Australian Gold Fund Valuation and SWOT Analysis

Special Report

Merger of Northern Star Resources (ASX: NST) and Saracen Mineral Holdings (ASX: SAR)

Date	20/10/2020
Classification	Major Gold Miner
Current Price	$16.210
No. Issued Stocks (m) - Post Merger	1,155.2
Net Cash + Bullion + 0.5 x GIC ($ m)	$30.11
Last Dividend Payment ($ p.a.)	$0.19
Market Capitalisation ($ m)	$18,726.14
Enterprise Value ($ m)	$18,696.03

Operating Performance Metrics	
Annual Gold Production Guidance *Post-Merger* (oz p.a.)	1 540 000-1 700 000
All-In Sustaining Cost Guidance *Post Merger* ($/oz)	$1 420-$1 550
Operating Margin *Post Merger* (Sale Price less AISC)	$830.95
Resources (oz)	49,207,000
Reserves (oz)	19,305,000
Financial Year Cumulative Production (oz)	1,425,591
Production as % of 2020 Annual Guidance	105.60%
Financial Year Cumulative AISC *Post Merger* ($/oz)	$1,351.92

Valuation Metrics	
Price Range	$12.06-$17.12
Overall Ranking	Slightly Overvalued
Current EV/AISC-Adjusted Production	$17,138.00
EV/AISC-Adjusted Production Range	$14 000-$16 500
Ranking	Slightly Overvalued
EV/Resources	$379.95
Ranking	Fair Value
EV/Reserves	$968.46
Ranking	Slightly Overvalued

Summary

Northern Star Resources (ASX: NST) and Saracen Mineral Holdings (ASX: SAR) announced on 6th October a merger of equals to be effective around February 2021 that will create the second largest ASX-listed gold producing company. Based on the information released at the time of the announcement, this merger implies a combined entity of over $16 billion producing 1 540 000-1 700 000oz at approximate AISC of $1 420-$1 550/oz in the 2021 financial year. The company will have a substantial 19.3Moz Ore Reserves and 49.2Moz Mineral Resources, which will underpin a relatively long mine life exceeding 15 years. With both companies boasting relatively excellent and enviable track records, the merged entity will be a force to be reckoned with in the gold mining space.

Northern Star ended the 2020 financial year having produced 900 388oz at AISC of $1 496/oz, with the June quarter being particularly strong at just over 262 000oz at AISC $1 475/oz. The company had started off the financial year rather weak as a result of the operational issues experienced at the Pogo mine, which seems to be heading in the right direction during the year. What is not to be missed, however, is that Northern Star's mines are beginning to rise in cost compared to the past years when it invariably was operating at the top quartile of the most efficient gold producing companies in Australia. Part of this is the reducing gold grades from their mines in Kalgoorlie (Kanowna Belle and Kundana) that was producing over 8g/t in the first year that Northern Star owned the mine when it was acquired in early 2014 to now producing just over 3g/t. Jundee has managed to maintain the cost profile and ore grades during the same period, and hence is the flagship operation for the company. The acquisition of the Kalgoorlie Super Pit late last year has helped the company enjoy further expansion in their production though the economies of scale is still yet to be fully capitalised, we believe. As the mine development activities continue, we expect the production volume to increase and the costs to substantially fall. This will also be helped by the merger as Saracen and Northern Star remove overlapping costs.

Saracen Mineral Holdings ended the year also on a relatively strong note, producing over 520 000oz at AISC of $1 101/oz. The company delivered record production in both the Thunderbox and Carosue Dam mines, with Thunderbox seeing record low AISC since it began to produce in the 2016 financial year. Management has indicated that the Carosue Dam mine will proceed to increasing production given the processing plant capacity being upgraded to 3.2Mt p.a. while the Thunderbox mine will focus on underground ore production, though with 2021 seeing a reduced amount of gold produced in the transition from open-pit mining to underground mining. Both mines have seen the ore grades improve since it began producing, as operations begin to shift towards underground mining. Unlike Northern Star, Saracen purchasing the Kalgoorlie Super Pit mine actually increased their AISC. However, we believe the company acquired this mine as they recognise the potential in capitalising on its growth potential in the coming six years as it seeks to develop the mine to produce over 675 000oz p.a., with corresponding reduction in AISC.

