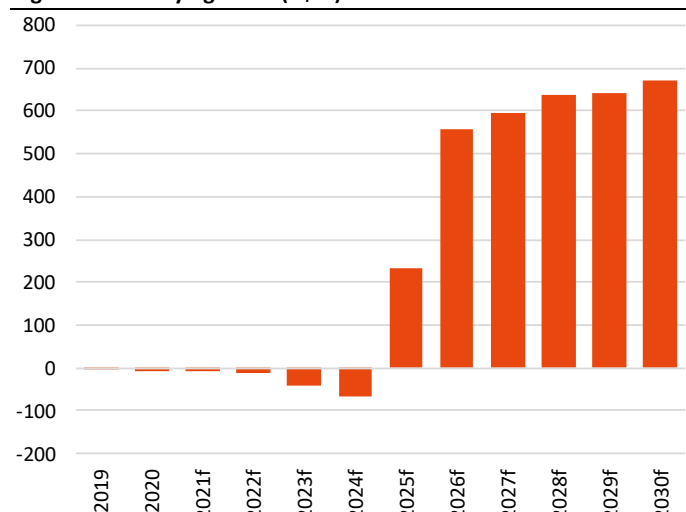
Source: Company data & Shaw and Partners analysis

Figure 7: EBITDA (A\$m)



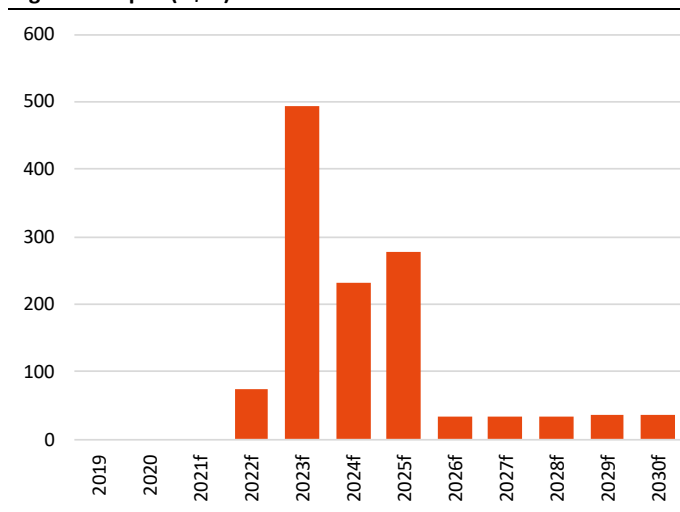
Source: Company data & Shaw and Partners analysis

Figure 8: Underlying NPAT (A\$m)



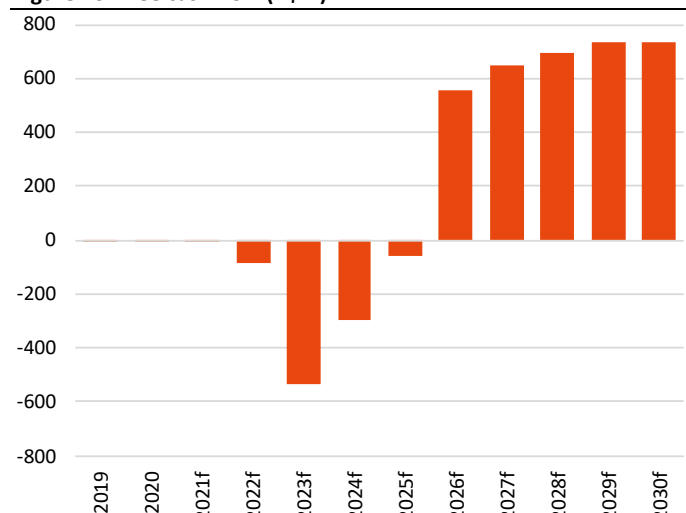
Source: Company data & Shaw and Partners analysis

Figure 9: Capex (A\$m)



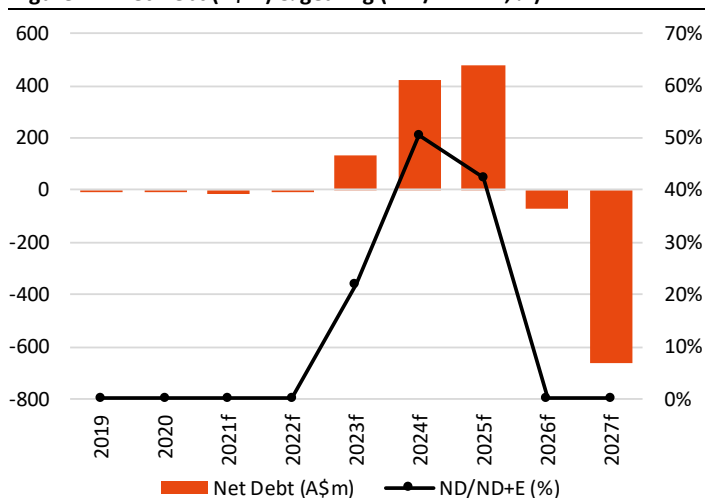
Source: Company data & Shaw and Partners analysis

Figure 10: Free cash flow (A\$m)



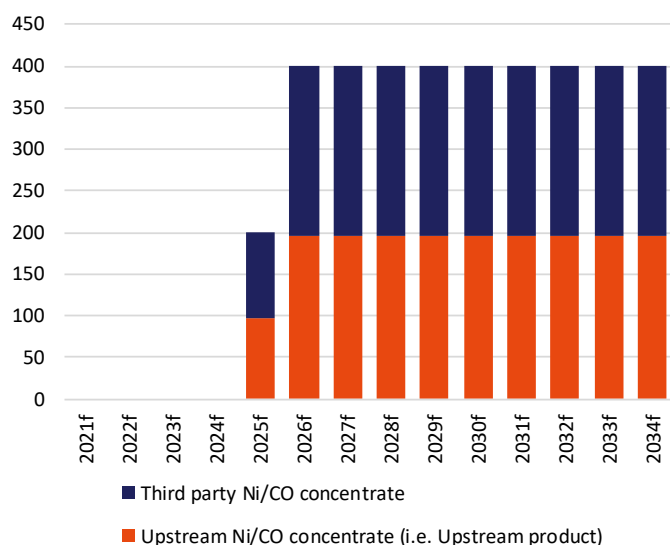
Source: Company data & Shaw and Partners analysis

Figure 11: Net Debt (A\$m) & gearing (ND / ND + E, %)



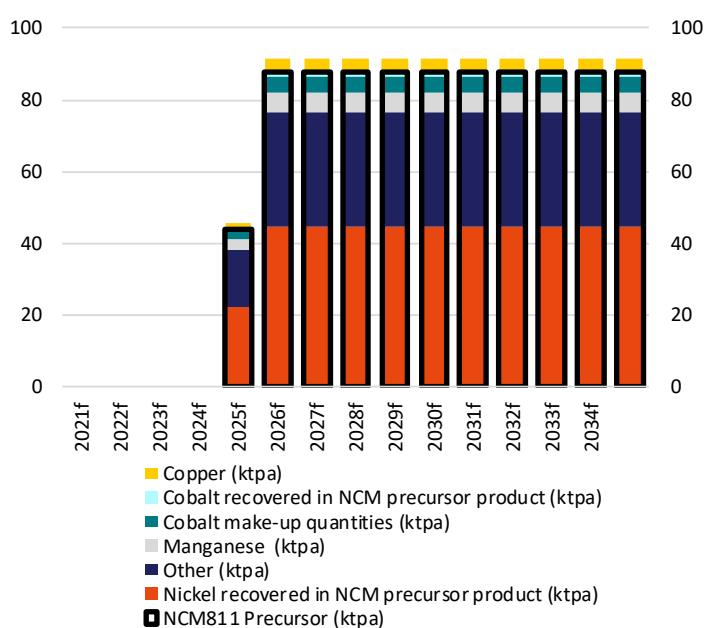
Source: Company data & Shaw and Partners analysis

Figure 12: Downstream – Ni/Co feed (ktpa, 11.5% Ni, 0.3% Co)



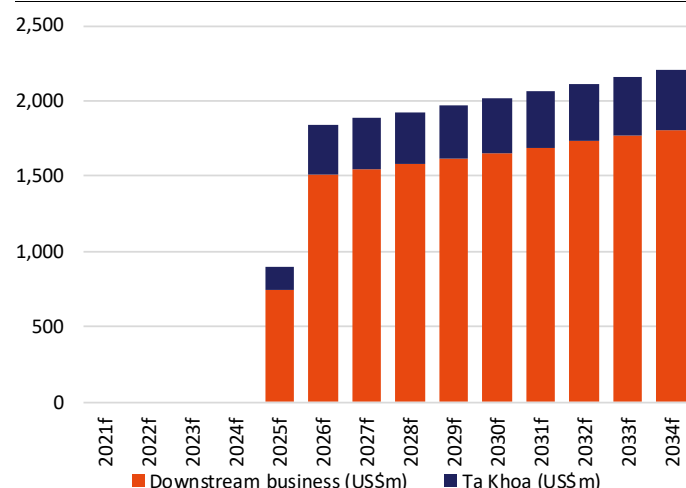
Source: Company data & Shaw and Partners analysis

Figure 13: Downstream - refining output (ktpa)



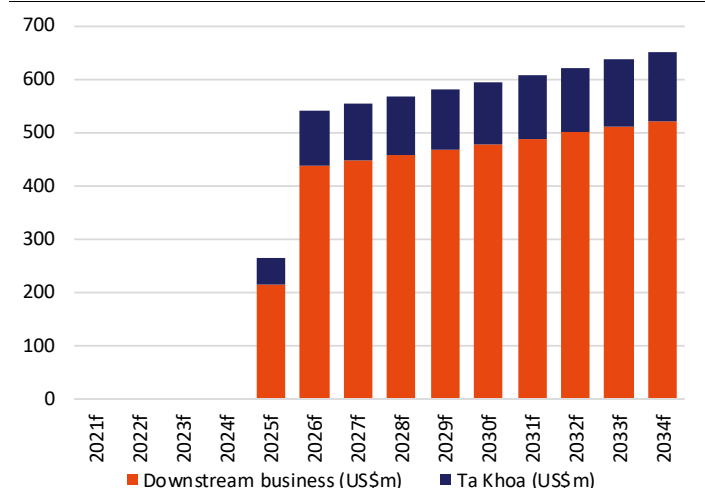
Source: Company data & Shaw and Partners analysis

Figure 14: Revenue (US\$m)



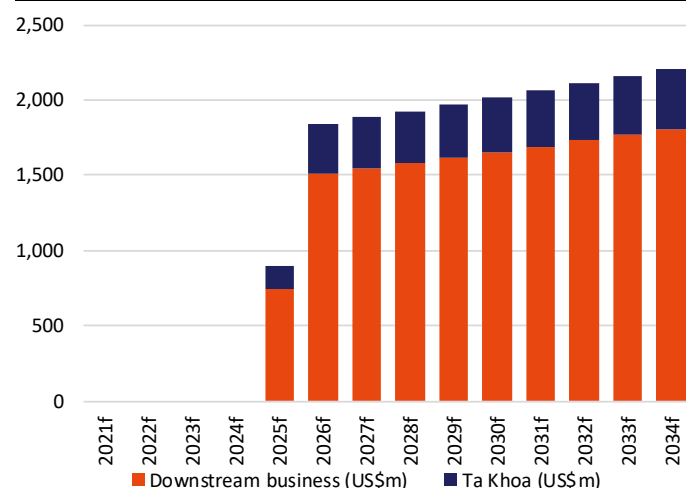
Source: Company data & Shaw and Partners analysis

Figure 15: EBITDA (US\$m)



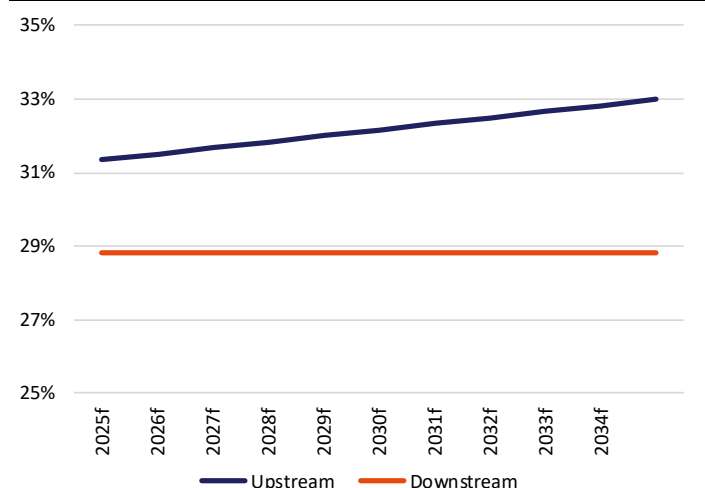
Source: Company data & Shaw and Partners analysis

Figure 16: EBIT (US\$m)



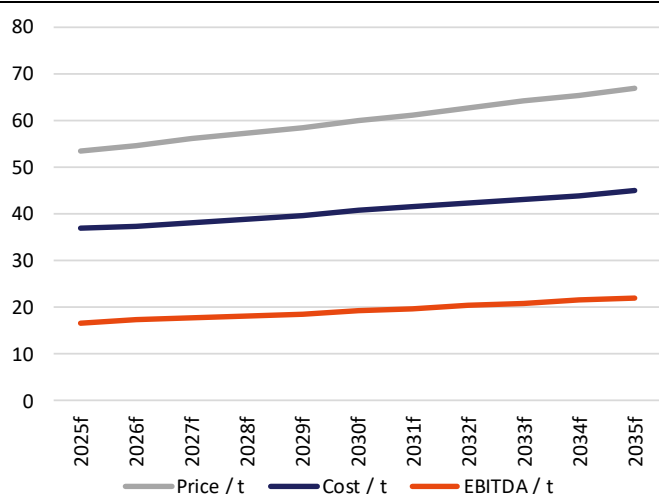
Source: Company data & Shaw and Partners analysis

