Pan African Resources
Buy, Hold, or Sell (Update)

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April 2023

On the 13th of October 2022 I wrote an article on Pan African for the Biznews community, where I rated it as a buy. At the time, Pan African was trading at R3.44 per share, but my analysis indicated that it might be worth quite a bit more. In the 5 months since, the company's shares briefly touched a high of R3.93 (in January 2023), only to reverse course, bottoming at R2.80 at the beginning of March. As I write this, Pan African shares are changing hands in the early R4.00's.

Clearly, the ride's been a bit bumpy, and if you're anything like me, not the sort of price action you find particularly comforting. Add the seemingly increasing local and international craziness and selling your Pan African's for something less "eventful" must appear increasingly appealing. On the other hand, perhaps recent events - and the rapid ascent of the gold price of late - have piqued your interest, but you're unsure whether to add to your position, hold out for more, or trim a little as a result.

Obviously, nobody can tell you what to do. My only suggestion is that you periodically revisit your reasons for owning Pan African, or any other share for that matter, especially if the facts change. Given that I think the Pan African facts *have* changed, and that my own reasons for owning the share were given in my previous article, I decided to update that article here.

In what follows, I will briefly highlight and unpack what I think those changed facts are, what caused them, and whether Pan African remains a comfortable buy as a result of their likely consequences.

Pan African: Key Value Factors and Key Events

Pan African's Key Value Drivers: A Quick Recap

Pan African's value is a function of five factors - what I call its "key value drivers". These are: the $ gold price, the ZAR/US$ exchange rate, the company's production and sales volumes, its production costs, and how long it can keep the gold coming. The resultant economics are simple: very good things will happen if the gold price rises, the ZAR/$ weakens, and the company produces more gold, more cheaply, and for longer. And vice versa. Hence, if you want to keep track of Pan African's value, keep an eye out for anything that's likely to move the needle on any of the above, or try and tease out the value implications - if any - of events that have *already* happened. And it's the latter - the likely value effects of things that *have* occurred - that will be my primary concern here.

What were the key events?

As I see it, three events have been, and will likely be, the most consequential. The first - not in order of importance - is that the company released a disappointing production and sales update for the 6 months ended 31 December 2022 (H1 2023), indicating that production and sales were down more than 15% vis-a-vis the comparable period ended 31 December 2021 (H1 2022). The second was the company's 13 March 2023 communiqué that the funding arrangements for its new Mintails tailings project had been finalised. And the third is the recent spike in the gold price above $2000 per ounce.

Key Event 1: Pan African's Production Troubles

The negative value-implications of Pan African's production miss should be obvious. The less gold you mine and sell, the smaller your top line. The smaller your top-line - everything else equal - the smaller your profits and cash flows. And the smaller your cash flows, the less valuable your company and its shares. I said 'everything else equal' because some companies can decrease their costs faster than their revenues decline, protecting - or even growing - their profits as their top lines disappoint. Unfortunately, Pan African is not one of those. Its significant fixed-cost base means that production declines not only lead to top-line frustration, but even larger bottom-line disappointment as fewer gold ounces need to absorb the same fixed costs. Let me illustrate.

For the 6 months ended 31 December 2022, Pan African produced 92 307 ounces of gold. The relevant 2021 number was 108 085. Ignoring 2021 to 2022 gold price changes, Pan African therefore generated 15.6% less in revenue than what they would have had they maintained their H1 2022 production run-rate. That was the top-line problem.

The cost-of-production problem was that Pan African spent R17 636 to produce an ounce of gold in H1 2022, but more than R22 370 to do the same in H1 2023 - 26.8% more. This is what happens when a lower production run-rate meets a large fixed-cost cost structure. Add the forgone revenue to the increased production costs, and the result is a 33.2% drop in operating profit. In short, and in general, mining profitability doesn't suffer production "losses" gladly.

These are the numbers, and they are more or less indicative of what investors can expect if Pan African doesn't shimmy up on H1's lackluster production performance. However, they are merely the *effects*, they don't tell us what *caused* the production disappointment in the first place. And it's in thinking about the causes that we will be best placed to tell whether - and to what extent - we should expect H1's production performance to be a regular feature of things to come, or more like that favorite oxymoron of investment analysts everywhere - a "once-off".

So, what were the causes of Pan African's recent production challenges? It appears that two carry most of the blame: Eskom and the Earth.

1. Eskom: Darkness my Old Friend

Although Eskom has been a painfully consistent problem for many over the years, its performance in Pan African's most recent interim period was particularly uninspiring. Although the company doesn't disclose the exact number of ounces lost due to 'electricity issues', a reading between the lines suggests that the figure was around 1400 ounces. According to my (rough) calculations, this translated into forgone (net) profits of at least R15 million.