Looking at the merger more specifically, the post-merger entity will have operations in Western Australia (Jundee/Yandal, Kalgoorlie, Kalgoorlie Super Pit, Thunderbox and Carosue Dam) and up in Alaska, United States (Pogo). The Australian operations are expected to deliver the following in 2021:

Kalgoorlie Super Pit – 440 000-480 000oz at $1 470/$1 570/oz
Yandal/Jundee – 270 000-300 000oz at $1 200-$1 275/oz with development of the Bronzewing deposit acquired from the acquisition of Echo Resources
Kalgoorlie (Kanowna Belle and Kundana) – 270 000-300 000oz at $1 650-$1 750/oz
Thunderbox and Carosue Dam – 380 000-400 000 at $1 200-$1 300/oz
Pogo – 180 000-220 000oz at approximately A$1 680-$1 960/oz

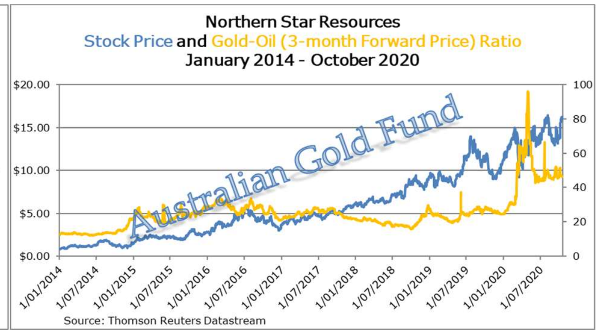
Based on the 2021 hedging profile reported by both companies, Northern Star has around 187 000oz hedged at $2 044/oz over the June 2021 half while Saracen has just under 184 000oz hedged from the September quarter onwards at around $2 040/oz. Based on the company's production from the September quarter onwards is around 1.2Moz and assuming the gold price in the next year will average around A$2 700/oz (being a bit conservative here), the profit margin for the year's production will be just over $1 020/oz. Thus, we believe that a suitable EV/AISC-Adjusted Production to Profit Margin multiple to be 14-16 for a company of this scope and after factoring in the two companies' strong track record. This implies the fair valuation range to be $14 000-$16 500/oz. At the current stock price for Northern Star at $16.21, the EV/AISC-Adjusted Production multiple is just over $17 000/oz, placing it at just above the fair valuation range. The combined entity will have over 19Moz of reserves at around 1.7g/t and over 49Moz of resources. These imply the EV/Reserves and EV/Resources multiples of $968/oz and $380/oz, respectively.

While initially the merger caused Saracen shareholders to be somewhat disappointed due to their belief that they have better assets to take to the table, we hold to a contrary view. We believe that Saracen shareholders benefit more from this merger as they immediately enjoy a re-rating on its stocks, which we have seen being realised with the stock price rising 17% after the announcement. The reason for this is prior to the merger, Saracen was trading at around $12 000/oz under the EV/AISC multiple while Northern Star was trading at around $15 000/oz. After the announcement, both companies rallied with Northern Star stocks also increasing by 17%. Saracen shareholders will receive a 3.8c special dividend upon the completion of the merger. Notwithstanding a potential dividend that could be paid in the first half of 2021 pending the December quarter results, this dividend will be a first for Saracen shareholders.

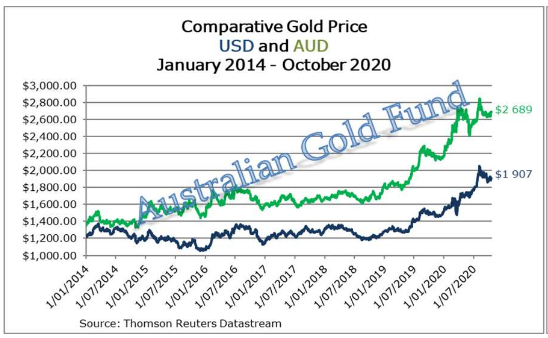
We believe that the fair valuation range for the merged entity to be trading at an equivalent Northern Star stock price of $12.06-$17.12, or a Saracen stock price equivalent of $4.54-$6.44. This range is considered somewhat conservative in terms of our expectation of the gold price trading at the current range (and it could be higher in light of central banks and governments being more accommodative in 2021 due to the economic slowdown brought about by the lockdowns during the Wuhan/coronavirus outbreak), the production guidance provided by the companies and our valuation multiple range building in a slight premium. However, based on our experience in the past, we are confident that our price range offers us a safety margin to minimise potential losses by taking trading positions based on optimism in a highly risky operating environment in the mining industry.

