VSA capital

Flashnote

Marketing Communication (Connected Research)

Shefa Gems (Shefa Yamim)#

BBG Ticker: SEFA LN *Price: 4.75p/sh.* *Mkt Cap: £7.95m*

Speculative Buy

From Mine to Market

Economic Evaluation Confirms Low Cost Mining

Shefa Gems (Shefa Yamim) (SEFA LN)# recently announced raising gross proceeds of £1m which is expected to be sufficient to significantly advance the company through mine licensing and to the start of mining and product sales. This follows the publication of a Technical Economic Evaluation (TEE) which demonstrated low operating and capital costs. The TEE considered both contract and owner-operated mining with LoM capital of US$7.5m and US$11.3m, and operating costs of US$27/t and US$26/t respectively assuming no existing equipment. However, given the investment in equipment post IPO the current plant capacity is 50tph and therefore the required investment ahead of commercial mining is likely to be considerably lower which along with the recent fundraise substantially reduces the financing risk.

Independent Gem Stone Valuation

An independent and experienced gemmologist has provided valuations for gem quality examples of SEFA stones from the Gembox suite. SEFA's unique Carmel Sapphire™ was valued at US$5,000/ct to US$7,000/ct for black and blue cabochons respectively and US$10,000/ct for rough, uncut Natural Moissanite™. Based on grades to date from zone one bulk sampling we have established a basket price for the Gembox of US$1,500/ct which combined with the results of the TEE produces a DCF based NPV10 of US$331m.

Given the unique nature of the strategy we have also analysed the asset on a non-integrated basis. A minimum revenue of US$31/ct is required to make the project breakeven which represents a modest hurdle well below the anticipated value and should demonstrate to investors both the significant potential for strong margins as well as the robust nature of the project to cope with variability in terms of grade and stone quality over the LoM.

Advancing the Mine to Market Strategy

Renowned jewellery designer **Yossi Harrari** launched a collection of unique handmade 24k gold jewellery using stones from the Kishon Mid Reach with pieces ranging in value from US$1,000-US$85,000 confirming the Independent Valuation report, particularly in relation to the Carmel Sapphire™ and Natural Moissanite™.

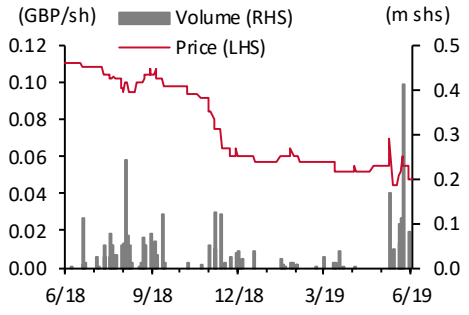
Recommendation

With the additional funding to SEFA is now well placed to execute its mine to market strategy, with commercial production planned to commence in 2020. **We reiterate our Speculative Buy recommendation, now supported by a target price of 29.5p/sh.**

Company Description

Shefa Yamim is an exploration and development company focused on coloured gemstones in northern Israel.

One Year Price Performance



Price % chg	1mn	3mn	12mn
	-13.6	-17.4%	-57.2%

SOURCE: FactSet, as of 3 June 2018 close.

Market:	LSE
Shares in issue	167.4m
Free float:	99.7%
Major Shareholders:	
Shefa Yamim LTD	40.6%
Eight O Eight Global Corp	5.87%
One Hundred and One Gold Hldgs LTD	4.03%

Oliver O'Donnell, CFA, Natural Resources

+44 (0)20 3617 5180 |
oodonnell@vsacapital.com

Technical Economic Evaluation Overview

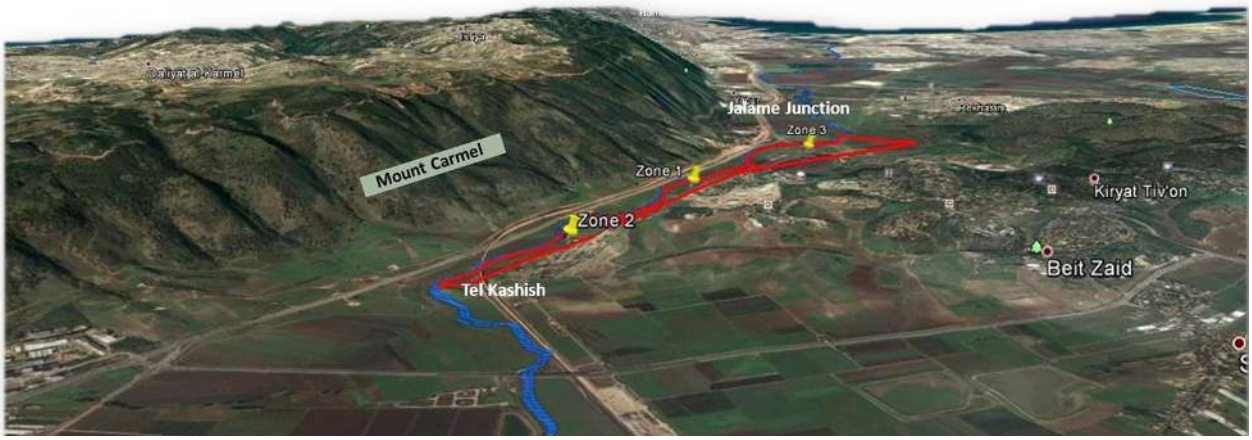
Shefa Gems (Shefa Yamim) (SEFA LN) announced that in May 2019 it raised gross proceeds of £1m. This follows a number of important milestones in H1 2019 including the publication of a Technical Economic Evaluation of the operating and capital costs of the Kishon Mid Reach project, and Independent Valuation of the stones discovered to date along with a landmark jewellery collection incorporating SEFA's unique gemstones.

