SAMVAL Committee Meeting Minutes
18 January 2024

Date of Meeting	18 January 2024	**Time**	08:00
Chaired by:	Vaughn Duke, Chair	**Location**	Zoom
Minutes prepared by:	Moipone Mkhize		

Present:

V Duke (Chair)	Z. Rashid	M.Turnbull
A de Bruyn	K. Redman	A Van Zyl
Joubert	Rocky	J.Zvorufura
L.Lautze	R Strydom	
A. Marx	N. Steenkamp	

SAIMM Secretariat:

G Charlie	M Mkhize

Apologies:

J. Odendaal	H. Hartman

Topic	Discussion
1. Welcome	Mr Duke welcomed everyone to the meeting. A special welcome was extended to the industry guest, Mr Riaan Strydom from Kgalagadi. Mr Duke reminded all present that the idea was to try to get industry more familiarised with what SAMVAL did and how the Committee was going. He reported that there had been numerous guests at previous meetings, and Mr Strydom was joining today's meeting. He asked members to introduce themselves to the meeting, for Mr Strydom's benefit. The idea was for the invited member from industry to meet the team and to then go back to their operations where they could explain a bit more about the importance of SAMVAL. No apologies had been received.
2. Real Options	Mr Duke advised that agenda item #2 was 'Real Options', which would be the discussion point for this meeting. He advised that SAMVAL was trying to touch on aspects that might need to be addressed in future changes to the SAMVAL Code. Discussions were held on Brines and Discount Rates, which would be in the form of a Guidance Note. Options were discussed before, as well as other topics and presentations had been given. He shared that Mr Turnbull was going to present a study on real options that was done to put a value to a project. This presentation was done about two years ago and was for a valuation from 6-7 years ago. He suggested that the meeting look at the presentation and then discuss it afterwards.

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	Mr Turnbull gave a presentation to the Committee about the Real Options valuation. This was a case study completed few years ago. What happened with this case study was that there was agreement between one party to purchase another party's mineral assets; and then they defaulted on buying those assets. A valuation was made at the sale date and not at the current date. One party would benefit from the highest possible value, or the other party would lose based on the lowest valuation. Each body got a Competent Valuator to provide different valuations for the assets. The results were that one party did a traditional discount cash flow model, as well as a market-related approach. They developed a valuation of US$280m and the market-related approach developed one of about US$350m. The other party made use of an ROA to generate a value of US$80m. They argued that a cost approach and market approach were not appropriate at the time. However, there was an enormous difference between the two parties in the valuation. He moved on to discuss few methods of the income approach, i.e. moving from a simple discount cash model down to a Real Options Valuation. A crucial discount for cash model was a specific path; it was a view of the future, and it was a singular point. All risks were encapsulated in the discount rate and then, moving from simple or traditional, there was a scenario discount cash model, where there were three scenarios – high, low, medium, or base case. This was a part of management. That would then move from scenario analysis into Monte Carlo simulation, where one would start introducing probabilistic outcomes that quantified risk and gave distributions of an outcome for a cash flow. At this point, management flexibility was still not considered. Once it moved into decision tree analysis, one then started reflecting management flexibility and active influence. Finally, there was a Real Options Valuation, which captured value, assessed the risks, and reflected price flexibility. For the ROV, the first requirement was options, i.e. management needed to identify options that they could implement. These options needed to have a decent amount of value added to the project; otherwise, they were not worth considering. Each of these options needed some kind of strike price/strike situation, where the cost of increases was too much, or prices went up and down where these options could be implemented. Each option required a strike price. Options required volatility and value increased value with high uncertainty. A Real Options model was considered at the risk-free discount rate. Forecasts were adjusted for risk. The actual costs incurred on the mine were used with the exception that certainly existed in the forecast. The revenue forecast relied on futures contracts to predict future prices with certainty. The CV used the Schwartz-Smit to do the future model.