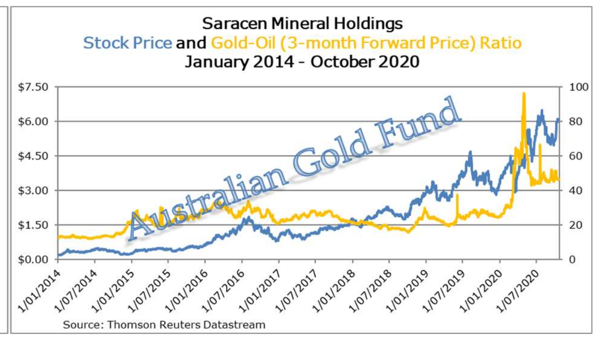
Prevailing Environment

Northern Star Resources



Saracen Mineral Holdings





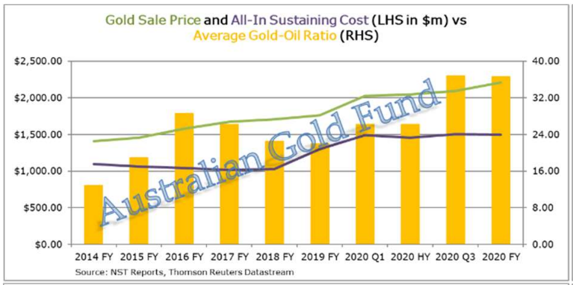
The global markets have been able to resist the experts' consensus opinions that it would fail soon and even rallied in the past six months. The reason for this is largely due to the extraordinary measures central banks and governments have taken to utilise stimulus packages in the form of currency creation, payments to businesses and households to cover for job and revenue losses in the midst of the lockdowns arising from the Wuhan/coronavirus as well as the recent reopening of many economies around the world resulting in spending due to pent-up demand. This market rally should not be mistaken as an economic recovery but due to the increase in velocity of currency and the reduction in the purchasing power of currencies around the world. With more currency created and a damaged supply chain, the amount of currencies available outweighs the amount of goods, services and assets that are exchanged, leading to price increases. This is inflation at work, not the CPI measured inflation that official agencies use that are hedonically adjusted to remove inflation from the view of the less discerning part of the population (which, sadly, is the predominant proportion).

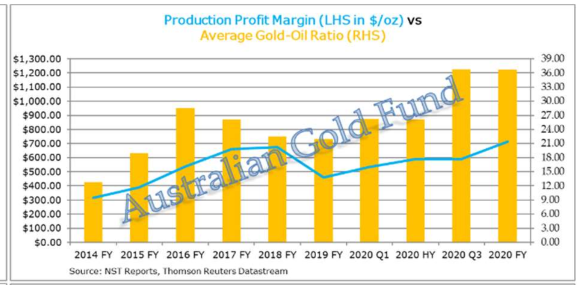
As inflation continues to take effect in the economy, we can see that the price of real assets such as precious metals, commodities, land and real estate continue to rise. The gold price in US dollar terms exceeded the all-time record high of US$1 921/oz in late July and then exceeded the psychological level of US$2 000/oz on 4th August 2020. This heralds a new era for precious metals becoming increasingly sought after by mainstream investors who have previously been steered away from gold due to the horrific bear market that ravaged many between 2012 to 2015. Furthermore, the US Department of Justice has levelled RICO charges on several bullion bank traders for manipulating the gold price (no longer a conspiracy theory). Unlike the past investigations by the CFTC and GATA, the US DOJ has extraordinary prosecutive powers and RICO charges are a heavy-handed measure once reserved for prosecuting Mafia bosses and their followers. We expect that the days of watching precious metal prices being pushed down through after-hour dumping are numbered. Oil prices, on the other hand, have recovered to around US$40/bbl, as we have foreshadowed in previous reports. This gives a solid gold-oil ratio of 46-50, which is still highly accommodative to gold producing companies in generating substantial operating margins.