The Gembox Suite

SOURCE: *Company data, VSA Capital Research.*

The additional funding will be utilised for bulk sampling in Zones 2 and 3 as well as resource delineation in Zone 1, furthering the mine to market strategy and cost that relate to securing the mining license. The license is currently expected to be awarded in Q4 2019 with commercial mining currently planned to commence in 2020.

Overview Zone 1 and 2



SOURCE: *Company data, VSA Capital Research.*

The Technical Economic Evaluation (TEE) published in February 2019 demonstrated the potential for low capital and operating costs at the Kishon Mid Reach project in Northern Israel. Although potential revenues were not assessed in the report the current marketing strategy and use of SEFA gemstones by Yossi Harari in a landmark jewellery collection will help to assess the realisable value of the stones and the mine to market strategy. However, a recently published Independent Report has provided third party pricing for the stones of the Gembox suite. This has enabled us to combine the datasets to produce a DCF analysis of the Kishon Mid Reach project demonstrating significant upside potential and strong cash flow generation potential. The second caveat important caveat to the TEE is that the report has not accounted for existing equipment. SEFA invested in upgrading its sorting facilities post IPO to speed up bulk sampling; this means that a 50tph facility already exists at the site in Akko and therefore upfront capital is significantly reduced compared to that stated in the TEE. SEFA has spent US$36m to date on all aspects of exploration and plant capital for the Kishon Mid reach project.

The key findings of the report are based on the assumption that the 1.5mt exploration target defined over zone one supports a mine life of 11 years with just under a one-year construction period. The report has also considered an owner operated model approach versus contract mining.

- Operating costs of US$26/t which covers mining and processing under an owner operating model rise to US$27/t under a contract mining schedule. Processing costs are the main operating expense hence the limited impact on opex of the switching from owner operated to contract mining.

- The report not reflective of existing equipment indicates pre-production capital is US$11.3m and US$7.5m for owner operated and contract mining respectively. This assumes using a small fleet for free digging and plant capacity of around 50tph (500-700tpd) up from the current bulk sampling capacity of 50tpd.

The Kishon Mid Reach project is an alluvial gemstone project in Northern Israel where to date over 9,700ct have been recovered from bulk sampling of the floodplain trapsites largely from Zone 1. A wide range of minerals, some of which are unique to SEFA, have been recovered and include sapphire, ruby, Carmel Sapphire™, garnet, Natural Moissanite™, spinel and hibonite as well as heavy minerals such as rutile, ilmenite and zircon where a small market exists for the use of the stones as gems. These are known as the Gembox suite and are expected to be valued at up to US$10,000/ct based on third party analysis.

View of Zone 1 of the Kizhon Mid Reach Project after Exploration Activity

SOURCE: *VSA Capital Research.*

The mining area is around 700m long with a buffer of 40m to the Kishon River; divided into three zones (mining, mined and rehabilitation) to be mined in a phased approach before being rehabilitated while the two excavated areas will in turn be used to hold pumped water whilst gravel extraction is taking place in the other. As can be seen, the alluvial plain is used as farmland currently.

The mining method is expected to be conventional truck and shovel using road suitable trucks to take gravel to the treatment plant site in Haifa where SEFA currently has a 50tpd facility; expanded from 30tpd following its 2017 IPO. The overburden and gravel may be extracted via free digging with no drilling or blasting required, which is a substantial factor in the low costs. Consequently, the plant design is likely to broadly similar to the beneficiation and sorting flowsheet which currently exists. Given the simple mining and operating processes required to extract SEFA's Gembox suite this is indicative of why it is a low-cost project both in terms of capital and operating costs.

Capital Costs

The TEE has presented two scenarios for project development under contract mining and the owner operated model. The respective project financing cost of each are US$7.5m and US$11.3m with an implied US$3.7m for mining equipment costs. The treatment plant upgrade costs are assumed at around US$4.8m. Although we see this as a low starting point in all cases the assumption is that new equipment would be purchased. However, given that SEFA already has a 50tph processing facility we anticipate based on management guidance that around US$1m is necessary to fully fund the start-up of mining.

Although in both cases the pre-production capital is minimal for SEFA, the contract mining approach has significant benefits to capital returns compared to the owner-operated model. By contract mining SEFA will lease the equipment over the mine life paying a contract fee to the operator rather than owning the equipment outright. This increases operating costs but only modestly. The substantial offsetting reduction in the upfront capital has a positive impact on the project NPV and further reduces the required revenue to make the project viable. This approach appears to be favourable from a capital return perspective.

We highlight that the TEE does not account for existing equipment and in order to progress its bulk sampling SEFA has already invested in much of the relevant equipment. Management estimate that it would require just US$1m to reach 50tpd capacity given the equipment on site. We do, however, forecast sustaining capital requirements based on the results of the TEE.

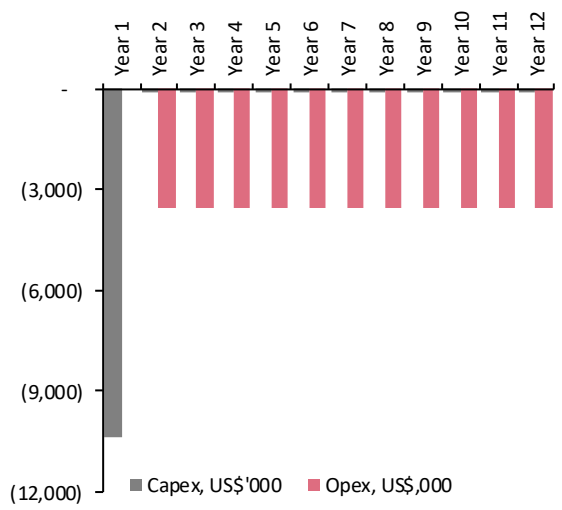
Operating Costs

The TEE findings indicate operating costs of US$26/t on an owner operated basis and US$27/t for a contract mining basis. These costs are based on tonnes of ore (gravel) mined and reflect the combined mining and processing costs. Mining costs on the owner operated basis account for around US$3.5/t and this is the reason that the switch to a contract model has only a modest inflationary impact on the overall unit cost. This is the main driver behind the significant positive impact on potential capital returns under our preferred option of contract mining. Salaries and power costs are the main additional factors underpinning opex.