	Mr Turnbull outlined some background on futures. Futures were used as a hedge, which meant that there was no upside potential to the revenue; so, there was a ceiling to the value of the company. Graphs were presented to show the position of the markets at the time. The only commodity that had gone up at that time was gold (4%) and the commodity that dropped the most was nickel (-35%). This was presented in US$ and it was interesting that if this was shown in Rand at the historical exchange rate, it gave a different scenario. South Africa was a commodity trading country, and the Rand had a natural hedge against any kind of fluctuation in the US$ pricing. Another thing that was identified during this case study was the Real Option Valuators decided/elected to use information that was post the valuation date and the reason why it was allowed was that, if one was to have a meeting of management at the time, this information was known and each one was to do a due diligence at the time, the information would have been put there, but the only reason it had not been found was that it was a post valuation exercise. Some of the concerns with this kind of exercise were that, because the Real Options Valuations were designed to enhance the traditional discount cashflow model by trying to reflect the ability of management making good decisions and not bad decisions, there was a concern of why the Real Options Valuation was so much lower than the traditional discount cashflow model. Ultimately, the reason for this was the difference in price forecasting the traditional discount. The cashflow model used the consensus spot price at the time, whereas the Real Options Valuation used a risk-neutral model to identify revenue. SAMVAL had four principles that they follow, i.e.: – Materiality – Transparency – Competency – Responsibility Mr Turnbull went into detail on each of these four principles. Mr Duke thanked Mr Turnbull for his comprehensive presentation and invited input from the floor. Ms de Bruyn noted that the case study was on a valuation that was done in 2019, based on a transaction that took place in 2016. Her question was whether one should have taken information into account after the 2016 date, and her concerns were that this would have resulted in a lower level. Mr Duke advised that the one party used a highly academic individual to do the work and the modelling was done very well. However, the tool used was a Real Options Valuation. Real Options was used to add value to the base cash flow forecast, etc. So, one had a mine plan and forecasts and a net cashflow. That could be

	discounted using the simple DSF, or one could get elaborate and add value. If one brought in management flexibility, the argument was that management could make a choice at the time and therefore add value to the underlying cash flows. That was the process of options and they ended up with a value that was lower. The one party wanted to demonstrate a higher value and the other party wanted to demonstrate a lower value, by using ROVs. The forecasts were distilled to add certainty. To apply certainty, one would use the elected costs on the mine that were currently being used and just be clear on the date. The failure to pay for the mine occurred in 2016. However, the decision to recoup losses only occurred in 2019.A decision was taken to do a valuation at the point of default, so the valuation date was 2016. There was information and everyone did know what happened over the coming years. Going back to the options model, they needed to have a capital forecast, but they needed a price and elected to determine a risk-free price, i.e. they wanted certainty on the price. The argument was that if one looked at futures contracts, those futures were certain because it was contracted in and therefore one should use futures principles for the revenue forecast. He advised that the longest contract that was accessed was about 18 months ago, and the shortest one was six months ago, based on that forecast and the various fluctuations in the price. It was to simulate it for the modelling, mostly around the process. A second point was the amount of volatility that applied. The more volatility – the higher the value when forecasting. His concern was what was appropriate. While the mathematics were correct, he asked whether they were appropriate. When looking at the principles of SAMVAL, i.e. transparency, reasonableness, materiality, etc. all those things came into question. In terms of materiality, there was a stark difference between the market, DCF and valuation figures. This should not be the case. He was asking about the appropriateness of using this technique for that purpose. Ms Redman advised that if one looked at the difference between the two valuations, she thought one would attribute everything to the difference in the prices used. There was a vast difference between the management view of the price and the Real Options view of the price. She asked if the management view of the price was reasonable and believed that price was always going to have the biggest impact on any valuation. She believed that management's view of the price might be a bit optimistic. Mr Duke believed the DCF was based on the consensus forecasts and management's view was just put in to explain what they thought at the time; and they were closer to the mine than to the market. He agreed with Ms Redman and asked whether it was appropriate to take this approach to forecast revenue, because that was the easiest way of bringing down value. Ms Redman added that, for the same reason, using a consensus view might be the easiest way of overstating value. She believed that consensus forecasts were as inaccurate as any other forecast of price.

