Chaarat Gold Holdings

CIS consolidator with a golden growth opportunity: initiate with 41p price target

We initiate coverage of Chaarat Gold Holdings ("CGH" or "Chaarat") with a price target of 41p per share implying 48% upside from the current share price. CGH leapfrogged from developer to producer with the acquisition of the Kapan mine in Armenia in Q1'19. This added to CGH's two gold projects in The Kyrgyz Republic: the Tulkubash oxide project, on which a revised bankable feasibility study was completed in Jun'19; and the larger, but more complex, Kyzyltash refractory sulphide project. From a ~65 kozpa AuEq run rate expected at Kapan in Q4'19E, Chaarat could add up to ~94 kozpa at Tulkubash, ramping up from FY21E. Beyond this, CGH has outlined an eventual 200-300 kozpa by the mid-2020s at Kyzyltash, transforming CGH into a mid-tier gold player.

Optimisation of Kapan to drive EBITDA and free cash flow generation

With the gold price having risen ~16% year-to-date, we estimate EBITDA generation from Kapan of ~US$11m in FY19E, assuming ~US$1,480/oz for the remainder of the year, ramping up to US$18m pa from 2021E on a gold price assumption of US$1,300/oz. On this conservative basis, we anticipate a solid US$10m in post-tax FCF from Kapan in 2019E, rising to a long-run average of ~US$13m pa. With Kapan buttressing both our base case valuation and the company's balance sheet, we see significant untapped optionality in the operation's excess processing capacity and extensive Resource base.

Upcoming catalysts as Tulkubash nears crucial project financing completion

Chaarat has agreed a JV, pending completion, with Çiftay, a Turkish mining and mine construction contractor, to progressively provide US$31.5m in funding in exchange for 12.5% of CGH's Kyrgyz projects. This leaves roughly US$80m to be raised for Tulkubash, with the company targeting a funding package by late 2019 or early 2020. Chaarat management's track-record of securing non-dilutive financing bodes well, in our view. Indeed, CGH announced in September 2019 that it has received a preliminary term sheet for debt funding "on acceptable and market terms" sufficient to cover the full budget. Once in production, we see Tulkubash generating average EBITDA of ~US$54m pa and FCF of ~US$44m pa on a US$1,300/oz gold price; we believe potential funders will be attracted by this robust free cash flow outlook and will see scope for improvement upon the BFS economics released in June 2019, with only 4km of a 24km mineralised trend included in the current Resource.

A platform for value-accretive growth, with highly-aligned leadership team

Chaarat is ~35% owned by management, closely aligning their interests with ordinary shareholders. Executive Chairman Martin Andersson holds ~34% via the Labro Investments vehicle, and has shown strong support through equity funding and provision of a debt facility at the end of 2018. Mr Andersson has a wealth of experience in the CIS natural resources and finance sectors, having advised on Russian privatisations in the 1990s. CEO Artem Volynets and CFO Chris Eger also have significant mining finance, M&A and commercial experience, while COO Darin Cooper's career has spanned mine management, construction and asset turnaround plans. We believe the US$50m deal for Kapan, which we value at US$100m+, displays management's ability to deliver a successful acquisition-led growth strategy in the CIS.

Valuation

The market is not placing enough value on CGH's growth potential, in our view. Once Tulkubash has fully ramped up in FY23E, we estimate an EV/EBITDA of just 3.3x. We believe short reserve lives at Kapan and Tulkubash have been a drag on valuation. Securing funding for Tulkubash and extension of mine lives at both key assets could therefore provide a catalyst for re-rating, in our view. Basing our model for Kapan on a 15-year mine life, rather than the current 5-years of reserves, and adding 5-years to the mine-life at Tulkubash, we derive a risked NPV for both combined of US$207m. We then apply a conservative US$20/oz multiple to the Resource at Kyzyltash, adjust for corporate G&A and deduct net debt to arrive at a sum-of-the-parts of ~41p per share.

GICS Sector	Materials
Ticker	AIM:CGH
Market cap 10-Sep-19 (US$m)	143.1
Share price 10-Sep-19 (GBp)	27.7
Target price 31-Dec-19 (GBp)	41

41p
DCF-based Dec'19E SOTP for Chaarat

>450kozpa
Potential total gold equivalent output from CGH's projects

H&P Advisory Ltd is a Retained Advisor to Chaarat Gold Holdings. The cost of producing this material has been covered by Chaarat Gold Holdings as part of a contractual engagement with H&P; this report should therefore be considered an "acceptable minor non-monetary benefit" under the MiFID II Directive.

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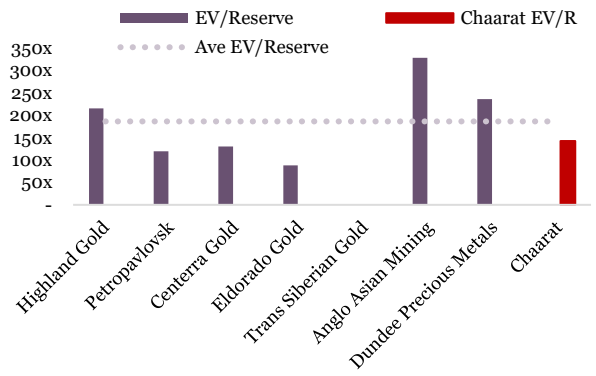
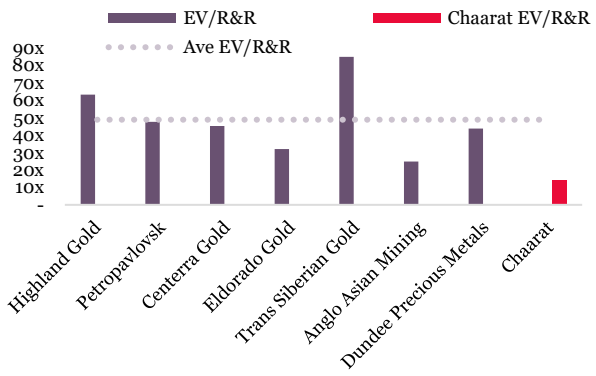
Key Charts

EV/gold equivalent Reserves (US$/oz)



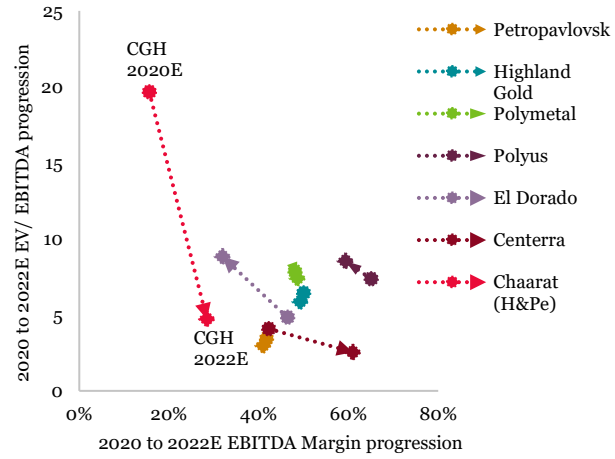
Source: SNL, CapIQ, Company reports. Priced as of close on 9th Sep 2019.

EV/gold equivalent Reserves+Resources (US$/oz)



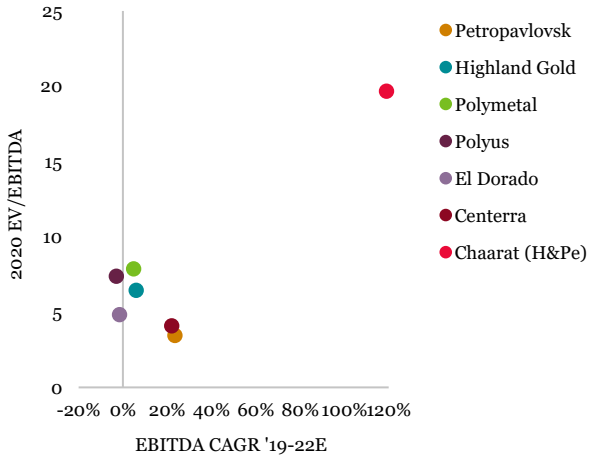
Source: SNL, CapIQ, Company reports. Priced as of close on 9th Sep 2019.

2020 -2022 EBITDA Margin vs EV/EBITDA



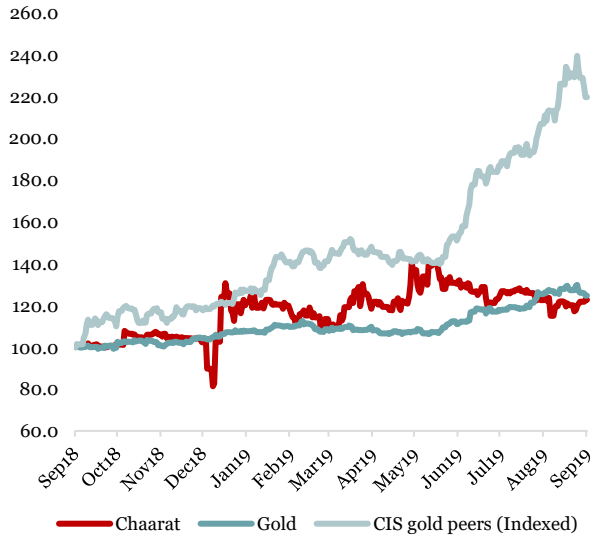
Source: CapitalIQ, H&P estimates. Priced as of close on 9th Sep 2019.

EBITDA CAGR vs 2020 EV/EBITDA



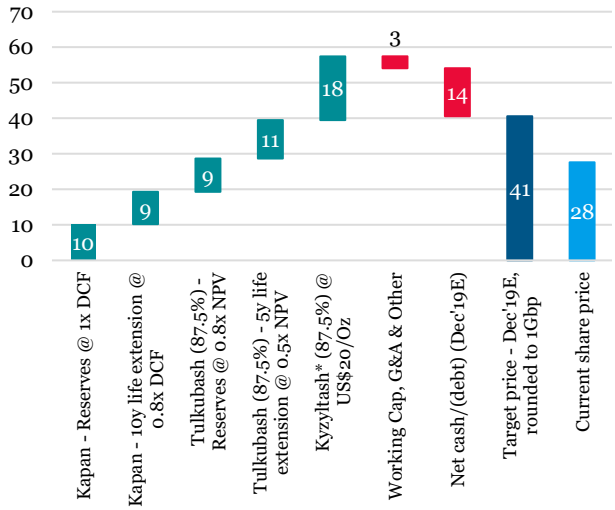
Source: CapitalIQ, H&P estimates. Priced as of close on 9th Sep 2019.

1-year share price performance vs gold vs CIS gold peers



Source: CapitalIQ

Derivation of 41p per share Dec'19E SOTP valuation



Source: H&P estimates

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Executive Summary

We initiate coverage of Chaarat Gold Holdings ("CGH" or "Chaarat") with a price target of 41p implying 48% upside from the current share price. Chaarat's key assets include the Kapan polymetallic mine in Armenia and the Tulkubash and Kyzyltash development projects in the Kyrgyz Republic.

Strong management vision and supportive shareholder base

Chaarat's vision is to become a leading, low-cost gold producer in the CIS through a combination of organic growth and selective M&A. The company's near-term strategy is to grow production in Kyrgyzstan via the technically straightforward, and easily expandable Tulkubash heap-leach project, whilst adding Resources through exploration in its wider Kyrgyz portfolio. Earnings growth is also being targeted through optimisation of the Kapan mine.

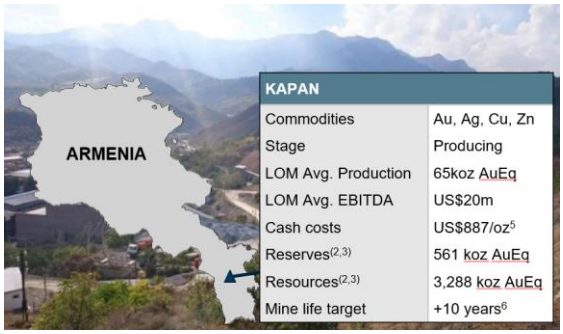
Chaarat's executive leadership team brings a strong combination of mining finance, M&A and commercial experience, along with operational expertise in mine construction and management. Management are also closely aligned with shareholders, owning a combined ~35% of the business.

Executive Chairman Martin Andersson holds ~34% via the Labro Investments vehicle, and has shown strong support through equity funding and provision of a debt facility at the end of 2018. Mr Andersson brings decades of experience in the CIS natural resources and finance sectors, having advised on Russian privatisations in the 1990s, before founding Brunswick Brokerage, a Moscow-based investment bank.

CEO Artem Volynets has significant experience in mining finance, M&A, commercial and management roles. In a career of over 20 years he has led private and public transactions worth more than US$30bn and founded Amur Capital Group Ltd, an advisory and investment management firm in 2014. CFO Chris Eger also has an impressive CV, having previously served as CFO of zinc producer Nyrstar NV and M&A Director at Trafigura AG.

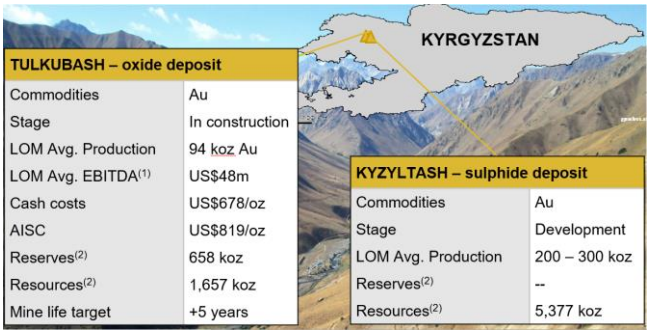
Meanwhile, COO Darin Cooper's career has spanned mine management, construction and asset turnaround plans. The US$50m deal for Kapan, which we value at US$70m+, displays management's ability to deliver a successful acquisition-led growth strategy in the CIS.

The Kapan mine is located in SE Armenia, close to borders with Azerbaijan and Iran



Source: Company presentation

Tulkubash & Kyzyltash, known collectively as the Chaarat Gold Project, are located in the NW of the Kyrgyz Republic

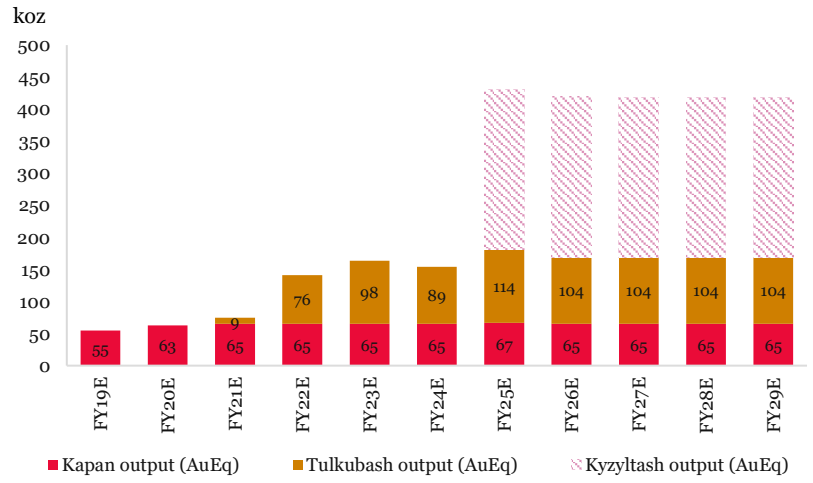


Source: Company presentation

Multi-asset producer with significant growth potential

Chaarat transitioned from gold developer to producer with the well-timed acquisition of the Kapan polymetallic mine in Armenia in Q1'19. This added CGH's two high-potential projects in The Kyrgyz Republic: the Tulkubash oxide project, on which a revised bankable feasibility study was completed in Jun'19; and the much larger and more complex Kyzyltash refractory sulphide project. Chaarat expects to reach a run rate of 65 kozpa AuEq at Kapan by Q4'19E. A further 94 kozpa is expected from Tulkubash, to be commissioned in FY21E, pending completion of project financing by year end 2019. While at a much earlier stage of development, Chaarat has outlined potential additional production of 200-300 kozpa from Kyzyltash in the longer-term, which would transform the company into a significant mid-tier gold player.

Chaarat Gold Equivalent production profile (koz)



Source: H&P estimates

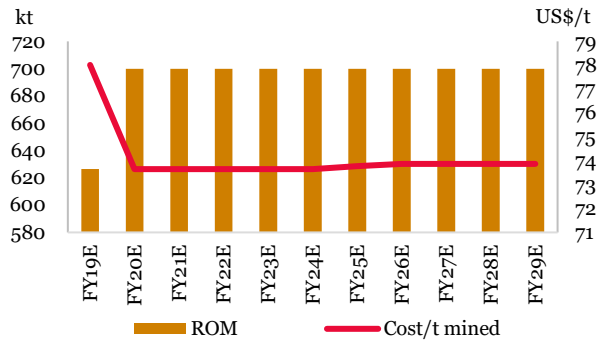
Kapan operational performance improving

Operations at Kapan have shown improvement in the first few months post-acquisition under Chaarat management. The company has already made significant progress in increasing RoM ore production and increasing milling rates, lowering costs per tonne of ore treated by 10% in the five months to June compared to the same period last year. Safety standards have also improved under a new safety management system, with contractors now subject to the same ESG requirements as direct employees.

Nonetheless, in its 29th July update, CGH acknowledged that Kapan has presented more operational challenges than was anticipated prior to acquisition. These issues appear to mainly centre around grade control, with RoM grades falling 14% YoY to 3.24g/t gold equivalent, versus a Reserve grade of ~4.3g/t. Ore tonnes mined, despite improving YoY, have also fallen short of the plant's expected milling rate of ~700ktpa due to a lack of availability of ore trucks, in turn the legacy of a lack of engine spares upon acquisition.

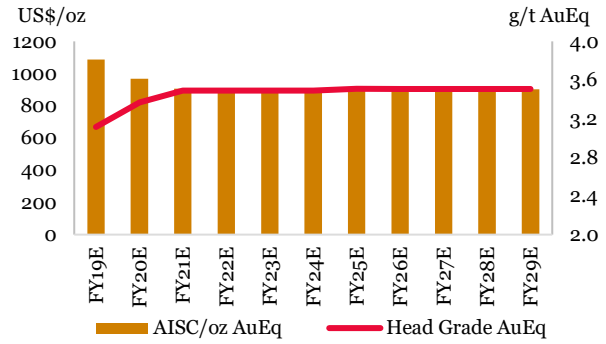
However, we returned from our site visit in May 2019 with confidence in the newly installed management team's ability to turn operations around. We expect cost per tonne of ore mined to continue to fall, with a reduction in unplanned dilution leading to improved head grades from 2020E onwards, albeit below the reserve grade.

Kapan annual tonnage vs cost per tonne of ore (H&Pe)



Source: H&P estimates

All-in sustaining cost per oz AuEq vs Head Grade g/t

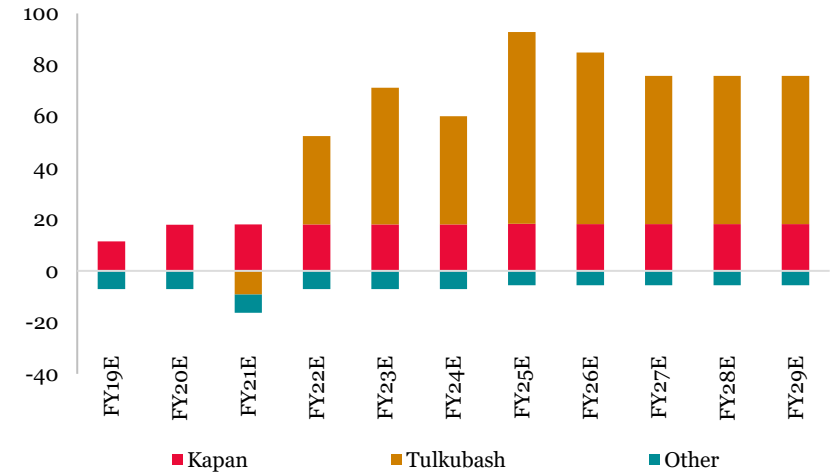


Source: H&P estimates

Kapan EBITDA and FCF to support expansion plans

We expect Chaarat will be able to overcome recent teething problems at Kapan to ramp up output to an expected 65kozpa (gold equivalent) production rate; at the same time, even if the company continues to drive down costs per tonne of ore processed, profitability will also be determined by RoM head grades. The extent to which these can be improved remains to be understood, with the company targeting the release of an updated Reserve estimate later in Q3. Nonetheless, with the gold price having risen 16% year-to-date, we estimate EBITDA generation from Kapan of ~US$11m in FY19E, assuming ~US$1,480/oz for the remainder of the year. Forecast EBITDA (post-royalties) rises to ~US$18m pa from FY20E onwards as we factor in unit cash costs falling to US$884/oz AuEq by FY21E from US$1,060/oz in FY19E, offsetting a falling trend in our gold price inputs towards our long-term assumption of US$1,300/oz. We estimate US$10m in FCF post royalties and taxes from Kapan in 2019E, rising to an average of ~US$13m pa over the remaining five-year Reserve-life. Beyond this, we expect 10-years of operations can be added to the end of the current 5-year Reserve life, based on conversion of Resources. (However, we risk these additional cash flows at 0.8x in our DCF-based target price derivation).

EBITDA breakdown by mine in US$m (H&Pe)



Source: H&P estimates

Spare plant capacity at Kapan offers optionality

Kapan is currently mining and processing ore at a rate of 700ktpa. However, the Kapan plant has available capacity to move to ~900ktpa of throughput, and could, for minimal capex, boost throughput further to 1.2Mtpa+ through the restart of idled mills. While underground mining rates would currently be a bottleneck on

any expansion, the spare capacity in the plant opens up options to add value through the processing of third-party ores, as is currently being trialled by CGH. Given the size of the Resource, the company could also look at options to expand Kapan's own mining capability, although this could prove more costly and would require further study. For the time-being we do not model any expansion in throughput from the 700ktpa rate.

Kyrgyz Projects: potential to create significant mid-tier gold player

Chaarat has a combined total of over 7Moz of gold in Measured, Indicated and Inferred Resources across two projects in The Kyrgyz Republic: the smaller Tulkubash oxide deposit with 1.66Moz M, I & I; and the larger Kyzyltash sulphide deposit with ~5.4Moz in M, I & I. As outlined below, Chaarat sees potential for these projects to deliver combined output of up to ~400 kozpa by the mid-2020s, subject to further feasibility work at Kyzyltash.