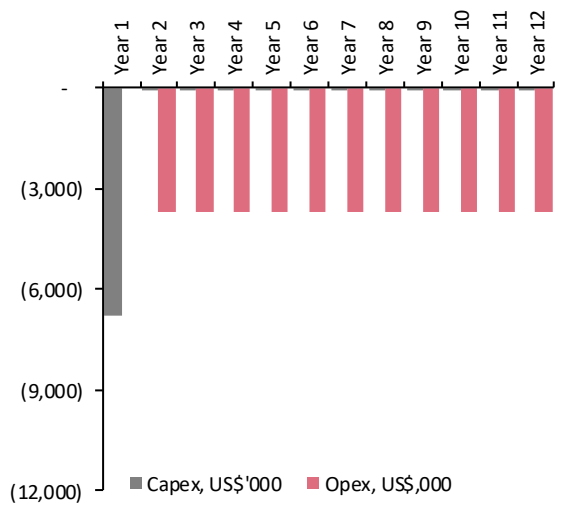
The nature of alluvial mining and excavating floodplains which act as trapsites for gemstones is a simple process. The operational costs are low which is typical of this type of mining. With no blasting or drilling required whatsoever this minimises the cost of extraction meaning that costs are likely to be highly competitive compared to other alluvial projects and naturally much lower than hard rock gemstone mining.

The base case scenario assumes an 11-year mine life and 1.5mnt gravel processed; our analysis focuses on the 1.1mnt exploration target previously defined and on which bulk sampling to date has largely focused on. The TEE presents the potential to increase the plant to 100tph from 50tph through an additional US$1m investment. This is due to latent spare capacity in the smaller scale equipment meaning that the cost of expansion is minimal. However, we also note that this increase based only on the 1.1mnt exploration target would simply shorten the mine life to around four years. The viability of this expansion would therefore, most likely be dependent on the bulk sampling ongoing at zone two and latterly at zone three which could suitably extend the mine life and enhance the project NPV.

TEE Owner Operated Cost Profile



TEE Contract Mining Cost Profile



SOURCE: *Company data, VSA Capital Research.*

Mine to Market Strategy – Yossi Harrari & Independent Valuation

SEFA recently announced along with **Yossi Harrari**, a world-renowned jewellery designer, the launch of a landmark collection of jewellery incorporating gemstones from the Kishon Mid Reach. The designer felt that the significance of the gemstones being from Israel added a unique layer of marketing potential and value beyond that arising from the natural quality of the stones. He expanded the range from 18 to 31 pieces in order to fully reflect the full potential of the stones from the Kishon Mid Reach and has designed 11 necklaces, 10 rings, four pendants, four pairs of earrings and two bracelets.

The pieces range in value from US$1,000-US$85,000 incorporating 24 Karat handmade gold and oxidised silver, known as Gilver, as well as the rough SEFA gemstones. The collection incorporates a wide range of the Gembox suite demonstrating that even the stones which investors are used to viewing as industrial minerals can be incorporated in high value add jewellery. Indeed, the collection incorporates Natural Moissanite™, Carmel Sapphire™, black spinel, ilmenite, garnet, sapphire, hibonite and ruby.

Yossi Harrari Heaven on Earth Collection

SOURCE: *Shefa Yamim, Yossi Harrari.*

This, in our view, is a major step in validating SEFA's mine to market strategy and should provide investors with confidence that the company can build a brand to maximise value from the Gembox suite of stones from the Kishon Mid Reach. Although this particular announcement does not provide insight into the value of individual stones, as pricing is for the pieces as a whole, it demonstrates the potential of this marketing strategy and its viability. Yossi Harrari has marketing agreements with leading retailers such as Stanley Korshak and Harvey Nichols London along with a deep following of celebrity endorsers and has a strong track record of selling high value pieces. We believe that this platform will give SEFA a major advantage as it seeks to build a brand for its unique Gembox Suite, particularly the Carmel Sapphire™.

The pricing announced as part of the Heaven on Earth collection ties in with the valuations indicated in the Independent Valuation Report, published in March 2019. This valuation report was produced by a gemmologist, Dr Gavrielov Gila, with over 40 years' experience in the appraisal and purchase of stones including experience with well-respected industry bodies such as Rapaport and the British Gemmological Institute.

This analysis is an important step for SEFA clearly indicating the significant value potential of its Carmel Sapphire™ and Natural Moissanite™, in particular, which are unique to the company and the Kishon Mid Reach project. These two gem stones have no existing market, however, their appearance, rarity and local significance are all factors which have positively influenced the valuation. The valuation report is, in our view, corroborated by the price range of the Heaven

on Earth collection although clearly it is not possible in this case to isolate the valuations of individual stones from within the jewellery pieces.

Independent Valuation Report Gembox Pricing

Shefa Yamim Gemstone	Cut & polished price per carat (US$)
Natural Moissanite™ (rough and uncut)	10,000
Blue Carmel Sapphire™ (cabochon cut)	7,000
Black Carmel Sapphire™ (cabochon cut)	5,000
Hibonite	1,000
Sapphire	500
Ruby	500
Spinel	150
Ilmenite	105
Garnet	50
Zircon	100
CPX	45
Mix KIM's (garnet, ilmenite, spinel, CPX)	30
Rutile	25

SOURCE: *Company Data, VSA Capital Research.*

It is important to note that this valuation report across the stones is reflective specifically of the gemstones found at the Kishon Mid Reach project and the valuer has assessed the stones discovered to date. We also highlight that the distinguishing factors in terms of regional significance and uniqueness have been heavily influential factors in gemstone valuations historically. However, in order to realise the full valuation potential SEFA will have to successfully build a brand and market the unique stones. Given the management team's deep experience of gemstone markets they are well placed, in our view, to do so.