Naively, I would have expected this "loss" to have been much bigger, given both the well-documented economic impact of Eskom elsewhere, and the company's evident and clearly repeated frustrations with the parastatal. Yes, R15 million is a lot of money, but the reality is that its rather insignificant when you realize that it translates to less than 4% of Pan African's H1 2023 after-tax profits.

Moreover, given how exceptionally dismal Eskom's performance was in H1 2023, a production loss of R15 million, or even double that, almost calls for celebration. For, if Pan African *only* lost R15 million when Eskom was *that* bad, it suggests that perhaps the parastatals *future* underperformance won't be too economically significant either.

However, as we are all painfully aware, Eskom is even more comatose now than it was last year. And the natural worry is that Eskom may have crossed a line of incompetence, or be flirting with one, beyond which Pan African will be unable to achieve an economically decent level of production. Whether that line has been crossed, or how close Eskom is to doing so, I do not know. The full year results will provide more clarity. Having said that, there is some evidence to suggest that perhaps H2's production numbers won't be as negatively affected by Eskom as one might have thought.

1.1 Pan African's Production Troubles: Reasons for Eskom optimism

Here, briefly, are several reasons to think that Pan African's H2 2023 - and future - gold production won't suffer as much as the parastatal's increasing unreliability would lead one to expect - bar a total black out scenario of course.

Firstly, Pan African management has *maintained* their full year production guidance. The significance of this unchanged forecast lies in the date of its communication: 15 February 2023. In other words, despite a month and half of Eskom at its historical worst, Pan African management *still* expects the company to match - or come within - 5% of its 205 000-ounce prior year record - a year in which Eskom was a lot less unreliable than it is now. This unchanged guidance would be very surprising if the group's production was as sensitive to the power utility's performance as one might have initially supposed.

And although management did qualify their guidance somewhat by noting that its 'subject to consistency in Eskom's electricity supply', given the date of their communication, they would almost certainly have incorporated the level of Eskom's unreliability in making their rest-of-H2 projections. As such, I think it's fair to say that management's production guidance will only be missed - from an electricity supply point of view - if Eskom gets *unexpectedly* worse than it was in January and February. And although that's certainly possible, I don't think that it would be "unexpected".

Secondly, given the nature, production profile, and location of Pan African's mines, it's very unlikely that the group would experience electricity-related production losses of 20% or more, instead of the 3% or so it sacrificed in H1 2023.

As I explained in my previous article, Pan African produces gold in two ways: by re-treating surface tailings, and by going underground. And the group's 200 000-ounce annual production is split roughly 40/60 between them. The electricity-and economic relevance of this is two-fold: because Pan African's tailings operations are both far less risky and power hungry than their underground cousins, the former are not required to curtail or suspend their activities in the event of loadshedding as often as the latter. And two, after a stop-start scenario, the tailings operations can resume production far quicker than their underground relations. The result: generally, far less production losses at the latter. In fact, the numbers show that production actually *increased* at the tailings operations in H1 2023 (compared to H1 2022).

Finally, I was recently informed by Pan African's investor relations that the group's Eskom troubles was confined to Evander. The other underground operation, Barberton, didn't suffer any Eskom-related production losses. And it's unlikely to, for a simple reason: it's location.

What made - and makes - Barberton's location more Eskom-resilient than Evander's is the fact that there are far fewer industrial-scale electricity users in the Barberton-relevant part of the grid than in the Evander one. The result: when a loadshedding event occurs, Barberton isn't required to curtail or suspend operations as often as Evander does, which means it will lose far fewer ounces to Eskom than its underground twin, if any.

1.2 Eskom Challenges: The Value Implications

Evander lost around 5% of its production to Eskom's inconsistencies in H1 2023, whereas the group's other operations don't appear to have suffered any meaningful Eskom-related losses during this period.

Given that Evander accounted for only 25% or so of Pan African's production - and that management haven't given up on their lofty full year production goals despite an increasingly erratic energy partner - suggests that one shouldn’t expect the group's future Eskom-related production losses to be too significant either.

The long and the short of the above is that I don't expect Pan African's Eskom-losses to exceed 5000 ounces in H2 2023, and 10 000 ounces in financial year 2024 (my best guess is that the group lost around 1400 ounces to the power utility in H1 2023). I expect the corresponding profit after tax losses to amount to around R54 million in H2 2023, and R108 million in financial year 2024. These estimates are based on Pan African’s 2022 production and profit performances - i.e., this is what I think Pan African is going to "lose" to Eskom in ounces and profits compared to what it's performance *would* have been had Eskom maintained its 2022-reliability during the forecast period.