Summary of CGH Reserve & Resource base

		Grade					Contained Metal				
	Tonnes (Mt)	Au (g/t)	Ag (g/t)	Cu (%)	Zn (%)	AuEq (g/t)	Au (koz)	Ag (koz)	Cu (kt)	Zn (kt)	AuEq (koz)
Reserves:											
Kapan P&P (Jan'18)	4.1	2.10	40.00	0.44%	1.67%	4.3	274	5,194	17.4	67.7	557
Tulkubash P&P (Apr'19)	22.2	0.92	1.01			0.9	658	720			667
Total P&P Reserves	**26.3**	**1.10**	**7.01**	**0.07%**	**0.26%**	**1.45**	**932**	**5,914**	**17.4**	**67.7**	**1,224**
Resources:											
Kapan M&I (Jun'19)	8.9	2.67	53.38	0.61	2.45	6.2	764	15,275	54.4	218.0	1,775
Tulkubash M&I (Dec'18)	42.0	1.20				1.20	1,624				1,624
Kyzyltash M&I (Jan'18)	39.5	3.70				3.70	4,545				4,545
Total M&I Resources	**90.4**	**2.39**	**5.26**	**0.06%**	**0.24%**	**2.73**	**6,933**	**15,275**	**54.37**	**218.0**	**7,944**
Kapan Inferred (Jun'19)	8.7	2.3	50.78	0.56	2.07	5.42	641	14,164	48	180	1,513
Tulkubash Inferred (Dec'18)	2.3	0.46				0.46	33				33
Kyzyltash Inferred (Jan'18)	6.6	4.05				4.05	832				832
Total Inferred Resources	**17.6**	**2.66**	**24.99**	**0.27%**	**1.02%**	**4.20**	**1,506**	**14,164**	**48.298**	**180.0**	**2,378**

Source: Company reports

Centerra deal marks turning point in Kyrgyz risks

Despite its significant mineral potential, Kyrgyzstan has historically been seen as a frontier jurisdiction for mining investment. Other foreign mining groups investing in the country, most notably Centerra Gold, have faced disputes with the Government over taxes and royalties, accompanied by environmental lawsuits. Centerra's ownership of the Kumtor mine makes it the largest foreign investor, largest private sector employer and largest taxpayer in the Kyrgyz Republic. The relatively high-profile nature of Centerra's challenges has put off other western mining groups from investing in the country.

However, on 26th August, Centerra and the Kyrgyz Government announced completion of an important Strategic Agreement, settling all legal claims and detailing Kumtor's obligations to contribute to various environmental and social funds. The deal clears the way for renewed spending on Kumtor by Centerra, and, more broadly, shows the Government's willingness to come up with pragmatic solutions to encourage foreign investment to develop the Kyrgyz mining sector. This is a positive for Chaarat, in our view, as it looks to fund its growth projects in the country.

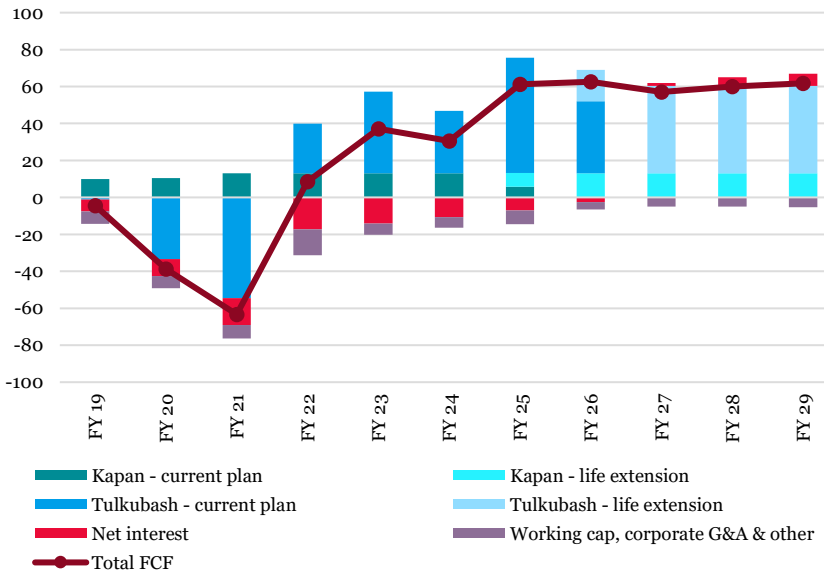
Tulkubash: simple heap-leach starter project with Reserve upside

Chaarat completed a revised bankable feasibility study on Tulkubash in June 2019, showing an NPV of US$70m (on a 5% WACC) and IRR of 20%. Due to its shallow, oxidised nature, the deposit lends itself to a simple open-pit mining and

heap-leach operation, employing tried-and-tested methods widely used in the gold sector. Upfront capex is estimated at US$110m, including US$10m contingency, for a ~5Mtpa operation, capable of producing ~94kozpa of gold over an initial 5-6 year life at an all-in sustaining cost (AISC) of US$819/oz pre by-products (or US$803/oz net of silver credits).

We see Tulkubash generating ~US$54m pa in EBITDA and ~US$44m in FCF on average from FY22E, using a gold price of US$1,300/oz in our model; we believe this robust cash flow outlook should allow a significant portion of the project to be funded with debt.

Free Cash Flow (US$m)



Source: Company reports, H&P estimates

Potential district scale opportunity

While the current Reserve-life is relatively short, we see ample scope for mine-life extension. The Reserve as it stands has only been derived from ~37% of the Measured & Indicated Resource. This in turn has been estimated based on drilling programmes covering only 4km of a 24km identified mineralised corridor. Chaarat published an exploration update on 28th August which showed potential to expand the existing pit shells and identified compelling new targets for drilling later in the season. Chaarat has so far completed 12,078m of an up to 20,000m drilling programme in 2019. Additionally, roadcut sampling from the development of roads in preparation for future drilling, to the northeast of the current resource boundary, has discovered high grades of gold outcropping at surface.

The assays and sampling results to date continue to support the hypothesis that Tulkubash could ultimately become a district scale operation, with multiple gold deposits feeding a significantly longer mine life than the 5-6 years delineated thus far. We, therefore, are confident that the ultimate value of Tulkubash will be considerably greater than the June'19 BFS suggested. Using a higher 8% WACC, we have derived a DCF (un-risked) of ~US$61m for CGH's 87.5% share of the initial 5-6 years of Reserves at Tulkubash. However, if we conservatively assume an additional 5-years of mine-life at similar grades and margins, this would add another ~US$113m in DCF-value.

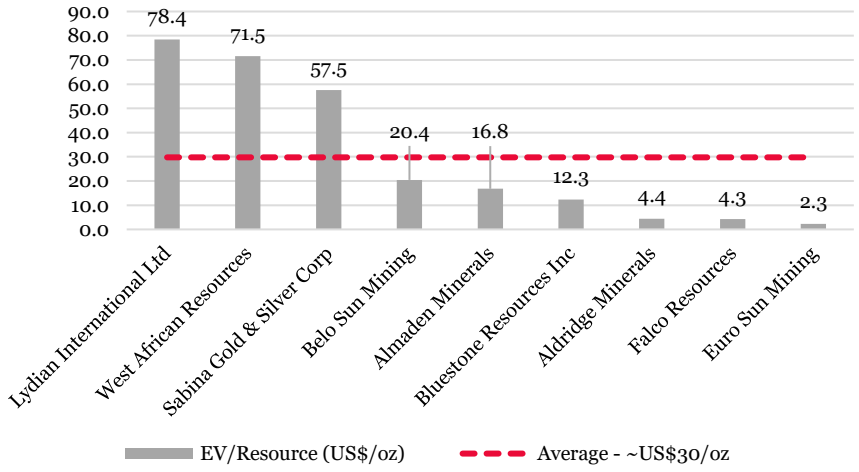
Blue-sky upside from Kyzyltash

The Kyzyltash project could ultimately prove to be the bigger prize for Chaarat in the Kyrgyz Republic, in our view. With a much larger 5.4Moz M, I & I Resource (of which 4.5Moz is Measured & Indicated), the company has outlined production potential of 200-300kozpa. While the project is adjacent to Tulkubash, the latest geological interpretation is that the Kyzyltash deposit is an entirely separate mineral formation, comprised mainly of refractory sulphide material.

There have been no published economic studies on Kyzyltash as a standalone project to date. Upfront capital intensity may be higher than at Tulkubash, as a pressure-oxidisation plant will be required to process refractory ore. As such, Kyzyltash will become a more viable prospect once cash flow from Tulkubash and Kapan has ramped up, de-risking CGH's balance sheet. However, we believe the ultimate value (and return on investment) this capex could unlock is likely to be greater than at Tulkubash, as Kyzyltash enjoys Resource grades nearly three times higher. Building a pressure oxidisation facility could also open up options to exploit other refractory deposits in the region.

We have valued Kyzyltash using an EV/M,I&I Resource multiple of US$20/oz. This implies a value of ~US$94m or 18p/share for Chaarat's 87.5% stake (assuming completion of the Çiftay JV). While we acknowledge the comparable universe of listed, purely exploration and development-focused gold companies is somewhat limited, the peers we have identified trade on an average of ~US$30/oz, i.e. in excess of the conservative target value we have applied.

Pre-production EV/M,I&I Resource comparables for Kyzyltash



Source: Company reports, H&P estimates. Priced as of close on 9th September 2019.

Funding Situation – near-term hurdles can be cleared

The steady cash flow base from Kapan should buttress the company's balance sheet as it looks to fund the ~US$110m initial capex budget required for Tulkubash over the next 2-3 years. To this end, Chaarat has signed a binding JV agreement with Çiftay, a Turkish mining and mine construction contractor, to progressively provide US$31.5m in funding in exchange for 12.5% of CGH's Kyrgyz projects. This leaves roughly US$80m in construction financing to be raised; the company is aiming to secure this by year-end 2019 or early 2020, allowing long-lead items to be ordered in time to keep the project on track for completion by the beginning of 2021E. On 11th September CGH gave an update on the Tulkubash financing process, announcing that it has received a preliminary term sheet for debt funding "on acceptable and market terms" which would be

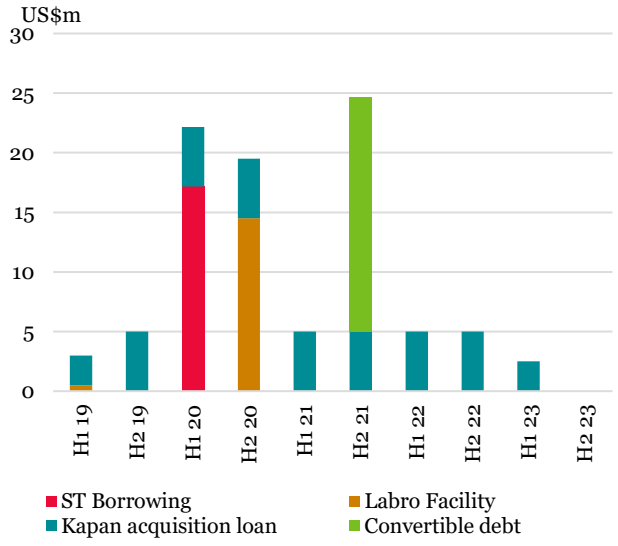
sufficient to cover the full budget. If confirmed, fully covering its share of the budget with debt would be another important achievement for Chaarat, materially de-risking the delivery of value from Tulkubash.

Aside from the Tulkubash funding process, CGH has sufficient headroom in the near term after the announcement on 11th September of an extension in the maturity of a US$10m short-term loan from August to 31st March 2020. The loan was also upsized by US$7m to US$17m, giving further breathing space in H2'19. This was secured with the help of a loan guarantee provided by Labro Investments, CGH's largest shareholder. We also estimate CGH has a further ~US$9.5m available from a debt facility lent directly by Labro Investments at the end of 2018. Overall, we estimate CGH will have a funding surplus of ~US$13m by the end of FY19E after deducting ongoing G&A and interest costs.

However, looking further out, CGH has ~US$19.7m in convertible bonds outstanding due in H2'21E, and the US$40m Kapan acquisition facility which is due to be repaid in quarterly instalments over four years to Q1 2023. Even assuming Kapan cash flows are available to service CGH's debt, we see a peak funding gap of around US$170m by the end of H1'22E arising from capital expenditures at Tulkubash and the repayment/servicing of debt (although this falls to ~US$158m if gold prices remain at US$1,500/oz). A large proportion of this gap is expected to be covered by a ~US$80m debt facility for Tulkubash as outlined above, and we expect the remainder could be covered by new debt facilities to refinance existing debts as they come due.

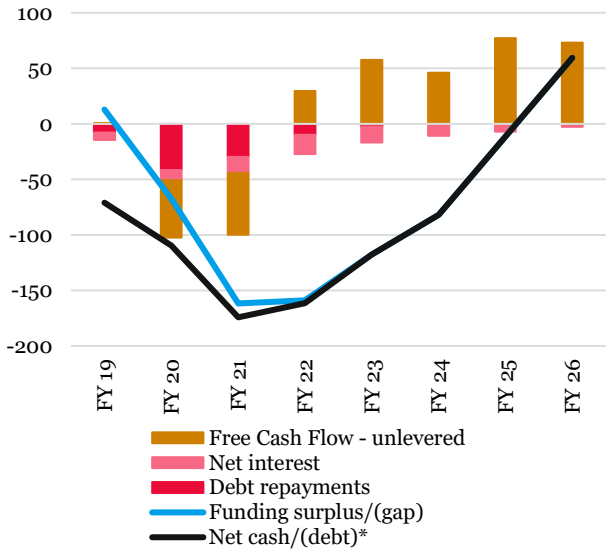
Once these near-to-medium term funding obstacles have been navigated, we see Tulkubash adding ~US$54m pa in average annual EBITDA to CGH from FY23E; this drives a robust cash flow outlook which should limit any equity dilution required. To put it another way, even on our conservative base case long-term gold price assumption of US$1,300/oz, we estimate Kapan and Tulkubash combined will generate (unlevered) cumulative free cash flow of over US$400m over the next 10 years, more than adequate to service an estimated debt balance of ~US$70m as of June'19E, plus the remaining US$80m capital required to build Tulkubash.

Chaarat debt repayment schedule (H&Pe)



Source: H&P estimates

Chaarat net cash/(debt) and funding surplus/(gap) versus free cash flow and debt service costs

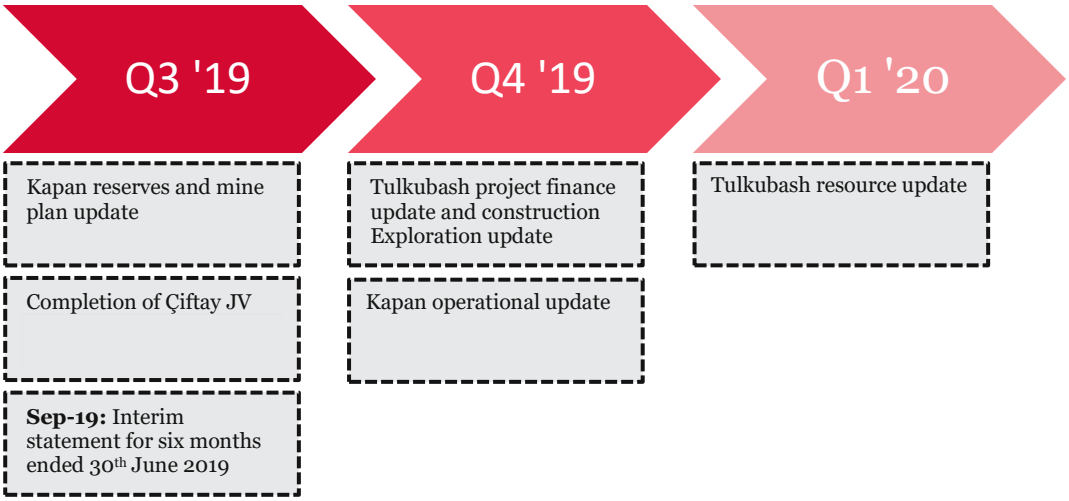


Source: H&P estimates. *Note: Net debt includes convertible notes as debt and assumes no new equity raised

Upcoming Catalysts

A reserve update at Kapan, expected in H2 '19, should provide more confidence in our DCF and drive further positive share price performance, in our view. Completion of financing at Tulkubash should also be a catalyst for us to increase our risk weighting to 1.0x, potentially boosting our SOTP by a further 10%. Meanwhile, any progress on conversion of Kyzyltash's significant inferred Resource to the measured or indicated categories could also provide a longer-dated catalyst.

Upcoming catalysts for Chaarat



Source: Company reports, H&P estimates

Valuation

Peer Group Comparisons

While Chaarat shares appear to trade at a premium to CIS peers on an FY20E EV/EBITDA of ~19.7x, the market is placing little value on the company's significant long-term growth potential, in our view. Once Tulkubash has begun to ramp up in FY22E, we estimate an EV/EBITDA multiple of just 4.7x on today's market cap, which falls further to 3.3x in FY23E, on our estimates, once the project has fully ramped up. This is based on a relatively conservative gold price assumption of US$1,300/oz and does not factor in any value for CGH's ~5.4Moz of Resource at Kyzyltash.

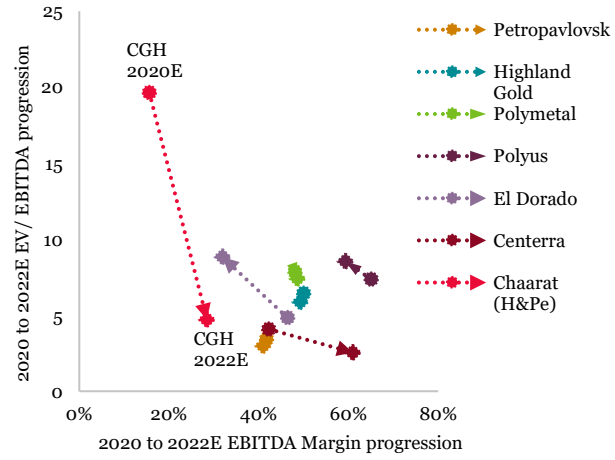
Chaarat Multiples vs Peers

	Market Cap ($mn)	P/E			EV/EBITDA			EBITDA Margin		
	2019	2020	2021	2022	2020	2021	2022	2020	2021	2022
Petropavlovsk	408	6.2x	6.2x	-	3.4x	3.1x	3.0x	42%	42%	41%
Dundee	724	7.7x	6.1x	-	3.7x	2.5x	-	39%	51%	-
Highland Gold	1,073	10.3x	10.8x	9.0x	6.4x	6.1x	5.9x	50%	49%	49%
Polymetal	6,717	10.7x	10.6x	9.9x	7.9x	8.1x	7.4x	48%	46%	49%
Polyus	15,147	9.0x	9.7x	9.7x	7.4x	7.3x	8.5x	65%	66%	59%
El Dorado	1,460	12.3x	46.7x	-	4.8x	7.6x	8.8x	46%	39%	32%
Centerra	2,474	8.3x	7.1x	6.8x	4.1x	3.9x	2.5x	42%	45%	61%
Anglo-Asian	223	21.6x	-	-	4.3x	-	-	56%	-	-
Trans-Siberian	134	12.3x	13.6x	-	4.6x	4.4x	-	49%	52%	-
Median		**10.3x**	**10.2x**	**9.3x**	**4.6x**	**5.2x**	**6.6x**	**48%**	**48%**	**49%**
Chaarat (H&Pe)	142	-	-	8.0x	19.7x	120.9x	4.7x	16%	2%	28%

Source: CapitalIQ, H&P estimates. Priced as of close on 9th September 2019.

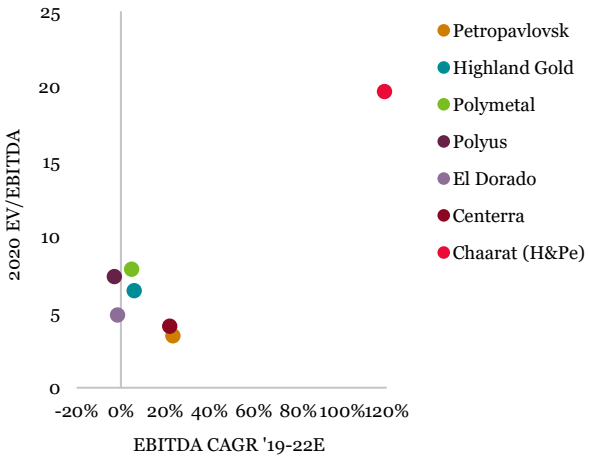
The scatter plots below highlight this – while CGH's 2020E multiples are high, they appear to be justified by the significant improvement in EBITDA margin and EBITDA in absolute terms over the following two years.

2020 -2022 EBITDA Margin vs EV/EBITDA



Source: CapitalIQ, H&P estimates. Priced as of close on 9th Sep 2019.

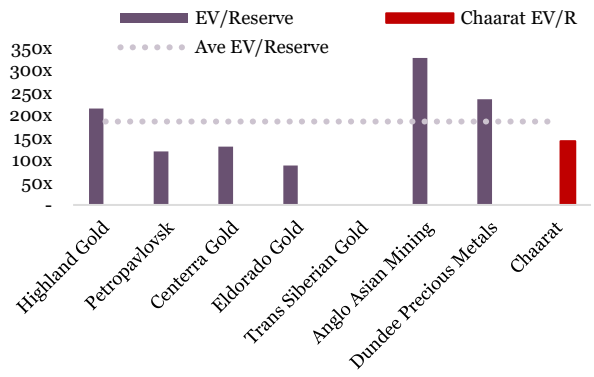
EBITDA CAGR vs 2020 EV/EBITDA



Source: CapitalIQ, H&P estimates. Priced as of close on 9th Sep 2019.

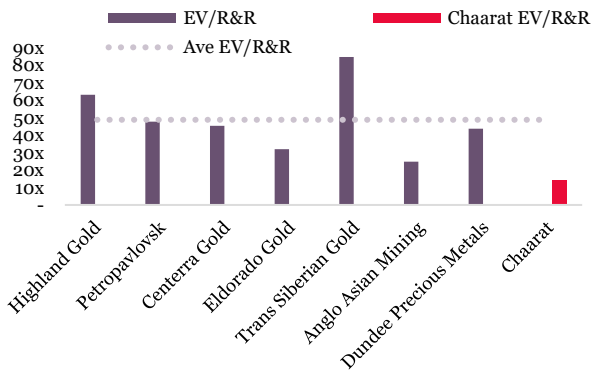
We believe relatively short reserve lives at both Kapan and Tulkubash have been a drag on Chaarat's valuation, providing an opportunity for re-rating on conversion of Resources to Reserves. Indeed, we calculate a relatively high EV/Reserve multiple of ~US$142/oz, but a steeply discounted EV/Resource of US$14/oz.

Peer group EV/Reserve multiples vs Chaarat (US$/oz AuEq P&P)



Source: SNL, Company reports. Priced as of close on 9th September 2019.

Peer group EV/Resource multiples vs Chaarat (US$/oz AuEq M,I&I)



Source: SNL, Company reports. Priced as of close on 9th September 2019.

SOTP valuation– 41p/sh at US$1,300/z, assuming mine life extensions

Extension of mine lives at both Kapan and Tulkubash could remedy the disparity between CGH's EV/Resource and EV/Reserve multiples, in our view.