Figure 17: EBITDA margins (%)



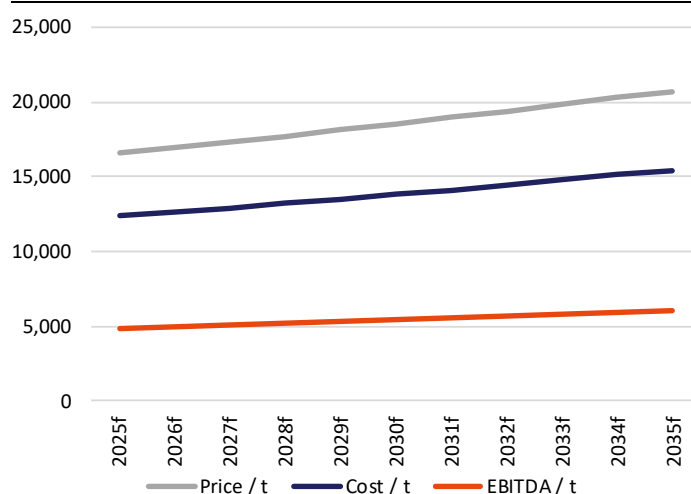
Source: Company data & Shaw and Partners analysis

Figure 18: Upstream - Pricing, costs and margins (US\$/t ore)



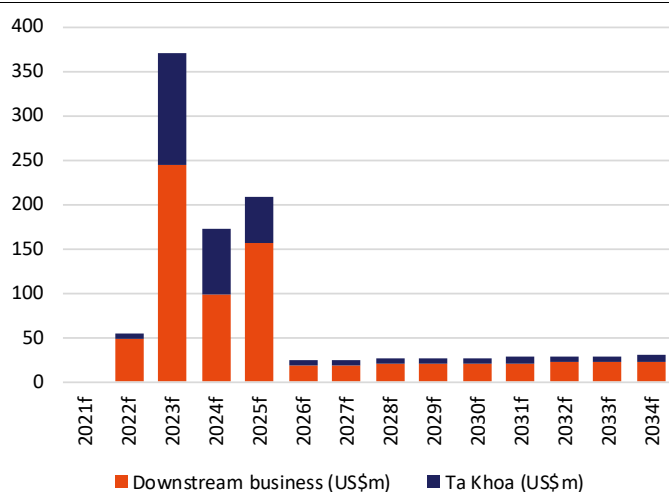
Source: Company data & Shaw and Partners analysis

Figure 19: Downstream - Pricing, costs and margins (US\$/t NCM811)



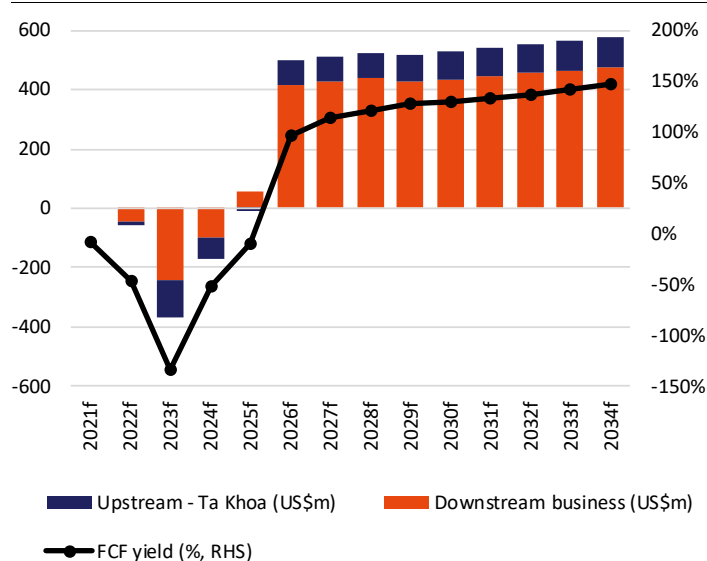
Source: Company data & Shaw and Partners analysis

Figure 20: Capex (US\$m)



Source: Company data & Shaw and Partners analysis

Figure 21: Free cash flow (US\$m) and yield (fully diluted, %, RHS)



Source: Company data & Shaw and Partners analysis

Key risks

- The Ta Khoa mine and downstream refinery are not yet producing and there is a risk that Blackstone Minerals is unable to bring the operations in to production. The projects may cost more than expected to build and restart and may not operate as expected.
- Sovereign risks – Vietnam. The Ta Khoa Refinery is expected to be a project of national significance and feature in the Vietnam National Master Plan. Nonetheless, economic challenges in country include access to infrastructure, pending public sector reforms, growing inequality and a weak banking system (*source: World Bank*).
- Blackstone Minerals is facing a significant financing challenge to develop the >US\$700m upstream and downstream projects. There is a risk that capital markets are not willing to fund the projects.
- Forecasting future commodity prices and operating costs has considerable uncertainty. Our forecasts may prove to be too optimistic on both. If metal prices are weaker than forecast and/or Blackstone Minerals Mining's costs are higher than we expect then our cash flow forecasts will be too high.
- Evolving battery chemistry - the Electric Vehicle and Lithium-ion battery industry is rapidly evolving. Market specialists are confident that EV adoption is set to increase, however, the underlying battery chemistries to support this electrification movement is uncertain. The market for nickel-based batteries, in particular high nickel content batteries, is relatively immature. Although NCM811 is forecast to become the predominant battery chemistry, there is risk of substitution from both existing (for example LFP) and future potential technologies.
- 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.
- Safe and reliable production from operations once projects are operational. The inability to maintain safe and reliable operations may result in a sustained, unplanned interruption to production and impact the company's licence to operate and financial performance. Production facilities are subject to operating hazards associated with major accident events, cyber-attack, inclement weather and disruption to supply chain, harm to personnel, environmental damage, diminished production, additional costs, and impacts to reputation or brand.

Commodity analysis

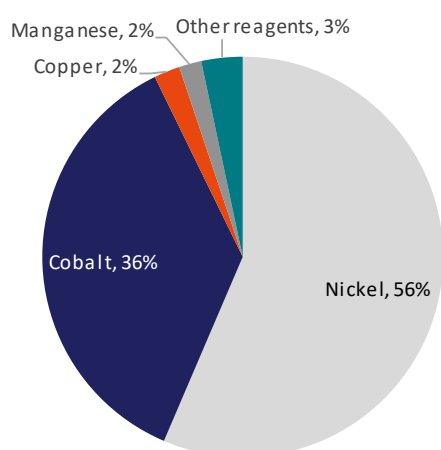
Nickel-rich lithium-ion batteries have nickel metal concentrated in the cathode of the battery to enable high energy density.

For the metal to be used in the cathode making processes, it requires nickel in the form of chemicals, such as a nickel-cobalt-manganese (NCM) precursor. In addition to nickel, this precursor product contains cobalt and manganese.

Blackstone Minerals intends to produce a high nickel content NCM precursor – NCM811 – from its Ta Khoa Refinery (TKR) for sale to battery manufacturers such as EcoPro. NCM811 nomenclature refers to 8 units of nickel, 1 of manganese and 1 of cobalt.

The TKR is a margin driven business, and therefore cash flow generation is impacted primarily by the feed costs and product revenue. The two factors that govern these are

Analytical refinery feed value (%)



Source: Company reports, LME, FactSet, Shaw and Partners analysis

- **The payability of the material** – its analytical value based on composition relative to the underlying commodity price.
 1. Refinery feed - concentrate feedstock payability is typically between 65-80% (Shaw 75%)
 2. Refinery product – there is a premium associated with a NCM811 Precursor product, approximately 120-140% since 2020 (Shaw 120%).
- **The underlying commodity prices** - ~95% of the value of the refinery's throughput comes from the metals Nickel, Cobalt and Copper. We make commodity specific comments for each below.
 1. **Nickel** - ~56% of the value of the refinery throughput is from nickel. We assume a period of elevated prices in the mid-2020s – an incentive price environment driven by demand - before reversion to our long-term price later in the decade of ~US\$15,800/t. This sits in the middle of the consensus assumption range.
 2. **Cobalt** - ~36% of the value of the refinery throughput is from cobalt. We assume a long-term cobalt price of US\$64,000/t, which is in the upper third of consensus price assumptions.
 3. **Copper** - ~2% of the value of the refinery throughput is from copper. In our view copper is in an incentive price environment, with spot prices at US\$9,400/t. Despite the pull in demand from increased electrification, we believe copper pricing will pull back from current levels in the long term to ~US\$6,400/t.

Figure 22: Commodity price forecasts (US\$/t)

N.B. Our long-term AUD:USD exchange rate of 0.75 is consistent with the company's assumption (Downstream PFS).

Commodity price assumptions

Metals prices	US\$/lb		US\$/t	
	PFS	Shaw	PFS	Shaw
Cobalt	2,995	2,905	66,028	64,039
Copper	317	289	6,985	6,376
Nickel	827	716	18,230	15,777
Manganese sulfate (32%)	47	47	1,035	1,035
Cobalt sulfate (21%)	583	610	12,842	13,448

Our metal price assumptions are slightly more conservative than the company. We note that our cobalt sulphate assumption is slightly higher than the company which leads to higher input prices for the refinery.

Concentrate and Precursor payability

Nickel Concentrate payability	0.75
NCM811 Precursor payability	1.2

Broadly consistent with the company.

Concentrate and Precursor prices	US\$/lb		US\$/t	
	PFS	Shaw	PFS	Shaw
Nickel Concentrate (/ NCM811)	320	312	7,062	6,876
Nickel Concentrate (/ Ni conc.)	70	68	1,550	1,506
NCM811 Precursor (/ NCM811)	744	689	16,397	15,184

In line with our metal price assumptions, our Nickel concentrate price and NCM811 precursor price assumption is slightly more conservative than the company.

Source: Argus, Company reports, Shaw and Partners analysis

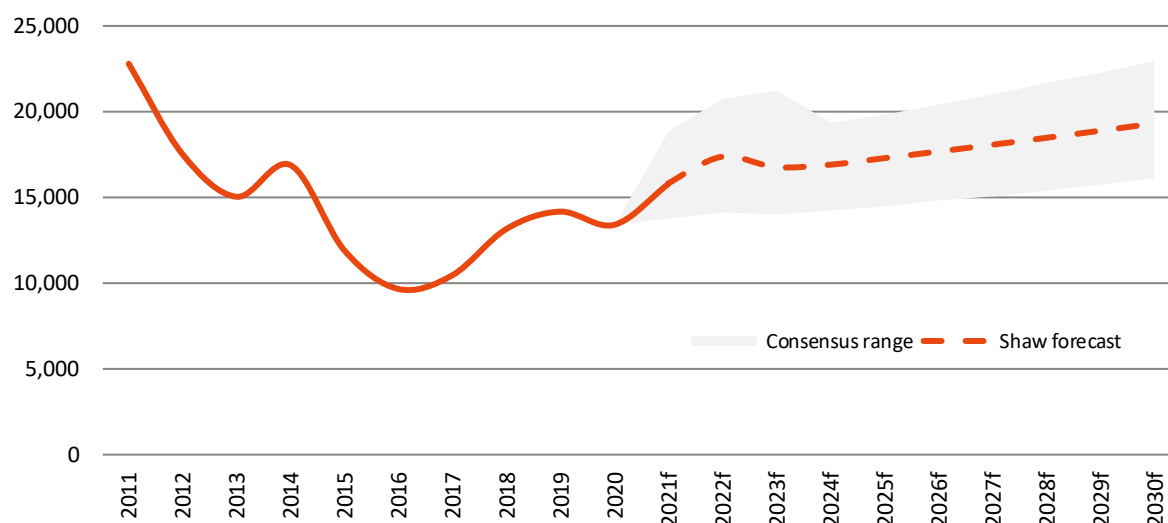
Figure 23: Commodity price forecasts (US\$/t)

Commodity prices (US\$/t)	2019	2020	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f	LT real
US\$/t													
Cobalt	43,775	33,465	41,370	54,123	58,335	68,750	70,000	71,575	73,185	74,832	76,516	78,237	64,039
Copper	6,120	5,720	8,147	8,300	7,683	7,108	6,970	7,127	7,287	7,451	7,619	7,790	6,376
Nickel	12,456	14,133	15,765	17,334	16,723	16,863	17,245	17,633	18,030	18,436	18,851	19,275	15,777
Manganese sulfate (32%)			1,035	1,058	1,082	1,106	1,131	1,157	1,183	1,209	1,237	1,264	1,035
Cobalt sulfate (21%)			8,688	11,366	12,250	14,438	14,700	15,031	15,369	15,715	16,068	16,430	13,448
Nickel Concentrate (/ Ni conc.) (75% payability)			1,469	1,629	1,582	1,612	1,646	1,683	1,721	1,759	1,799	1,839	1,506
Nickel Concentrate (/ NCM811) (75% payability)			6,876	7,030	7,189	7,350	7,516	7,685	7,858	8,034	8,215	8,400	6,876
NCM 811 Precursor (120% payability)			13,016	15,390	15,355	16,253	16,598	16,971	17,353	17,743	18,143	18,551	15,184
A\$/US\$	0.71	0.67	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
A\$/t													
Cobalt	61,873	50,135	55,160	71,924	77,780	91,667	93,333	95,433	97,581	99,776	102,021	104,317	85,385
Copper	8,650	8,570	10,862	11,030	10,244	9,478	9,293	9,502	9,716	9,935	10,158	10,387	8,502
Nickel	17,606	21,173	21,020	23,035	22,297	22,484	22,994	23,511	24,040	24,581	25,134	25,700	21,036
Manganese sulfate (32%)			1,380	1,406	1,443	1,475	1,508	1,542	1,577	1,613	1,649	1,686	1,380
Cobalt sulfate (21%)			11,584	15,104	16,334	19,250	19,600	20,041	20,492	20,953	21,424	21,906	17,931
Nickel Concentrate (/ Ni conc.)			1,958	2,164	2,110	2,149	2,194	2,244	2,294	2,346	2,398	2,452	2,007
Nickel Concentrate (/ NCM811)			9,168	9,343	9,585	9,800	10,021	10,246	10,477	10,713	10,954	11,200	9,168
NCM 811 Precursor			17,355	20,451	20,473	21,670	22,130	22,628	23,137	23,658	24,190	24,734	20,246

Source: Argus, Company reports, Shaw and Partners analysis

Nickel

- ~56% of the value of the refinery throughput is from nickel.
- Taking in account the demand implications of production growth in stainless steel and rising penetration of electric vehicles, most observers expect the nickel market to be undersupplied in the medium to long term with positive implications for the nickel price. We agree.
- There is likely to be a period of incentive pricing when the nickel price will need to be high enough to incentivise new supply into the market. We assume a period of elevated prices in the mid-2020s before reversion to our long-term price later in the decade of ~US\$15,800/t. This sits in the middle of the consensus assumption range.