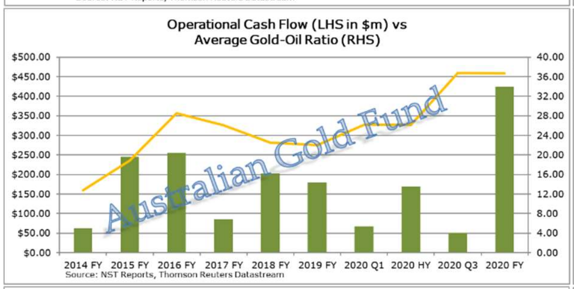
The past month have seen the precious metals prices decline quite sharply and we have seen a slight recovery from the trough, but still some 5% below the record highs in August. Based on our experience and seasonal analysis of precious metals prices, we believe this may be the beginning of the September to late-November weakness in the precious metals prices that will feed into the stock prices of precious metals mining companies. We have begun to exercise more caution on our positions as we keep a sharp lookout for quality gold mining companies that will have increasingly compelling value as prices adjust. The US election and its uncertainty of who will win (though we personally hold to the view of a comfortable victory for President Trump) also should keep the precious metals prices and the broader stock markets on track for a rollercoaster ride.

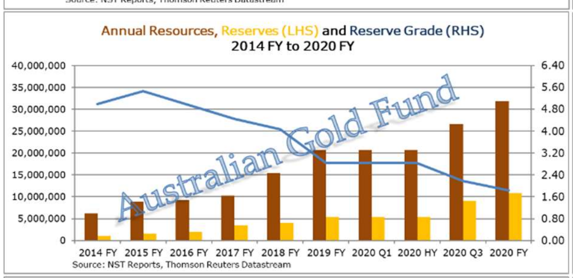
Operational and Financial Performance Charts