As shown in our SOTP valuation below, we have derived a DCF for the current ~5 years of Reserves at Kapan of 10p/share, and a DCF for the Reserves at Tulkubash of 9p per share (risked at 0.8x due to the project's unfunded status). We use a discount rate of 8% and long-term gold price assumption of US$1,300/oz for both assets, and our forecast cash flows at Tulkubash are on an 87.5% attributable basis assuming ~US$31.5m of the capex budget will be covered by JV partner and construction/mining contractor Çiftay under the terms of their strategic investment.

However, given the size of the Resource at Kapan, and the mine's track-record of consistently converting Resources to Reserves to offset depletion, we assume the mine life will be extended by at least ~10 years, with similar throughput, grades and recoveries to the current operation. We estimate a DCF value for the Kapan life extension of US$60m (unrisked) or 9p/share (risked at 0.8x).

Similarly, at Tulkubash, the current 6-year Reserve life is derived from the current Measured & Indicated Resources, which only covers ~4km of a ~24km mineralised trend. We are, therefore, confident that at least 5 years of additional mine-life could be added at similar economics to those of the current reserve. These additional years post 2026E add ~US$113m in DCF value (unrisked) or 11p/share after applying a risk-weighting of 0.5x to account for the Tulkubash life-extension's early stage.

For Kyzyltash, we apply a conservative US$20/oz multiple to the ~5.4Moz of Measured, Indicated and Inferred Resources, contributing ~18p per share on an 87.5% attributable basis (assuming the JV with Çiftay is completed). This gives a total SOTP for CGH's assets of ~US$300m (as at Dec'19E).

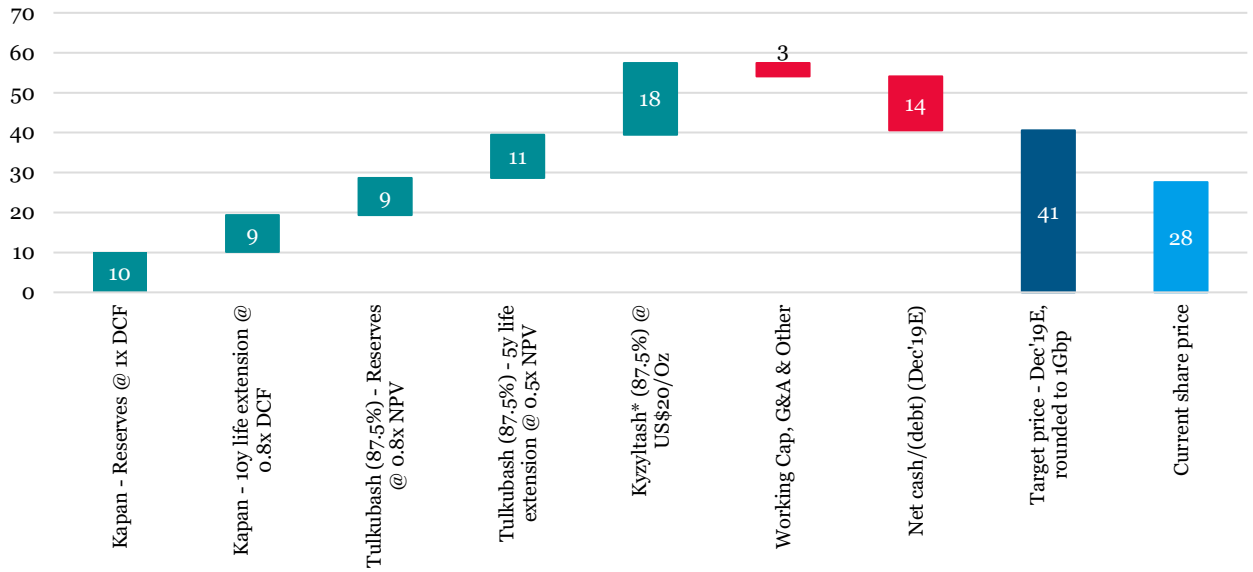
We then deduct US$18m for working capital and corporate G&A, and a further US$71m in estimated Dec'19E net debt. This leaves a sum-of-the-parts for Chaarat shares of US$212m or ~41p per share, implying 48% upside from the current share price.

Valuation / Price Target Derivation - Dec'19E

		Value	Target multiple	Target Value
Kapan mine - current Reserves	US$m	53	1.0	53
Kapan mine - 10y life extension	US$m	60	0.8	48
Tulkubash project (87.5%) - current Reserves	US$m	61	0.8	49
Tulkubash project (87.5%) - 5y life extension	US$m	113	0.5	57
Kyzyltash project* (87.5%)	US$m	M,I&I of 5.4Moz	US$20/Oz	94
Working Cap, G&A & Other	US$m	-18	1.0	-18
Net cash/(debt), incl convertible notes (Dec'19E)	US$m	-71	1.0	-71
Total	**US$m**			**213**
Shares out	m			419
USD/GBP FX	$/£			1.25
NPV / Target Price per share	**GBp**			**41**
Current share price	GBp			27.7
Upside/downside from current share price	%			48%

Source: H&P estimates, Company reports, CapitalIQ. *Note: Kyzyltash valuation based on EV/Resource Multiple of USD 20/oz Au Eq M,I&I. Priced as of close on 10th September 2019.

SOTP valuation breakdown for Chaarat (GBp per share)



Source: H&P estimates, Company reports, CapitalIQ. *Note: Kyzyltash valuation based on EV/Resource Multiple of USD 20/oz Au Eq M,I&I

Significant valuation upside if current gold price persists

The key drivers of Chaarat's profitability outside of the company's control include underlying gold prices, by-product metal prices such as silver, zinc and copper, as well as some key cost inputs such as TC/RCs, fuel and labour.

It almost goes without saying that by far the most important factor is the long-term outlook for gold. The table below outlines the sensitivity of our overall SOTP valuation to different long-term gold price and WACC assumptions. As shown, **if the current gold spot price of close to ~US$1,500/oz were to persist or move higher, the output of our SOTP valuation would rise by at least 32% or 13p per share to ~54p.**

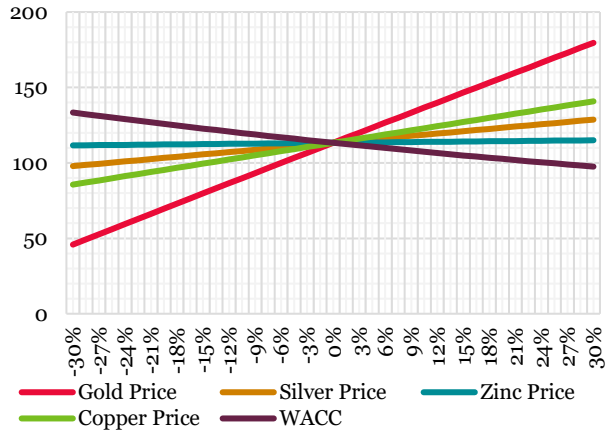
Dec'19E SOTP Valuation implied by different gold price and WACC inputs (GBp)

Long-term gold price (US$/oz)	WACC 5%	6%	7%	8%	9%	10%	11%	12%
1,100	30	27	25	23	21	20	18	17
1,150	35	32	30	27	25	23	22	20
1,200	40	37	34	32	29	27	25	24
1,250	45	42	39	36	34	31	29	27
1,300	51	47	44	**41**	38	35	33	31
1,350	54	50	46	43	40	37	35	33
1,400	59	55	51	47	44	41	39	36
1,450	62	58	54	50	47	44	41	38
1,500	67	62	58	**54**	51	47	44	41
1,550	70	65	61	56	53	49	46	43
1,600	75	70	65	61	57	53	50	47

Source: H&P estimates

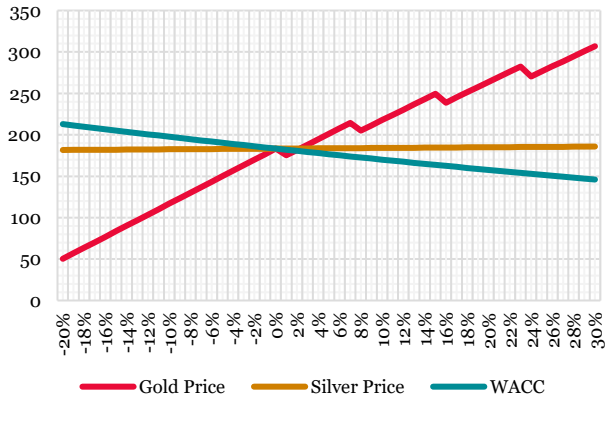
The charts below show the sensitivity of our FY19 NPV estimates to a decrease/increase in our assumptions from -30% to +30% for each of these key inputs in Kapan and Tulkubash, based on our DCF models including extensions to the Reserves at each of the assets. As expected, changes in our gold price assumption have the largest impact on both projects. For every 1% decrease in our US$1,300/oz long-term gold price assumption, Kapan's DCF value would fall by ~US$2.2m or ~2%, while at Tulkubash the downside sensitivity is ~US$6.6m or 3.6% for a 1% fall in gold price assumption.

Kapan DCF (including mine-life extension) in US$m – sensitivity to key inputs



Source: H&P estimates

Tulkubash DCF (including mine-life extension) in US$m – sensitivity to key inputs



Source: H&P estimates

Interestingly, while Kapan's DCF has a linear relationship to our long-term gold price input, this is not the case for Tulkubash above US$1,300/oz due to the Kyrgyz gold royalty regime. The royalty is subject to a top-up depending on the gold price, such that the overall royalty rate steps up if the gold price moves above a certain threshold. (See Tulkubash overview section for more details).

Fluctuations in silver and zinc prices will not significantly affect our DCFs, although Kapan's valuation is relatively sensitive to long-term copper price assumptions. As expected, the discount rates have an inverse relationship with the projected DCF; our base case assumption is an 8% WACC at each of the assets.

Risks

The risks to our valuation for Chaarat include:

- Downside risk to our valuation if gold prices drop below our expectations.
- The volatility of price in Silver, Copper and Zinc: These are the by-products included in the concentrate, and hence any price changes in these metals will cause a change in the expected cash flows.
- Exchange Rate uncertainty: As mining activities operate in Armenia and The Kyrgyz Republic, the fluctuation in exchange will result in transaction risks in operations and translation risks in the reported financial results.
- Our valuation is sensitive to the size and timing of operating and capital expenditures modelled for each of the company's operating assets.
- Evolving geopolitical environment: Any amendments in to regulations regarding tenure, licensing, royalties and taxation may have an adverse effect on the valuation. For example, the main mining law in The Kyrgyz Republic has been amended four times since 1992, and risks in the prolongation, suspension or termination of licenses could impact Chaarat's projects, and our valuation.
- Labour Disruption caused by local communities: Campaign groups may lobby to the government if they find the mining activities interruptive to the local community.
- Underground Mining Risk associated with Kapan: the company has systems to manage and minimise health and safety risks associated with underground mining on an ongoing basis. Other safety risks that affect the operation include avalanches and the effect of seasonal snow melt. In addition, head grades will be affected if dilution is greater than the expected level already factored into the company's reserves. Kapan also has a relatively short Reserve life. While the mine's historic track-record and the scale of its JORC Resources gives us confidence that the mine-life can be extended, the conversion of Resources to Reserves cannot be guaranteed.

Chaarat Gold – Corporate Overview

Chaarat Gold Holdings Ltd is an AIM-listed gold and base metals producer and developer, focused on the CIS. The company currently holds the Kapan operating mine in Armenia, the Tulkubash oxide and Kyzyltash sulphide gold projects in The Kyrgyz Republic, with both the Kyrgyz assets outstanding long-term development potential.

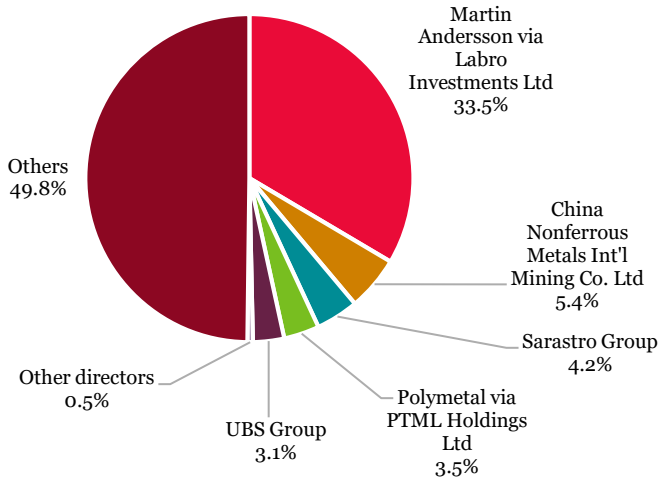
In late 2018, the company agreed the acquisition of the Kapan gold mine from Polymetal for a total consideration of US$55m (since revised down ~US$50m based on working capital adjustments and with Polymetal's acceptance of 14.6m shares instead of US$10m in convertible notes). The deal was completed in Q1'19, transforming Chaarat into a producer, with 65koz of gold equivalent output targeted for 2019. To achieve its vision of becoming a leading low-cost gold producer and sustaining organic growth, Chaarat is looking for selective and transformational M&A opportunities.

The corporate leadership team includes Executive Chairman Martin Andersson, who is also the largest shareholder through Labro Investments (~35%). CEO and board member Artem Volynets was appointed in March 2018. The Company's CFO Chris Eger was appointed in July 2018 while its COO Darin Cooper was appointed in June 2019.

At the local level in Kapan, operations are managed by General Director David Tovmasyan, appointed in late 2018. David was previously GM at Zangezur / Kadjaran mine, a large open pit copper-moly operation in the Kapan region, owned by Cronimet AG. He has also previously worked at Kapan under Dundee Precious Metals, at Freeport McMoRan, and Zangezur CMC.

Chaarat also has a highly capable team in The Kyrgyz Republic, led by Project Manager Davron Vakhabov. Mr Vakhabov has ~20 years of experience in green-field and brown-field mining projects, having previously held senior positions in the development of the Çöpler Gold Mine in Eastern Turkey, including subsequent plant and heap leach expansion projects. He was also a senior project team member during construction of Amulsar Gold Mine in Armenia.

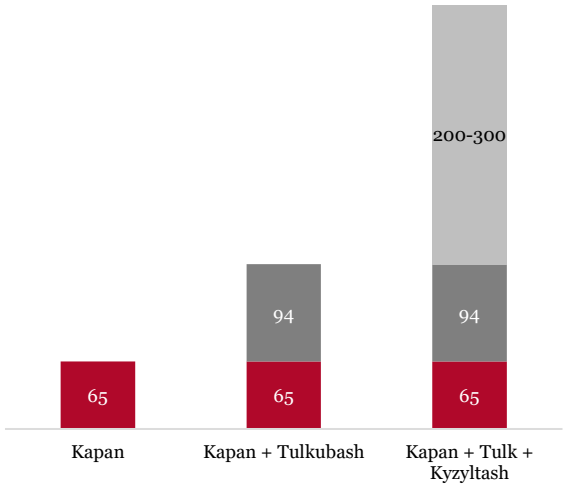
Chaarat Gold's significant shareholders



Source: Company website

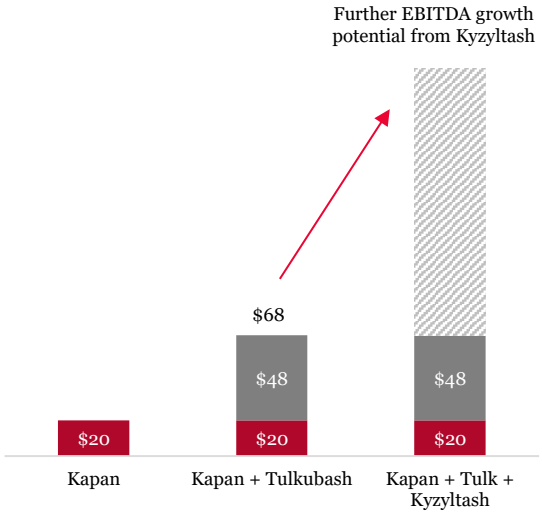
Chaarat Gold – guidance on performance metrics from key assets

LOM Average Gold Equivalent Production (koz AuEq)



Source: Company reports

LOM Average EBITDA (US$m)

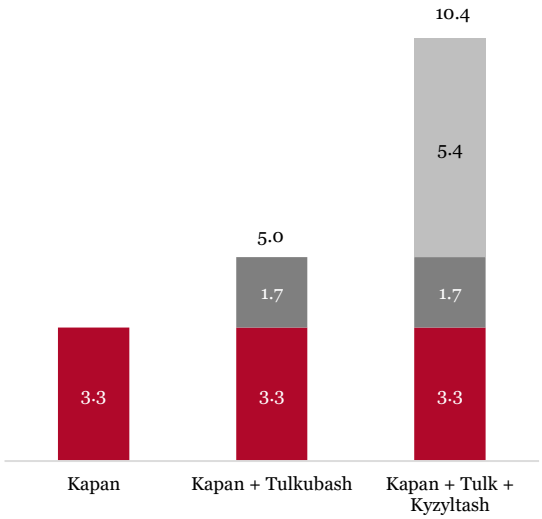


Source: Company reports

JORC P&P Reserves (Moz AuEq)

Source: Company reports

JORC M,I&I Resource (Moz AuEq)



Source: Company reports

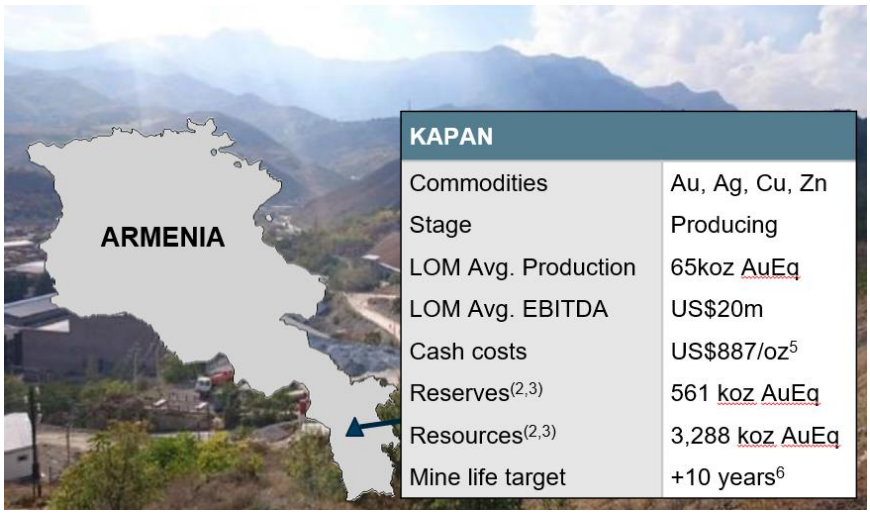
Asset overview: Armenia

Kapan

Location

The Kapan underground mine is located in the southeast corner of the former soviet state of Armenia, in the Syunik province, close to borders with Iran and Azerbaijan. The operation sits adjacent to the town of Kapan, approximately five hours by road from Armenia's capital, Yerevan, and ~860km by road from the Black Sea port of Poti in Georgia, from where Kapan's product is shipped. Chaarat holds a mining licence over the Shahumyan deposit at Kapan and a wider exploration licence covering ~90km².

Kapan Project Summary



Source: Company presentation

History

While mining in the Kapan area dates back to the 19th century, operations at the current plant site were established in the 1950s, with the exploitation of the Centralni copper deposit. This was supplemented in the late 1970s by the commencement of underground mining operations at the polymetallic Shahumyan deposit.

Mining at Centralni ceased in ~2010 while Kapan was under the ownership of Canadian-listed Dundee Precious Metals. Although the underground mining of Shahumyan continued, Dundee shelved plans for an open pit, and sold the operation to Polymetal in April 2016 for US$10m cash, $15m in shares and a 2% NSR royalty.

Polymetal is estimated to have invested ~US$35m in Kapan before agreeing to sell the asset to Chaarat in Jan 2019 for US$55m, comprising US$45m in cash and US$10m in convertible notes. The final consideration was later revised to US$50m, based on working capital adjustments, as Polymetal agreed to accept ~14.6m shares, worth ~US$5m, in exchange for the convertible notes. As part of the deal, it was agreed that Chaarat would not have to take on the liability associated with the royalty agreement obligation between Polymetal and Dundee Precious Metals Inc in relation to Kapan.

Kapan Project – Site overview

Source: Company presentation

Management

Kapan operations are managed by General Director David Tovmasyan, appointed in late 2018. David is an Armenian American who was previously GM at Zangezur / Kadjaran mine, a large open pit copper-moly operation in the Kapan region, owned by Cronimet AG. He has also previously worked at Kapan under Dundee Precious Metals, as well as with Freeport McMoran in Arizona.

Kapan's management structure has been revamped since David's arrival, with multiple deputies removed and the appointment of directors/managers for each of the key areas reporting directly to the General Director. David has also committed to improving safety, appointing a British safety manager, Trevor Matthews (formerly at Dalradian), the only ex-pat at the operation.

Other areas of focus are development of more robust mine plan, improving unplanned dilution, and a review of the tailings dam (SRK have been appointed to undertake a technical review of the tailings storage facility).

Kapan mine: Resources & Reserves

Kapan is a polymetallic mine, and the products primarily include gold with significant copper, silver, zinc by-products.

Kapan's Measured & Indicated Resources as at Jan 2018 stood at 1,178koz gold equivalent (inclusive of Reserves) plus 1,610koz in the Inferred category. This is based on an M&I Resource tonnage of 6.44Mt of ore grading 2.8g/t gold and 5.7g/t gold equivalent; and 8.22Mt of Inferred ore grading 2.9g/t gold and 6.1g/gold equivalent.

Proven & Probable Reserves at Jan 2018 stood at 562koz gold equivalent. [4.07Mt at 2.1g/t Au and 4.3g/t Au eq]. The current reserve is expected to last until ~2023-24, but management believes that this can be extended through conversion of current resources, and discovery of additional resources proximal to the current mine workings.

Kapan Reserve & Resources- 1st Jan 2018							
Category	**Tonnes (Mt)**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**	**Zn (%)**	**Au Equivalent (g/t)**	**Contained Metal Au (thousand troy oz)**
Total Proven & Probable Reserve	4.07	2.1	40	0.44	1.67	4.3	562
Total Measured & Indicated Resources	2.37	4	74	0.81	3.1	8	609
Total M&I Resources and Reserves	**6.44**	**2.8**	**52**	**0.58**	**2.2**	**5.7**	**1,178**
Total Inferred Resources	8.22	2.9	63	0.67	2.3	6.1	1,610

Source: Company reports

In July 2019, Chaarat provided a Resource update for Kapan, with increased M&I tonnages but at a lower grade than previously reported. We understand this was due to two factors – firstly the previously Inferred Resources which were converted to Measured & Indicated were of a lower grade in general, and secondly the previous Resource estimate was over-reliant on underground channel sampling which created a positive grade bias.