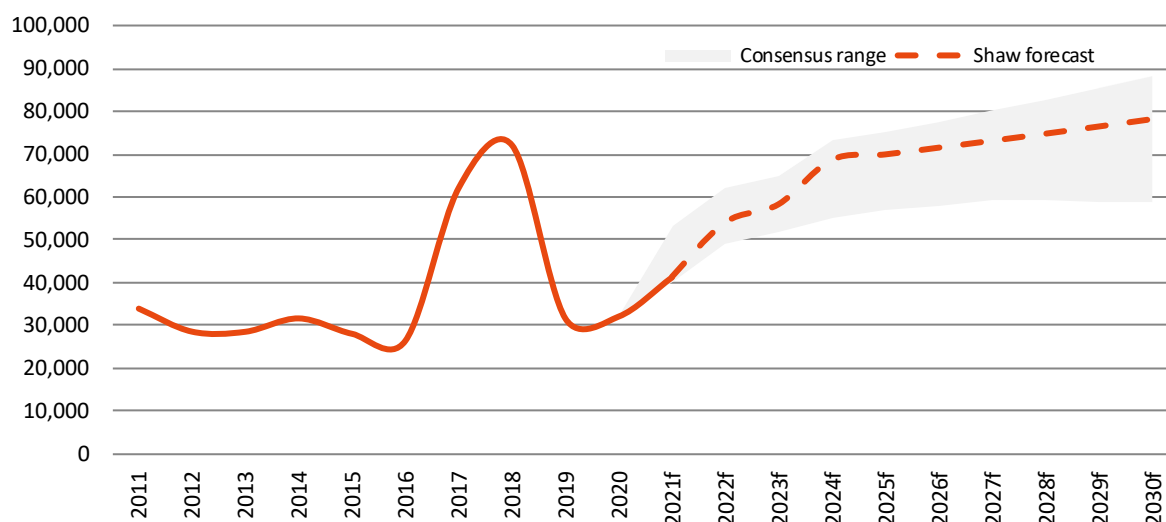
Figure 24: Nickel price forecasts (US\$/t)


Source: LME, FactSet, Shaw and Partners analysis

Cobalt

- ~36% of the value of the refinery throughput is from cobalt.
- Is priced on the London Metals Exchange (LME) and currently has a spot price of US\$52,400/t. Since 1990, the price has averaged ~US\$38,500/t, or ~US\$55,000/t in real 2021 dollars.
- In our view battery manufacturers are attempting to reduce the amount of cobalt being used, but current technology needs cobalt for battery stability and performance. Alternative sources of supply to the DRC will be highly valued.
- We assume a long-term cobalt price of US\$64,000/t, which is in the upper third of consensus price assumptions.

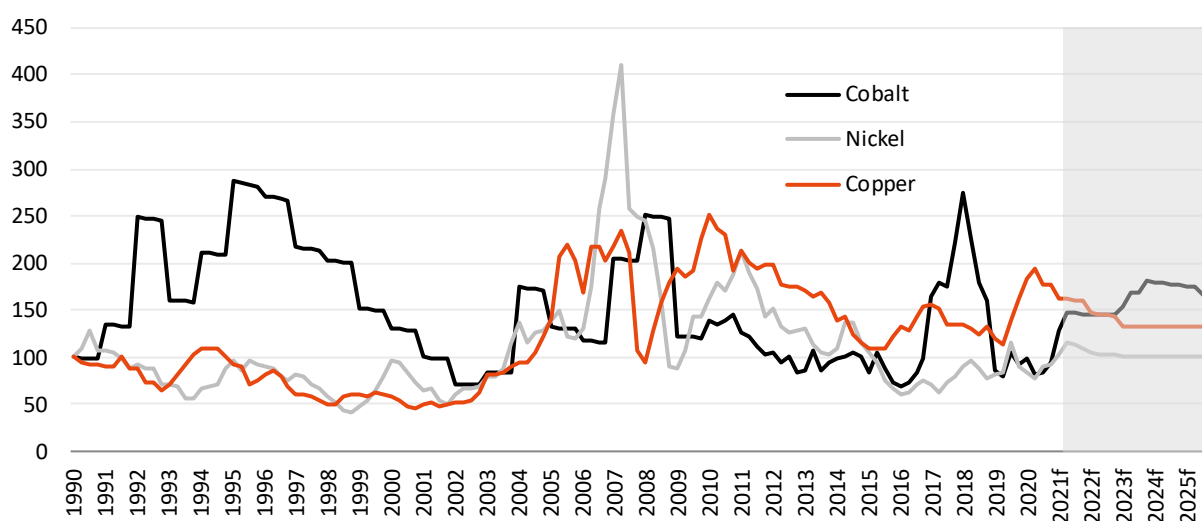
Figure 25: Cobalt price forecasts (US\$/t)



Source: LME, FactSet, Shaw and Partners analysis

Figure 26: Cobalt price compared to nickel and copper (Real, indexed to 1990)

Cobalt is largely produced as a by-product from copper and nickel mines, and so it would be reasonable to expect there to be a relationship between the three metals. Since 1990 the metals have indeed traded with the same general trend, although there have been periods when the smaller size of the nickel and cobalt markets have resulted in outsized price spikes (nickel in 2007, cobalt in 2018).

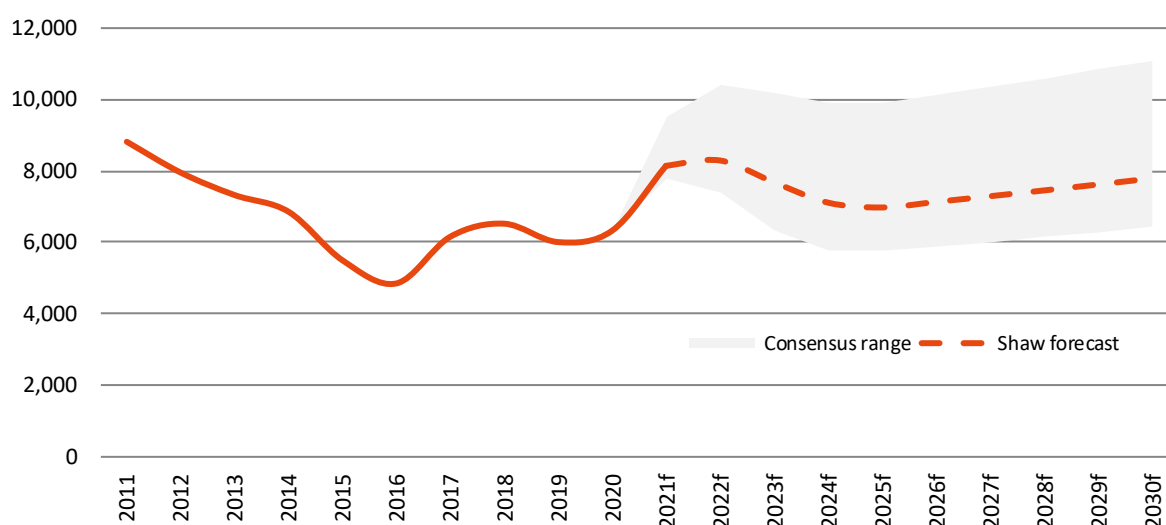


Source: USGS, Factset, Shaw and Partners forecasts

Copper

- ~2% of the value of the refinery throughput is from copper.
- Copper is currently trading in an incentive price environment, with spot prices at US\$9,400/t and well above cost curve support. Demand is strong, driven by post Covid fiscal stimulus and the structural tailwind of electrification.
- High prices are incentivizing increased production and increased usage of scrap copper. The market has persistently underestimated brownfield expansions of existing mines and the availability of scrap, which is why copper deficits are not as large as historically forecast.
- We expect copper to remain trading above cost curve support for the foreseeable future due to strong demand, but fading back to our long-term price assumption of ~US\$6,400/t.

Figure 27: Copper price forecasts (US\$/t)



Source: LME, FactSet, Shaw and Partners analysis

The origins of lithium ion batteries

The pioneers of the lithium ion battery were John Goodenough, Stanley Whittingham and Akira Yoshino, who shared the Nobel Prize in Chemistry in 2019.

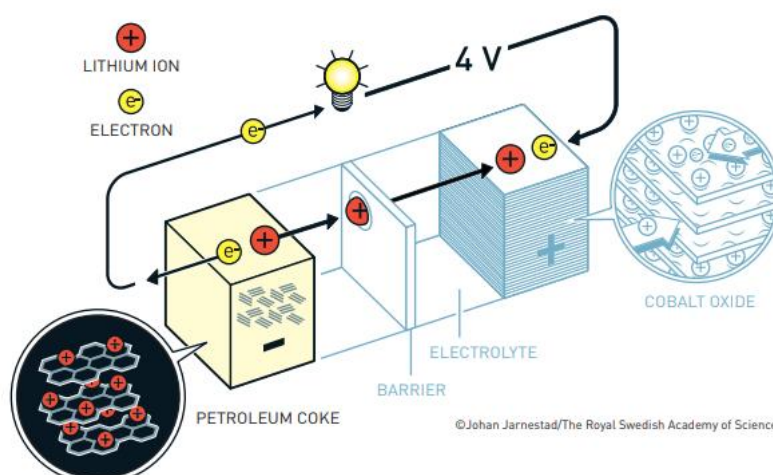
The original lithium-ion battery was invented in the 1970s by Stanley Whittingham. He discovered titanium disulphide made a cathode that can store (intercalate) lithium ions. The battery's anode was partially made from metallic lithium, which has a strong drive to release electrons. However, metallic lithium is reactive and the battery was too explosive to be viable.

Whittingham's design was improved by John Goodenough by changing the cathode to a metal oxide instead of a metal sulphide. In 1980 he discovered that cobalt oxide with intercalated lithium ions can produce as much as four volts (more than the two volts from Whittingham's design).

The technology was further enhanced by Akira Yoshino who created the first commercially viable lithium-ion battery in 1985. Rather than using reactive lithium in the anode, he used petroleum coke, a carbon material that, like the cathode's cobalt oxide, can intercalate lithium ions.

The result was a lightweight, hardwearing battery that could be charged hundreds of times before its performance deteriorated. The advantage of lithium-ion batteries is that they are not based upon chemical reactions that break down the electrodes, but upon lithium ions flowing back and forth between the anode and cathode.

Figure 28: Akira Yoshino's battery design



Source: www.nobelprize.org

How a lithium ion battery works

A rechargeable lithium ion battery consists of four main parts: a positive and negative electrode, a separator and a liquid electrolyte. When the battery is being charged, the lithium ions pass from the positive cathode electrode, through the polymer membrane, to the negative anode electrode. During discharging, the lithium ions travel back from the anode to the cathode, in the process giving up electrons to the anode which travel via an external circuit to power an electronic device before returning via the circuit to the cathode.

Carbon graphite is the most common anode electrode material as it has an ordered layered structure that can store the small lithium ions between its layers. Because the working voltage of a battery is determined by the difference in electrochemical potential between the cathode and the anode, the cathode must be another material than graphite. Compounds chosen for cathodes are commonly oxides made from transition metals such as nickel, cobalt, copper, iron, chromium, zinc, or manganese.

The importance of nickel in batteries

A key determinant in the performance of the battery is the choice of metal in the cathode structure. The cathode is what is known as an intercalation compound – it has layers of lithium, oxygen, and the various ‘transition’ metals – predominantly nickel.

At this stage it appears that there are five major battery formulations vying to become the industry standard. These are;

- Lithium-Nickel-Manganese-Cobalt (NMC);
- Lithium-Nickel-Cobalt-Aluminium (NCA);
- Lithium-Iron-Phosphate (LFP);
- Lithium-Manganese Oxide (LMO); and
- Lithium-Manganese-Nickel Oxide (LMNO).