1.3 Pan African's Renewable's Strategy

We've spent a great deal of time on how miserable Eskom is, and the resultant Pan African production challenges this causes. However, it’s not as if the company can't do anything to try and minimize its Eskom troubles. For, it, like many others, is increasingly going the renewables route. In fact, Pan African was the first SA mining group to bring a solar power plant online - the 9.9MW unit at Evander (in May 2022). With plans to increase the number of plants to four, and the total energy generating capacity to 40MW, the company expects to generate at least 15% of their own electricity needs by 2027.

But why target only 15%? Why not 50%, or 100% for that matter? After all, the electricity cost savings at the Evander plant are currently accruing at about R2.5 million per month. Moreover, given that electricity accounted for roughly 15% of Pan African's most recent production costs - combined with the rate of its price increases - and the case for going much more renewable, much quicker, appears to be very strong.

So why not? Because, firstly, it's my understanding that the 15% (2027) target is both a *minimum* - it could be a lot more - and only refers to the *self*-generation part of Pan African's broader renewables strategy - the company also plans to source 40MW of renewable energy from 3rd parties by the middle of 2024.

And, secondly, although Eskom appears to be getting electricity price raises at the rate government employees are getting wage increases, the economics of going all-solar - or much more solar - are not as straightforwardly superior to Eskom's as one might have thought. The reason is simple: the economically useful life of the average mine is generally much shorter than that of the average solar plant. This means that the economics of any proposed solar project needs to make sense on a much shorter time frame than is typically the case. And, as things stand, it appears that the math - for better or worse - still generally favours the parastatal.

1.4 Pan African's Renewables Strategy: The Value Implications

It may not yet be economically feasible for Pan African to go all - or mostly - renewables, but where it *has* made sense - Evander - the electricity savings have been impressive - R2.5 million per month. And if the economics of the Evander plant is anything to go by, the electricity savings the group is likely to harvest from their future renewable efforts will be substantial.

For example, a matchbox calculation based on Evander's performance suggests that the company could be saving upwards of R120 million per year on electricity costs by 2027, and with Eskom tariff increases, it could very well reach R150 million. The positive value implications of these kinds of numbers - and the improved energy security that going increasingly renewables will provide - should be clear.

2. Pan African's Production Troubles: The Earth

Paraphrasing Yogi Berra somewhat: 'Mining is difficult, especially the digging part'. This brings us to the second major reason for Pan African's disappointing H1 2023 production performance: the Earth. Or less tongue in cheek, the typical challenges faced when operating in extreme environments.

2.1 Barberton's Underground Challenges

According to management, of the group's operations, only Barberton's three underground mines - Fairview, Sheba, and Consort - didn’t perform to expectations. The reasons given are, firstly, that the mines are getting deeper, which means that mining crews are spending more time travelling to where they need to go, and therefore less time mining when they get there.

And, secondly, when they *do* get there, the rocks they face contain less gold per ton than it used to. The result: Barberton's underground production declined from nearly 40 000 ounces in H1 2022 to just over 32 000 ounces in H1 2023 - or just shy of 20%.

The materiality of this 8000-ounce decrease may appear rather pedestrian given the group's total production of 92000 ounces during the period. But looks can be very deceiving; the financial effects of this disappointing production performance were impressively unpleasant. For example, I estimate that the corresponding profit after tax "losses" - the difference between the profits the relevant operations made in H1 2023 and the profits that they *would* have made had production been maintained at H1 2022 levels - amounted to roughly R208 million.

Even if you play nicely with this number, the value implications are very substantial: Pan African plus Barberton H1 2023 is worth at least R1.28 billion *less* than Pan African plus Barberton H1 2022, or at least 58 cents in per share terms. The importance of successfully meeting the aforementioned operational challenges should therefore be obvious.

2.2 Barberton: Proposed Solutions

To return Barberton Underground to its H1 2022 productivity in H2 2023 requires an 8000-ounce (25%) improvement on H1 2023's run-rate. Management aims to achieve this - or something close enough - in three ways.

Firstly, they are increasing the time mining crews have available at the rock face by switching from day shifts to day-and-night shifts at both Fairview and Sheba. They estimate that that this will increase mining "facetime" by about 20%, which should lead to immediate productivity improvements.

Secondly, additional Pan African employees will be transferred from Consort to Fairview and Sheba to take advantage of the added night shift. Consort itself will be converted to a more cost-effective contract mining operation.

And finally, management also has plans to improve some of the underground infrastructure at Fairview in the near term. They aim to 'decongest ore flows', 'identify down dip extensions', and 'prove up new explorations targets'. Here I must confess that I don't know if this will ultimately add any ounces to the relevant production basket, but if any should, 'decongesting ore flows' sounds the most promising.