Kapan Resources- 10th June 2019												
Cut-off 2.5g/t AuEq			**Grade**					**Metal**				
Class	**Tonnes (mt)**	**Density**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**	**Zn (%)**	**AuEq (g/t)**	**Au (koz)**	**Ag (koz)**	**Cu (t)**	**Zn (t)**	**AuEq (koz)**
Measured	0.65	3.05	4.01	74.88	0.88	3.44	9.01	83	1,550	5,645	22,167	186
Indicated	8.27	3.02	2.57	51.70	0.59	2.37	5.99	681	13,725	48,726	195,835	1,589
M&I	**8.92**	**3.03**	**2.67**	**53.38**	**0.61**	**2.45**	**6.2**	**764**	**15,275**	**54,370**	**218,002**	**1,775**
Inferred	8.69	3.02	2.3	50.78	0.56	2.07	5.42	641	14,164	48,298	179,995	1,513

Source: Company reports

Chaarat intends to release an updated Reserve for Kapan later in Q3. We do not believe the lowering of the Resource grade should be read as having negative implications for the upcoming Reserve grade estimate.

However, as we describe later, we understand that Chaarat has experienced greater than expected mining dilution at Kapan since taking on the operation in Feb 2019, and so a reassessment of the modifying factors on the Resource could impact on Reserve grades. As such, we have built our production estimates for Kapan on the assumption that head grades will continue to be in the 3.2-3.5g/t (AuEq) range, undershooting the last published Reserve grade of 4.3g/t AuEq.

Infrastructure

The mine and plant are located outside the town of Kapan, the regional capital. The main road to Kapan, although steep and winding, is fully tarmacked and passable by heavy trucks. Nonetheless, on our May 2019 site visit, certain sections were in a state of relative disrepair, which could impact viability of trucking during winter months. The site elevation is around 800m above sea level.

Electricity on site is sourced from the Russian-owned Electric Networks of Armenia, providing relatively consistent grid power. Power is not expected to be a constraint to operations at current production rates.

Process water is 85% supplied by water pumped from the mine and water reclaimed from the tailings dam, with the remaining 15% sourced externally. Tailings water has the advantage of being mildly alkaline, which is helpful when it is reintroduced to the floatation circuit.

Mining operations

Kapan / Shahumyan is a narrow-vein underground operation, currently capable of producing ~700ktpa of ore using long-hole open stoping. Underground access is via two 5x5m declines, the north and south decline, with a fleet of 20-tonne and 30-tonne underground ore trucks. The bottom of the declines is currently ~200m below surface.

The ore is accessed via the development of 4x4m cross cuts, followed by 3x3m vein drives using drill and blast. Stopes are then mined using overhead long hole blasting, with mining widths ranging from ~1.8m-2.6m. Mined out stopes are later back-filled with waste rock.

Minimum vein widths can be as low as ~0.6m, leading to relatively high planned dilution within the Reserve (~64%), not uncommon for these kinds of ore bodies. However, on our site visit in May 2019, mining operations were experiencing unplanned dilution of ~70%. As a result, head grades were running at around 2g/t Au or 3.8g/t Au eq, versus the Jan '18 Reserve grade of 2.1g/t Au and 4.3g/t Au eq. Nonetheless, this was an improvement from head grades of ~3.2g/t Au eq in January 2019.

The biggest lever on Kapan's per oz costs would be a further improvement in dilution. This comes down to employing better blasting technique to reduce the level of "overbreak", and a consulting engineer was on site to review current practices and make recommendations.

Mining equipment is supplied by Sandvik (primarily drilling & blasting equipment) and Epiroc (mainly hauling equipment). Both also provide onsite maintenance under contract, with dedicated service sheds.

Kapan's mining manager confirmed that Polymetal had invested significantly in underground mining equipment and had ensured adequate mine development. Vein drive development is running approximately 3 months ahead of production, with ~15 active stopes providing operational flexibility.

However, onsite management did observe that Polymetal had underinvested in spares and consumables ahead of selling the operation to Chaarat. The company has guidance that this could impact upon sustaining capex in 2020E (we factor in ~US$1.5m in FY19E, rising to US$3m in FY20E, before falling back to ~US$1.4m pa thereafter).

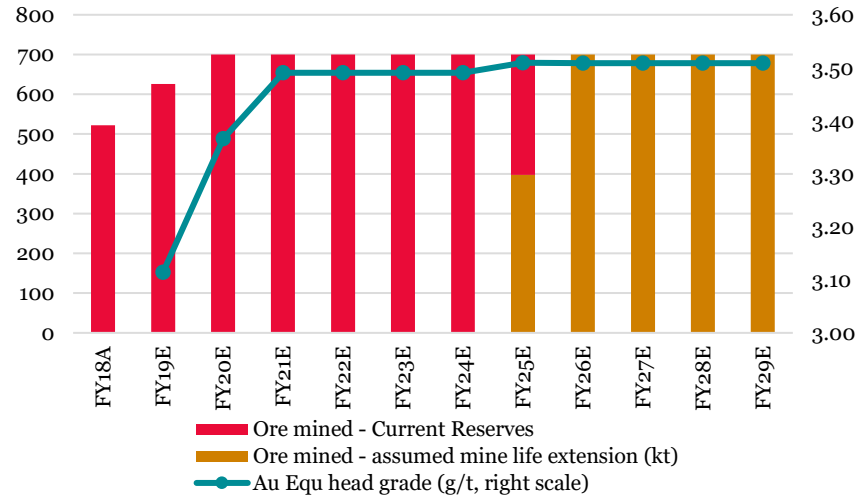
Meanwhile, management is targeting completion of a new, more robust mine plan during Q3 this year, as Polymetal's underground exploration and sampling was inadequate, leading to lower than expected grades in some stopes.

Underground safety standards were also poor under Polymetal, another key area of focus, while it appeared on our site visit that mining costs per tonne of ore were running above expectations in Q1. Nonetheless, through better management and

more discipline, mining costs were already being brought under control by the time of our visit in May.

We base our estimates for Kapan on mine output of ~700ktpa of ore, but conservatively assume head grades will remain below the Reserve grade of 4.3g/t AuEq, at ~3.5g/t until FY24E, by which point the current reserve will have been fully depleted.

Total Tonnes Mined & Au Equivalent Grade



Source: Company report, H&P estimates

Crushing & grinding

The mined ore passes through three stages of crushing - a jaw crusher plus two cone crushers - to bring the size down to ~25mm.

It then enters three stages of milling, via a rod mill and two ball mills, to bring the size down to <75microns for 80% of the material.

The company has also rented an additional crusher in order to trial crushing and screening down to ~12mm ahead of milling. This could have two potential benefits:

- It could improve the performance of the milling circuit to ~3ktpd (~1.1Mtpa) from ~2ktpd (~700ktpa) at present, as the residence time to take material from 12mm to 75microns would be shorter than taking material from 25mm.

- The screening out of oversize material actually improves the grade of the feed to the mill, as the chalcopyrite typically reports to the lower size fractions during crushing, i.e. screening could be a simple beneficiation step ahead of milling.

In addition to the potential for an improved crushing circuit to boost the existing mill capacity towards the 1Mtpa mark, the old mills from the previous Centralni copper operation remain in situ. While these have not been used for nearly a decade, management believes these could be restored for relatively modest capex, adding a further 400ktpa-500ktpa in milling capacity.

This would give total mill capacity of ~1.4Mtpa-1.5Mtpa and would "shift the bottleneck" initially on to the flotation circuit, then back to the crushing circuit and ultimately the mine itself.

Kapan is trialling the economics of processing third party ores on a toll basis, testing the metallurgy and impact on end product quality.

Flotation

After milling, a first stage of flotation separates the material into two product streams: a copper concentrate stream (floats) and zinc concentrate stream (tails).

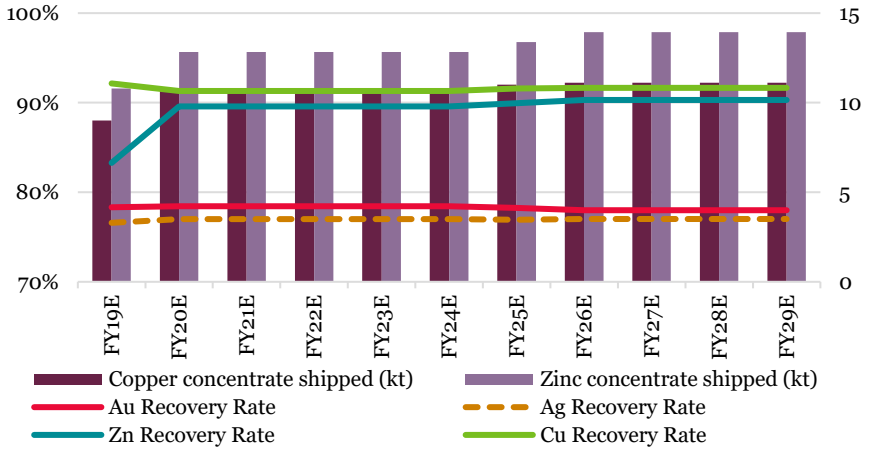
The copper concentrate stream is then passed through a second (cleaner) flotation phase before thickening and drying.

The zinc concentrate stream is passed through a re-grinding phase before its second stage of flotation, thickening and drying.

The majority of the gold and silver (65-70%) is recovered to the copper concentrate stream, with a further ~12% reporting to the zinc concentrate, giving an overall recovery rate of ~75-80% for gold and silver. We model roughly flat recovery rates over the life of the mine in-line with our forecast for relatively flat head grades from 2020E.

By-product copper and zinc recoveries are higher at ~92% and ~90% respectively; however, some copper ends up in the zinc concentrate, and vice versa, impacting upon payability.

Recovery Rate



Source: Company reports, H&P estimates

End product specifications & marketing

The output from the Kapan plant comprises of copper and zinc concentrates – we forecast 11ktpa on average of copper concentrate and 14ktpa of zinc concentrate shipments over the life of mine. However, around 50% of the payable metal value comes from gold content and 11% from silver. Only ~22% and ~17% come from zinc and copper, respectively.

Concentrates from Kapan are trucked to the port of Poti in Georgia, and shipped to Glencore and Trafigura smelters.

We factor in treatment charges of $140/t concentrate and a refining charge of 14c/lb Cu for copper concentrate product, and a TC of $17/t and RC of $1.7c/lb for zinc concentrate.

Overall payability for gold content averages around 94%, for silver around 92%, for zinc ~78% and copper ~91%.

Tailings management

Kapan's tailings storage facility is in a nearby valley, with retaining walls constructed from waste rock and clay to ensure chemicals from the tailings are isolated from the surrounding environment.

The river in the valley has been redirected around/under the TSF using a concrete tunnel.

After solids in the tailings have settled, the tailings water is piped under gravity back to the process plant. 85% of water required for the process comes from either mine water or recycled tailings water, and no waste water is discharged into local water courses etc.

The TSF is expected to have capacity for a further 10 years at the mine's current run rate of 700ktpa.

While not an immediate priority, tailings management could at some point become an impediment to growth. For instance, an expansion of the current facility or an entirely new facility may be required if greater than expected proportion of the resource is to be converted to reserves, or if Kapan were to begin processing third-party ores.

In line with its commitment to sustainable mining practices, upon acquisition of Kapan Chaarat commissioned an engineering group to conduct a review of the tailings dam structure and make any recommendations on necessary improvements.

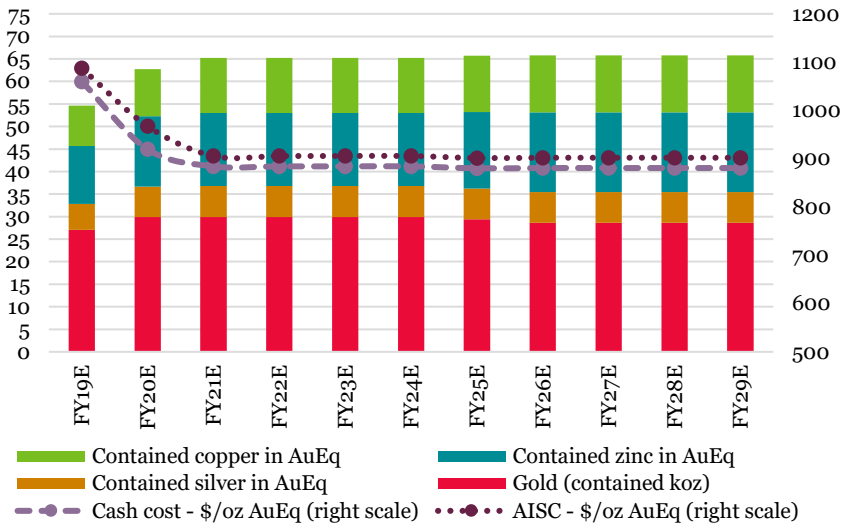
Production guidance & current mine economics

Chaarat's revised guidance for production at Kapan as of July 2019 is that output will reach a run rate of ~65koz AuEq pa by the end of 2019E. This appears achievable based on the current throughput and grades, even with some level of unplanned dilution:

~700ktpa x
~3.4g/t Au eq x
~80-90% recovery
= ~61-69koz AuEq

Based on our modelling assumptions, we estimate contained AuEq of ~28koz in H2'19, ramping up to ~63koz in FY20E. Using metal price inputs roughly in-line with current spot levels, and payability factors in-line with those outlined in CGH's AIM Re-Admission document, we derive a gross revenue forecast of US$69m and net revenue of US$64m after deducting treatment and refining charges and royalties for the 11 months CGH will have owned Kapan in FY19E, rising to US$76m gross and US$70m net in FY20E.

Total gold equivalent output by metal & cash cost in US$/oz AuEq

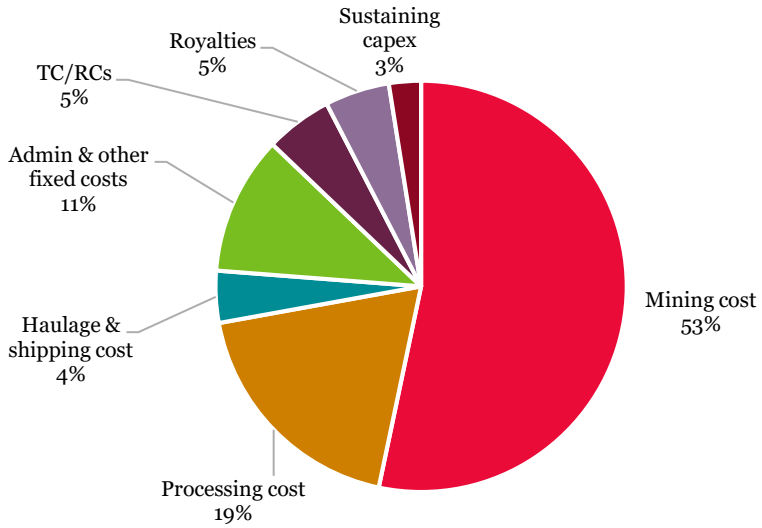


Source: Company report, H&P estimates

Unit cost, EBITDA & FCF forecasts

We have modelled Kapan's mining and processing costs per tonne of ore at ~US$45/t and ~US$16/t, respectively, based on figures derived from the company's AIM Re-Admission Document. We have then added estimates for haulage & shipping, admin and other fixed costs to derive our average operating cost forecast of ~US$799/oz AuEq. Adding TC/RCs amounting to ~US$48/oz AuEq plus a 4% revenue royalty gives a total cash cost US$894/oz AuEq over our forecast horizon, as shown in the graph above. If we then include average annual sustaining capex of ~US$1.5m, our average forecast AISC for Kapan comes to US$917/oz.

Kapan All-in sustaining cost breakdown



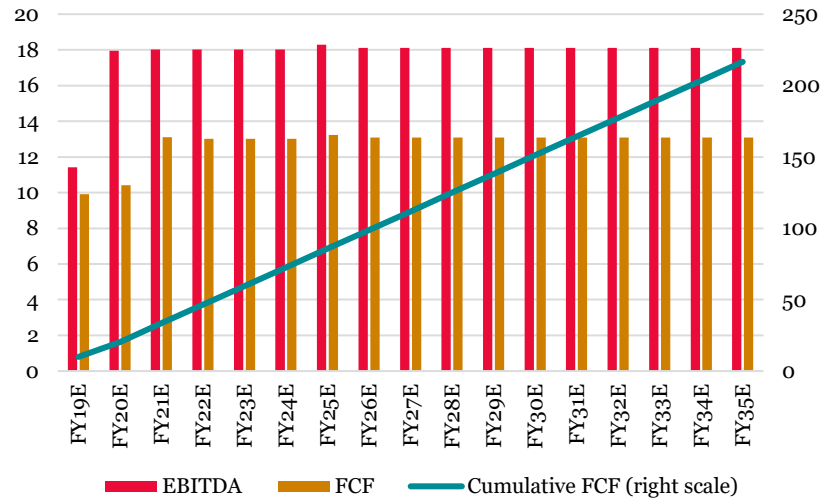
Source: Company reports, H&Pe

In terms of profitability and cash flow, we base our estimates on gold prices returning to a long-term level of US$1,300/oz by 2021E, and for this reason see EBITDA annualising at closer to US$18m pa at Kapan than the ~US$20m pa

expected by CGH. However, taking a less conservative assumption of US$1,400/oz would drive annual EBITDA at this level, on our estimates.

Netting off taxes and a top-up royalty charged on profits, as well as sustaining capex, we forecast annual free cash flows from Kapan of ~US$13m pa from FY21E. Our estimates for FY19-20E are lower at ~US$10m in FY19-20E as grade control issues are being addressed and capex is expected to be above normal levels in FY20E, as discussed above.

Kapan EBITDA & FCF projections



Source: Company reports, H&Pe

Potential future upside developements

- Reserve update and more reliable mine plan expected September 2019
- Focus on improving unplanned dilution
- Continue to lease or buy additional crusher to augment mill performance
- Add flotation lines to allow for >700ktpa throughput
- Potentially rehabilitate old Centralni milling circuit to accommodate third party ores

DCF Valuation Summary - Kapan

Kapan DCF model summary		FY19E	FY20E	FY21E	FY22E	FY23E	Average FY24-35E
Key assumptions							
Gold	US$/oz	1,395	1,350	1,300	1,300	1,300	1,300
Silver	US$/oz	15.93	16.25	16.00	16.00	16.00	16.00
LME Zinc	US$/t	2,532	2,500	2,500	2,500	2,500	2,500
LME Copper	US$/t	5,985	6,225	7,000	7,000	7,000	7,000
Production							
Total tonnes processed	kt	672	700	700	700	700	700
Average Au head grade	g/t	1.60	1.69	1.69	1.69	1.69	1.64
Average Ag head grade	g/t	30	32	32	32	32	32
Average Zn head grade	%	1.27%	1.35%	1.35%	1.35%	1.35%	1.44%
Average Cu head grade	%	0.34%	0.35%	0.35%	0.35%	0.35%	0.37%
Average gold equivalent head grade	**g/t**	**3.11**	**3.37**	**3.49**	**3.49**	**3.49**	**3.51**
Recovery rate-Au	%	78%	78%	78%	78%	78%	78%
Recovery rate-Ag	%	77%	77%	77%	77%	77%	77%
Recovery rate - Zn	%	83%	90%	90%	90%	90%	90%
Recovery rate - Cu	%	92%	91%	91%	91%	91%	92%
Gold in concentrate production	koz	27	30	30	30	30	29
Silver in concentrate production	koz	504	559	559	559	559	559
Zinc in concentrate production	kt	7	8	8	8	8	9
Copper in concentrate production	kt	2	2	2	2	2	2
Gold equivalent in conc production	**koz**	**55**	**63**	**65**	**65**	**65**	**66**
Payable Gold equivalent in conc production	**koz**	**50**	**56**	**58**	**58**	**58**	**58**
Sales							
Gross gold revenue	US$m	36	38	37	37	37	35
Gross silver revenue	US$m	8	8	8	8	8	8
Gross zinc revenue	US$m	14	16	16	16	16	18
Gross copper revenue	US$m	11	13	14	14	14	15
Gross sales revenue	**US$m**	**69**	**76**	**76**	**76**	**76**	**76**
Royalties	US$m	-3	-3	-3	-3	-3	-3
Total TC/RCs	US$m	-3	-3	-3	-3	-3	-3
Net sales revenue	**US$m**	**64**	**70**	**70**	**70**	**70**	**70**
Costs							
Total variable costs	US$m	46	45	45	45	45	45
Fixed Cost	US$m	5	5	5	5	5	5
Admin	US$m	1	2	2	2	2	2
Total cash costs ex-royalties & TC/RCs	**US$m**	**52**	**52**	**52**	**52**	**52**	**52**
Cash cost/oz AuEq incl royalties & TC/RCs	**US$/oz**	**1,060**	**919**	**884**	**884**	**884**	**884**
All-in Sustaining Cost/oz AuEq	**US$/oz**	**1,087**	**967**	**906**	**906**	**906**	**906**
D&A	US$m	3	4	4	4	4	4
Capex							
Growth capex	US$m	0	0	0	0	0	0
Sustaining capex	US$m	-2	-3	-1	-1	-1	-1
Total capex	**US$m**	**-2**	**-3**	**-1**	**-1**	**-1**	**-1**
Profit & Loss							
EBITDA	**US$m**	**11**	**18**	**18**	**18**	**18**	**18**
EBIT	US$m	8	14	15	15	15	15
Notional tax & additional royalty on profit	US$m	-2	-3	-3	-3	-3	-3
NOPAT	US$m	6	11	11	11	11	11
FCF & DCF							
EBITDA	US$m	11	18	18	18	18	18
Capex	US$m	-2	-3	-1	-1	-1	-1
Tax paid adjusting for carried forward losses	US$m	-2	-3	-4	-4	-4	-4
Free Cash Flow	**US$m**	**10**	**10**	**13**	**13**	**13**	**13**
Discounted cash flow @8% WACC	**US$m**	**113**					
Of which DCF from current reserve life	US$m	53					
Of which DCF from 10-year life extension	US$m	60					

Source: H&P estimates, Company reports

Asset overview: Kyrgyz Republic

Tulkubash

The Tulkubash oxide deposit is one of two co-located projects owned by Chaarat in the Kyrgyz Republic (with the second being the larger but more challenging Kyzyltash refractory sulphide deposit). The projects, often referred to collectively as the "Chaarat Gold Project", sit in the Tien Shan Gold Belt in the North West of the country. Chaarat holds a Mining Licence to develop Tulkubash and an exploration license at Kyzyltash. A bankable feasibility study on Tulkubash was first published in 2018, followed by a revised study published in June 2019. While the initial reserve life is relatively short at 5-6 years, the reserves and resources sit with in a relatively shallow mineralised corridor which, in the company's view, offers a high probability of mine-life extension, with the M&I resource covering only ~4km of a 24km trend.

Although grades are comparatively low at ~0.9g/t gold in reserve, the shallowness and oxidised nature of the deposit lends itself to a relatively simple open-pit and heap-leach operation, producing a gold and silver doré end-product. This plan also offers scope for easy expansion by cherry-picking high-grade satellite pits along the mineralised trend, or extension of the original open-pit mine.