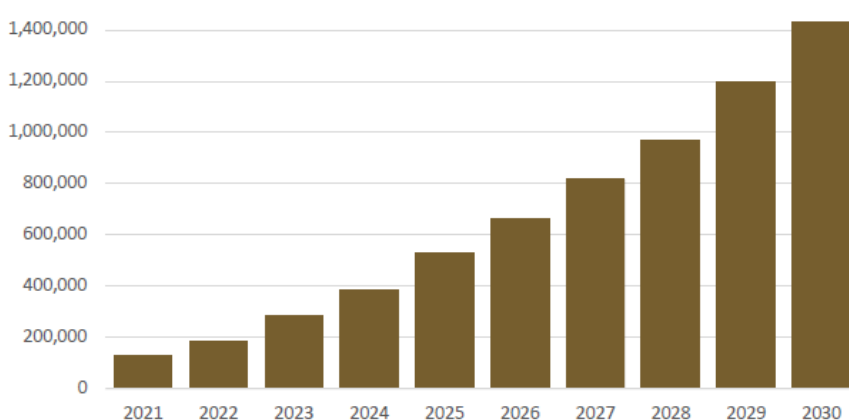
Battery nomenclature denotes the relative proportions of each metal in units of 10, for example NMC811 refers to 8 units of nickel, 1 of manganese and 1 of cobalt.

Each of the different cathodes has its own strengths and weaknesses, and none is perfect. The optimum battery will be energy dense, thermally stable, capable of being recharged multiple times without degrading, and being recharged quickly. It will also be made of raw materials that are inexpensive and with reliable supply.

The industry appears to be converging on a nickel rich formulation due its superior energy density, with the downside of thermal stability being managed through addition of cobalt and manganese. The formulation that appears to be gaining greatest traction is NMC811, which is an evolution from NMC532 and NMC622.

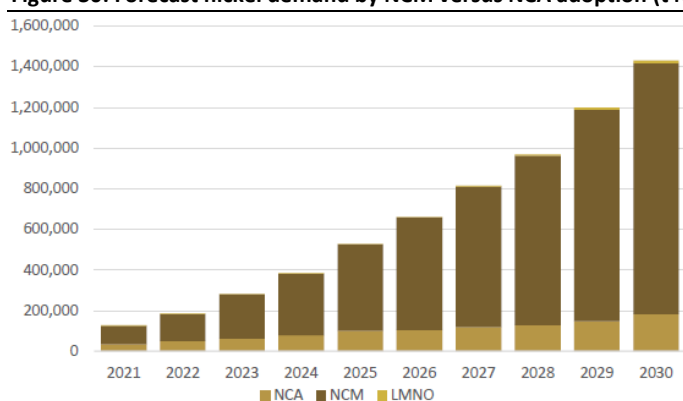
Figure 29: Increasing Nickel Demand from Li-ion batteries (t Ni)

The total current market for nickel is ~2.5Mtpa; the metal’s primary sources are laterite and sulfide deposits, distributed across the globe.



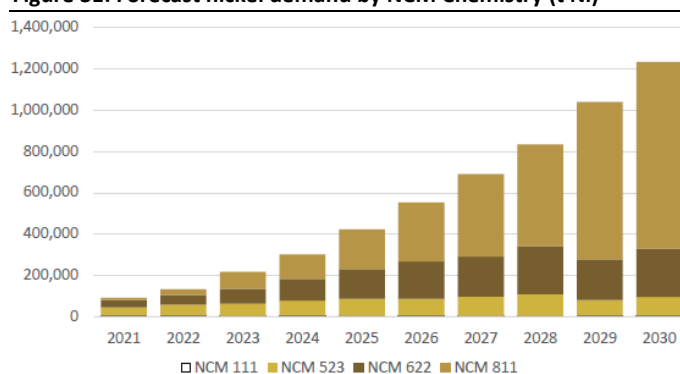
Source: Nickel Institute

Figure 30: Forecast nickel demand by NCM versus NCA adoption (t Ni)



Source: Company data

Figure 31: Forecast nickel demand by NCM Chemistry (t Ni)



Source: Company data

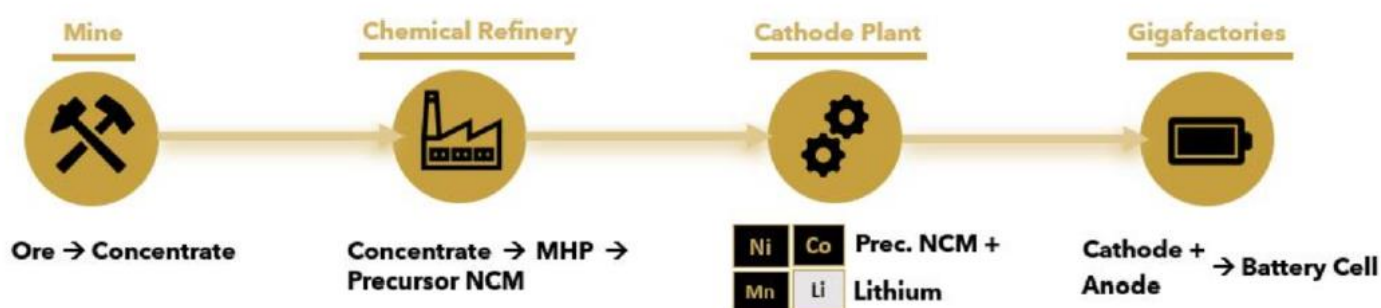
BSX producing a NCM811 precursor product

Nickel-rich batteries have relatively complex supply chains. Nickel metal is concentrated in the cathode of the battery to enable high energy density. For the metal to be used in the cathode making processes, requires nickel in the form of chemicals (Nickel-Sulfate, Mixed-Hydroxide Precipitate or NCM Precursor), while nickel in other forms (i.e., briquette) generally need to be converted to chemical forms before becoming useful in the process.

BSX's NCM precursor products will be sold to cathode manufacturers, who have some flexibility to purchase various forms of chemical products (e.g. NCM precursor or nickel sulfate) in the process of making cathodes. Some battery manufacturers, including LG Chem and Samsung SDI, also have vertically integrated cathode businesses.

BSX maintains a list of global cathode producers and their respective dominant product chemistry. Cathode manufacturers with exposure (existing or planned capacity) to nickel-rich cathodes comprise BSX's primary customer targets. Secondary customer targets comprise international commodity traders who are moving into the NCM Precursor market. BSX is in discussion with both cathode manufacturers (e.g. EcoPro) as well as trading groups (e.g. Trafigura).

Figure 32: Simplified nickel-rich battery supply chain



Source: Nickel Institute

Ta Khoa Project – green battery metals proximate to target markets

Blackstone IPO'd four years ago – originally as a WA gold focussed company. Over the past 12 months they have become focussed on the Ta Khoa Project in Vietnam.

The Ta Khoa Project contains the Ban Phuc mine, an underground nickel-sulphide mine 160km West of Hanoi that produced a nickel concentrate 2013-16. It's located within a 150km² land package that hosts more than 25 advanced-stage massive sulphide targets.

Blackstone acquired 90% of this mine from metallurgist Steve Ennor in 2019/20, who worked on the mine during its operation. Steve is now in the Blackstone management team.

Blackstone is proposing a restart the open pit mine at Ban Phuc, with greater upstream processing and new, extensive downstream processing to produce a precursor battery product. The company has relationships with some of the biggest players in battery metals including EcoPro, located in nearby Korea, which will facilitate offtake discussions.

BSX recently completed a Pre Feasibility Study for the downstream component, based on a 400ktpa (nickel concentrate feed) refinery operating for 10 years. BSX is proposing to feed the refinery via its in-country upstream resources and third-party feedstocks. The company expects to complete a Pre Feasibility Study for a Ban Phuc mine development by calendar year end 2021.

Figure 33: Location of the Upstream and potential locations of the Downstream Ta Khoa Refinery (industrial zones)

BSX owns 90% of the Ta Khoa Nickel Project via its interest in Ban Phuc Nickel Mines (BPNM).

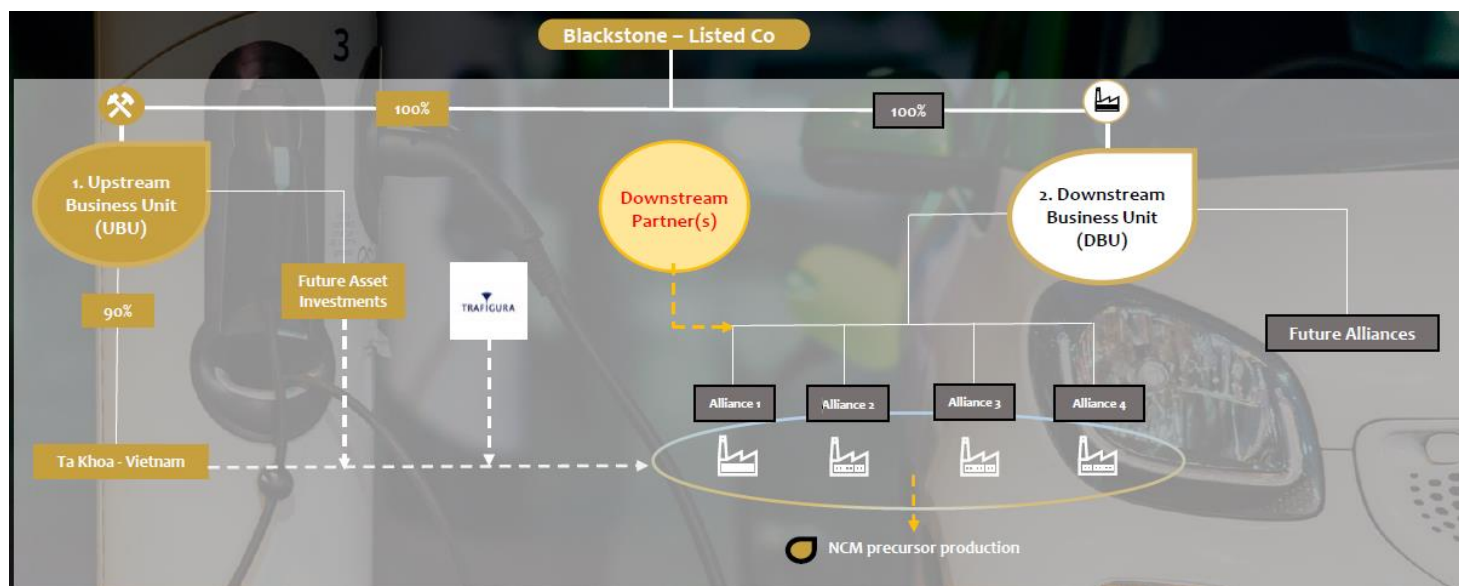
It is located ~160 km West of Hanoi near Ban Phuc Village in Son La Province, in the north-west of Vietnam. The travel time on serviceable paved roads to Hanoi is approximately 6 hours. The previous owners of the Ta Khoa Project mined the Ban Phuc Massive Sulfide Vein (MSV) underground deposit and treated approximately 1Mt over 3 years through the existing 450ktpa nickel concentrator.

The refinery will be located in Northern Vietnam. Further optimisation studies will confirm its exact location (i.e. dependent on Provincial Gov't / community support, logistics, tax incentives, cost and availability of renewable power, availability of water and availability of skilled labour).



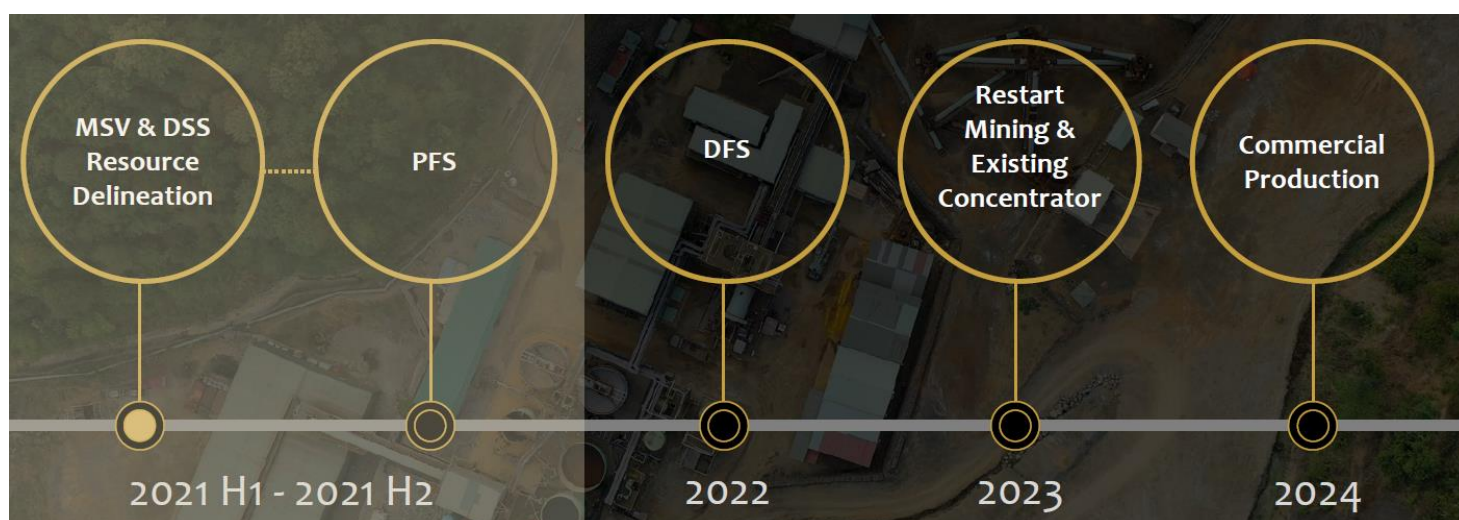
Source: Company reports

Figure 34: Blackstone business model – integrated upstream and downstream business units