	Mr Marx added that the valuations were most sensitive to price. One could accurately forecast costs and use inflation indicators; but one was overly sensitive to price. Mr Turnbull agreed 100% that it was all to do with price. The argument made between the two valuations, was that a risk-free price (a futures price) discounted by a risk-free rate, should be like a risk-free price discounted at a risk adjusted rate. It just depended on one's view on whether it is representative of a future spot price and it may be inaccurate, and consensus might be inaccurate, but that was the difference between the view of the two parties. Mr Duke reiterated that what he was trying to tease out was whether the way of going about Real Option Valuations was appropriate for the purpose. Mr van Zyl advised that there were a lot of things with Real Options, One of the critiques that he had read, and which he agreed with, was that if management did not explicitly target the options in their management philosophy and send a clear management guideline that stated that if the price reaches x level, that it would go into care and maintenance and if this happened to the price, then they would expand something, then it became a very hypothetical thing. You could realise value from various things, but if you did not have something to say that you would follow a certain course of action under certain conditions, then the values that you create in that process become very hypothetical. Looking at the scenario. He suggested that there was more 'stickiness' in decisions than what Real Options value typically gave one value for. The value that they created by having an overly optimistic view of how things would be done was more than offset by the more negative price assumptions. Mr Duke highlighted the difference in the cash flows. The planned cashflows (2016) and the costs were the same. The difference came in the revenue. If one took the DCF and applied the revenue forecast that they applied, it was hopelessly negative. The mine should have been shut down then; but it was not. There was a value to the operation in 2016 and it was the value that had been agreed by both parties, i.e. it was fixed and fair. They got to R80m by adding on all the options. This was used to bring the value down and the materiality of what was done was hidden in the mathematics. Mr Bornman advised that if one wanted to do options, then probability came into play as well and those probabilities could be worked out mathematically. He added that other thing was that futures, by themselves, are extremely dynamic. Daily, one had to pay in if going in the wrong direction and pay out if going in the right direction. He believed that it was very risky to go the futures way to do a price forecast. The more complexity is added, the more often inaccurate the forecast will be. Mr Duke believed that one should be able to at least reproduce the value. The other principle in the SAMVAL Code was that one should use at least two or three other methods. He added that the use of this approach was defendable from a mathematical point of view. He advised that members could encounter something like this going forward and it was an area to be wary of.

	He added that he did not believe this should be addressed in the Codes, but it should be brought to everyone's attention. In the Code, the pitfalls associated with the different valuations could be introduced in the interest of transparency. Regarding the price issue, output and price were what drove the revenue, so in connection with the management plans and options to improve production, output, and efficiency; those were the factors that needed to be considered along with the price – as well as the process of the company. There were several factors that might contradict some of the futures pricing, etc. making the need for transparency important. Mr Duke agreed to document a 1-2 pager around this and to warn of the pitfalls. That could go out as a guidance note for people to reflect on. Mr Bornman supported this. **Action**: Vaughn Duke
3. ESG Insights	Ms Redman advised that the documents for ESG were finalised at the end of last year. Part of what she was doing in January was reviewing all the various documents that had been put together, to ensure that what was done was coherent. She added that she had concerns that SAMVAL was potentially trying to add too much material to the Codes. Once the SAMESG Committee had finalised all the documents, these would go to the SAMVAL and SAMREC Committees for review and update. SAMVAL should consider what was really required for submissions and where there was excess. There was already resistance from mining companies around the amount of information they had to provide for CPRs and valuations. She advised that we should avoid getting to the point where companies choose to go somewhere else because SAMVAL were making it difficult for them to report. Both Ms de Bruyn and Mr Duke agreed that this would need to be considered very carefully, and there had to be balance in the process. The idea was to enhance awareness and motivate for better performance; but to start dictating would be a problem. Ms Redman believed that the SAMVAL Code should enable balanced, transparent, reasonable, and realistic reporting. Mr van Zyl added that SAMVAL should stay open to what was going on in the industry in terms of reporting. This may vary from country to country. As a group, SAMVAL should stay open to not creating burdens over and above what companies were already complying with. It was agreed that there should be disclosure, but it should not be dogmatic. The guidance notes should not be prescriptive.
4. Acceptance of previous minutes and actions	The minutes of the meeting held on 31 August 2023 were accepted as correct. Approved: Hannes Bornman The list of action items was not discussed.

5. General	Mr Duke advised that he had received a letter from Mr van Zyl on interest rates with some thoughts on that guidance note. This would be discussed with Mr van Zyl. **Action**: Vaughn Duke & Andrew van Zyl
5. Next meeting	The next meeting was scheduled to take place at 08h00 on 29 February 2024.
6. Meeting closure	Mr Duke thanked everyone for their attendance and input. The meeting ended at 09:00.

Matters arising/Action Items

Meeting Date	Action	Responsible	Due	Status	Comments
30/11/23	Mr Duke to discuss contacts with mining houses with regards to future meeting invitations, with Ms Moolla.	Vaughn Duke			
30/11/23	Comments on discount rates	Nico Strydom	Nov 23		
30/11/23	ESG Draft document to be circulated to SAMVAL Committee once approved.	Teresa Steele-Schober	Ongoing		
30/11/23	Note to be generated for SSC meeting.	Vaughn Duke	Nov 2023		
30/11/23	Mr Mullins note on brines to be circulated.	Nazli Mamdoo	Nov 2023		