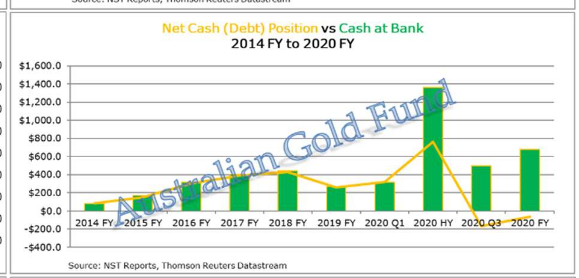
Northern Star

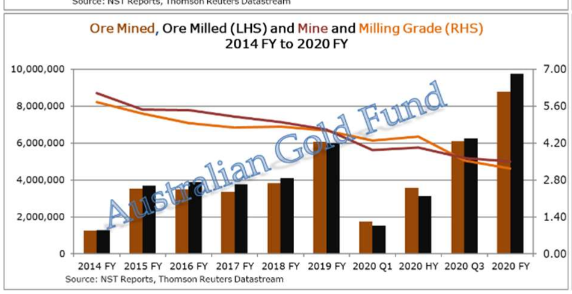


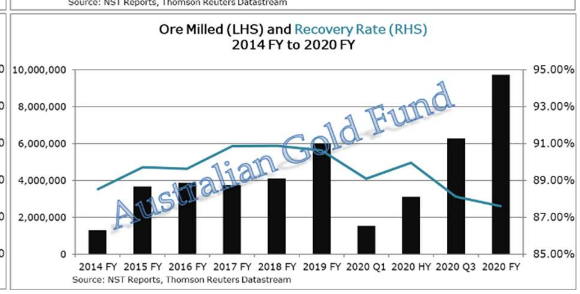




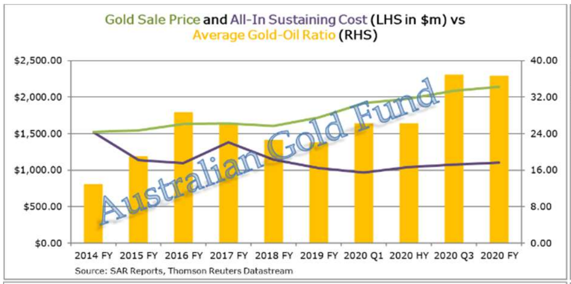


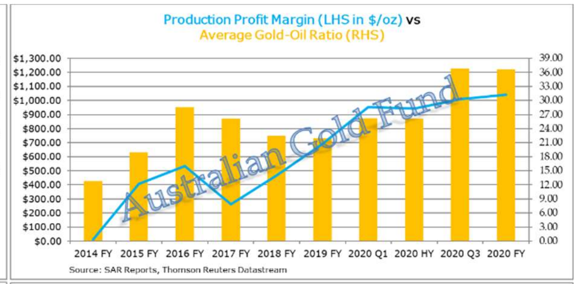


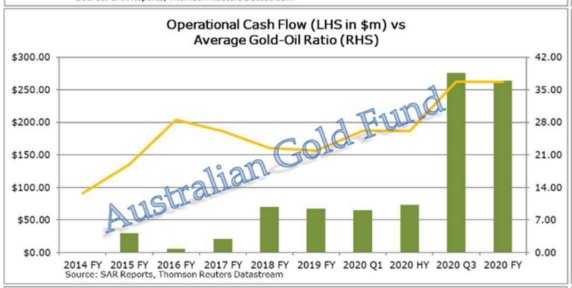


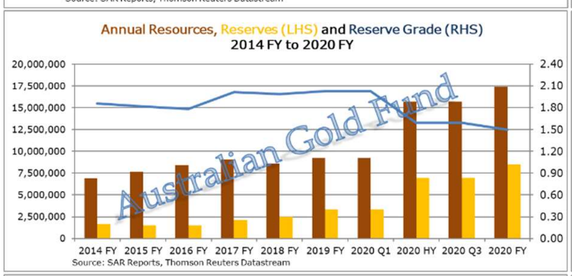


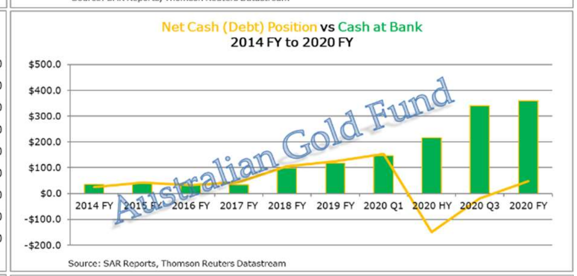
Saracen Mineral Holdings

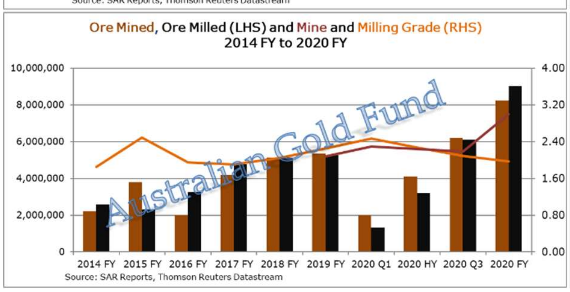


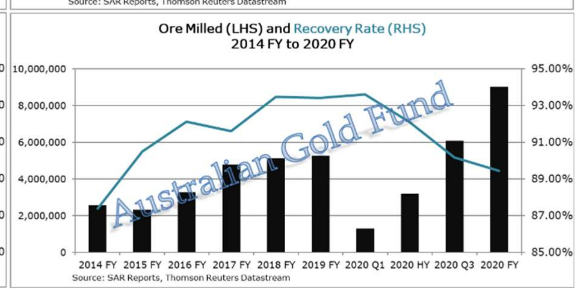








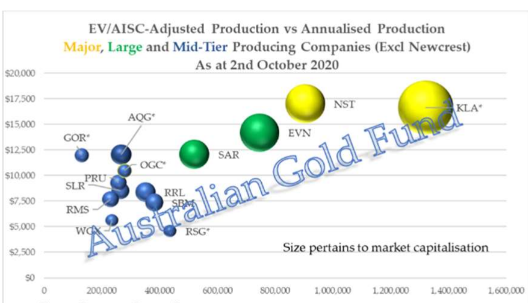


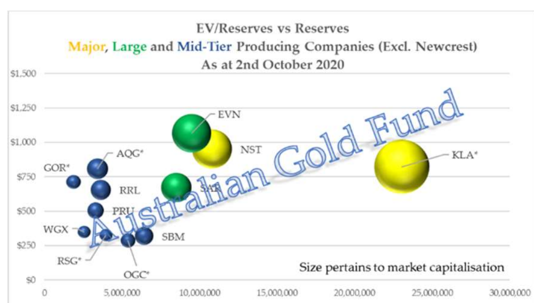


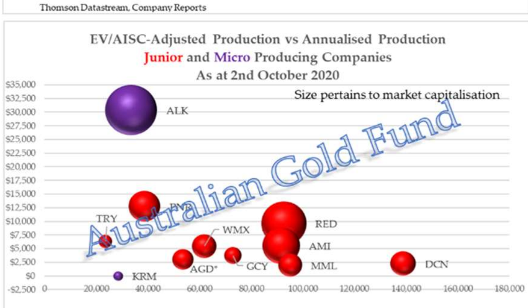
SWOT Analysis

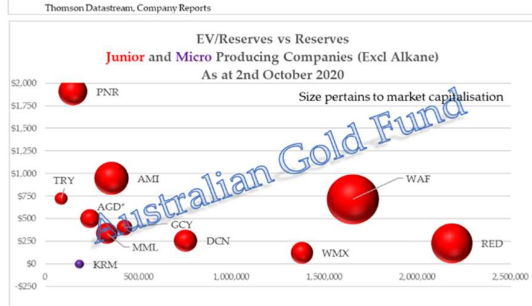
Strengths	**Weaknesses**
• Merged entity to become potentially the most competitive major gold producing company listed on the ASX, due to the two companies' strong track record. • Mines operate in tier 1 jurisdictions with a history of generating strong operating cashflows and high reserve/resource base to underpin longer mine life. • Strong balance sheet with capacity to pay dividends	• Rising costs in the Kalgoorlie operations and the setbacks at Pogo could continue, bringing a dark cloud over the overall optimism regarding this merger. • Merged entity may offer less explosive stock price growth potential.
Opportunities	**Threats**
• Substantial synergy benefits with the merged entity, especially at the Kalgoorlie Super Pit, that allows for cost savings. • Cash balance, operating cashflow generation and improved borrowing capacity to fund further expansion to set it on track to rival Newcrest Mining. • Company positioned to benefit further from impending gold price rally and interest from investors into the gold mining industry due to its scope and reputation.	