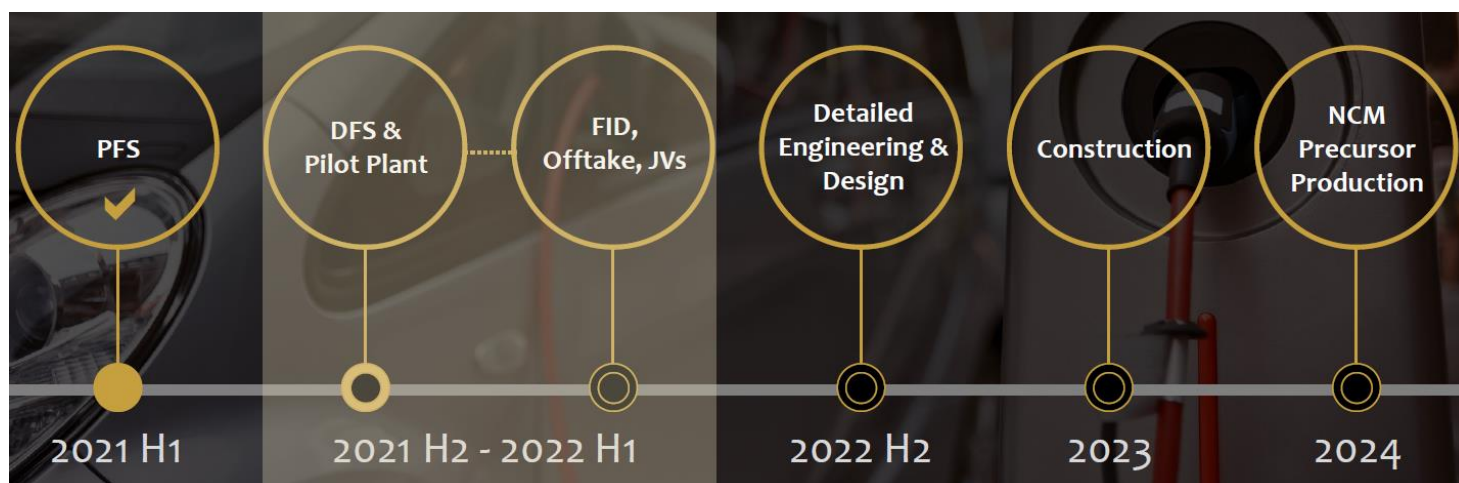
Source: Company reports

Figure 35: Upstream business milestones



Source: Company reports

Figure 36: Downstream business milestones



Source: Company reports

Ta Khoa Project History

1940s-60s: The Ban Phuc deposit was first discovered in 1945 and subsequent early exploration work conducted by Vietnamese geologists in the mid-1950s and early 1960s was initially focused on copper.

1990s-2000s: AMR Nickel Limited was established in 1993 and commenced modern exploration at Ban Phuc in 1996. The licence area, prior to 1993, was entirely owned and administered by the Vietnamese government. Asian Mineral Resources Limited listed on the TSX-V in April 2004 (90% of asset, now called Decklar Resources, DKL CN) and completed a diamond drilling program soon after, aiming to define a mineral resource at Ban Phuc.

2010s: The first phase of mining commenced in 2008 but global market conditions saw this soon cease. Construction recommenced in 2012 and the mine was brought into full-scale production during 2013 and completed in mid-2016. Previous exploration and mining almost entirely focused on the high-grade Massive Sulphide Vein (MSV) with ~80% of all drilling to date into Ban Phuc. In 2016 when the Ban Phuc Nickel mine was placed into care and maintenance, a total of ~381 holes had been drilled for ~61,894m (with ~ 310 holes for ~49,743m into Ban Phuc). The mine was never profitable as the finished product was a nickel concentrate (i.e. a 20% Gov't royalty) and nickel price was US\$8k/t at the time of closure (spot ~US\$19k/t).

2018 - Asian Mineral Resources' 90% ownership interest in the mine and supporting infrastructure was sold to Ta Khoa Mining. Ta Khoa was a company established by AMR's longstanding in-country senior manager and metallurgist, Stephen Ennor, in 2018.

2019/20 - Blackstone purchased the mine in 2019/20 and Steve joined Blackstone and now sits in the company's management team.

Blackstone's progress since acquiring Ta Khoa in 2019/20

Since acquiring the Ta Khoa Nickel Project in 2019/20 BSX has completed extensive modern geophysical targeting and exploration drilling on multiple disseminated sulfide (DSS) and MSV targets. The MSV targets are generally of the style that were mined from the Ban Phuc underground mine, and may present a district scale Nickel-Cu-PGE sulfide opportunity if further exploration continues to be successful.

In October 2020 BSX announced a maiden resource at its first target being the Ban Phuc DSS orebody. The maiden Indicated Mineral Resource of 44.3Mt @ 0.52% Ni for 229kt nickel underpinned a Scoping Study also released in October 2020. The Indicated Mineral Resource and Production Target have been reported in accordance with the JORC Code by a Competent Person.

The Ta Khoa Scoping Study considered a basis of 4Mtpa (and an upside case of 6Mtpa) mill feed rate from the Ban Phuc Disseminated Sulfide (DSS) deposit, producing approximately 200ktpa concentrate for feed to the downstream refinery. The Scoping Study Refinery produced a NCM811 product via a mixed hydroxide precipitate intermediate product.

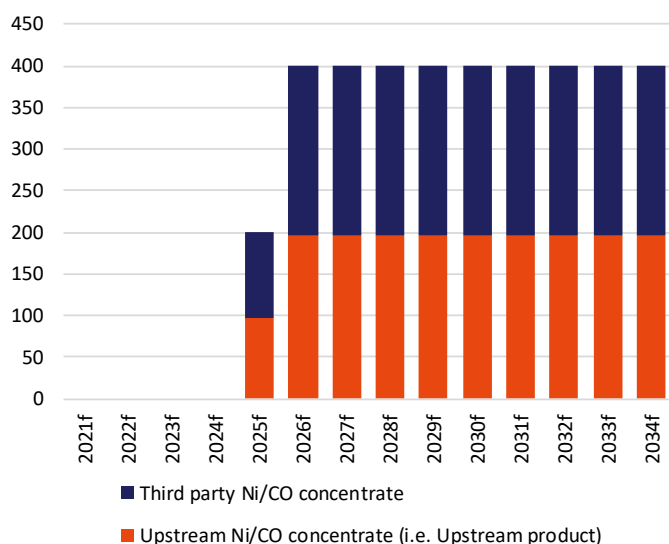
More recently, the company completed a Preliminary Feasibility Study for the Ta Khoa Refinery (TKR). The PFS considers an expanded downstream refining production strategy with no change to the upstream production.

The TKR treats 400ktpa (Base Case) nickel concentrate feed sourced from the Ban Phuc DSS deposit (~200ktpa as per the Scoping Study production profile) and Third Party Feed Sources making up the 400ktpa. This is how we base our modelling of a TKR development.

The TKR will prioritise feed from the Ta Khoa Nickel Project, including any successful exploration targets and Upstream Joint Venture (JV) partners, with top-up from third party feed where excess TKR capacity is available.

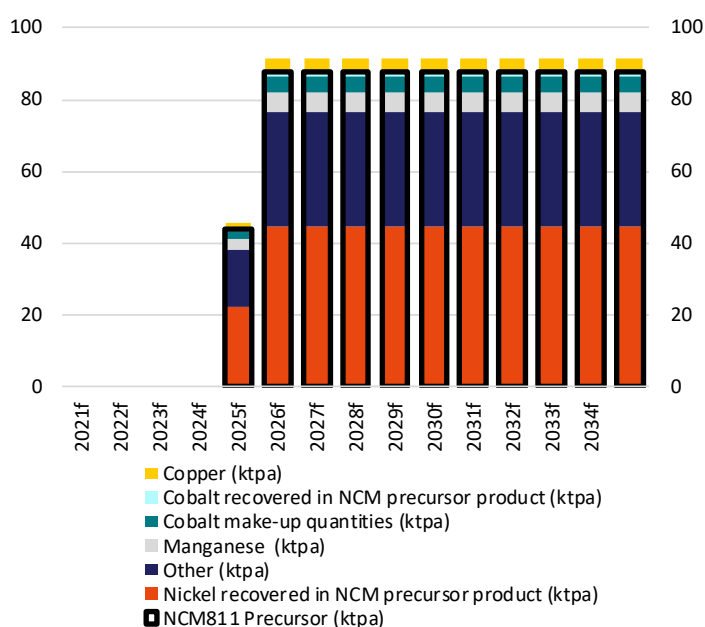
Indicative quantities and concentrate specifications have been received from all third party feed concentrate suppliers / partners included in the PFS. Based on current and confidential discussions, BSX is confident it can secure sufficient supply to meet the feed concentrate requirements. In addition, indicative demand for the company's downstream products appears to be underpinned by a rapidly developing global electric vehicle market.

Figure 37: Downstream – Ni/Co feed (ktpa, 11.5% Ni, 0.3% Co)



Source: Company data & Shaw and Partners analysis

Figure 38: Downstream - refining output (ktpa)



Source: Company data & Shaw and Partners analysis

Upstream – Geology and Mineral Resource

The Ban Phuc nickel mine operated as a modern mechanised underground mine for 3.5 years between 2013 and 2016, producing 20.7kt Ni, 10.1kt Cu and 0.67kt Co, before closing when the defined mineable reserves were depleted (and nickel prices ~US\$8k/t vs spot ~US\$19k/t).

There are two main Ni-Cu-PGE sulphide deposit styles in the Ta Khoa district:

- Massive Ni-Cu+PGE sulfide veins (MSV) associated with narrow ultramafic dykes or locally within sedimentary wall rocks. Zones of disseminated semi massive and stringer sulfides are associated with many massive sulfide veins. The Ban Phuc nickel mine exploited one of these massive sulfide veins adjacent to the Ban Phuc ultramafic body.
- Disseminated sulfide (DSS) deposits within larger ultramafic intrusions, of which the Ban Phuc ultramafic intrusion is the best known and hosts the Ban Phuc Disseminated Ni-Cu-PGE sulfide deposit. The Ban Phuc ultramafic intrusion is approximately 940 m long by 420 m wide and >400 m deep with two main disseminated sulfides zones, an outer and more extensive inclined boat hull-shaped zone and a smaller bean-shaped central zone. Indicated and Inferred Resources at a 0.3% Ni lower cut off are reported in Figure 39.

Figure 39: Ta Khoa Project Mineral Resource Estimate (JORC at a 0.3% Ni lower cutoff)

The Ban Phuc deposit is a large, near-surface disseminated nickel sulfide orebody amenable to bulk open pit mining with a prestrip requirement of approximately 25Mt and life of mine (LOM) strip ratio of 6.1:1.

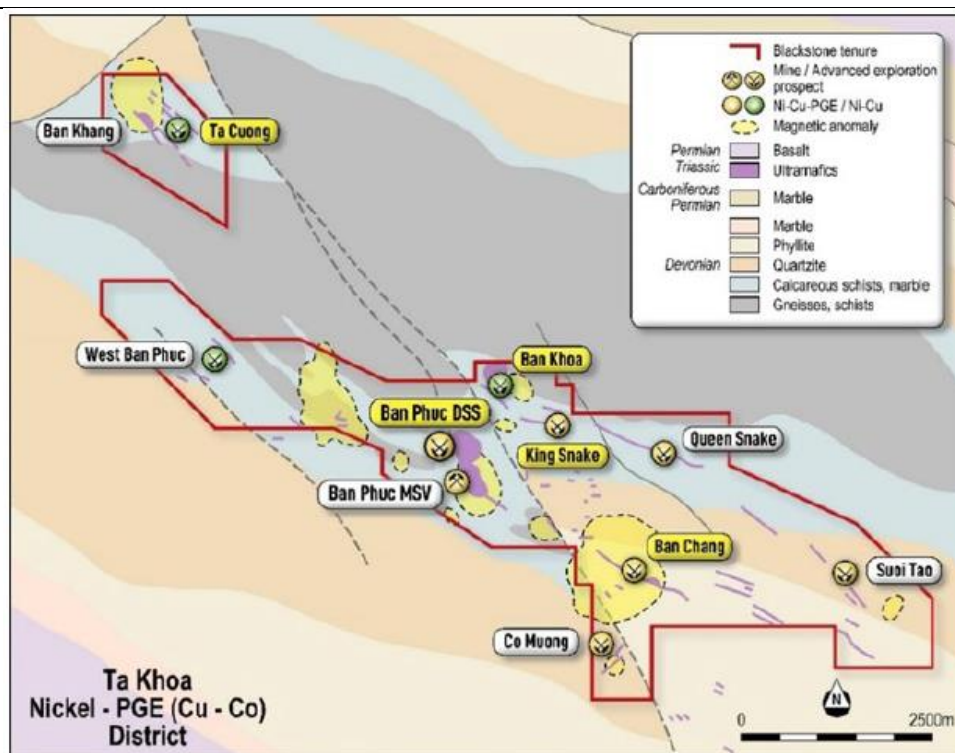
Category	Mt	Ni (%)	Cu (%)	Co (%)	Pd (g/t)	Pt (g/t)	S (%)	Ni (t)	Cu (t)	Co (t)	Pd (oz)	Pt (oz)
Indicated Resources	44	0.52	0.06	0.01	0.11	0.09	0.45	230,000	27,000	5,800	160,000	130,000
Inferred Resources	14	0.35	0.01	0.01	0.03	0.03	0.13	51,000	1,600	1,100	12,000	15,000

Source: Company reports

Figure 40: District scale nickel sulphide opportunity – Ta Khoa Project

The high-grade Ban Phuc Massive Sulphide Vein deposit was mined adjacent to the Ban Phuc Disseminated Sulphide deposit and remains underexplored at depths below the base of previous mining.