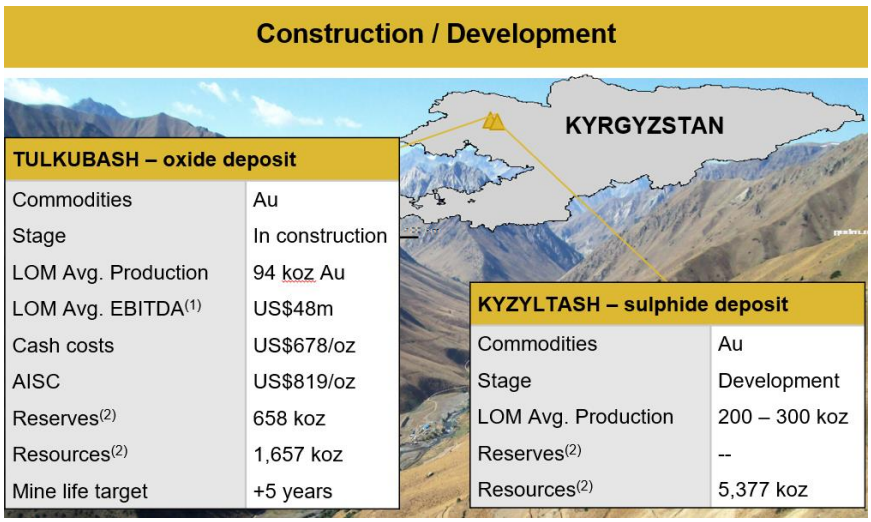
The revised BFS outlined initial construction capex for Tulkubash of US$110m, including a ~US$10m contingency. Strategic funding of ~US$31.5m has already been secured in the form of work-in-kind by the Turkish mining and construction contractor Çiftay İnsaat Tahhüt ve Ticaret A.S. ("Çiftay"). Çiftay will earn-in to a 12.5% stake in both Tulkubash and Kyzyltash at an implied combined valuation of US$252m.

The company expects the remaining ~US$80m in funding for Tulkubash to come mainly in the form of debt, and for the total funding package to be secured by the end of 2019, leaving the project on track to deliver first production in 2021. Life-of-mine average production is estimated at 94 kozpa, peaking at 111 koz at an average cash cost of US$679/oz and AISC of US$819/oz, excluding silver by-product credits, or ~US$803/oz net of silver by-product credits.

Based on a 5+ year mine-life which, in our view, will ultimately be extended, Chaarat's BFS estimates an unlevered IRR of 18% and DCF for Tulkubash of US$70m using a 5% WACC and US$1300/oz gold price. Our DCF estimate is US$183m, using a more conservative 8% WACC, but assuming an additional 5 years of Resource converted to Reserves at similar grades.

Assuming completion of the Çiftay JV and adjusting CGH's capex profile to reflect Çiftay's work-in-kind, we estimate an attributable DCF of US$174m for Tulkubash. This translates to US$106m on a risked basis in our SOTP price target derivation, applying a multiple of 0.8x to the current mine plan and 0.5x to our assumed 5-year extension.

Tulkubash Project Summary



Source: Company presentation

Location & Climate

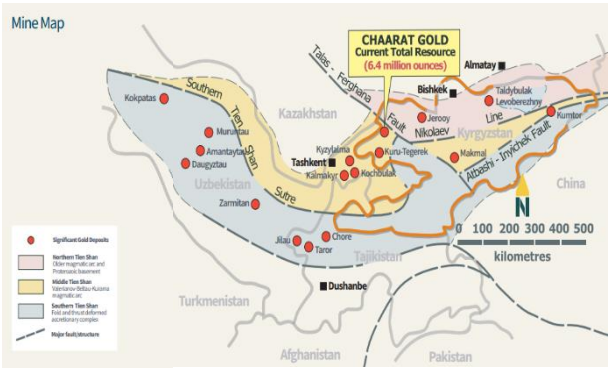
The Tulkubash and Kyzyltash deposits are located approximately 300 km WSW of the Kyrgyz capital city of Bishkek, in the Sandalash Valley close to the border with Uzbekistan. The Sandalash range sits within the Alatau Mountains, with the project area exhibiting steep topography ranging from 2,000 m above sea level at the valley floor and 4,200 m. The climate is semi-arid to temperate-humid at the lower levels, and alpine at the higher levels, with average winter lows of -20°C, frequent snowstorms and avalanches.

The site is highly constrained in terms of infrastructure and the project will need to be largely self-reliant. Power will be self-generated; personnel and small loads can be flown in by helicopter, but larger loads, consumables and spares will need to be transported over mountainous terrain subject to extreme winter conditions.

Transport of containers larger than 20ft will not be possible until the Kumbel Pass access road to site is upgraded. Budget provision has been made to substantially upgrade this road so that it can be negotiated by trucks transporting 40ft containers by modifying the switchbacks. Provision will also be made for additional avalanche protection.

During winter operation of the mine, an avalanche safety and mitigation programme is in place to ensure additional safe operation of the road.

The Chaarat Gold Project (Tulkubash Oxide & Kyzyltash Sulphide) sits in Central Asia's Tien Shan Gold Belt



Source: Company reports

The Project is located in the Sandalash Range of the Alatau Mountains, ~300 km WSW of the capital, Bishkek

Source: Company reports

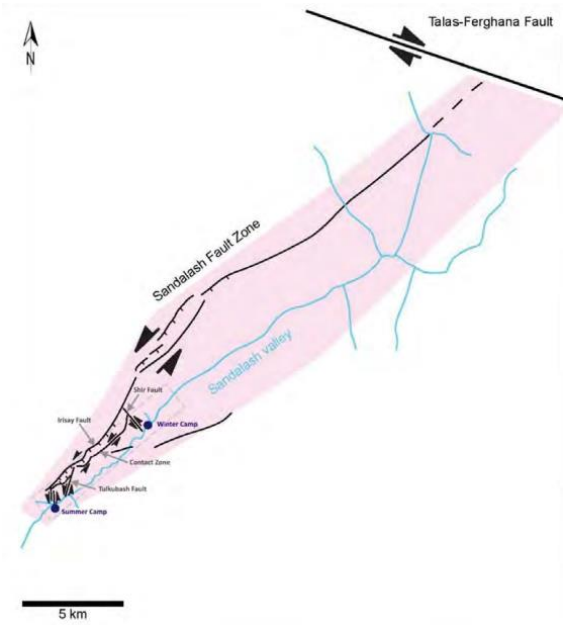
Geological setting

Tulkubash is classified as an epizonal orogenic deposit, exhibiting features of shallow epithermal mineralisation.

Mineralisation within the Tulkubash Zone is characterized by zones of intense silicification and quartz flooding. The widespread silicification and deep oxidation is in distinct contrast to the Kyzyltash Zone, where there are only minor amounts of quartz, mostly in thin veinlets and occasional veins with no significant oxidation. The low arsenic and consistently low arsenic-to-antimony ratios of the Tulkubash Zone are another distinct difference.

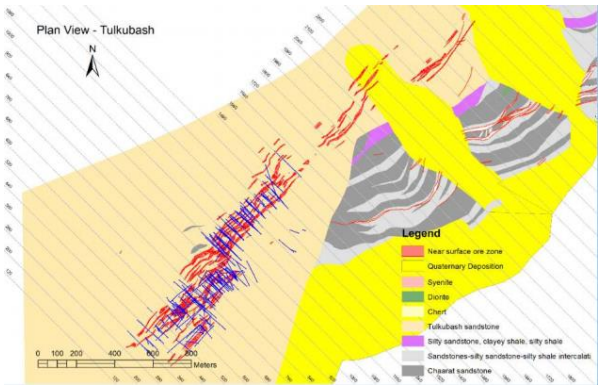
Gold mineralisation at Tulkubash occurs in quartzite breccias, quartz stockwork zones, and intensely silicified quartz flooded zones that form multiple parallel lodes trending northeast and dipping 60°-80° to the northwest.

Sandalash Fault Zone Schematic Map



Source: Company reports

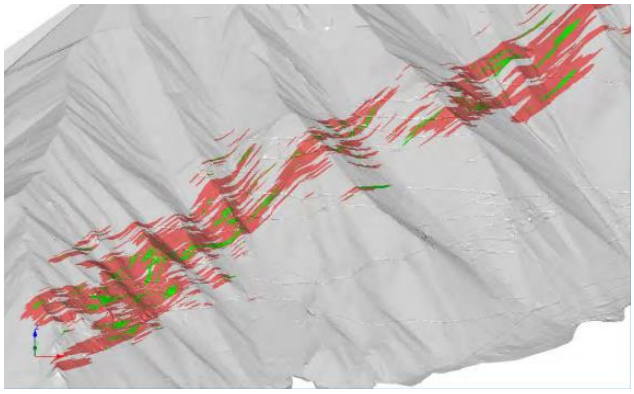
Tulkubash deposit geology



Source: Company reports

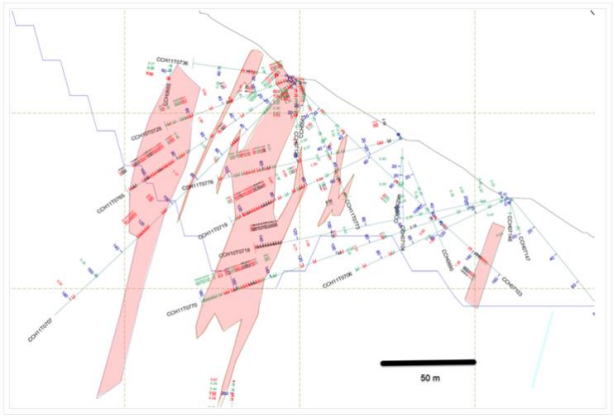
Individual gold-bearing lodes range from 5 m to 45 m in true thickness. Development drilling of the Tulkubash deposit has revealed that the zone is remarkably continuous, but blossoms and thins along its defined length. Where multiple lodes are present, they combine to form a mineralised zone that varies from 110m to 250m wide that has been developed over a strike length of approximately 2.2kms.

Isometric View of Mineralised Domains at Tulkubash – Looking Northwest (Not to Scale)



Source: Company reports

Tulkubash Deposit Section



Source: Company reports

Mineralisation is open to the northeast along strike and down dip below the limits of the current drilling (±150m).

The gold is very fine grained and is associated with minor pyrite and stibnite. The Tulkubash Zone is strongly oxidised and contains free milling ore suitable for heap leach processing.

Tulkubash – Work History

In 2010, early metallurgical test work indicated that much of the Tulkubash mineralisation was free milling and could potentially develop into a low-cost, open pit, heap leach operation.

This culminated with the completion of 128 holes totalling nearly 16,000m in 2011.

Exploration and development programmes were modest from 2013 through 2016, with no drilling occurring in 2015.

Before 2016, the exploration was primarily focused on the Kyzyltash formation. In 2017, the exploration focus moved to the Tulkubash oxide zone. Significant gold in soil anomalies at >1g/t have been defined within the mining licence area.

In 2017 and 2018, there was a renewed focus on the Tulkubash deposit as a potential starter mine for Chaarat, with approx. 17,400m of drilling completed in 2017 and approx. 20,000m of drilling completed in 2018.

To date, all Tulkubash exploration has been targeted in the south-west of the licence area. The two licenses include:

- A mining permit covering the initial 6km mineralised trend valid until June 2032

- An exploration licence extending approximately 20km further along the strike valid until October 2023 and renewable.

Further exploration potential exists along strike in the East Chaarat exploration licence. Large soil anomalies have been defined in this licence area at grades >1.0g/t.

Construction is ongoing at Tulkubash and the first gold production remains on schedule for 2021. The Company continues to advance detailed engineering and has finalised several project components for immediate construction readiness.

Resources & Reserves

First identified through gold-in-soil anomalies in 2004, the deposit had a total ~78km of drilling and trenching as of the end of the 2018 exploration season, forming the basis of the BFS Resource and Reserve estimates. Up to 20,000m is scheduled to be added in 2019.

Exploration Drilling at Tulkubash

Year	No. of Holes	Length (m)
2005	1	150.6
2006	7	1,393.6
2007	12	2,374.8
2008	0	0.0
2009	5	802.6
2010	37	4,271.8
2011	128	15,984.2
2012	39	6,842.0
2013	14	1,781.2
2014	48	5,813.7
2015	0	0.0
2016	12	1,185.8
2017	135	17,420.4
2018	122	19,925.0
Total	560	**77,954.6**

Source: Company reports

On back of this extensive exploration work, the Mineral Resource Estimate as at Dec 2018 stood at 1,624koz Au equivalent (M&I) plus 33koz inferred [41.96Mt M&I at 1.2g/t Au and 2.33Mt Inferred at 0.46g/t Au].

The Resource is contained within 4km of strike in the southern portion of Chaarat's 6km long mining licence. Chaarat's exploration license extends an additional 18km, for a total of 24km, reflecting favourable geology and mineralisation. Drilling in 2018 confirmed that mineralisation was continuous along strike, extending the proposed open pit to include previously identified along-strike satellite deposits. The 2019 drilling programme is expected to further extend the Tulkubash mineralisation.

A cut-off grade of 0.3g/t has been applied in the Resource estimation, based on the metallurgical recovery of 69% identified in the BFS, an assumed mining cost of US$1.96/t, processing and G&A of US$6.37/t, a US$1,300/oz gold price and 5% discount rate.

Tulkubash open pit heap leach Resource, cut-off grade 0.3g/t Au			
Category	**Tonnes (Mt)**	**Au grade (g/t)**	**Content (koz)**
Measured	5.66	1.35	246
Indicated	36.30	1.18	1,378
Measured and Indicated	**41.96**	**1.20**	**1,624**
Inferred	2.33	0.46	33

Source: Company reports

An open-pit mining plan was developed incorporating the economically exploitable Measured & Indicated Resources. As shown below, only 15.7Mt of the total 42.0Mt M&I Resource were brought into the open-pit design, once levels of oxidisation, recoveries, hydrogeology, geotechnical criteria and various other factors were taken into account.

In-situ Mineral Resource within Limit of the Final Open Pit Design				
Category	**Quantity (kt)**	**Content**		
		(g/t)	**(t)**	**(k oz)**
Measured	4,747	1.37	6.49	209
Indicated	10,910	1.31	14.25	458
Total	**15,657**	**1.32**	**20.74**	**667**

Source: Company reports

Applying estimated mining **dilution of 42%** and **mining recovery of 99%**, the mineable M&I Resource translates to a P&P Ore Reserve as at Apr 2019 of 658koz Au (P&P) [comprising 22.1Mt at 0.92g/t Au].

Tulkubash Ore Reserve Estimate - 1st Apr 2019			
Category	**Tonnes (Mt)**	**Au grade (g/t)**	**Content (koz)**
Proven Ore Reserve	6.75	0.95	206
Probable Ore Reserve	15.43	0.91	451
Combined Ore Reserve	**22.18**	**0.92**	**658**

Source: Company reports

Mine Plan

The Tulkubash orebody is suitable for open pit mining and low-cost heap leach extraction – a low capital, low operating cost, technically straightforward solution. The project is expected to have an initial capacity of 94koz per year.

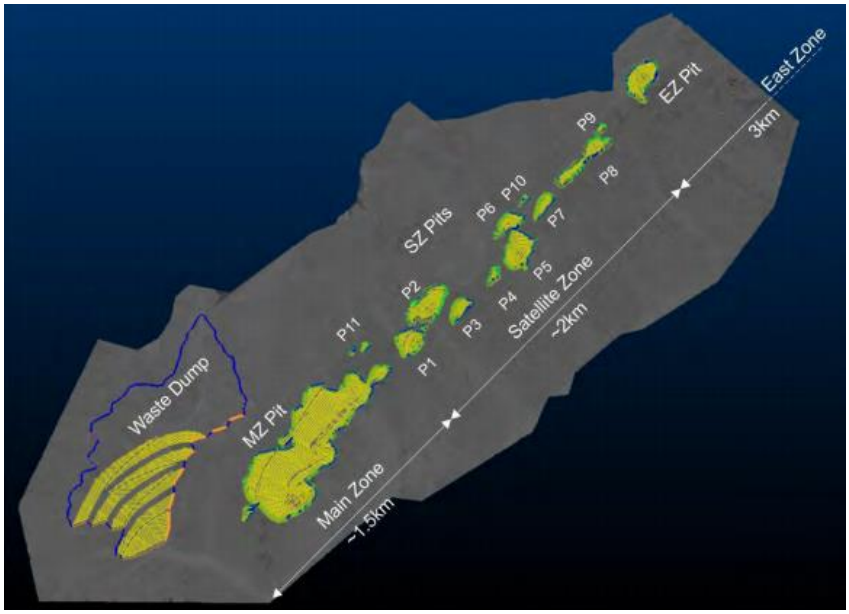
Tulkubash project summary

Ownership	First Production Date	Extraction Process	Measured & Indicated Resources	Proved & Probable Reserves	Metallurgical recovery rate	Production	Life of Mine
100%*	Q4 2021	Open pit, contract mining, heap leach, 2.9Mtpa processing capacity	1,624koz contained gold; 42Mt at 1.2g/t	658koz contained gold; 22.2Mt at 0.9g/t	69%	94 kozpa	6 years @ 3.7Mtpa RoM / 5Mt peak RoM

Source: Company reports. *Note: Çiftay will earn-in to a 12.5% stake in both Tulkubash and Kyzyltash post completion of ~US$31.5m of work-in-kind on the Tulkubash construction. Pending completion of this JV agreement, CGH's attributable ownership will reduce to 87.5%.

To achieve this run rate a mine plan has been developed encompassing numerous open-pits along the 4km strike length. While conventional hard rock mining techniques will be used, the steepness of the site (26° - 34°) presents some challenges. Çiftay has been appointed as mining contractor for the life of the mine and will deploy a small-scale fleet suitable to the terrain. The contractor is also expected to be responsible for all activities necessary to meet the planned production targets.

Schematic View of Open Pit Locations and Waste Dump

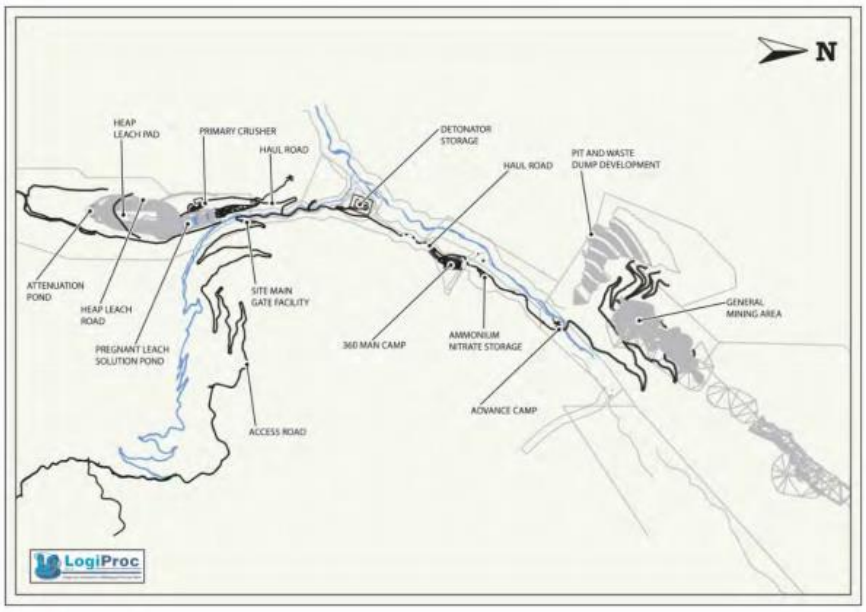


Source: Company report

The average strip ratio over the initial 6-year LoM is expected to be ~2.6x, with first ore coming from the relatively high-grade EZ Pit. Mining is then expected to progress along strike to the main MZ Pit, which contributes 80% of the Ore Reserve.

Waste tonnes (estimated to be ~58.6Mt in the current mine plan) will be deposited at the waste dump adjacent to the main MZ Pit, while ore tonnes will be hauled 5.6km over the Sandalash River to the ROM pad, ready for the first phase of processing in the primary crusher.

Tulkubash Gold Project Site Layout



Source: Company reports

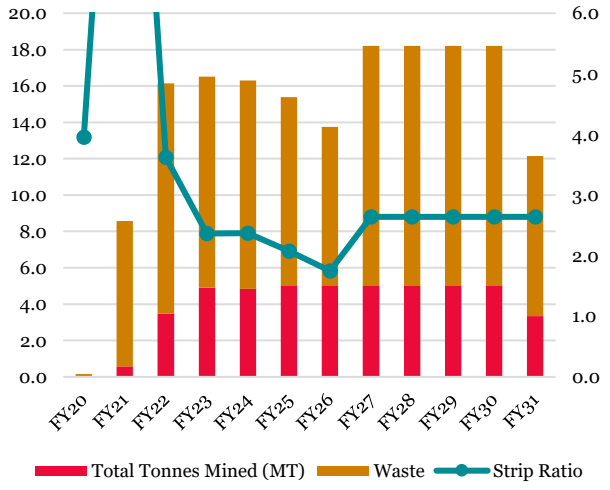
Assumed mine life extension

Under the current mine plan, the Reserve has been derived from only 15.7Mt of the 42Mt M&I Resource. In our model for Tulkubash, we assume an additional ~5-years of mining at a similar throughput, strip ratio and grade can be achieved from the remaining ~26Mt of M&I Resource (or from new Resources discovered along strike).

This may prove to be a conservative estimate, but beyond a certain point, there will be a trade-off between going deeper into the existing Resource (and thereby potentially encountering higher strip ratios and lower recoveries due to increasing levels of sulphur) and finding new shallow Resources in the district, which may incur longer haulage distances to the ROM pad and waste dump.

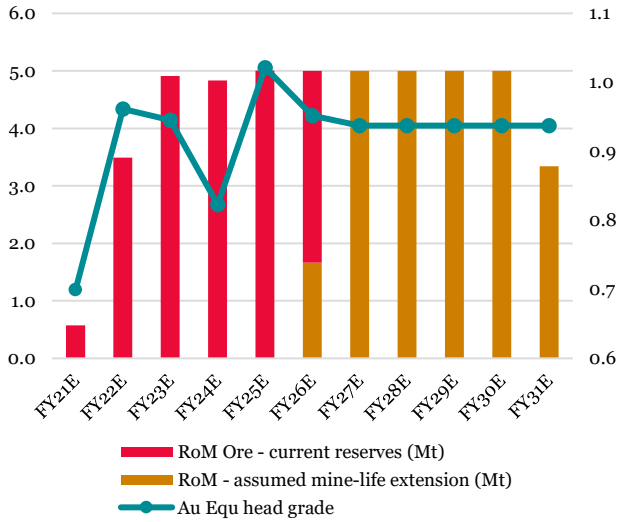
To account for the additional uncertainty around mine-life extensions beyond the current P&P Reserve, we apply a risk multiple of 0.5x to the discounted cash flows associated with the assumed additions.