• Declining ore grades and underground mine disruptions could be costly, as we have seen with Pogo, Kalgoorlie and the Kalgoorlie Super Pit East Wall collapse. • Substantial blowout in mine development and maintenance could erode the synergy benefits of the merger.

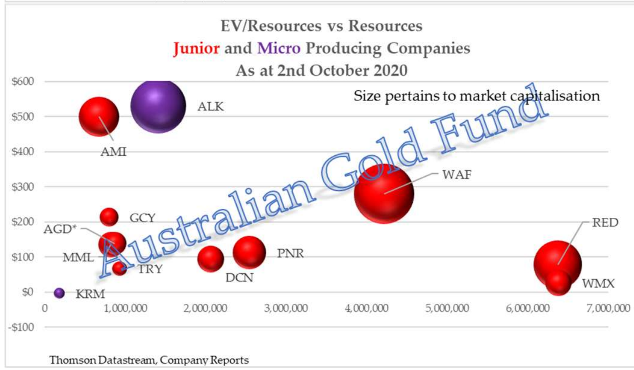
Peer Comparison











Valuation Thesis

Our key valuation metric is the **EV/AISC-Adjusted Annual Production** as we have found in our empirical study that the market valuation is most aligned to this metric, as opposed to earnings, resources and reserves. We also prefer a multiples method over the typical Discounted Cashflow Method for valuation because we understand that beyond even one year of projection, everything is highly speculative – whether it is the management outlook on production and costs as well as the gold price and broader economic drivers. To allow for comparison across all classes of producers, our metric can standardise by the company's scope of production as we observe that the market values the companies with higher production with a greater multiple. However, we scale production by AISC because we believe that not all ounces are equal. Companies that can produce gold at lower cost are naturally more profitable and deserve a higher multiple of their production and other operational or financial performance measures. We use the following classes for the different tiers of gold producing companies – **A** (major producer – 1Moz p.a. or more), **B** (large producer – 0.5-1Moz p.a.), **C** (mid-tier producer – 150 000-500 000oz p.a.), **D** (junior producer – 50 000-150 000oz p.a.) and **E** (micro producer – less than 50 000oz p.a.).