Yossi Harrari Heaven on Earth Collection

Cabochon Cut Carmel Sapphire™

SOURCE: *Shefa Yamim, Yossi Harrari.*

Project Economics

Our analysis results in an NPV10 of US$331m for the Kishon Mid reach initial exploration target reflects the vertically integrated mine to market model which seeks to fully benefit from the value uplift as stones progresses through the value chain. This valuation is driven primarily by the combination of low-cost mining and minimal pre-production capital along with the unique array of gemstones whose rarity, regional significance and inherent gem quality are

expected, based on independent opinion, to achieve significant valuations. Consequently, if these gemstone prices can be realised the potential for SEFA is significant with strong margins and cashflow generation.

Alluvial mining is typically low-cost and the TEE has confirmed this from both an operating and capital cost perspective. The net result from the low-cost figures is that in order to make the project profitable the minimum required carat value is reasonably low, however, the valuations in the Independent Report which may be realised through the mine to market strategy.

The difficulty with alluvial projects is that although costs are low the nature of deposition means that grade distribution can vary significantly within a resource in an unpredictable fashion. This has a resulting impact on revenues and margins. This is a drawback in our analysis which assumes a consistent grade over the life of mine and therefore stable revenues. However, the risk is to both the upside and downside with the potential for finding highly concentrated trapsites as well as sparse areas. Furthermore, the potential for exceptional finds to boost earnings significantly is one of the particular attractions for investing in junior gemstone companies.

The TEE did not consider potential revenues and an NPV because insufficient testwork has been carried out to date on the value of the stones within the Gembox suite. However, an independent report published in March 2019 has provided guidance on potential valuations for gem quality examples of polished and cut stones within the SEFA Gembox suite with the exception of the Carmel Sapphire™ where a valuation on a cabochon cut stone was provided. A cabochon is a stone which has been polished but not faceted.

Using a combination of assumptions provided by the TEE and the independent valuation report we have produced a DCF analysis which indicates the potential for strong cash flows and margins. All calculations are based on US dollar values and we use a discount rate of 10%.

Gembox Suite Independent Valuation & Implied In-Situ Value

Shefa Yamim Gemstone	Cut & polished price per carat (US$)	Zone 1 Grade, cpht	Value per tonne, US$
Natural Moissanite	10,000	0.1	1,000
Blue Carmel Sapphire™ (cabochon cut)	7,000	39.36	275,520
Black Carmel Sapphire™ (cabochon cut)	5,000	39.36	196,800
Hibonite	1,000	0.33	330
Sapphire	500	4.5	2,250
Ruby	500	0.08	40
Spinel	150	61.91	9,287
Ilmenite	105	12.06	1,266
Garnet	50	34.09	1,705
		152.44	**2,520**

SOURCE: *Company Data, VSA Capital Research.*

Due to the fact that the Independent Valuation report largely reflects the value of cut and polished stones rather than rough stones as is typical for a project of this nature we have made additional assumptions regarding the proportion of gem quality stones within the resource, wastage during cutting and the terms of a JV with jewellery makers. **Bain & Company** data with regard to diamonds indicates that around 50% of diamonds mined globally are industrial. No such analysis has been produced as yet on the Kishon Mid Reach, however, we believe that this conservative estimate is appropriate. During the cutting process, typically 50-60% of a stones weight is lost; we have a applied a factor of 0.5 to all stones except for the Carmel Sapphire™ and Natural Moissanite™ which due to the cabochon nature of the former will not be cut so harshly (we assume 0.6x value) and no change for Natural Moissanite™ which due to the sizes discovered to date will be incorporated within jewellery as a rough stone.

The value-add process from mining to jewellery increases the value of stones by a multiple of their value in rough form. Although industry margins decline on that rising value from mining to jewellery manufacture SEFA is uniquely attempting to capture the full uplift through the value chain. In the case of Yossi Harari where SEFA has opted to work with a brand name in order to help market the unique stones that SEFA has discovered some of that value is shared.

We believe that as the SEFA brand is established for the Carmel Sapphire™ and Natural Moissanite™ SEFA will be able to increasingly fully capture that value particularly when operating to produce its brand of jewellery. We assume over the life of mine that SEFA may have to give up around 25% of the value as SEFA seeks to build its brand. Additionally, we note that there may be longer time lags than a simple mining operation between mining and recording of revenues given the jewellery design, making and distribution process. This would necessitate a higher working capital buffer than a non-integrated strategy, in our view.

One other consideration which must be incorporated is the cost of the value-add process, primarily at the cutting stage. Global data from Bain and Company indicates that US, European and Israeli cutting costs are typically US$100/ct, while in China they fall to US$35/ct and US$25/ct in India although some estimates suggest that cutting costs may be as low as US$10/ct. One of SEFA's advantages are the strong local relationships which management have in the local cutting industry which we anticipate would mean favourably cutting rates. Furthermore, the decision to cut cabochons rather than fully faceted stones means that costs will be significantly lower than US$100/ct. Indeed, the cost of cutting for the Yossi Harari collection was around US$15/ct according to management. With a mixture of lower cost cabochon cutting, fully faceted cutting and SEFA's local advantage we anticipate that cutting costs would be between US$30-50/ct on average.