Total ore and waste mined (Mt, left scale) vs strip ratio (right scale)



Source: Company reports

Ore mined – breakdown between current reserves and assumed mine life extension vs grade in g/t AuEq



Source: Company reports

Process Plant Design

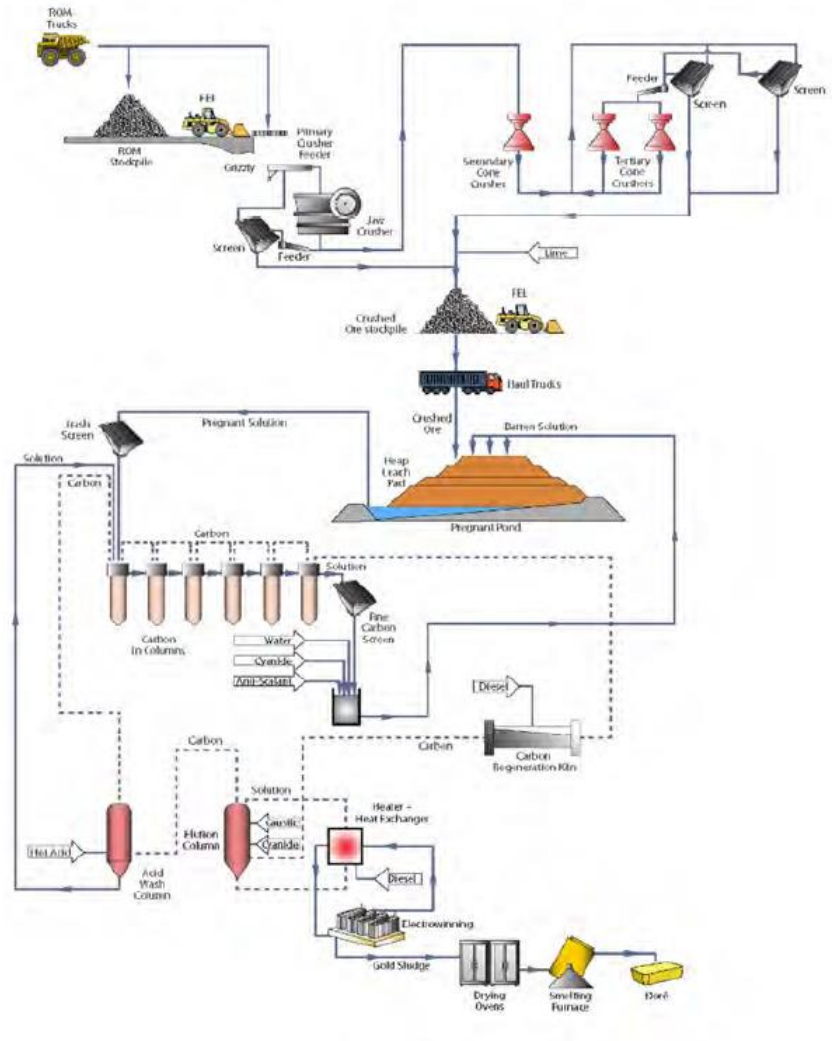
The processing plant at Tulkubash follows a relatively standard heap-leach flow sheet. The ore will first be passed through three stages of crushing and screened to 12.5mm (P_{80}), stockpiled, then stacked on the heap leach pads.

The heaps will be irrigated with a dilute cyanide solution to dissolve the gold and silver content in the ore. Upon reaching the base of the heap, the "pregnant" (i.e. gold and silver bearing) solution will flow to a storage pond before being gravity fed into the ADR plant (absorption, desorption and refining plant).

The ADR plant consists of a series of carbon "columns". As the solution is passed through the columns, granular activated carbon will absorb the gold and silver from the solution. Barren solution will be recirculated to the heap leach pads, while the "loaded" carbon will move on the "elution" circuit, where it will be treated with hot acid to re-dissolve the precious metals into an "eluate" solution.

This eluate solution will then pass through an electrowinning circuit to produce a gold-rich sludge, which in turn can be smelted to deliver a doré bar of gold and silver with minor impurities.

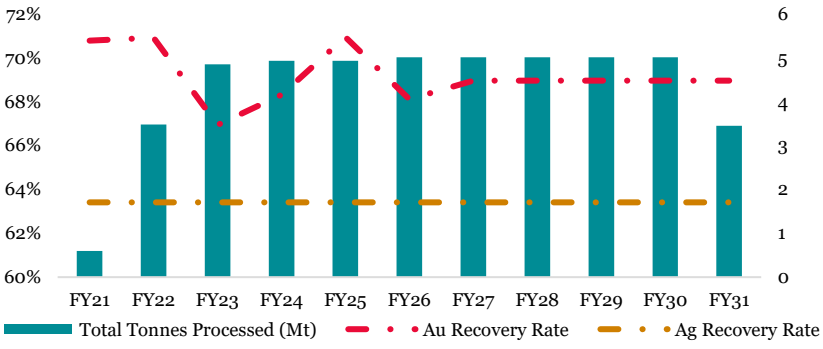
Tulkubash Block Flow Diagram



Source: Company BFS

Overall gold and silver recoveries are expected to be 68.9% and 63.4% respectively. As outlined in the June 2019 revised BFS, recovery rates at Tulkubash are not expected to deviate far from these averages, although there will be some variability depending on head grade and sulphur content.

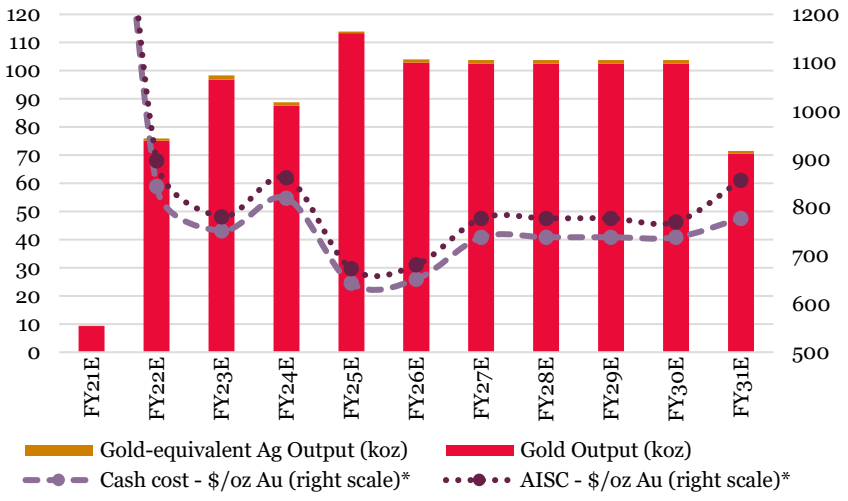
Total tonnes processed (right scale) & expected recovery rates (left scale) for silver & gold



Source: Company reports, H&P estimates

The chart below shows our forecast gold and silver output from Tulkubash based on the recoveries published in the BFS and our assumption that the economics of the mine life extension will be similar to the LoM averages in the initial 6 years.

Tulkubash Total Equivalent Output & Cash Cost/ Equivalent Ounce



Source: Company report, H&P estimates

Infrastructure

The infrastructure requirement of the Tulkubash project are fairly common to gold projects in remote, mountainous regions:

- Some existing off-site facilities e.g. Chatkal Station and Kumbel Pass Checkpoint. The Kumbel Pass to Site Gatehouse road will be upgraded.
- Mining and related facilities including Main Ore Haul Road, East Pit Haul Road etc.
- Camp facilities including a 360 modular Man Camp, local diesel power generation and distribution etc.
- Heap Leach Facility including a Pregnant Leach Solution Pond, PLS Overflow Pond, Emergency Stormwater Pond etc
- Power Station including power generation, fuel farm, internal utilities, etc.
- Water bores and pumping stations will be required to supply water to the accommodation camp, the contractor's vehicle maintenance shop, the ADR plant, crushers and other plant facilities.

Capex estimates

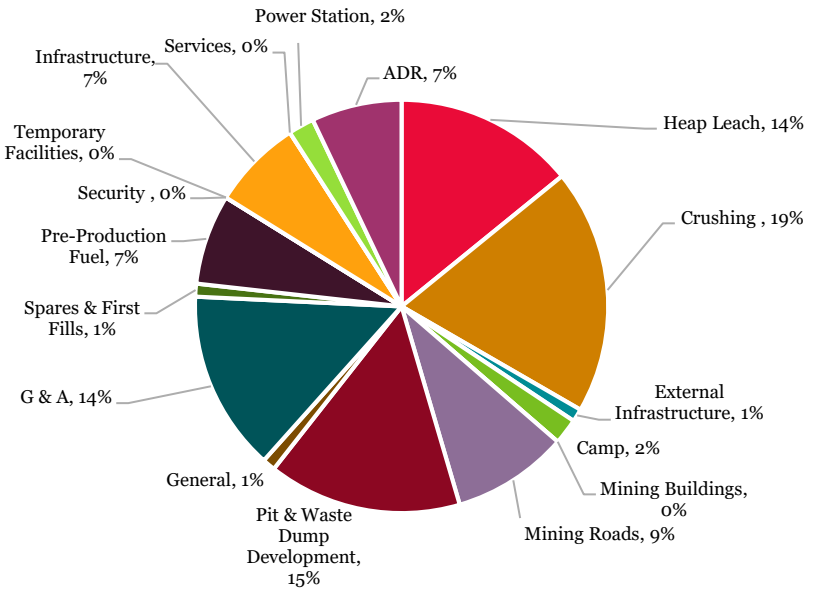
The June 2019 BFS estimates initial capex required to build Tulkubash will be ~US$110m, including a ~US$10m contingency. The largest components of this capex budget will be the construction of the mine itself, the crushing circuit and the heap leach pads, as shown in the breakdown below.

Initial Capital Cost Summary

Area	Total (US$'000)
Mining	25,211
Infrastructure	3,387
Process Plant	49,388
Owners Cost Site Infrastructure	21,724
Contingency @ 10%	9,971
Total Initial Capital Cost	109,681

Source: Company reports

Tulkubash initial capital cost breakdown



Source: Company reports, H&P estimates

Royalty calculation

The anticipated royalty regime at Tulkubash is outlined below. According to the June BFS, the company expects to pay a fixed basic royalty of 5% on revenue to the government, plus a further fixed 2% "non-tax" royalty for local infrastructure. On top this, a further "revenue tax" will be applied, with the rate determined by the prevailing gold price as shown below.

Prescribed Applicable Value Added Tax Rate

			Gold price for revenue tax calc (US$/oz)			
Royalty	**Non-tax**	**Fixed Royalty**	**From**	**To**	**Revenue Tax**	**Total**
5%	2%	7%	0	1,300	1%	8%
5%	2%	7%	1,301	1,400	3%	10%
5%	2%	7%	1,401	1,500	7%	12%
5%	2%	7%	1,501	1,600	9%	14%
5%	2%	7%	1,601	1,700	11%	16%
5%	2%	7%	1,701	1,800	13%	18%
5%	2%	7%	1,801	1,900	14%	20%
5%	2%	7%	1,901	2,000	15%	21%
5%	2%	7%	2,001	2,100	16%	22%
5%	2%	7%	2,101	2,200	17%	23%
5%	2%	7%	2,201	2,300	18%	24%
5%	2%	7%	2,301	2,400	19%	25%
5%	2%	7%	2,401	2,500	20%	26%
5%	2%	7%	>=2,501			27%

Source: Company reports

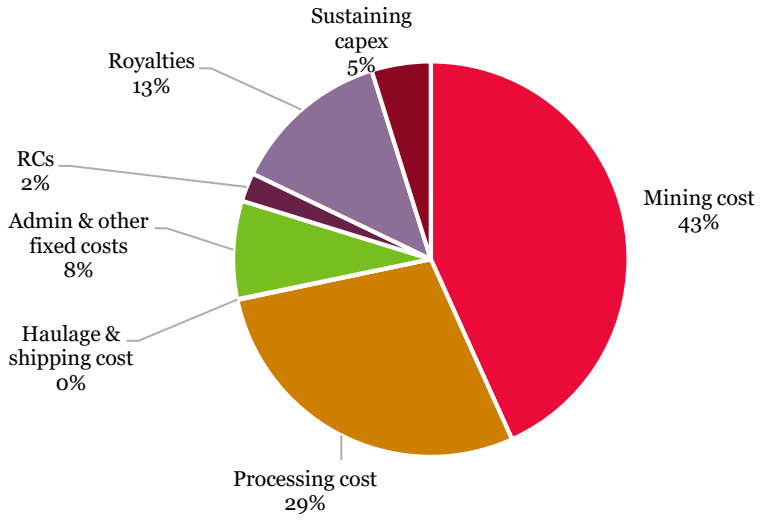
Unit costs, EBITDA & FCF

We have arrived at our operating cost estimates for Tulkubash based on the June 2019 BFS. This showed a mining cost per tonne of ore and waste moved of ~US$2/t, equivalent to ~US$7.2/t of ore when the average stripping ratio of 2.6x is taken into account. These costs can be forecast fairly accurately as they were based on quotes from Çiftay, CGH's mining and mine construction contractor. To this we have added a forecast processing cost of ~US$4.7/t of ore (markedly lower than at Kapan due to the heap-leach method being deployed).

Haulage and shipping costs are also less of a factor at Tulkubash as the end product is gold-silver dore bars rather than a bulk concentrate. Similarly, CGH will only incur refining charges on the dore rather than the treatment and refining charges which are payable on Kapan concentrate. Royalties will, however, be higher at 8% or more as outlined in the table above.

The breakdown of our forecast AISC at Tulkubash is shown below. Based on our model with an extended mine-life to 2031E, we estimate an average cash cost (including refining charges and royalties) of US$752/oz Au, net of silver by-product credits. Including sustaining capex our average AISC estimate comes to US$791/oz.

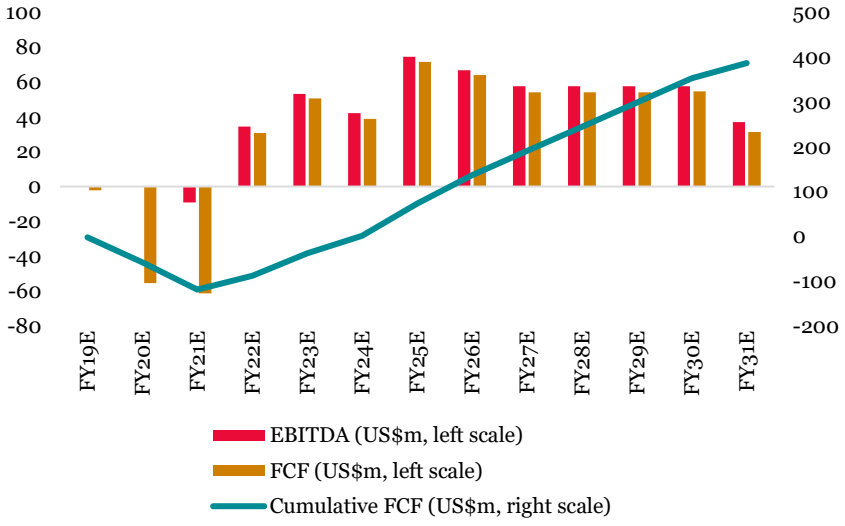
Tulkubash AISC breakdown



Source: Company report, H&P estimates

Based on these cost projections, our EBITDA and free cash flow forecasts for Tulkubash are shown below; assuming first capital is sunk in late 2019/early 2020 we estimate the capital investment will be fully paid back within just over five years, or within ~3 years of first production.

H&Pe EBITDA & FCF forecast for Tulkubash project (US$m)



Source: Company reports, H&Pe

Potential future upside developements

- Following a joint venture deal agreed with Çiftay, pending completion, Çiftay will invest US$31.5m for a 12.5% equity stake in both Tulkubash and Kyzyltash Projects.
- Completion of project financing expected by year end '19E.
- To avoid share dilution, the majority of the remaining funding will come from debt. The targeted time to secure the project financing is by Q4 2019.

- Pre-construction activity has already started, and the first production is scheduled in Q4 2021.
- Target production of 94kozpa with annual EBITDA of ~US$50m.
- Up to 20km of drilling to extend the mine life for Tulkubash which currently stands at 5.3 years.
- Begin heap leach pad construction in 2020 and install plant and facilities in 2020-2021

DCF Valuation - Tulkubash

Tulkubash DCF model summary							Average
		FY19E	FY20E	FY21E	FY22E	FY23E	FY24-31E
Key assumptions							
Gold	US$/oz	1,395	1,350	1,300	1,300	1,300	1,300
Silver	US$/oz	15.93	16.25	16.00	16.00	16.00	16.00
Production							
Total tonnes processed	kt			594	3,470	4,839	4,785
Average Au head grade	g/t			0.69	0.95	0.93	0.92
Average Ag head grade	g/t			0.76	0.93	1.25	0.99
Recovery rate-Au	%			71%	71%	67%	69%
Recovery rate-Ag	%			63%	63%	63%	63%
Gold in dore production	koz			9	75	97	98
Silver in dore production	koz			9	66	123	97
Gold equivalent in dore production	**koz**			**9**	**76**	**98**	**99**
Sales							
Gross gold revenue	US$m			12	98	126	127
Gross silver revenue	US$m			0	1	2	2
Gross sales revenue	**US$m**			**12**	**99**	**128**	**129**
Royalties	US$m			-1	-8	-10	-10
Total TC/RCs	US$m			0	-1	-2	-2
Net sales revenue	**US$m**			**11**	**89**	**116**	**117**
Costs							
Total variable costs	US$m			20	48	55	55
Fixed Cost	US$m			0	1	1	1
Admin	US$m			0	6	6	5
Total cash costs ex-royalties & TC/RCs	**US$m**			**20**	**55**	**62**	**60**
Cash cost/oz AuEq incl royalties & TC/RCs	**US$/oz**			**2,269**	**848**	**760**	**738**
All-in Sustaining Cost/oz AuEq	**US$/oz**			**2,297**	**910**	**801**	**787**
D&A	US$m			1	7	10	10
Capex							
Growth capex	US$m	-2	-50	-47	0	0	0
Sustaining capex	US$m	0	0	0	-4	-3	-3
Contingency & closure provision	US$m	0	-5	-5	0	0	-1
Total capex	**US$m**	**-2**	**-55**	**-52**	**-4**	**-3**	**-4**
Of which capex incurred by Ciftay under JV deal	US$m	-1	-22	-6	0	0	-1
Of which CGH share of capex	US$m	-1	-33	-47	-3	-2	-3
Profit & Loss							
EBITDA	**US$m**			**-9**	**34**	**53**	**56**
EBIT	US$m			-10	27	43	47
Notional tax expense	US$m			0	0	0	0
NOPAT	US$m			-10	27	43	47
FCF & DCF							
EBITDA	US$m	0	0	-9	34	53	56
Capex	US$m	-2	-55	-52	-4	-3	-4
Tax paid adjusting for carried forward losses	US$m	0	0	0	0	0	0
Free Cash Flow	**US$m**	**-2**	**-55**	**-61**	**31**	**51**	**53**
Attributable FCF (87.5%), adj for Ciftay earn-i	**US$m**	**-1**	**-33**	**-55**	**27**	**44**	**46**
IRR	%	33%					
Discounted cash flow @8% WACC	**US$m**	**183**					
Attributable DCF (87.5% stake)	**US$m**	**174**					
Of which attrib DCF from current reserve life	US$m	61					
Of which DCF from 10-year life extension	US$m	113					

Source: H&P estimates, Company reports

Kyzyltash

Kyzyltash mine: Resources & Reserves

The Kyzyltash ore body represents most of the currently defined mineralisation at the Chaarat Gold Project. While the 5.4Moz of M,I&I Resource is large enough to potentially support a significantly more sizeable operation than at Tulkubash and Kapan, the gold mineralisation is contained in a sulphide-rich, unoxidized refractory material, adding to the complexity and cost of the project.

Resources based on the block model originally developed for the November 2014 resource update is at 4,545koz Au equivalent (M&I) plus 832koz inferred [39.52Mt M&I at 3.70g/t Au].

Kyzyltash underground COG 2.0g/t Au

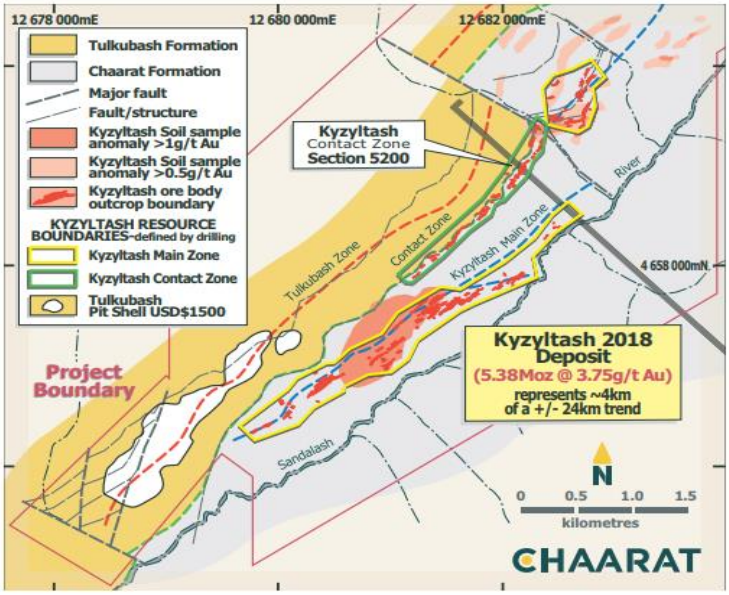
Category	Tonnes (kt)	Au grade (g/t)	Content (koz)
Measured	6,722	3.26	681
Indicated	32,794	3.79	3,864
Measured and Indicated	**39,516**	**3.70**	**4,545**
Inferred	6,611	4.05	832

Source: Company reports

Location

The Kyzyltash mineralised zone occurs within a northeast trending structure that has been traced for 10km along strike, parallel to the oxidised Tulkubash zone. While Kyzyltash has been interpreted as a separate formation to Tulkubash, the proximity of the two deposits should allow for a certain degree of infrastructure synergies and potentially some fleet and consumable procurement synergies. However, given the refractory nature of Kyzyltash, the processing synergies with Tulkubash are likely to be limited.

Kyzyltash Project Map



Source: Company website

Geology

The Kyzyltash Zone is a sulphide-bearing ore body made up of the Main Zone and Contact Zone mineralisation.

The Main Zone is a northeast-southwest trending system of anatomising and braided oblique slip faults steeply dipping to the northwest. Abundant conjugate structures and riedel shear intersections provide favourable areas for mineralisation. The Main Zone structure is developed within the siltstones of the Kyzyltash Zone on the lower slopes of the Sandalash River Valley and includes several discrete mineralised bodies along the strike.