2.3 Barberton Underground's Operational Challenges: The Value Implications

If I'm right, Barberton operating at H1 2023 levels is worth at least R1.2 billion less than Barberton operating at H1 2022 levels, or roughly 58 cents in Pan African share terms. The billion-odd rand question is therefore this: 'Will management's planned interventions return Barberton's underground operations to their H1 2022 glory?'. I think they will - or at least come close - for meeting the required 25% increase by adding more miners - and increasing the time they have available to mine by 20% - seem both economically plausible and operationally doable.

Key Event 2: Money for Mintails

Two weeks ago, Pan African indicated that they had finalised the funding arrangements for their next big thing, what they refer to as the 'Mintails' project. And, as a shareholder, I couldn't be happier with the results. But before we take a look, a quick Mintails recap.

When Mintails is up and running towards the end of 2024, it will not only increase Pan African's annual production by about 25%, but the ounces its likely to add will be both "cheap" and "safe". It will be "cheap" because the all-in-sustaining cost (AISC) of delivering these ounces is expected to come to around $914 per unit, a cost profile which will place it just north of some of the cheapest in the world. And it's likely to be "safe" - both operationally and economically - because it's a tailings project - everything will happen above ground and in a manner Pan African has lots of practice in. In short, the projected economics of Mintails is sweet.

Money for Mintails: The Details

The Mintails project is expected to cost R2.5 billion. As you can see, a very significant amount of money - given Pan African's R8.8 billion market cap. But my key worry wasn't so much about its size but whether the project's funding would be both reasonably cheap and not shareholder dilutionary.

Given these concerns, I found the details of management's 13th of March final project funding communication very pleasing: No equity raises required, R2.1 billion in reasonably cheap debt, and the R400 million balance in what to my mind is a highly value-enhancing bit of dealmaking magic. I will briefly highlight the details of the latter. And here they are:

Pan African will receive the R400 million *today* in exchange for supplying the funder - RMB - with 4846 ounces of gold per month for the next 24 months - or roughly 30% of the group's current annual production. So far, par for the course. What makes this arrangement special - and particularly pleasing - lies in the gold price the parties managed to agree on - R1 135 604 per kg, or perhaps more familiarly, $1909 per ounce.

You may wonder why I'm so impressed that Pan African managed to sell 30% of their next 24-month gold production at R1.135 million per kilogram, when the gold price is currently trading at almost R1.194 million (per kilogram). And the reason is simple: the current ZAR gold price is the highest it's *ever* been in nominal terms, and close to the highest it's been in real terms (since the early 1980's). If 40 years of gold price history is anything to go by, then management's decision to take some money off the table at $1909 should prove to be a very good one.

Key Event 3: Gold at $2000-plus

Gold at $2000-plus per ounce…for how long? The short answer: there appears to be both good reasons why gold should be trading at $2000 plus for some time to come, and similarly good reasons why it should revert to far less lofty levels. The $2000-plus proponents see increasing geopolitical uncertainty and stagflation as the most likely and consequential drivers, whereas their $2000-minus counterparts think that increasing real interest rates will do most of the damage.

I have no strong inclination either way - as a Pan African shareholder, I would obviously love to see gold's record-breaking price action continue. But I won't be surprised to see the yellow metal back at far less elevated levels in the next two to three years. The primary reason for my gold price reticence is simple: history. Specifically, the fact that the current record-breaking gold price is close to two standard deviations above its 20-year inflation-adjusted average price strongly suggests that the pull of history on future gold prices shouldn't be underestimated. What has gone up has come down far too often for me to be comfortable with gold prices at these levels.

Having said that, I do agree that the world is a far more geopolitically fragile place than it has been for decades - and given the sensitivity of gold to uncertainty - a data point one cannot ignore. As such, I think that gold may have entered a new higher normal price regime - not the $2000-plus we are seeing today - and not the 40-year inflation-adjusted average of $1280 - but something somewhere in-between. My best Morgan Stanley-inspired guess is around $1500. The future will reveal all, but the good news is that Pan African still makes a lot of current would-be investor sense at this (much) lower price forecast.

Conclusion: Pan African: Still a buy?

Having come this far, what is (my) final word: 'Is Pan African still a buy at 431 cents per share, should one hold out for more, or is it time to take some profits'? I reckon it's still a buy, but not for everybody, and certainly not in excess. For although my best take on the numbers and the key events suggests that Pan African's fair value (476 cents per share) is greater than its current market value (432 cents per share), the difference between the two is too small for my comfort. As such, I won't be adding any shares to my Pan African position at current levels, but I certainly won't be selling any before the late 400's either.