Many other MSV targets are within potential trucking distance of the existing 450ktpa Ban Phuc processing facility that was built to international standards, commissioned in 2013, and has been on care and maintenance since 2016.



Source: Company reports

Downstream - process flowsheet development

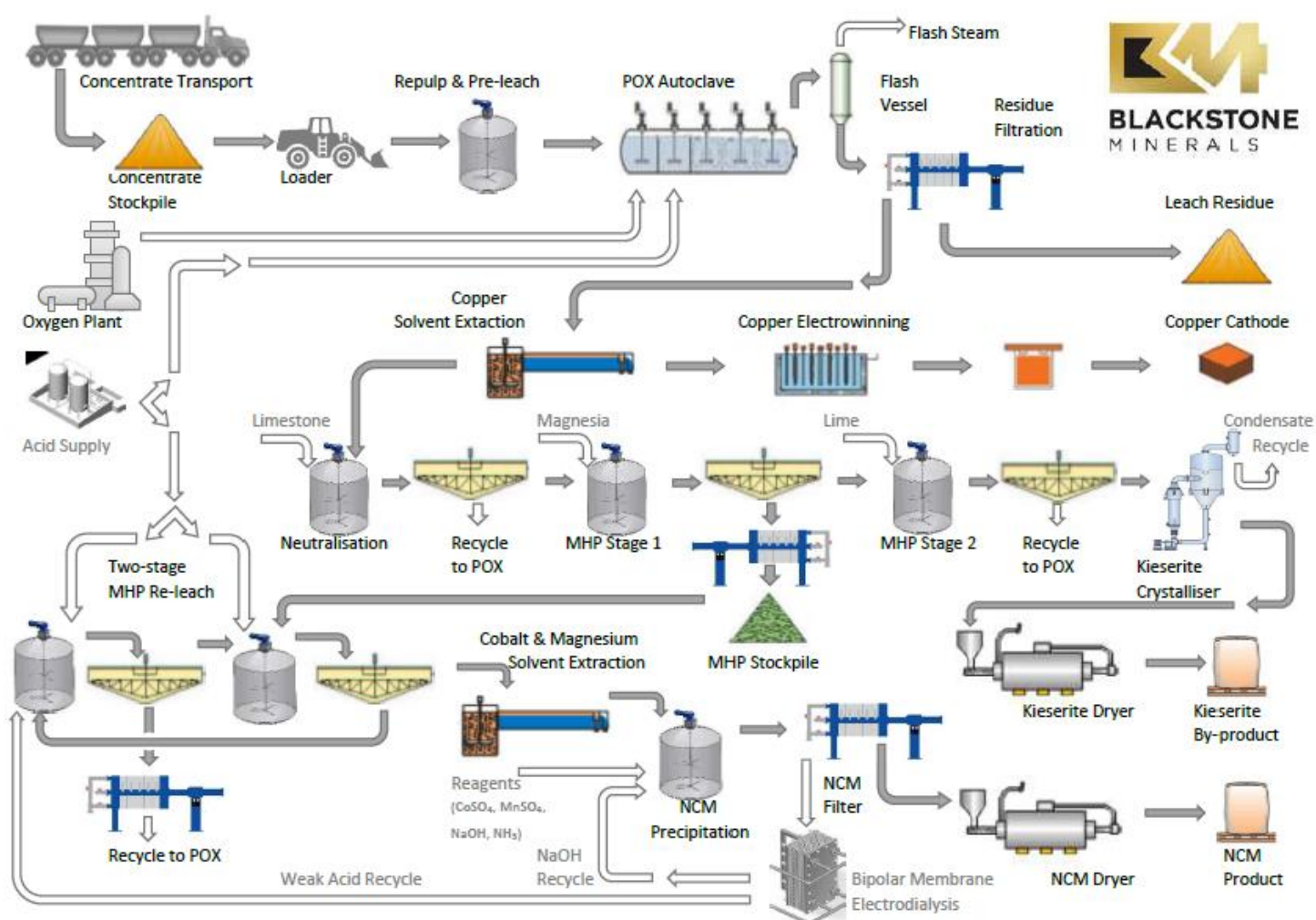
The PFS feed profile treats 400ktpa of nickel concentrates through two Pressure Oxidation (POX) autoclaves. This allows the hydrometallurgical TKR to have a higher tolerance of deleterious elements (MgO and arsenic) when compared to conventional pyrometallurgical operations.

Extensive testwork has been completed to date on a range of concentrate samples for the Ta Khoa downstream refinery. All major unit operations from concentrate input through to purified nickel sulphate solution in line with the 400ktpa PFS study. At this stage the flowsheet involves

- Pressure Oxidation
- Copper Solvent Extraction (CuSX)
- Neutralisation
- Mixed Hydroxide Precipitation.

The testwork completed to date has demonstrated the selected process flowsheet is able to produce high purity nickel products from Ta Khoa disseminated concentrate and a range of other nickel concentrates including when blended with Ta Khoa material.

Figure 41: Process flow diagram for downstream processing



Source: Company reports (PFS – July 2021)

Project piloting and flowsheet testing

BSX has planned two pilot plant phases for completion prior to full commercial production.

- Phase 1 Pilot Plant (PP1) - 20kg/hr Ni Concentrate feed (cost ~US\$2-3m - Shaw)
- Phase 2 Pilot Plant (PP2) - 1,000kg/hr Ni Concentrate feed (cost US\$40m - Shaw)

BSX has commenced development of the Phase 1 Pilot Plant in support of the upcoming DFS study. PP1 design to process 20kg/hr of nickel concentrate feed and will produce approximately 1.75kg/hr of nickel in NCM products. The circuit will be designed to produce various grades of NCM. Including 811 and 622. PP1 will be located at the Ban Phuc nickel mine and will have access to the existing power, water and air services, as well as the maintenance and operations personnel.

The Phase 2 Pilot Plant will support a detailed engineering design for a full commercial plant. PP2 will receive 1000kg/hr of nickel concentrates blend and will produce approximately 100kg/hr of nickel in NCM products. The circuit will be designed to produce various grades of NCM. PP2 will be located at the final selected location for the TKR. PP2 will be providing the detailed engineering design 1:25 scale of a full single train of the commercial plant.

Financial modelling assumptions and risks

We model the company broadly in line with the 2020 Scoping Study (upstream component) and Downstream Preliminary Feasibility Study released in July 2021. Key features of our modelling are outlined in Figure 42.

Figure 42: Key assumptions and metrics for the Ta Khoa Project

Upstream		Downstream		Shaw comment
Financials				The majority of the value (~80%) is in the downstream.
Fully diluted valuation (A\$ps)	0.18		1.34	
Project financials	SS (6ktpa)	Shaw	PFS	Shaw
Development Capex (US\$m)	247	250	491	490
NPV (US\$m) (nominal)	NA	193	2,010	1,397
IRR (%)	NA	25%	67%	52%
EBITDA (US\$m) (2021 Real)	NA	~60	~420	~410
EBITDA margin(%)	NA	32%	33%	29%
Project / mine life (years)	8	11	10	11
Sust. Capex (US\$/t BA equ.)				
Corporate tax (%)	20%		0% -> 5% yr 5 onwards	
Royalty	0.60/lb Ni conc product		NA	
Balance sheet recapitalisation assumptions				
Debt (US\$m)	400			
Equity (US\$m)	300			
Debt / Equity split	57% / 43%			
Peak gearing (ND / ND+E [%])	51%			
Steady state production				
Mill throughput (ktpa)	6,000		NA	
Nickel concentrate (ktpa)	200		400	
NCM 811 precursor (ktpa)	NA		~86	
Commodity price assumptions				
Metals prices	USc/lb		US\$/t	
	PFS	Shaw	PFS	Shaw
Cobalt	2,995	2,905	66,028	64,039
Copper	317	289	6,985	6,376
Nickel	827	716	18,230	15,777
Manganese sulfate (32%)	47	47	1,035	1,035
Cobalt sulfate (21%)	583	610	12,842	13,448
Concentrate and Precursor payability				
Nickel Concentrate payability	0.75			
NCM811 Precursor payability	1.2			
Concentrate and Precursor prices	USc/lb		US\$/t	
Nickel Concentrate (/ NCM811)	320	312	7,062	6,876
Nickel Concentrate (/ Ni conc.)	70	68	1,550	1,506
NCM811 Precursor (/ NCM811)	744	689	16,397	15,184

- The company is working on a PFS for the upstream, which is expected for completion 2H21. The U/S Scoping Study included a 200ktpa refinery, which renders the U/S economics largely irrelevant following the release of the D/S PFS.
- Our post-tax NPVs, IRRs and plateau production EBITDA for the D/S are lower than the PFS, primarily due to our commodity price assumptions - lower revenue from the NCM811 precursor.
- Our WACC assumption is broadly in line with the company - 10% Nominal vs BSX 8% Real.

We model funding for the Upstream and Downstream projects in one recapitalisation stage - FY23 - provided by a combination of debt/equity.
--

Consistent with the company.

Our metal price assumptions are slightly more conservative than the company. We note that our cobalt sulphate assumption is slightly higher than the company which leads to higher input prices for the refinery.

Broadly consistent with the company.

In line with our metal price assumptions, our Nickel concentrate price and NCM811 precursor price assumption is slightly more conservative than the company.
--

Source: Company reports, Shaw analysis

Figure 43: Ta Khoa Upstream financial model (6Mtpa ore feed) (US\$m)

The company is working on a Preliminary Feasibility Study (PFS) for the upstream, which is expected for completion 2H21. The U/S Scoping Study included a 200ktpa refinery, which renders the U/S economics largely irrelevant following the release of the D/S PFS.

Upstream - Ta Khoa (US\$m)	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
Nickel/ cobalt concentrate (kt)	0	0	0	98	196	196	196	196	196
Revenue	0	0	0	161	329	337	344	352	360
Expenses	0	0	0	111	226	230	235	239	244
EBITDA	0	0	0	50	104	107	110	113	116
D&A	0	0	0	11	22	22	23	23	24
EBIT	0	0	0	40	82	84	87	89	92
Net Operating Assets	8	133	208	250	234	218	201	184	167
Capex	8	125	75	53	6	6	6	6	6
EBITDA Margin (%)	0%	0%	0%	31%	32%	32%	32%	32%	32%
EBIT / Assets (%)	0%	0%	0%	16%	35%	39%	43%	49%	55%
Cobalt (US\$/t)	54,123	58,335	68,750	70,000	71,575	73,185	74,832	76,516	78,237
Copper (US\$/t)	8,300	7,683	7,108	6,970	7,127	7,287	7,451	7,619	7,790
Nickel (US\$/t)	17,334	16,723	16,863	17,245	17,633	18,030	18,436	18,851	19,275

Source: Company reports, Shaw analysis

Figure 44: Ta Khoa Refinery financial model (400ktpa Ni/Co feedstock) (US\$m)

Our post-tax NPVs, IRRs and plateau production EBITDA are lower than the company's PFS, primarily due to our commodity price assumptions - lower revenue from the NCM811 precursor.