The Contact Zone is a shear system developed between the Tulkubash and Kyzyltash Zones. Mineralisation in this zone has been discovered intermittently over a length of 10km. The Contact Zone structure strikes northeast-southwest and dips at 45-60 degrees to the northwest.

Three separate project areas occurring along the strike have been drilled at Sections 5300, 4600 and 4000 with extensive underground development at Section 5300. Gold mineralisation is hosted in sheared siltstones, which display sericitic alteration with minor quartz veins and calcite-ankerite and contain some 10-15% pyrite, stibnite, tetrahedrite and arsenopyrite – all associated with gold mineralisation.

Mine Plan and Process Plant Design

Kyzyltash remains at an early stage of development and few firm estimates on key project parameters have been provided as yet.

The Kyzyltash project is a larger, higher grade resource than Tulkubash but its extraction will be more complex given it is refractory in nature. However, a number of proven technologies are already available to extract gold economically from refractory ore-bodies, with over 40% of annual world gold production coming from this type of ore.

Kyzyltash will be primarily an underground mine, with an adit driven into high grade mineralisation in the heart of the deposit. Based on early-stage engineering designs, Kyzyltash has the potential to produce 200,000-300,000 ounces of gold per annum with low operating cash costs.

Due to the scale of investment required and the additional risks associated with both underground mining and refractory ore processing, a phased development – starting with the Tulkubash oxide heap leach development – has been adopted, with the aim of eventually redeploying cash flow from Tulkubash to the development of the larger, richer Kyzyltash deposit.

Kyzyltash project summary

Ownership	Anticipated Start Date	Extraction Process	Measured & Indicated Resources	Production	Life of Mine
100%*	2024	Underground mining, pre-oxidation and direct cyanide	4,545koz contained gold; 39.5Mt at 3.7 g/t	200-300koz/ year	8 years

Source: Company reports. *Note: Çiftay will earn-in to a 12.5% stake in both Tulkubash and Kyzyltash post completion of ~US$31.5m of work-in-kind on the Tulkubash construction. Pending completion of this JV agreement, CGH's attributable ownership will reduce to 87.5%.

Guidance on next key milestones at Kyzyltash

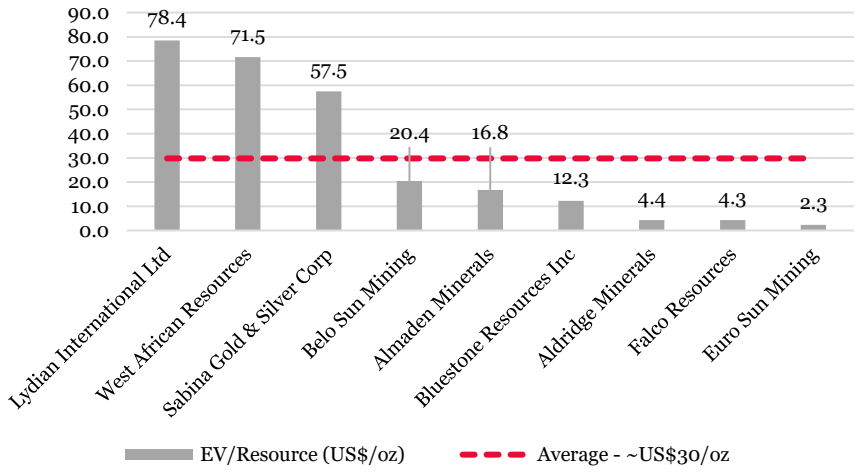
- 3300 meters of drilling at Kyzyltash to obtain fresh metallurgical samples
- Systematic metallurgical testing to identify optimum processing flow for Kyzyltash
- Begin pilot scale test work
- Update feasibility study for Kyzyltash by 2020-21 and bring the mine to production
- Begin construction in 2022

Valuation

With limited information available upon which to build a DCF model, we have chosen to value Kyzyltash using a basic EV/Resource multiple approach. We apply a conservative US$20/oz of M,I&I resource to derive a value of US$108m for Kyzyltash on a 100% basis and US$94m (or ~18p per share) on an 87.5% attributable basis assuming completion of the Çiftay JV.

While we acknowledge the comparable universe of listed, purely exploration and development-focused gold companies is somewhat limited, the peers we have identified trade on an average of ~US$28/oz, i.e. in excess of the conservative target value we have applied.

Pre-production EV/M,I&I Resource comparables for Kyzyltash



Source: Company reports, H&P estimates. Priced as of close on 9th September 2019.

Financial Statements Summary

Price & FX assumptions							
Year end Dec		FY18A	FY19E	FY20E	FY21E	FY22E	FY23E
Gold	US$/oz		1,395	1,350	1,300	1,300	1,300
Silver	US$/oz		16	16	16	16	16
LME Zinc	US$/t		2,532	2,500	2,500	2,500	2,500
LME Copper	US$/t		5,985	6,225	7,000	7,000	7,000

Income statement							
Year end Dec		FY18A	FY19E	FY20E	FY21E	FY22E	FY23E
Revenue	**US$ '000**	**-**	**63,802**	**69,503**	**80,676**	**159,054**	**185,092**
Cost of Sales	US$ '000	-	(51,038)	(50,056)	(69,823)	(99,356)	(106,600)
Depreciation	US$ '000	-	(3,358)	(3,500)	(4,688)	(10,440)	(13,178)
Gross profit/(loss)	**US$ '000**	**-**	**9,406**	**15,947**	**6,164**	**49,258**	**65,314**
Exploration & Evaluation	US$ '000	(1,692)	(1,500)	(1,500)	(1,500)	(1,500)	(1,500)
Administration expenses	US$ '000	(12,013)	(6,950)	(7,100)	(7,588)	(12,959)	(12,959)
Other operating income/(costs)	US$ '000	24	-	-	-	-	-
Operating profit/(loss)	**US$ '000**	**(13,681)**	**956**	**7,347**	**(2,924)**	**34,799**	**50,855**
Net finance costs	US$ '000	(3,361)	(6,669)	(9,110)	(14,516)	(17,284)	(14,194)
Profit/(Loss) before tax	**US$ '000**	**(17,042)**	**(5,713)**	**(1,762)**	**(17,439)**	**17,515**	**36,661**
Tax credit/(expense)	US$ '000	-	(1,691)	(3,082)	(3,096)	(3,096)	(3,096)
Net profit/(loss)	**US$ '000**	**(17,042)**	**(7,404)**	**(4,844)**	**(20,535)**	**14,419**	**33,566**
Wtd ave shares outstanding	m	377,348	403,895	419,167	419,167	419,167	419,167
EPS	**Us¢/sh**	**(4.5)**	**(1.8)**	**(1.2)**	**(4.6)**	**2.6**	**6.7**
EPS growth	%		-59%	-37%	297%	-157%	156%

Cash flow statement							
Year end Dec		FY18A	FY19E	FY20E	FY21E	FY22E	FY23E
Operating cash inflow/(outflow)	**US$ '000**	**(8,843)**	**4,552**	**6,742**	**(1,972)**	**34,665**	**61,547**
Additions to PPE	US$ '000	(2,157)	(2,700)	(36,416)	(47,966)	(4,586)	(3,651)
Other	US$ '000	(17,131)	(39,930)	118	177	165	263
Net cash used in investing activities	**US$ '000**	**(19,288)**	**(42,630)**	**(36,298)**	**(47,790)**	**(4,421)**	**(3,388)**
New equity issued	US$ '000	3,004	1,340	-	-	-	-
Increase/(decrease) in borrowings	US$ '000	18,858	43,350	(30,663)	(29,013)	(10,000)	(2,500)
Other	US$ '000	-	(6,399)	60,772	77,808	(19,948)	(46,457)
Net cash from financing activities	**US$ '000**	**21,862**	**38,291**	**30,109**	**48,795**	**(29,948)**	**(48,957)**
Net change in cash	**US$ '000**	**(6,269)**	**213**	**554**	**(967)**	**295**	**9,202**
Beginning cash/(additional funding reqd)	US$ '000	7,461	1,168	1,381	1,934	967	1,263
Ending cash	**US$ '000**	**1,168**	**1,381**	**1,934**	**967**	**1,263**	**10,465**

Balance sheet							
Year end Dec		FY18A	FY19E	FY20E	FY21E	FY22E	FY23E
Cash	US$ '000	1,168	1,381	1,934	967	1,263	10,465
Receivables	US$ '000	190	5,485	5,656	7,086	15,636	15,089
Inventory	US$ '000	-	2,714	2,720	3,911	5,863	5,793
Other	US$ '000	5,000	-	-	(0)	0	-
Current Assets	**US$ '000**	**6,358**	**9,580**	**10,311**	**11,965**	**22,762**	**31,348**
PPE	US$ '000	5,094	49,436	82,352	125,630	119,776	110,249
Other	US$ '000	43,581	43,581	45,037	45,443	45,946	46,450
Fixed Assets	**US$ '000**	**48,675**	**93,017**	**127,389**	**171,073**	**165,722**	**156,698**
Payables	US$ '000	4,924	4,071	4,081	5,867	8,794	8,690
Short term debt	US$ '000	10,163	30,663	10,000	10,000	2,500	-
Convertible Note - current	US$ '000	-	-	18,423	-	-	-
Other	US$ '000	-	-	-	-	-	-
Current Liabilities	**US$ '000**	**15,087**	**34,734**	**32,504**	**15,867**	**11,294**	**8,690**
Long term debt	US$ '000	-	22,500	12,500	2,500	-	-
Convertible note - non-current	US$ '000	16,303	17,243	-	-	-	-
Other - including balancing debt	US$ '000	-	1,691	71,691	164,191	161,691	129,691
Non Current Liabilities	**US$ '000**	**16,303**	**41,434**	**84,191**	**166,691**	**161,691**	**129,691**
Shareholders' equity	US$ '000	156,014	157,694	157,694	157,694	157,694	157,694
Convertible note - equity portion	US$ '000	2,360	1,770	590	-	-	-
Retained profit/(loss)	US$ '000	(132,984)	(140,388)	(145,232)	(164,476)	(153,480)	(125,345)
Other reserves	US$ '000	(1,747)	7,353	7,953	8,553	9,153	9,753
Total Equity	**US$ '000**	**23,643**	**26,429**	**21,005**	**1,771**	**13,367**	**42,102**

Non-IFRS & other key items							
Year end Dec		FY18A	FY19E	FY20E	FY21E	FY22E	FY23E
EBITDA	**US$000**		**4,314**	**10,847**	**1,764**	**45,239**	**64,033**
EBITDA margin	%		7%	16%	2%	28%	35%
EBIT	**US$000**		**956**	**7,347**	**(2,924)**	**34,799**	**50,855**
EBIT margin			1%	11%	-4%	22%	27%
Net cash/(debt)	**US$000**	**(27,658)**	**(70,795)**	**(109,579)**	**(174,033)**	**(161,237)**	**(117,535)**
Funding surplus/(shortfall)	**US$000**	**1,168**	**12,381**	**(68,066)**	**(161,533)**	**(158,737)**	**(117,535)**
Capital employed	US$000	48,941	95,454	129,993	175,804	174,605	159,637
Average Capital employed	US$000		84,095	110,194	152,245	176,116	167,094
ROCE	**%**		**1.1%**	**6.7%**	**-1.9%**	**19.8%**	**30.4%**
ROE	%		-27.2%	-20.1%	-186.4%	496.5%	121.4%

Kapan Project - key items Year end Dec		FY18A	FY19E	FY20E	FY21E	FY22E	FY23E
Gold in concentrate production	koz		27	30	30	30	30
Silver in concentrate production	koz		504	559	559	559	559
Zinc in concentrate production	kt		7.1	8.4	8.4	8.4	8.4
Copper in concentrate production	kt		2.1	2.3	2.3	2.3	2.3
Gold equivalent in conc production	**koz**		**55**	**63**	**65**	**65**	**65**
Payable Gold equivalent in conc production	koz		49.7	56.0	58.2	58.2	58.2
Sales Revenue	**US$m**		**69**	**76**	**76**	**76**	**76**
Cash cost	US$m		52	52	52	52	52
Royalties	US$m		-3	-3	-3	-3	-3
Sustaining Capex	US$m		-1.5	-3	-1.4	-1.4	-1.4
EBITDA	**US$m**		**11**	**18**	**18**	**18**	**18**
EBITDA Margin	**%**		**16%**	**24%**	**24%**	**24%**	**24%**
Unlevered FCF			10	10	13	13	13
DCF as at Dec 19, 8.0% WACC	**US$m**		**113**				

Tulkubash Project - key items Year end Dec		FY18A	FY19E	FY20E	FY21E	FY22E	FY23E
Gold in dore production	koz		0	0	9	75	97
Silver in dore production	koz		0	0	9	66	123
Gold Eq in dore production	**koz**		**0**	**0**	**9**	**76**	**98**
Sales Revenue	**US$m**		**0**	**0**	**12**	**99**	**128**
Cash cost	US$m		0	0	20	55	62
Royalties	US$m		0	0	-1	-8	-10
Sustaining Capex	US$m		0	0	0	-3.641	-2.572
EBITDA	**US$m**		**0**	**0**	**-9**	**34**	**53**
EBITDA Margin	**%**				**-75%**	**35%**	**42%**
Unlevered FCF			-2	-55	-61	31	51
IRR	%		33%				
DCF as at Dec 19, 8.0% WACC	**US$m**		**183**				

Valuation / Price Target Derivation		Value	Target multiple	Target Value
Kapan Project - current mine plan	US$m	53	1.0	53
Kapan Project - 10y life extension	US$m	60	0.8	48
Tulkubash Project - current mine plan*	US$m	61	0.8	49
Tulkubash Project - 5y life extension*	US$m	113	0.5	57
Kyzyltash Project*	US$m	M,I&I of 5.4Moz	US$20/Oz	94
Corporate G&A & other	US$m	-18	1.0	-18
Net cash/(debt) (Dec'19E)	US$m	-71	1.0	-71
Total	**US$m**			**213**
Shares out, assuming conversion of notes	m			419
NPV / Target Price per share	**US cents**			**51**
USD/GBP FX	$/£			1.25
NPV / Target Price per share	**GBp**			**41**
Current share price	GBp			27.5
Upside/downside from current share price	%			49%

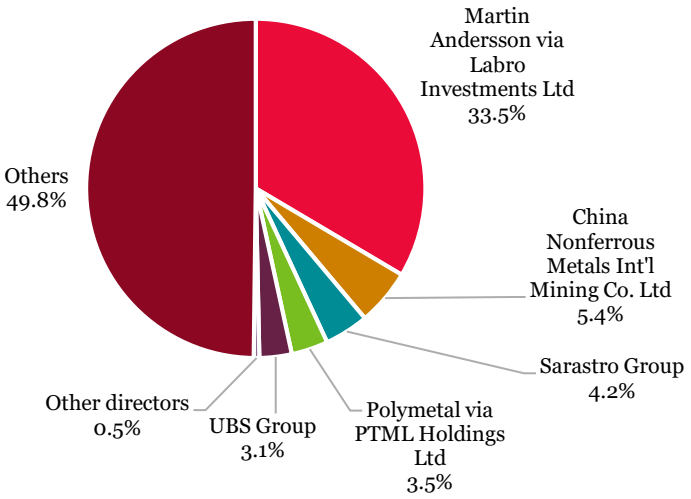
*Based on CGH's 87.5% attributable share assuming completion of Ciftay JV

Source: H&P estimates

Appendices
Corporate Overview

Key Shareholders

Chaarat Gold's significant shareholders



Source: Company reports, Bloomberg

Labro Investment is a private company co-owned by Chaarat's Chairman Mr. Martin Andersson. Currently it owns over 35% stake in Chaarat. A provision in the company's articles of association requires any holder of 20% to make a mandatory offer if they acquire additional interest. On 8th July 2019, Chaarat waived the requirement for Labro, which would allow Labro to provide further financial support in the form of equity capital if necessary.

China Nonferrous Metals International Mining was founded in 2002 in Beijing and operates as a subsidiary of China Nonferrous Metal Mining (Group) Co. Ltd. It engages in exploring, investing and operating projects in the world, including gold, zinc, copper, bauxite, crude lead and fluorite projects.

Key Management and Board of Directors

Name	Title	Tenure	Profile
Martin Andersson	Executive Chairman	2 years 11 months	• Mr. Anderson was appointed as Executive Chairman of the Company on 1st October 2016 • He first invested in Chaarat in 2011 and he intends (via Labro) to be a long term and supportive shareholder • He currently chairs the Nomination's Committee for the Company • Between 2006 and 2013, Mr. Anderson was a shareholder and served on the Board of Siberian Coal Energy Company (SUEK), one of the largest thermal coal producers in Russia • In 1993, he co-founded Brunswick Brokerage – a Moscow based investment bank that was later sold to UBS – initially holding the position of CEO and from 1999 as Chairman of the joint venture, Brunswick UBS Warburg • Mr. Anderson is a graduate of the Stockholm School of Economics and HEC Paris
Artem Volynets	Executive Director and Chief Executive Officer	1 year 5 months	• Mr. Volynets has more than 20 years' experience in mergers and acquisitions, capital markets, and senior corporate management roles. During this time, he has led private and public transactions worth more than US$30bn and managed leading businesses in the metals and mining industry • Founded ACG Amur Capital Group Ltd which is an advisory and investment management firm in 2014
Chris Eger	Chief Financial Officer	1 year	• Mr. Eger has extensive financial, M&A and commercial expertise in the metals and mining sector, gained over a 20-year career in investment banking, metals trading and private equity • Previously served as the chief financial officer of Nyrstar NV, where he played a major role in developing and implementing the Company's transformation strategy in addition to strengthening the balance sheet • Previously was the M&A director at Trafigura AG and a member of the investment banking group of Bank of America Merrill Lynch, where he worked with metals and mining companies on debt and equity financing and M&A. He also worked as a director in the global metals and mining group at BMO
Darin Cooper	Chief Operating Officer	3 months	• Mr. Cooper was appointed as the COO of the Company on 1st June 2019 • He comes with a 30 years' experience in the metals and mining industry spanning operations, projects, restructuring and culture change • Most recently, he was Head of Mining at Fusion Capital, a Swiss investment firm, where he was responsible for due diligence of potential projects, assessment of early stage exploration projects, and development of capital and operating plans for proven development assets • He held senior roles at Nyrstar, from 2012-2017, latterly as Vice President of Zinc Smelting. He also served as COO of Talvivaara Mining Company (Finland) where he worked with the Finnish

			government, creditors and investors to secure financing options during their restructuring. In this role he was responsible for the health and safety, environmental, operational and financial performance of Nyrstar's zinc smelters worldwide • Mr. Cooper obtained a B.Eng. in Metallurgy from the University of Newcastle upon Tyne and an MBA from the Open University Business School, Great Britain
Gordon Wylie	Sr. Independent Director and Deputy Chairman	1 year 10 months	• Mr. Wylie was appointed as Sr. Independent Director and Deputy Chairman of the Company on 13th November 2017 • He brings to the Board of Chaarat 42 years' experience in the mining industry and directly relevant experience of growing companies from exploration to production • Chairs each of Chaarat's Remuneration Committee and HSE Committee and also serves as a member of each of Chaarat's Audit Committee, Technical Committee and Nominations Committee • During his eight years as a member of AngloGold Ashanti's senior management team, he was responsible for their global exploration programme, part of which included moving into new prospective, higher risk geographical regions • Has been a non-executive director of numerous junior exploration companies operating globally since leaving AngloGold Ashanti • Was previously the chairman of Lydian International. Lydian International has been constructing a mine at the Amulsar open pit, heap leach gold project in Armenia
Robert D Benbow	Non-Executive Director	1 year 2 months	• Mr. Benbow was appointed as Non-Executive Director of the Company on 4th July 2018 • Mr. Benbow has over 45 year of experience during which he has taken three green field gold developments into production, including Alacer Gold Corp.'s Çöpler Gold Mine in Eastern Turkey which has produced over 1 million ounces as one of the lowest cost producers in the world. The Çöpler mine is now moving into development of the refractory ore contained within the deposit • Also serves as a director of Powderhouse Gulch LLC (Colorado) • Serves as the chairman of Chaarat's Technical Committee and a member of Chaarat's Nominations Committee and HSE Committee
Robert Edwards	Independent Non-Executive Director	11 months	• Mr Edwards has worked in the global natural resources industry for 27 years, primarily in frontier and emerging markets, advising the managements of numerous companies on a range of industrial issues • Currently serves as an independent non-executive director and member of the audit and corporate governance and remuneration committees of PJSC MMC Norilsk Nickel, and an adviser to several private natural resource companies. Mr Edwards also holds a number of other directorships • He is a member of each of Chaarat's Technical Committee, HSE Committee and Nominations Committee

			• Previously he was the chairman of Global Mining at Renaissance Capital and has also worked for HSBC and the Royal Bank of Canada
Dr Hussein Barma	Independent Non-Executive Director	9 months	• Dr Barma has significant FTSE-50 senior executive experience, gained through over 15 years at Antofagasta plc, where he led its UK presence through a period of change and growth as the UK-based Chief Financial Officer • He is currently an independent non-executive director and audit chair of Atalaya Mining plc and is a principal at Barma Advisory where he has worked on various assignments within the natural resources and other sectors. Dr Barma also holds a number of other directorships • He is currently the Chairman of Chaarat's Audit Committee and is a member of each of Chaarat's Remuneration Committee, and Nominations Committee • He is also a qualified lawyer and chartered accountant and holds a doctorate in corporate law from the University of Oxford
Warren Gilman	Independent Non-Executive Director	5 Months	• Mr. Gilman was Chairman and CEO of CEF Holdings Ltd, a mining focussed investment company jointly owned by CK Hutchison Holdings Ltd and the Canadian Imperial Bank of Commerce from 2011 to 2019 • He is a mining engineer and co-founded CIBC's Global Mining Group in 1988. During his 26 years at CIBC he ran the mining investment banking teams in Canada, Australia and Asia, serving as Managing Director and Head of the Asia Pacific region for 10 years and latterly as Vice Chairman for CIBC World Markets • He has acted as advisor to the largest mining companies in the world including BHP, Rio Tinto, Anglo American, Noranda, Falconbridge, Meridian Gold, China Minmetals, Jinchuan and Zijin and has been responsible for some of the largest equity capital markets financings in Canadian mining history • Founded Queen's Road Central Capital Ltd, where he is Chairman and CEO, in 2019. He is also a Board member of NYSE/TSX listed NexGen Energy Ltd, a uranium exploration and development company, and private mining company, Niobec Inc, which jointly owns the Niobec niobium mine in Canada with CEF, Temasek of Singapore and Magris Resources of Canada

Source: Company reports, LinkedIn, Reuters.