Consequently, we assume that 50% of the resource is non-gem quality and conservatively assume no value, between 40-50% of carat weight is lost during the cutting process and that SEFA receives 50% of the sale profits on the jewellery. Despite these conservative assumptions we expect strong cashflow potential from SEFA and highlight that our analysis focuses only on the initial zone one exploration target of 1.1mnt. Further exploration therefore has the potential to enhance the project NPV which based on our assumptions stands at US$331m on the back of pre-production capital of just US$1m.

Kishon Mid Reach Project Highlights

Basket Price, US$/ct	2,520	**NPV, US$m**	331
Cutting Cost, US$/ct	30-50	**Discount rate, %**	10
Average EBITDA, US$mpa	92	**Pre-Production Capital, US$m**	1.0
Average EBITDA margin, %	79	**Sustaining Capital, US$mpa**	0.07
Life of Mine	9 years	**Operating Unit Cost, US$/t**	27
Grade, cpht	152	**Plant throughput, ktpa**	140

SOURCE: *Company Data, VSA Capital Research.*

One other significant benefit we factor into our analysis is that without a Mining License SEFA has been unable to sell the inventory yielded in its bulk sampling. We are therefore able to factor the 9,733ct discovered in the Gembox suite as an additional benefit to early revenue generation. This follows a nine-month construction period and we anticipate production to commence in late 2020.

Alternative Valuation Approach; Minimum per Carat Value

Whilst our base case is firmly rooted in SEFA's mine to market strategy most investors are perhaps more used to a strategy of marketing rough stones. We have adapted our model to determine a breakeven NPV valuation and based on a minimum per carat value necessary to generate the required revenue. Again, we use a 10% discount rate and our model is in USD. However, in this scenario since we assume that all stones could be sold into industrial or gem markets we make no assumptions for cutting wastage or resource gem quality.

Breakeven NPV Scenario Analysis, US$m

	Grade	**Contract v Owner Operated**		**NPV10**	
	152cpht	Contract	Owner Operated	Breakeven (US$0m NPV)	IRR, 15%
Implied Minimum Required Value per Carat (US$/ct)	**31**	**31**	**36**	**31**	**45**

SOURCE: *VSA Capital Research, Company data.*

Given the low capital costs and operating costs of US$26-27 per tonne we anticipate that in order for the project to breakeven from an NPV perspective it would require average revenue of just US$31/ct. This valuation is based on our assumption that SEFA would use the more attractive contract mining approach and that grade distribution would be in line with the bulk sampling to date.

The implied required minimum carat value of cUS$31/ct is therefore more closely aligned with low quality non gem grade pricing. Whilst the mine to market strategy demonstrates considerable upside we believe that this analysis should highlight to investors a downside scenario. It is possible that SEFA could combine its strategies selling some rough stones in the early stages of mining whilst it builds the jewellery brand in order to generate near term cashflow and our analysis demonstrates that even low valuations for the stones make the project viable.

Using the base case scenario to determine the necessary value to generate a 15% IRR this would require an average carat value of US$45/ct and results in an NPV of US$11m. Again, this is a per carat value consistent with low quality stones and therefore a hurdle rate that could reasonably be achieved. However, the upside potential beyond this remains significant given the propensity for alluvial projects to deliver large high value stones with transformative results for profitability. Furthermore, additional exploration to extend the mine life could further enhance the project potential.

Data from previous **Gemfields** auctions of rough rubies and emeralds indicate that non-gem or commercial quality corundum is valued at up to US$20/ct. Medium quality rubies have been priced at between US$300-400/ct with high quality stones fetching US$600-700/ct. Rubies typically achieve higher prices than sapphires although this provides some indication of current market valuations of rough coloured stones. The latest data from the December 2018 Singapore auction of all grades of rubies had an average carat value of US$84/ct which was down 7% YoY and 30% compared to June 2018. This does not, however, reflect the variation in quality within the sights and Gemfields highlighted that per carat prices on a like for like basis remained supported.

Exploration Upside

Our analysis is focused on the updated exploration target of 1.1mnt gravel in zone one where over 6kt of gravel has been processed. Although zone two bulk samples have yielded results in line with those of zone one with a Gembox suite grade of 97.98-242.69cpht dominated in this case by garnet and spinel. Further bulk sampling is planned for Q2 and Q3 2019 and consequently we intend to revisit our assumptions once the results are fully interpreted.

Success in zones two and latterly three would potentially justify the US$1m upgrade in plant capacity to 100t/hour that would enhance mine life and potential cash flows. The total exploration target for zones one, two and three was previously announced as 5mnt of precious tone bearing gravels. Just 1.1mnt is included in zone one and there is therefore potential upside to our base case as successful bulk sampling indicates the potential to extend the mine life beyond zone 1.

Zone Two Bulk Sampling Results to Date

		Spinel		Garnet		Carmel Sapphire		Sapphire		Ruby		Moissanite		Hibonite		Ilmenite		Gembox
Bulk Sample no.	Tonnage	cts	Grade, ctpht	cts	Grade, ctpht	cts	Grade, ctpht	cts	Grade, ctpht	cts	Grade, ctpht	cts	Grade, ctpht	cts	Grade, ctpht	cts	Grade, ctpht	Grade, ctpht
1223	691	330	47.8	191	27.6	25.8	3.7	40.8	5.9	0.08	0.01	0.14	0.02	-	-	147	21.3	107
1224	553	276	49.9	123	22.2	23.0	4.2	21.9	3.9	0.04	0.01	0.04	0.01	1.0	0.2	93.3	16.9	97.98
1225	566	487	86.1	132	23.4	14.2	2.5	19.8	3.5	-	-	-	-	1.5	0.3	82.0	14.5	131
1229	530	292	55.0	98.1	18.5	15.4	2.9	25.0	4.7	-	-	-	-	-	-	92.9	17.5	99.48
1230	569	790	139	254	44.7	40.6	7.1	68.9	12.1	0.08	0.01	0.07	0.01	3.3	0.6	209	36.7	243
Total	**2,909**	**2,175**	**74.8**	**798**	**27.4**	**119**	**4.1**	**176**	**6.1**	**0.20**	**0.01**	**0.25**	**0.01**	**5.7**	**0.2**	**624**	**21.4**	**135**

SOURCE: *Company Data, VSA Capital Research.*

Valuation

With the results of the Technical Economic Evaluation and Independent Valuation Report on the enabling us to produce a DCF analysis of SEFA's Kishon Mid Reach project we believe that it is now possible to quantitatively evaluate SEFA and provide a target price to support our Speculative Buy recommendation. Our base case analysis utilises the contract mining approach which requires a lower upfront funding requirement and more attractive cashflow profile despite modestly higher opex of US$27/t versus US$26/t.