Downstream business (US\$m)	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
NCM811 Precursor (ktpa)	0	0	0	44	88	88	88	88	88
Revenue	0	0	0	741	1,516	1,550	1,585	1,620	1,657
Expenses	0	0	0	528	1,079	1,103	1,128	1,153	1,179
EBITDA	0	0	0	214	437	446	457	467	477
D&A	0	0	0	21	44	45	46	47	48
EBIT	0	0	0	192	393	402	411	420	430
Net Operating Assets	48	293	391	525	500	475	448	422	394
Capex	48	245	98	156	19	19	20	20	20
EBITDA Margin (%)	0%	0%	0%	29%	29%	29%	29%	29%	29%
EBIT / Assets (%)	0%	0%	0%	37%	79%	85%	92%	100%	109%
NCM Precursor (US\$/t)	15,390	15,355	16,253	16,598	16,971	17,353	17,743	18,143	18,551
Nickel/cobalt concentrate (US\$/t (N	7,030	7,189	7,350	7,516	7,685	7,858	8,034	8,215	8,400

Source: Company reports, Shaw analysis

Figure 45: Company P&L summary (A\$m)

PROFIT & LOSS (A\$m)	2019	2020	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
U/S - Nickel/ cobalt concentrate (kt)							98	196	196	196	196	196
D/S - NCM811 Precursor (ktpa)							44	88	88	88	88	88
Upstream Revenue							215	439	449	459	469	480
Downstream Revenue							988	2,021	2,066	2,113	2,160	2,209
Revenue							902	1,845	1,886	1,929	1,972	2,017
Upstream costs							-147	-301	-307	-313	-319	-325
Downstream costs							-703	-1,439	-1,471	-1,504	-1,538	-1,572
Operating expenses							-851	-1,739	-1,778	-1,817	-1,857	-1,898
Admin & other expenses	-4	-9	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
Total costs	-4	-9	-10	-10	-10	-10	-861	-1,749	-1,788	-1,827	-1,867	-1,908
EBITDA	-4	-8	-10	-10	-10	-10	342	710	727	745	763	781
Depreciation & Amortisation	0	0	0	0	0	0	-43	-87	-89	-91	-93	-95
EBIT	-4	-8	-10	-10	-10	-10	299	623	638	654	669	685
Net Finance Expense	0	0	0	0	-33	-55	-57	-46	-20	7	32	55
Profit before tax	-4	-8	-9	-10	-43	-65	242	577	618	661	702	740
Income tax (expense)/benefit	0	0	0	0	0	0	-11	-22	-23	-25	-62	-70
Reported NPAT	-4	-8	-9	-10	-43	-65	232	555	596	635	640	671

Source: Company reports, Shaw analysis

Balance Sheet and Cash Flow

Currently no term debt and ~A\$14m cash

At the end of the Jun-21q the company had ~A\$14m cash and no debt (vs \$19m end Mar-21q). Key developments which have affected BSX's capital structure over the past ~18 months include:

- In December 2019, the company announced it had entered into a memorandum of understanding (MOU) with Korea's largest electric vehicle (EV) battery cathode manufacturer, EcoPro. The non-binding MOU outlines an alliance structure whereby EcoPro and BSX will work in partnership to develop a downstream processing facility associated with the Ta Khoa Nickel Project in northern Vietnam.
- In April 2020, Blackstone executed an option agreement to acquire AMR Nickel, a company controlled by Stephen Ennor's investment vehicle Ta Khoa Mining. AMR held a 90% interest in the Ta Khoa Project, the balance held by local partner COXAMA (a private Vietnamese industrial conglomerate with primary operations in Son La). To complete the transaction, BSX issued A\$1m shares to AMR i.e. 8.6m shares. Stephen Ennor maintains a position in BSX's management team (GM Project Development).
- In April/Jun 2020, over two tranches, the company issued 20m BSX shares to EcoPro with an issue price of \$0.1ps, for a total of A\$6.8m. Mr Hoirim Jung, was appointed to the Board of Blackstone Minerals, which he maintains.
- In September 2020, the company raised \$17.8m (before costs) through a placement of 42.4m shares at \$0.42ps to sophisticated and professional investors.

Requirement to raise A\$85m equity in FY22 in order to reach an FID 2HCY22

There are several activities required to be completed in the lead up to Final Investment Decisions for both the upstream and downstream Ta Khoa projects. These include

- Upstream and Downstream Definitive Feasibility studies (Shaw ~US\$7.5m each),
- 12-18 months of working capital - upstream drilling, phase 1 of the downstream pilot plant, general corporate expenses; Shaw US\$10m, and
- A second phase downstream pilot plant (Shaw ~US\$40m). *N.B. There may be an opportunity to recover some costs from the second phase of the downstream pilot plant via the sale of precursor products to offtake partners. We take a conservative approach and do not model any costs recovered.*

As such, we model an A\$85m (~US\$65m) equity raise for the company in FY22.

Requirement to raise ~A\$400m equity FY23 to sanction and develop

We believe the recapitalisation for a 6Mtpa (ore) upstream and 400ktpa (nickel concentrate) downstream development may come from four sources;

1. An equity raise.
2. Prepayment of a portion of the offtake.
3. Project finance – the Ta Khoa upstream and downstream projects are robust enough to support a project finance structure.
4. Corporate debt, potentially related to the project's 'green' credentials.

We assume an additional ~\$930m (\$530m/\$400m : 57%/43% : debt/equity) to re-capitalise the company in FY23. We believe this will fully fund the development and commissioning of a 6Mt (ore) upstream mine and 400ktpa (nickel concentrate feed) downstream refinery.

Figure 46: Shaw and Partners Balance Sheet recapitalisation assumptions - pre-production capital requirements of ~A\$1B.

Recapitalisation assumptions	WC / DFS / Pilot Plant	U/S & D/S funding (FID)
Assumed recap. year (FY)	FY22	FY23
Debt (A\$m)	NA	533
Equity (A\$m)	85	400
Debt / Equity split	NA	57% / 43%
Peak gearing (ND / ND+E [%])	NA	51%

Source: Company reports, Shaw and Partners analysis

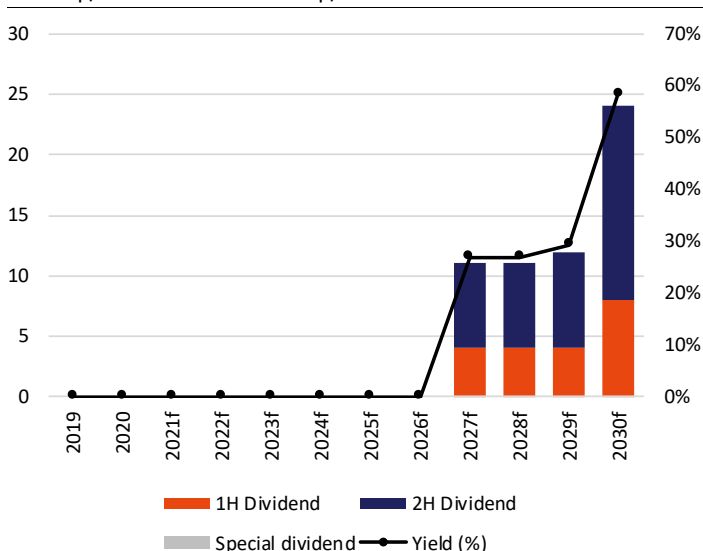
Gearing to peak at 51% in FY24

Using our base case commodity assumptions, this will leave BSX with gearing (ND / ND+E) of 51% at the end of FY24. Debt servicing ratios will be very strong once the company is at full production ramp-up (FY26). EBITDA / Gross Interest is 15x and Gross debt / EBITDA is 0.6x in FY26. Our forecast has BSX net cash in FY26.

In our view the company will be able to start paying dividends in FY27 and ramp up around FY30 as the company retires debt.

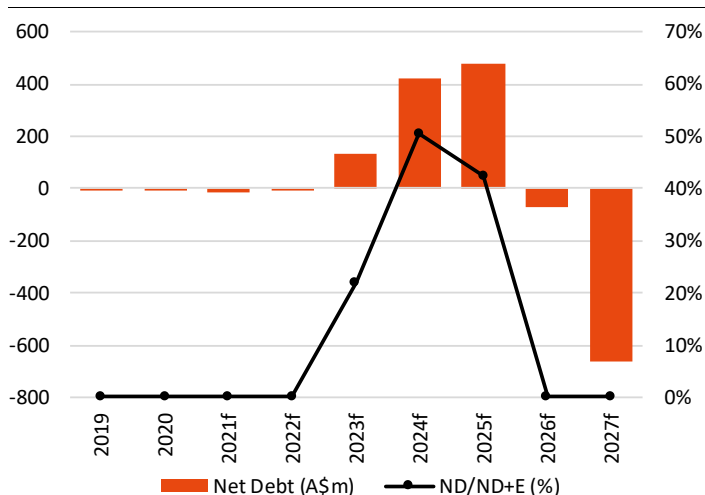
Figure 47: Dividends (Acps) & yield (%)

A 25% p/o ratio in 2027 -> 50% p/o ratio in 2030



Source: Company data & Shaw and Partners analysis

Figure 48: Net Debt (A\$m) & gearing (ND / ND + E, %)



Source: Company data & Shaw and Partners analysis

Figure 49: BSX Cash Flow (A\$m)

CASH FLOW (A\$m)	2019	2020	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
Operating activities												
Receipts from customers	0	0	0	0	0	0	1,203	2,460	2,515	2,572	2,630	2,689
Payments to suppliers and empl	-2	-3	-10	-10	-10	-10	-861	-1,749	-1,788	-1,827	-1,867	-1,908
Income taxes paid	0	0	0	0	0	0	0	-11	-22	-23	-25	-62
Working capital movement	0	0	0	-5	0	0	-65	-68	-3	-3	-3	-3
Net cash flow from operating activities	-1	-2	-9	-14	-43	-65	220	586	682	726	767	771
Investing activities												
Payments for PPE	0	0	0	-73	-493	-231	-279	-33	-33	-34	-35	-36
Net cash flow from investing activities	-3	-5	-5	-77	-482	-226	-277	-37	-38	-38	-39	-40
Free cash flow	-1	-2	-9	-87	-537	-295	-58	553	649	692	732	735
Financing activities												
Proceeds from issue of shares	2	14	21	85	400	0	0	0	0	0	0	0
Payment of capital raising costs	0	-1	0	-3	-10	0	0	0	0	0	0	0
Proceeds from borrowings	0	0	0	0	533	0	0	0	0	0	0	0
Repayments of borrowings	0	0	0	0	0	0	0	-100	-100	-100	-100	-100
Dividends paid	0	0	0	0	0	0	0	0	-56	-153	-153	-223
Other	0	0	0	0	0	0	0	0	0	0	0	0
Net cash flow from financing activities	2	13	21	82	923	0	0	-100	-156	-253	-253	-323
Net increase/(decrease) in cash	-3	6	7	-9	398	-290	-56	449	489	435	474	408

Source: Company reports, Shaw analysis

Figure 50: BSX Balance Sheet (A\$m)

BALANCE SHEET (A\$m)	2019	2020	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
Cash and cash equivalents	0	7	14	4	403	113	56	505	994	1,429	1,903	2,311
Trade and other receivables	0	2	2	0	0	0	99	202	207	211	216	221
Other	0	0	0	0	0	0	82	168	172	176	180	184
Total current assets	0	9	16	4	403	113	237	876	1,373	1,816	2,299	2,717
Property, plant and equipment	0	12	12	85	578	809	1,045	990	935	878	819	760
Exploration and evaluation expe	10	8	12	17	22	27	32	37	42	47	52	57
Total non-current assets	10	20	24	102	601	836	1,078	1,028	977	925	872	818
TOTAL ASSETS	11	29	41	107	1,004	949	1,315	1,904	2,350	2,742	3,171	3,534
Trade and other payables	0	7	7	0	0	0	117	238	244	249	254	260
Other	0	1	1	1	1	1	101	101	101	101	101	34
Total current liabilities	0	8	8	1	1	1	218	339	345	350	355	294
Deferred tax	0	2	2	2	2	2	13	24	25	28	64	72
Borrowings	0	0	0	0	533	533	433	333	233	133	33	0
Other	0	1	1	1	1	1	1	1	1	1	1	1
Total non-current liabilities	0	3	3	3	536	536	447	358	259	162	98	73
TOTAL LIABILITIES	0	11	11	4	537	537	665	697	603	511	453	367
NET ASSETS	11	18	30	103	466	412	650	1,206	1,747	2,230	2,718	3,167
Net debt	0	-7	-14	-4	131	421	477	-72	-661	-1,195	-1,770	-2,278
Gearing (ND/ND+E %)	0%	0%	0%	0%	22%	51%	42%	0%	0%	0%	0%	0%

Source: Company reports, Shaw analysis

Valuation and Price Target

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

Our undiluted DCF valuation is \$6.49ps for a 6Mtpa (ore) upstream and 400ktpa (nickel concentrate) downstream development. BSX is currently trading at a ~95% discount to this valuation. We note we apply a notional asset value of A\$35m for:

- the company's exploration targets at Ta Khoa,
- its gold exploration assets in British Columbia, Canada (the Gold Bridge Project), and
- its 46% ownership of Codrus Minerals (ASX:CDR, market capitalisation A\$13m @ A\$0.17ps).

In our base case forecast we assume that BSX will raise:

- A\$85m of equity in FY22 at a share price of A\$0.35ps in FY22 for the downstream pilot plant and upstream and downstream DFSs.
- A\$400m of equity in FY23 at A\$0.50ps for the upstream and downstream developments.

In Figure 52 we show a forward DCF valuation of BSX incorporating the two equity raisings. Our valuation drops to A\$1.90ps due to the dilution, but this is highly dependent on the price the additional equity is issued at.

Figure 51: DCF valuation – undiluted

Blackstone Minerals Valuation	US\$m	A\$m	A\$ps
Ta Khoa Upstream	193	257	0.77
Exploration / Other Upstream	26	35	0.11
Downstream Business Unit	1397	1,863	5.62
Net cash	10	14	0.04
Corporate costs	-11	-15	-0.05
Total Valuation	1,615	2,154	6.49

Source: Company reports, Shaw and Partners analysis

Figure 52: DCF valuation - diluted for ~A\$485m of equity raisings and the exercise of options

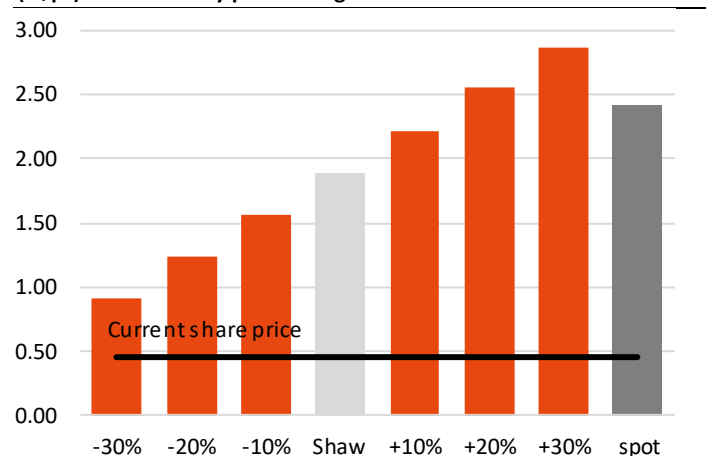
BSX Valuation - fully diluted	US\$m	A\$m	A\$ps
Ta Khoa Upstream	193	257	0.18
Exploration / Other Upstream	26	35	0.03
Downstream Business Unit	1397	1,863	1.34
Net cash	10	14	0.01
Cash from options & equity raise	364	485	0.35
Corporate costs	-11	-15	-0.01
Total Valuation	1,979	2,639	1.90

Source: Company reports, Shaw and Partners analysis

Given BSX is an industrial business much more leveraged to its downstream refinery than its upstream mine, it is largely a margin-based business leveraged to commodity prices. We use a commodity price deck the is slightly more conservative than BSX and broadly in line with consensus assumptions.