The **Enterprise Value** is the sum of the market value of equity (stock price multiplied by number of issued stocks) and net debt (total borrowings less cash and gold bullion, but excluding gold in circuit and ore stockpiles). This metric quantifies the market value of the company's assets deployed in the company's operations. The **AISC-Adjusted Annual**

Production calculated as the annual production of gold per oz divided by the AISC adjusted by a factor of 1 000. The factor of 1 000 is arbitrarily chosen as a way to standardise the final metric. As an illustration, if a company produces 250 000oz p.a. at AISC of $1 250, the AISC-adjusted production is 200 000.

When determining the production ranges in our valuation metric, we take the management guidance as this is based on their access to information relating to their operations and progress. We believe that the market will use the guidance figures to base their valuation and investment decisions. This may not always be optimal given that some management may have their bias in reporting their outlook, as well as having a track record of announcing surprises. In such cases, we seek to qualify this in our SWOT analysis and adjust it in our EV/AISC-Adjusted Production multiple.

The **Price Range** determines a reasonable range for which the company stock price should be trading at. This range is relatively wide as it considers the **margin of safety**. A company whose stock price is currently outside the fair value range is significantly over or undervalued and investors should look more deeply into the company's operations, financial performance and recent market announcements. This range should not be taken as the sole driver for investment decisions, but as a starting point for further research to identify the potential causes for the current stock price.

We recognise that many analysts consider discretionary forecasts and adjustments on the company's production level, ore grade, cost levels, resources and reserves and economic factors into their valuation. We have studied many of these reports and recognise their merits. However, our view is that such subjective adjustments are dubious in terms of additional accuracy of their estimations. This is because with mining companies, both internal and external drivers that affect the company's future performance are unpredictable. Furthermore, we understand that while a company with substantial resources and reserves have potential to convert into substantial value in future, this is contingent on the successes in building the infrastructure, extracting the ore from the ground and processing it in a cost-effective manner. We recognise the criticism by many regarding our approach, but we have tried and tested our valuation against the actual price performance as well as through our own investment performance. We let these results speak for themselves.

Given the rise in gold price in the recent three months, we see reason to re-rate the gold mining companies' valuation metrics upwards to reflect their improving profitability as well as increased enthusiasm from investors. As a rough guide, the fair value ranges for different mining company classes are as follows:

***Major and Large Companies** - $8 000-$12 000/oz*

***Mid-Tier Companies** - $4 000-$7 000/oz*

***Micro and Junior Companies** - $1 500-$4 000/oz*

We also add that after reviewing our reports, we have found another metric that may inform the fair value ranges, namely the Operating Margin. The Operating Margin is the difference between the Gold

Sale Price per oz and the AISC. A higher Operating Margin implies higher cashflow generation. We have also found that the market appears to take this into account when determining the price they will pay to purchase the stocks. We found that there is a link between the Operating Margin and our EV/AISC-Adjusted Production in that 8-12 times the Operating Margin gives a reasonable EV/AISC-Adjusted Production.

Glossary

The **All-in Sustaining Cost (AISC)** is a measure adopted by the World Gold Council as a standardised measure of production costs. This cost includes typically the **Cash Cost** associated with the direct production (extraction, transportation, processing and refining costs, staff salary and wages and relevant corporate costs) as well as **Sustaining Expenditure** that may include maintenance of mine equipment and infrastructure, insurance and administration costs over its production life. Companies may still have discretion in apportioning their expenses.

The **Net Cash/Debt** is the net amount of cash and bullion the company holds after their borrowings and interest-bearing debt are paid. This represents the liquidity position of the company, although this measure does not consider whether the debt is current (due within the next twelve months) or not. A company in a significant net debt position is owing more than they currently have in cash and bullion, which may potentially put them in financial distress if the debt is due soon.

The **Net Cashflow from Operations Excluding Maintenance Capital Expenditure** measures to what extent the company can generate cashflows from its operations after paying for its operating costs as well as Cash Paid for Purchases of Property, Plant and Equipment and the Cash Paid for Development Expenditure in the Investing Cashflows section of the Statement of Cash Flows. It does not include Cash Paid for Exploration and Evaluation, which is assumed to be growth capital expenditure. This is by no means a stable and comparable measure as different companies may have discretionary interpretation of what constitutes as Operating Activities and Investing Activities or Development, Exploration and Evaluation expenditures.

Disclaimer

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Declaration of Interest

The Australian Gold Fund and its directors currently own Saracen Mineral Holdings stocks only and may trade them subsequent to the report being published on their website. We do not receive any income or benefits from the company as a result of our report.