Our initial DCF analysis produces an unrisked valuation of US$331m using a discount rate of 10% and a weighted price based on the grades achieved from bulk sampling. However, with further exploration, trial mining and project financing yet to be resolved we have risked our valuation to more fairly reflect the current project risk. As project milestones are achieved and the project is derisked we expect the stock to rerate to more fully reflect the value potential.

Given that the TEE and valuation report were produced in USD we have applied the same approach for our analysis using GBPUSD of 0.75 to convert. We believe that using a P/NPV multiple is the most appropriate method of reflecting the risk. Given that a compliant resource has not yet been determined, financing remains outstanding and project development is therefore at an early stage, a 0.20x multiple fairly reflects the risks whilst also indicating the current significant upside potential in the shares.

Our assumptions extrapolate grade distribution achieved to date from bulk sampling, however, this does not fairly reflect the potential grade distribution of an alluvial deposit which could be higher or lower than the results achieved to date. Furthermore, it is not possible to reasonably predict the upside potential associated with extraordinary finds which is a major reason for investing in junior gemstone producers. The largest stones discovered to date which include Carmel Sapphire™ in excess of 30 carats would likely have a premium valuation if of gem quality which could produce significant excess positive returns to earnings particularly given the low cost of extraction.

We also note the announcement of a 1 for 10 share split on 17 April 2019 from 14.24m shares to 142.36mn shares, prior to the placing of £1m which took the outstanding shares to 167mn.

Shefa Yamim Valuation Methodology

	NAV, US$m	P/NAV, x	Fair Equity Value
Kishon Mid Reach (Zone 1)	**331**	**0.20**	**66**
Total NAV, £mn			50
Consolidated Net Debt, £m			(0.2)
Total Equity Value, £m			49
No. of shares, m			167
Target Price, GBp/sh.			**29.5**
Current Price, GBp/sh.			4.75

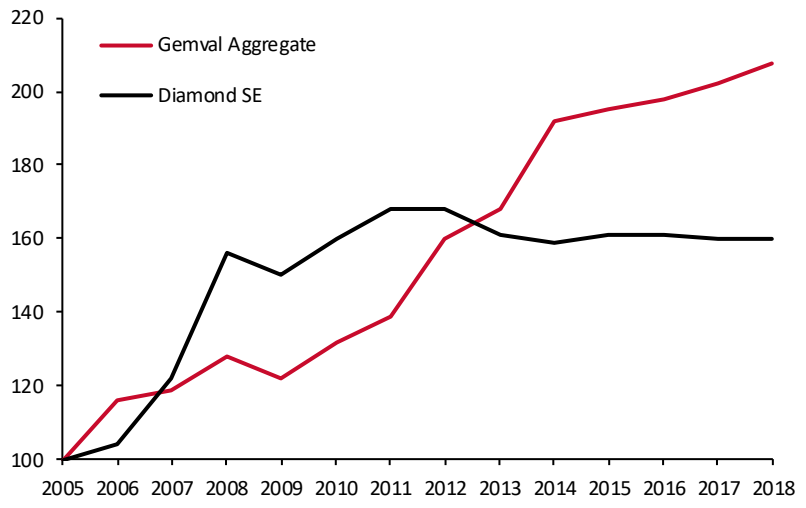
***SOURCE**: Company Data, VSA Capital Research.*

We reiterate our Speculative Buy recommendation although have now determined a target price of 29.5p/sh.

Peer Group Comparison

Given the lack of listed coloured gemstone miners and developers, SEFA continues not to have a natural peer group. Highlighted by a 37% and 19% fall in Q1 2019 revenue for **Alrosa (ALRS RU)** and **De Beers** the soft diamond market is having a negative impact on the comparable stocks made up of alluvial diamond peers and this may have impacted sentiment towards SEFA. However, coloured gemstone pricing continues to be robust as evidenced by the **Gemval Index** and the long-term uptrend in pricing continues highlighting the potential opportunity in SEFA as exposure to the market.

Coloured Gemstones Continue to Outperform Diamonds



SOURCE: *Gemval, VSA Capital Research.*

Robust pricing along with the low-cost extraction potential demonstrated by the TEE underpins our investment case. The low operating and capital costs minimise the required value of discovered gemstones necessary to generate profitability while the potential for exceptional finds could quickly add significant upside to the value of the operations.