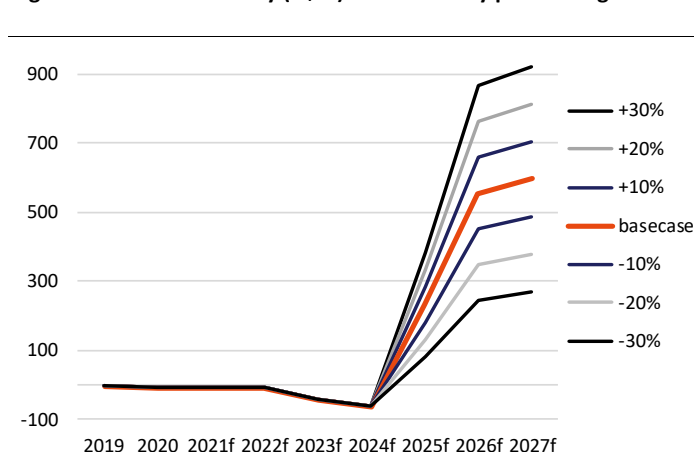
In Figure 53, we outline the BSX's DCF valuation at a range of commodity prices. Every 10% move in our commodity price deck impacts our DCF valuation by ~A\$0.33ps and adds ~A\$110m to NPAT and Free Cash Flow once at full scale production (FY26, Figure 54).

Figure 53: Blackstone Minerals fully diluted DCF valuation sensitivity (A\$ps) to commodity price changes



Source: Company reports, Shaw and Partners analysis

Figure 54: NPAT sensitivity (A\$m) to commodity price changes



Source: Company reports, Shaw and Partners analysis

Appendix A: Key Personnel

Board of Directors

Scott Williamson | Managing Director

Mr Williamson is a mining engineer with a Bachelor of Commerce degree from the West Australian School of Mines (WASM). Mr Williamson has over 10 years' experience in the mining and finance sectors across a variety of technical and corporate roles, recently Investor Relations Manager at Resolute Mining Ltd and a senior Analyst at Hartley's.

Hamish Halliday | Non-Executive Chairman

Mr Halliday is a Geologist with a Bachelor of Science from the University of Canterbury and has over 20 years of corporate and technical experience in the mining industry. Mr Halliday co-founded Blackstone Minerals and was instrumental in the acquisition of its Company's current tenement portfolio. Mr Halliday has been involved in the discovery and acquisition of numerous projects over a range of commodities throughout four continents. Mr Halliday has founded and held executive and non-executive directorships with a number of successful listed exploration companies including Adamus Resources Ltd. He was CEO of Adamus from its inception through to successful completion of a feasibility study on its gold project in Ghana which is now in production.

Andrew Radonjic | Non-Executive Director

Mr Radonjic is a geologist and mineral economist with over 30 years of experience in mining and exploration, with a specific focus on gold and nickel in the Eastern Goldfields of Western Australia. Mr Radonjic began his career at the Agnew Nickel Mine before spending over 15 years in the Paddington, Mount Pleasant and Lady Bountiful Extended gold operations north of Kalgoorlie, where he has fulfilled a variety of senior roles which gave rise to three gold discoveries, totalling in excess of 3 million ounces in resources and in the development of over 1 million ounces.

Alison Gaines | Non-Executive Director

Alison has 20 years of experience as a director in Australia and internationally. She is experienced in the roles of Board Chair and board committee chair, particularly remuneration and nomination and governance committees.

Hoirim Jung | Non-Executive Director

Mr Jung has over 10 years financial management experience, specifically in financing and feasibility studies for new projects. He began his career with KPMG Samjong Accounting Corporation, one of Korea's "big four" accounting firms, providing advisory services for various M&A transactions. He then moved to Atinum Partners, where he was involved in investments in the oil and gas industry and managed the invested assets in North America. He joined EcoPro in 2016 where his accomplishments include successfully dealing with the initial public offering of subsidiary EcoPro BM (KOSDAQ: 247540).

Management Team

Jamie Byrde | Chief Financial Officer and Company Secretary

Chartered Accountant with more than 16 years' experience in accounting, company secretarial and corporate advisory.

Patrick Chang | Head of Corporate Development

Master of Science Degree in Geology, a Master of Computer Science Degree and Chartered Financial Analyst. Previously Corporate Development Officer with ASX listed gold producer Medusa Mining.

Andrew Strickland | Head of Project Development

Experienced Study and Project Manager, Fellow of the Australian Institute of Mining and Metallurgy, BSc (Extractive Metallurgy), BEng (Chemical), MBA.

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

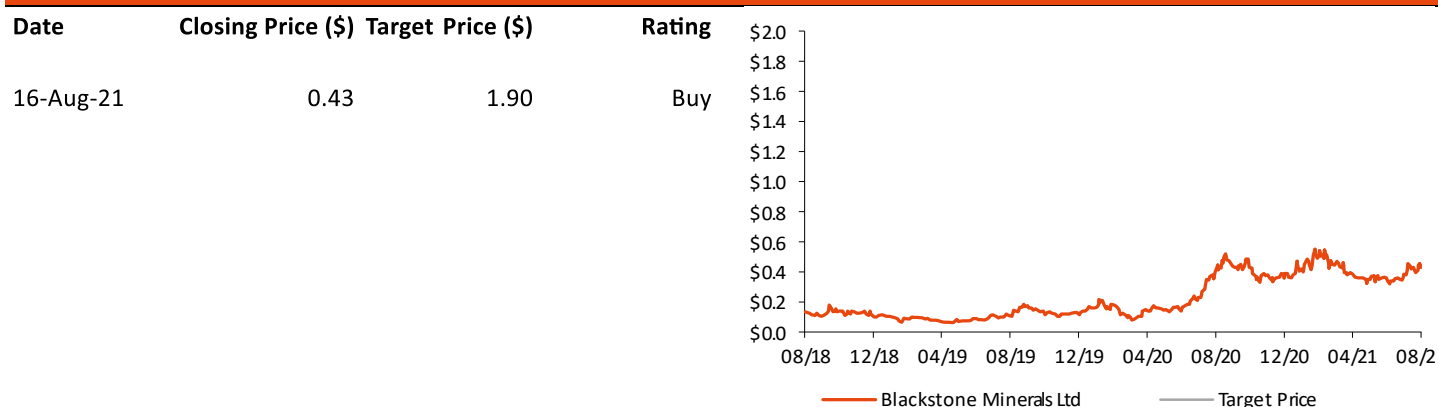
High	Higher risk than the overall market – investors should be aware this stock may be speculative
Medium	Risk broadly in line with the overall market
Low	Lower risk than the overall market

RISK STATEMENT: Where a company is designated as 'High' risk, this means that the analyst has determined that the risk profile for this company is significantly higher than for the market as a whole, and so may not suit all investors. Clients should make an assessment as to whether this stock and its potential price volatility is compatible with their financial objectives. Clients should discuss this stock with their Shaw adviser before making any investment decision.

Distribution of Investment Ratings

Rating	Count	Recommendation Universe
Buy	72	81%
Hold	15	17%
Sell	2	2%

History of Investment Rating and Target Price - Blackstone Minerals Ltd



Disclaimer

Shaw and Partners Limited ABN 24 003 221 583 ("Shaw") is a Participant of ASX Limited, Chi-X Australia Pty Limited and holder of Australian Financial Services Licence number 236048.

ANALYST CERTIFICATION: The Research Analyst who prepared this report hereby certifies that the views expressed in this document accurately reflect the analyst's personal views about the Company and its financial products. Neither Shaw nor its Research Analysts received any direct financial or non-financial benefits from the company for the production of this document. However, Shaw Research Analysts may receive assistance from the company in preparing their research which can include attending site visits and/or meetings hosted by the company. In some instances the costs of such site visits or meetings may be met in part or in whole by the company if Shaw considers it is reasonable given the specific circumstances relating to the site visit or meeting. As at the date of this report, the Research Analyst does not hold, either directly or through a controlled entity, securities in the Company that is the subject of this report, where they do hold securities those interests are not material. Shaw restricts Research Analysts from trading in securities outside of the ASX/S&P100 for which they write research. Other Shaw employees may hold interests in the company, but none of those interests are material.

DISCLAIMER: This report is published by Shaw to its clients by way of general, as opposed to personal, advice. This means it has been prepared for multiple distribution without consideration of your investment objectives, financial situation and needs ("Personal Circumstances"). Accordingly, the advice given is not a recommendation that a particular course of action is suitable for you and the advice is therefore not to be acted on as investment advice. You must assess whether or not the advice is appropriate for your Personal Circumstances before making any investment decisions. You can either make this assessment yourself, or if you require a personal recommendation, you can seek the assistance of your Shaw client adviser. This report is provided to you on the condition that it not be copied, either in whole or in part, distributed to or disclosed to any other person. If you are not the intended recipient, you should destroy the report and advise Shaw that you have done so. This report is published by Shaw in good faith based on the facts known to it at the time of its preparation and does not purport to contain all relevant information with respect to the financial products to which it relates. The research report is current as at the date of publication until it is replaced, updated or withdrawn. Although the report is based on information obtained from sources believed to be reliable, Shaw does not make any representation or warranty that it is accurate, complete or up to date and Shaw accepts no obligation to correct or update the information or opinions in it. If you rely on this report, you do so at your own risk. Any projections are indicative estimates only and may not be realised in the future. Such projections are contingent on matters outside the control of Shaw (including but not limited to market volatility, economic conditions and company-specific fundamentals) and therefore may not be realised in the future. Past performance is not a reliable indicator of future performance. Except to the extent that liability under any law cannot be excluded, Shaw disclaims liability for all loss or damage arising as a result of any opinion, advice, recommendation, representation or information expressly or impliedly published in or in relation to this report notwithstanding any error or omission including negligence.

Depending on the timing and size of your investment, your portfolio composition may differ to the model. Performance figures are derived from the inception date of the model and its investment transactions from that date, therefore the performance for your portfolio may be different. If you have any questions in connection with differences between your portfolio and the model, you should speak with your adviser.

IMPORTANT INFORMATION TO CONSIDER: It is important that before making a decision to invest in a Shaw Managed Accounts, a managed fund, an exchange traded fund, an individual hybrid security or listed debt instrument that you read the relevant Product Disclosure Statement ("PDS"). The PDS will contain information relevant to the specific product, including the returns, features, benefits and risks. The PDS can be found at: www.shawandpartners.com.au/media/1348/shawmanagedaccounts_pds.pdf.

RISKS ASSOCIATED WITH HYBRID SECURITIES: Hybrid securities and listed debt instruments differ from investments in equities and cash products in a number of important respects. The liquidity risk associated with an investment in hybrid securities and listed debt instruments will generally be greater than that associated with equities. The credit risk associated with hybrid securities and listed debt instruments is higher than that of a cash product or term deposit. Some hybrid securities may be perpetual in nature, meaning that they can only be redeemed or exchanged for cash or equity at the issuer's option. Hybrids may also contain terms which automatically trigger the deferral of an interest payment or cause the issuer to repay the hybrid earlier or later than anticipated. ASIC has published information to assist consumers in understanding the risks and benefits associated with an investment in hybrid securities or listed debt instruments. This information can be found under the heading 'Complex Investments' at www.moneysmart.gov.au/investing.

DISCLOSURE: Shaw will charge commission in relation to client transactions in financial products and Shaw client advisers will receive a share of that commission. Shaw, its authorised representatives, its associates and their respective officers and employees may have earned previously or may in the future earn fees and commission from dealing in the Company's financial products.

Sydney Head Office	Melbourne	Brisbane	Adelaide	Canberra	Perth	Noosa
Level 7, Chifley Tower	Level 36	Level 28	Level 23	Level 7	Level 20	Suite 11a Q Palace
2 Chifley Square	120 Collins Street	111 Eagle Street	91 King William Street	54 Marcus Clarke Street	108 St Georges Terrace	2 Quamby Palace
Sydney NSW 2000	Melbourne VIC 3000	Brisbane QLD 4000	Adelaide SA 5000	Canberra ACT 2600	Perth WA 6000	Noosa Heads QLD 4567
Telephone: +61 2 9238 1238	Telephone: +61 3 9268 1000	Telephone: +61 7 3036 2500	Telephone: +61 8 7109 6000	Telephone: +61 2 6113 5300	Telephone: +61 8 9263 5200	Telephone: +61 7 3036 2750
Toll Free: 1800 636 625	Toll Free: 1800 150 009	Toll Free: 1800 463 972	Toll Free: 1800 636 625	Toll Free: 1800 636 625	Toll Free: 1800 198 003	Toll Free: 1800 271 201