History

- **2007:** Incorporation of Chaarat Gold
- **2008:** Scoping study completed on the Chaarat Gold Project in The Kyrgyz Republic.
- **2010:** The Company acquired Kyrex Limited, holder of three prospective assets in The Kyrgyz Republic (Chontash, Mironovskoye and Kyzil).
- **2016:** The Company presented the results of the review of certain key areas of the Feasibility Study by the team and its advisers, on its 100% owned Chaarat Gold Project prepared by NERIN Engineering and NFC
- **2016:** Announced that it has raised approximately £4.1m through the issue of 78.8m new ordinary shares of USD 0.01 each in the capital of the Company at a price of GBp5.25/sh
- **2017:** Provided an update on progress on its strategy to achieve production from the Tulkubash Heap Leach Project. The Tulkubash Project is the first stage in developing Chaarat. With a deposit of 7Moz of a high-grade gold resource
- **2017:** The Company announced that it raised US$15m financing by means of short term senior secured convertible loan notes for the Tulkubash Heap Leach Project
- **2017:** The Company provided an update on the drilling programme in the Tulkubash Zone of the Chaarat Gold Project
- **2017:** Provided an update on the in-country approval process for the Chaarat Gold Project
    - Licence agreement signed with Kyrgyz Government confirms approval for the plan to take stage one and two of the Chaarat Gold Project to production following successful submission of the Technical Project and positive public hearing
    - Tulkubash Heap Leach Project approved for construction
- **2017:** The Company provided an update on the 2017 drilling program in the Tulkubash oxide Zone
    - Drilling program was extended to 15km from 11km
- **2017:** Announced that the Board has decided to raise up to US$20m through a mixture of equity and short term Senior Secured Convertible Loan Notes in order to optimise the development of the Tulkubash heap leach project and ensure efficient execution of the construction schedule, while also allowing for continued exploration of the oxide deposit during 2018
- **2018:** Announced the results of the JORC compliant feasibility study for its 100% owned Tulkubash Oxide Gold Project. The feasibility study was independently prepared by the UK office of Tetra Tech, Inc.
    - Initial reserve base of 16Mt ore grading 0.91 g/t gold containing 470koz of gold with 76.5% recovery via heap leaching
    - Average gold production of 95.2koz per annum, with peak production during steady state operations in excess of 100koz per annum
    - Initial capital expenditure of US$132m paid back over 3.2 years

  - The initial post-tax NPV for Tulkubash, using a 5.0% discount rate and a long-term gold price of US$1,300/oz, totals US$12.1m
- **2018:** The Company announced that it has entered into a loan agreement with a previous note holder in the Company, to secure funding of US$10m. The loan proceeds will be applied to Chaarat's goal of building a leading emerging markets gold company with an initial focus on Central Asia and the FSU, and to support the Kapan acquisition announced on 30th October 2018

- **2018:** Announced that it has entered into agreements with two investors for the subscription and issue of secured convertible notes 2021 for US$600k and US$400k respectively. These notes have been issued on the same terms as the 2021 Notes issued on 11th September 2018 as first announced on 28th August 2018

- **2018:** The Company further announced that it has entered into an agreement with an investor for the subscription and issue of secured convertible notes 2021 for US$350k

- **30th January 2019:** The Company announced that it along with its subsidiary Chaarat Gold International Limited have completed the acquisition of Kapan Mining and Processing Company CJSC from PMTL Holding Ltd, a subsidiary of Polymetal International Plc
  - Of the total consideration of US$55m, US$10m was settled on completion in Convertible Loan Notes and US$5m was previously paid as a deposit in November 2018.
  - The remaining US$40m is payable in cash following the execution of certain settlement procedures associated with the Kapan Acquisition Financing

- **18th March 2019:** Announced that it has signed a binding term sheet to enter into a Joint Venture with Çiftay İnsaat Tahhüt ve Ticaret A.S, the Turkish mining and mine construction contractor, to collaborate on the Tulkubash and Kyzyltash projects in the Kyrgyz Republic

- **1st May 2019:** Announced that further to its announcements of 1st April and 26th April 2019, it has closed the Placing, having raised gross proceeds of approximately US$2.71m from the issue of 6.9m new ordinary shares of US$0.01/sh at GBp30/sh in the Placing

- **31st May 2019:** Announced an update regarding its secured convertible notes 2021. As announced on 1st April 2019, the company entered into an agreement with a new investor for the subscription and issue of Convertible Bonds for US$10m. The investor has now increased their subscription to US$15m

- **4th June 2019:** Provided an update of the JORC compliant BFS for its majority owned Tulkubash Oxide Gold Project. Mining in Armenia and The Kyrgyz Republic
  - Initial reserve base of 22.2Mt ore grading 0.92g/t gold containing 658koz of gold, an increase of 39%
  - Average gold production of 94koz per annum, with peak production during steady state operations in excess of 111koz ounces per annum
  - The initial post-tax NPV for Tulkubash, using a 5% discount rate and a long-term gold price of US$1,300/oz, is projected to increase to US$70m

- **18th June 2019:** Announced the first tranche of results from its 2019 exploration and drilling programme at its Tulkubash oxide gold deposit in the Kyrgyz Republic
    - Over 3.8km of drilling completed with minimum of 20km scheduled to be completed in 2019

- **23rd June 2019:** Announced that it has issued 1.4m ordinary shares of US$0.01/sh
    - 250k new ordinary shares were issued to Labro Investments Limited pursuant to a guarantee fee agreement announced by the Company on 31st January 2019

- **29th July 2019:** Provided an update regarding the Kapan mine which the Company acquired on 30th January 2019
    - RoM ore production increased by 8% YoY relative to the same five-month period in 2018
    - RoM grade in Au Eq terms declined 14% YoY, resulting in a 6% decline in contained RoM metal
    - Production of copper concentrates was up 12% YoY in conjunction with a 16% increase in GEO recovered to copper concentrate
    - Production of zinc concentrate was down 10% YoY due to lower RoM zinc grades and slightly lower mill recoveries

- **30th July 2019:** Announced that following discussions related to the acquisition of the Kapan mine acquired in January 2019 from Polymetal International, Polymetal has agreed to exchange its US$10m of Convertible Notes received as part of original consideration, and a working capital settlement under the SPA for 14.6m newly issued ordinary shares of US$0.01/sh (Link)
    - This shall represent 3.5% of the enlarged fully diluted share capital of Chaarat post allotment

Mining in Armenia and The Kyrgyz Republic

Armenia

Armenia: Key Facts

GDP (2017)	- GDP $28.34bn - GDP per capita: $9,500 - GDP growth rate: 7.5%
GDP Composition (2017)	- Agriculture: 16.7% - Industry: 28.2% - Services: 54.8%
Population (2017)	- 3.04m (2018) - Urbanisation: 63.1% - Unemployment rate: 18.9% - Literacy rate: 99.7%
Exports and Imports (2017)	- Imports: $3.771bn - Primarily natural gas, petroleum, Tobacco products - Exports - $2.361bn Primarily Copper, pig iron, nonferrous metals, gold
Ease of Doing Business (2018)	- World rank: 41st

Source: IMF, CIA World Factbook, World Bank

Armenia's mining industry contributes towards over 50% of the national export. The sector is regulated by Ministry of Energy Infrastructures and Natural Resources (who grants permissions) and Ministry of Natural Protection (who issues and supervises cultivation works). Laws governing the sector include Mining Code of RA 2011, Law on Environmental and Natural Resources Using Fees 1998, Law on Waste 2004 etc. Companies wishing to obtain a right of subsoil use to extract mineral resources in Armenia are required to perform a preliminary and initial environmental impact assessment.

It is a good investment destination of lots of opportunities, as no limits are placed on foreign ownership in the mining industry - the market is fully open to foreign investors without discrimination towards origins. In addition, Armenia became a member of the Extractive Industries Transparency Initiative (EITI) in 2017 to demonstrate its determination to promote open and accountable management of natural resources.

Mining companies are charged 20% on corporate income, lower than individuals who are charged between 23% and 36% on their income. Royalties will only be higher for profitable projects, and these should encourage mining activities and development.

Armenia Tax Code	
Mining Royalties	- Rate varies. Calculated as 4 + PBT*100 / (revenue *8). Projects with higher profitability will attract higher royalty rates
Other Tax	- VAT 20% on supply of goods - Income Tax 20% payable on taxable income for companies - Environmental Tax payable on pollution on water/ air or buying/selling products that harm the environment; different rates apply

Source: Practical Law, PwC

The Kyrgyz Republic

The Kyrgyz Republic: Key Facts	
GDP (2017)	- GDP $23.15bn - GDP per capita: $3,700 - GDP growth rate: 4.6%
GDP Composition (2017)	- Agriculture: 14.6% - Industry: 31.2% - Services: 54.2%
Population (2017)	- 6.42m (2019) - Urbanisation: 33% - Unemployment rate: 7.1% - Literacy rate: 99.5%
Exports and Imports (2017)	- Imports: $4.187bn Primarily oil and gas, machinery and equipment, chemicals - Exports - $1.84bn Primarily gold, cotton, wool, garments
Ease of Doing Business (2018)	- World rank: 70th

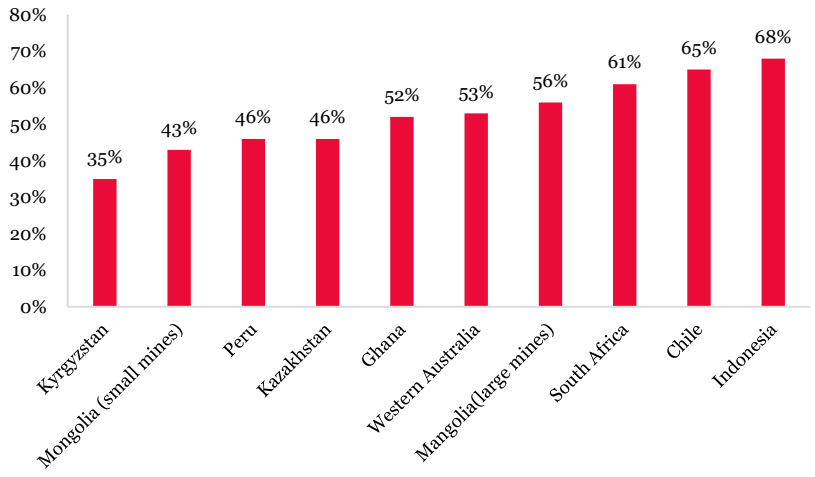
Source: IMF, CIA World Factbook, World Bank

Mining is a central pillar of The Kyrgyz Republic's economy, and the plethora of minerals it possesses include gold, iron, coal and copper, but it remains a sensitive area due to political and economic uncertainty. As the country did not sufficiently implement the 2016 EITI Standard, its membership was suspended in 2017. Current regulations include 'Law on Mining' and the 'Law on Licensing and Permits System in the Kyrgyz Republic'.

Similar to Armenia, foreign investors also enjoy the full national treatment in The Kyrgyz Republic. Under the 'Law on Investments in Kyrgyz Republic', investments are protected against expropriation, including nationalisation, requisition, or acts or failure to act by the authorised Government agencies. In

addition, the tax code is seen as favourable to the mining companies. These will open up potential opportunities for foreign investors in the mining industry.

Average Effective Tax Rate for a Model Mine with Gold Price of $1300/ oz and Opex of $500/oz



Source: Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development

The Kyrgyz Republic Tax Code

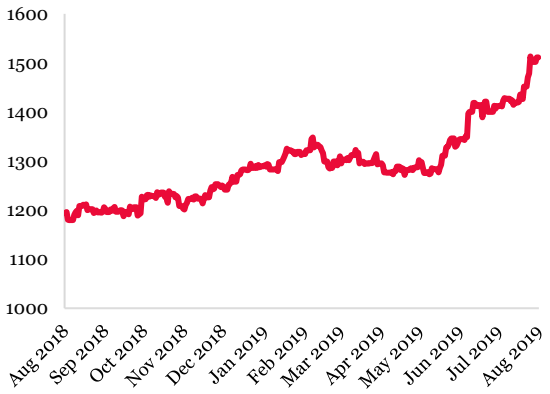
Mining Royalties	- Rate varies. Calculated as a percentage of proceeds. or the amount in KGS/unit depending on the type of mined mineral and the amount of reserves
Other Tax	- VAT 12% on supply of goods - Income Tax 0% payable on taxable profit for companies engaged in extraction and sale of gold ore, concentrate, alloy and refine gold, whereas the general profit tax is 10% for other companies

Source: Gov.kg

Gold Market Outlook

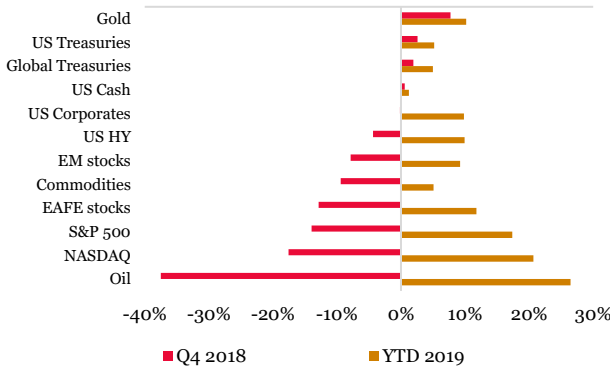
Gold performance

1-Year Gold Price Performance



Source: S&P Global

Performance of Major Assets at Q4 2018 and YTD 2019

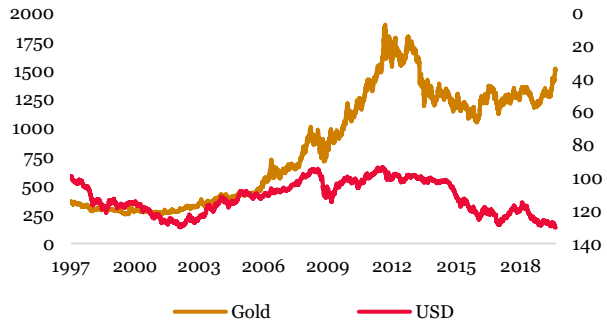


Source: Bloomberg, ICE Benchmark Administration, World Gold Council

The gold price has soared in recent months to above $1,500/oz, the highest in 5 years. Many commentators expect this short-term upward movement to continue, with several predicting the price to reach $1,600/oz over the coming months. This has mainly been driven by economic and geopolitical uncertainties around the globe, pushing investors away from riskier assets, depressing government bond yields, and increasing the attractiveness of zero-yielding stores of value such as gold. While we share this near-term positivity, for modelling purposes we are factoring in more conservative long-term price of US$1,300/oz from 2021E onwards, which is roughly in-line with current consensus and the average over the last 10 years.

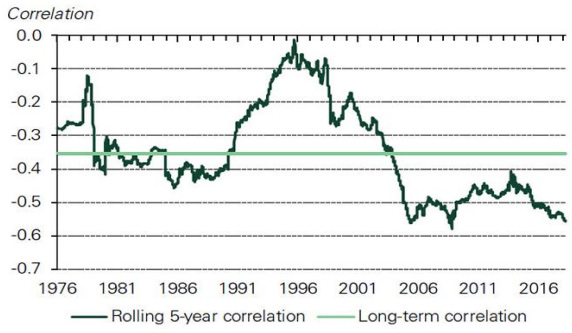
Gold as a hedge

Long-term Gold Price vs USD Movements (1997 – 2019)



Source: Bloomberg

Correlation between gold and USD real fx rate



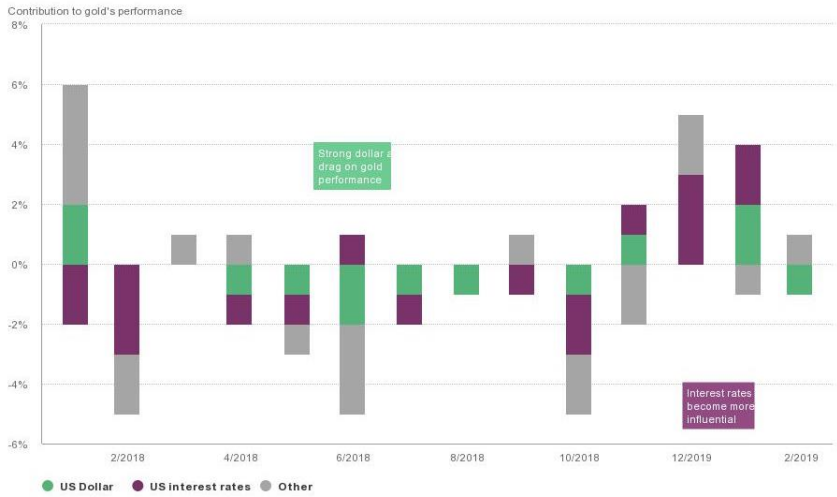
Source: Bloomberg, ICE Benchmark Administration, World Gold Council

There has been a long-term negative correlation between the gold price and broad trade-weighted US dollar index movement. The popularity of gold investment increases as the US dollar weakens against other currencies because gold becomes more expensive in other currencies. Nevertheless, USD depreciation may not necessarily indicate a rise in the gold price, and vice versa. One notable feature of the recent rally in gold prices is that it has not been associated with USD weakness, with the DXY currently up 3% YTD to a 2-year high of 98.99. We

believe this deviation from the historic relationship could reflect concern that the global trade war could morph into a currency war, which has benefitted gold in comparison to all currencies in general, not only the dollar.

In addition, monetary policy can have an impact on the gold prices, although the effects may not always be immediate. Historically the gold price has been observed to increase when the central banks shift from higher rates (tightening) to steady rates (neutral). Changes in interest rates have appeared to become more important in influencing the gold price, especially in recent months. One reason could be that an estimated 25% of the global debt market (equating to ~$13trn) is currently in negative-yield territory due to the aforementioned risk-off mood and loose monetary policy. Due to the convexity of the price-yield relationship, each basis point change in prevailing yields has a greater impact on bond prices - particularly long duration bonds - when yields are zero or lower. This in turn could be increasing the volatility of gold and the importance of yields as an explanatory factor.

Contribution to gold's performance



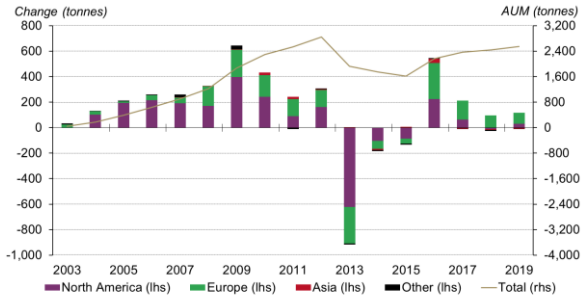
Source: World Gold Council

What has also contributed to the price rise is the fact that gold is seen as a hedge against rising inflation. One potential consequence of a global trade war, in our view, could be an increase in long-term inflation risks. In this environment, gold could be seen by investors as one of the most attractive asset-classes to hedge against a deterioration of wealth in real-terms.

Global gold-backed ETF holdings

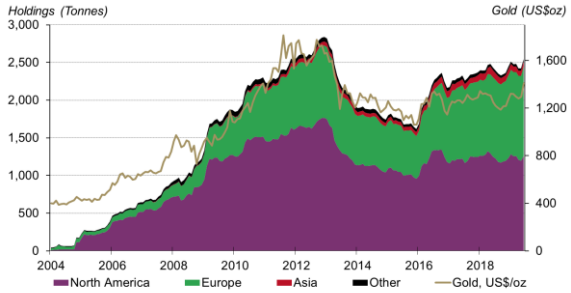
Gold-backed ETFs account for a large part of the gold market and flows in general highlight the short and long term expectations of holding gold. In June 2019, the flow in gold-backed funds increased by 15%, which is the largest monthly growth in 7 years. In 2019, UK-based gold-backed ETFs represented 60% of global inflow. The increase in gold holdings may be a result of the unsatisfactory stock market performance due to political and economic uncertainty fuelled by events such as Brexit, and the US-China trade war.

Gold-backed ETFs Money Flow ($bn pa)



Source: Bloomberg; Company Filings, World Gold Council

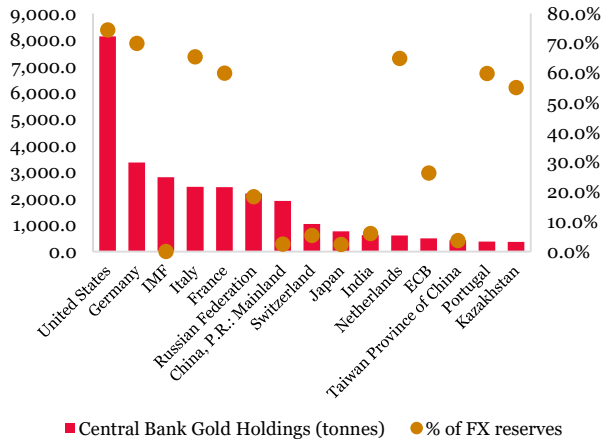
Gold-backed ETFs (and similar) Holdings



Source: Bloomberg; Company Filings, World Gold Council

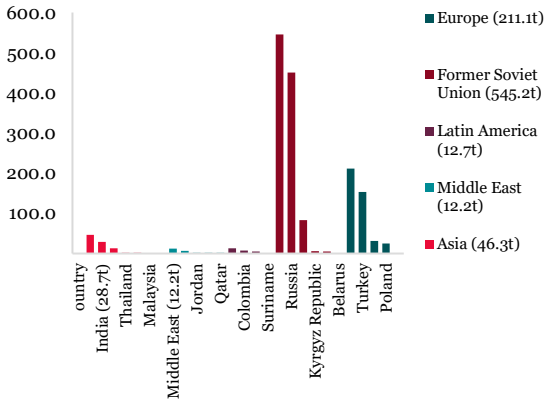
Central bank gold holdings

Official Gold Holdings vs Gold as % of FX Reserves- May 2019



Source: Central Banks, International Monetary Fund, World Gold Council

Net Central Bank Gold Purchases (Jan 18 – Oct 18)



Source: IMF IFS, Central Banks, World Gold Council

Central banks are one of the world's largest investors in gold, with total holdings of more than 30kt. The current largest official gold holding is in the US, with 8,134 tonnes of reserves, which is 74.5% of their foreign exchange reserves. Other countries that come in the top of the list include Germany, Italy, France, Russia and China. The average gold reserve as a percentage of FX reserve is 15.5%, and although the amount gold reserves in countries like China, Switzerland and Japan is relatively large, it still only accounts for a small percentage compared to their foreign exchange reserves.

Central banks have been increasing their reserves in gold further, with the net purchase totalling 351.5t in the first 10 months of 2018, up 17% YOY. Russia, Kazakhstan and Turkey have been the most consistent gold buyers in the world, but the historically inactive countries, such as Poland, Hungary and India also returned to gold after years of absence. During the first half of 2019, central banks purchased $15.7bn (374t) of gold, which is the largest precious metal acquisition by public institutions in the period.

These purchases may be because the investment priorities of central banks are safety and liquidity, which is why gold has been a long-term mainstay for central bank investments. The fact that the relationship between gold and other investments e.g. equities or fixed income are less than perfectly correlated means that holding gold will help to diversify risks and provide a comparatively better return on an investment portfolio. In addition, in July 2019, the ECB terminated a 20-year-old sales restriction agreement in gold as it is no longer necessary, implying that gold as a metal has become more liquid, and that it will still remain 'an important element of the monetary reserve'.

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