Peer Group Comparison

Company Name	Ticker	Market Cap, US$m	Market Cap, £m	12 month performance, %	Location	Company Description
Olivut Resources	OLV CN	5.58	3.91	+21.1	Canada	Early stage, primary source explorer of kimberlite pipes in Northwest Territory
Botswana Diamond	BOD LN	5.15	3.60	-41.9	Botswana, South Africa	Early stage JV with Alrosa; completed rock sampling, mapping and geophysics. Recently acquired earn in rights on advanced exploration assets in South Africa
Tsodilo Resources	TSD CN	6.09	4.26	-70.9	Botswana, South Africa	Exploration of various kimberlite and precious metals assets.
Batla Minerals	MLBAT EN	3.39	2.37	-58.3	Lesotho, South Africa	Alluvial diamond production, contract mining and mine development.
Diamcor Mining	DMI CN	8.58	6.01	-60.9	South Africa	Currently developing an alluvial diamond project with a 1.3mnct resource.
Trans Hex Group	TSX SJ	4.50	3.15	-65.3	South Africa	30+ year track record of alluvial diamond production
Richland Resources	RLD LN	0.68	0.48	-73.0	Australia	Sapphire producer. c900kct production in 2015 of all qualities
Fura Gems	FURA CN	19.85	13.90	-56.3	Colombia & Mozambique	Ruby and Emerald exploration and production. Former Gemfields Coscuez mine January 2018.
Gemfields	GML SJ	175.87	123.11	-35.3	Mozambique	Ruby & emerald producer, market leader
Shefa Yamim	**SEFA LON**	**11.38**	**7.95**	**-57.2**	**Israel**	**Advancing to Trial Mining in 2019**

SOURCE: *Factset, Company data, VSA Capital Research.* ***NOTE:*** *USDGBP 0.74, USDCAD 1.28, GBPCAD 1.69 GBPNIS 4.64*

Shefa Yamim continues rightly, in our view, to trade at a premium to the comparable peers, however, its own performance has been weak in recent months. We believe that the publication of the TEE should demonstrate the projects potential in large part whilst the ongoing divergence in gemstone pricing highlights the investment opportunity. However, we note that **Fura Gems (FURA CN)** which is acquiring **New Energy Minerals (NXE AU)** (formerly Mustang Resources) via an earn in agreement into its Mozambican ruby assets, has now raised C$35m since listing although it has announced that it requires an additional similar amount to achieve its milestones. The valuation of A$2.8m-A$9.99m for the transaction highlights the wide variation in valuations in the peer group and the inherent challenges in valuing this type of asset. However, FURA's performance has also been broadly range bound. The results of the TEE and independent valuation report demonstrate the potential viability of the project and SEFA continues to work towards trial mining in 2019. The results of the TEE are a key milestone necessary for that.

Risks

- **Commodity Prices**. The company is primarily exposed to the coloured gemstone market and unexpected changes to pricing may affect our valuation. Prices are dependent on the unique characteristics of individual stones.
- **Financing Risk.** Given the challenging conditions for commodity markets and natural resources companies there is a risk of Shefa Yamim failing to secure project financing. This has been reduced by the latest round of funding.
- **Development Risk.** The potential for delays and operating issues are an inherent industry risk and there is the potential for delays to the licensing and construction of the project. The project is located close to residential areas and transport links, management will need to address the potential impact and possible solutions as part of its social and environmental impact studies.
- **Geological Risk.** Further geological assessment is required to ascertain commercial viability; there is of course a risk that this is not established.
- **Marketing Risk.** The valuation of individual stones presents a future risk to the potential valuation and profitability of Shefa Yamim.

Appendix 3: Financial Statements

Profit & Loss, NIS'000

		2018		2017
Costs and expenses				
General and administrative expenses	-	3,410	-	541
Capital gain		-		-
Operating loss	-	3,410	-	541
Financial expenses	-	218	-	15,954
Financial income		9,637		237
Net financial Expense		9,419	-	15,717
Loss for the year and comprehensive loss attributed to the Company shareholders		6,009	-	16,258
Basic and diluted loss per share (in NIS) attributed to the Company shareholders		0.4	-	1.7

SOURCE: *Company data, VSA Capital Research.*

Balance Sheet, NIS'000

	2018	2017
Non-Current Assets		
Fixed assets	1,736	2,130
Loan to the parent company	2,494	2,342
interested party	77	77
Assets for exploration and evaluation of precious stones	59,128	55,259
Total non-current assets	**63,435**	**59,808**
Current Assets		
Cash and cash equivalents	209	6,489
Deposit in bank	-	173
Receivables	779	368
Total current assets	**988**	**7,030**
Total Assets	**64,423**	**66,838**
Liabilities and shareholders' equity		
Non-current Liabilities:		
Long-term loans from interested parties and others	560	800
Financial leasing	-	49
Liability for severance pay	138	118
Warrants	564	9,834
Total long-term liabilities	**1,262**	**10,801**
Current Liabilities:		
Short-term loans from bank and others	456	467
trade payables	1,368	1,766
Other accounts payable	114	110
Interested parties	907	1,206
Loans convertible to shares	772	-
Total Current Liabilities	3,617	3,549
Total Liabilities	**64,423**	**14,350**
Shareholders' Equity	**59,544**	**52,488**
Total Liabilities and Shareholders' Equity	**123,967**	**66,838**

SOURCE: *Company data, VSA Capital Research.*

Cash Flow Statement, NIS'000

	2018	2017
Cash flows from operating activities:		
Loss for the year	6,009	- 16,528
Adjustments required to reconcile loss for the year to net cash used in operating activities	- 9,931	17,114
Net cash used in (provided by) operating activities	**- 3,922**	**856**
Cash flows from investing activities:		
Purchase of fixed assets	- 391	- 531
Consideration from sale of fixed assets	55	-
Deposits	173	-
Investment in exploration and evaluation assets	- 3,541	- 4,375
Decrease in deposit	- 84	- 1,177
Loan rendered to parent company	-	188
Net cash used in investing activities	**- 3,788**	**5,895**
Cash flows from financing activities:		
Consideration received for issuance of share capital (including additional capital)	908	137
Increase in deferred issuance expenses	-	- 4,707
Repayment of credits from banks and others, net	- 2	- 205
Receipt (Repayment) of loans from interested parties, net	- 111	446
Receipt of loans convertible to shares	685	16,611
Receipt of long-term loans	-	-
Repayment of long-term loans	- 25	- 40
Interest received, net	- 106	- 458
Net cash provided by financing activities	1,349	11,784
Linkage differences in regard to cash and cash equivalents	81	- 257
Increase in cash and cash equivalents	**6,280**	**6,488**
Cash and cash equivalents at the beginning of the year	**6,489**	**1**
Cash and cash equivalents at the end of the year	**209**	**6,489**

SOURCE: *Company data, VSA Capital Research.*

Disclaimer

Investment Analyst Certification

In our roles as Research Analysts for VSA Capital Limited, we hereby certify that the views about the companies and their securities discussed in this report are accurately expressed and that we have not received and will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this report.

Non-Independent Research

This is a marketing communication. It is non-independent research as it has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

Important Disclosures

This research report has been prepared by VSA Capital Limited, which is party to an agreement to be paid a fee as corporate finance advisors and arrangers with, or has provided investment banking services to, Shefa Yamim, or has been party to such an agreement within the last twelve months, and is solely for, and directed at, persons who are Professional Clients as defined under Annex II of the Markets in Financial Instruments Directive, Directive 2004/39/EC, or as defined in the FCA Handbook. Persons who do not fall within the above category should return this research report to VSA Capital Limited, New Liverpool House, 15-17 Eldon Street, London EC2M 7LD, immediately.

This research report is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. It is being supplied to you solely for your information and may not be reproduced, forwarded to any other person or published, in whole or in part, for any purpose, without out prior written consent.

This research report is exempt from the general restriction on the communication of invitations or inducements to enter into investment activity and has therefore not been approved by an authorised person, as would otherwise be required by Section 21 of the Financial Services and Markets Act 2000 (the "Act"), as amended by The Financial Services and Markets Act 2012.

Neither the information nor any opinion expressed constitutes an offer, or an invitation to make an offer, to buy or sell any securities or any options, futures or other derivatives related to such securities.

The information and opinions contained in this research report have been compiled or arrived at by VSA Capital Limited (the "Company") from sources believed to be reliable and in good faith but no representation or warranty, express or implied, is made as to their accuracy, completeness or correctness. All opinions and estimates contained in the research report constitute the Company's judgments as of the date of the report and are subject to change without notice. The information contained in the report is published for the assistance of those persons defined above but it is not to be relied upon as authoritative or taken in substitution for the exercise of the judgment of any reader.

The Company accepts no liability whatsoever for any direct or consequential loss arising from any use of the information contained herein. The company does not make any representation to any reader of the research report as to the suitability of any investment made in connection with this report and readers must satisfy themselves of the suitability in light of their own understanding, appraisal of risk and reward, objectives, experience and financial and operational resources.

The value of any companies or securities referred to in this research report may rise as well as fall and sums recovered may be less than those originally invested. Any references to past performance of any companies or investments referred to in this research report are not indicative of their future performance. The Company and/or its directors and/or employees may have long or short positions in the securities mentioned herein, or in options, futures and other derivative instruments based on these securities or commodities.

Not all of the products recommended or discussed in this research report may be regulated by the Financial Services and Markets Act 2000, as amended by The Financial Services and Markets Act 2012, and the rules made for the protection of investors by that Act will not apply to them. If you are in any doubt about the investment to which this report relates, you should consult a person authorised and regulated by the Financial Conduct Authority who specialises in advising on securities of the kind described.

The Company does and seeks to do business with the companies covered in its research reports. Thus, investors should be aware that the Company may have a conflict of interest that may affect the objectivity of this report. To view our policy on conflicts of interest and connected companies, please go to: http://www.vsacapital.com/policies/conflict-of-interest-policy.

VSA Capital acts as Corporate Adviser/Broker to Shefa Yamim, and is therefore classed as a connected company.

Investors should consider this report as only a single factor in making their investment decision.

The information in this report is not intended to be published or made available to any person in the United States of America (USA) or Canada or any jurisdiction where to do so would result in contravention of any applicable laws or regulations. Accordingly, if it is prohibited to make such information available in your jurisdiction or to you (by reason of your nationality, residence or otherwise) it is not directed at you.

Definition of Ratings

VSA Capital Limited uses the following stock rating system to describe its equity recommendations. Investors should carefully read the definitions of all ratings used in each research report. In addition, since the research report contains more complete information concerning the analyst's views, investors should carefully read the entire research report and not infer its contents from the rating alone. In any case, ratings (or research) should not be used or relied upon as investment advice. An investor's decision to buy or sell a stock or investment fund should depend on individual circumstances and other considerations.

VSA Capital Limited's recommendations are defined as follows:

BUY: The stock is expected to increase by in excess of 10% in absolute terms over the next twelve months.
HOLD: The price of the stock is expected to move in a range between -10% and +10% in absolute terms over the next twelve months.
SELL: The stock is expected to decrease by in excess of 10% in absolute terms over the next twelve months.

In addition, on occasion, if the stock has the potential to increase by in excess of 10%, but on qualitative grounds rather than quantitative, a SPECULATIVE BUY may be used.

Distribution of VSA Capital Limited's Equities Recommendations

VSA Capital Limited must disclose in each research report the percentage of all securities rated by the member to which the member would assign a "BUY", "HOLD, or "SELL" rating, and also the proportion of relevant investments in each category issued by the issuers to which the firm supplied investment banking services during the previous twelve months. The said ratings are updated on a quarterly basis.

Equities breakdown: 31 December 2018	Spec. BUY	BUY	HOLD	SELL
Overall equities coverage	33.3%	66.7%	0.0%	0.0%
Companies to which VSA has supplied investment banking services	33.3%	66.7%	0.0%	0.0%

Recommendation and Target Price History

Valuation basis

Our valuation is based on a risked DCF analysis.

Risks to that valuation

The company is subject to commodity price risk, financing risk, development risk, geological risk and marketing risk.

This recommendation was first published at 12/05/18.