SAMVAL Committee Meeting Minutes
2 June 2022

Date of Meeting	2 June 2022	**Time**	08:00
Chaired by:	Andrew van Zyl, Chair	**Location**	Zoom
Minutes prepared by:	Gugu Charlie		

Present:

A van Zyl (Chair)
H Bornman
A de Bruyn
A Kinghorn
Dr T Marshall
K Redman
M Turnbull

SAIMM Secretariat:

C Jardine

Apologies:

V Duke
R Croll
A MacDonald
J Odendaal
H Raathman

Topic	Discussion
1. Welcome	Mr van Zyl welcomed everybody to the meeting and apologies were noted.
2. Confirmation of previous minutes	The minutes of the meeting held on 24 February 2022 were taken as read, with the following corrections: Mr Bornman noted that under Point 2 – Action items for the meeting held on 26 August 2021, it should be noted that this was the NYSE and not the Canadian Stock Exchange. He also queried the use of 'ESG Inquisition' and believed it should be 'ESG Enquiry'. Ms de Bruyn advised that her Christian name should be spelt 'Annalie'. The minutes were proposed by Mr Bornman and seconded by Ms de Bruyn.
3. Presentation by M Turnbull	Mr Turnbull had been requested at the previous meeting to present on Real Options/Pitfalls. This was about a specific case study that his company was exposed to. He ran through a few principles of a Real Option analysis. These were: – Real Option Analysis simulates possible outcomes – Real Option Analysis places a value on possible outcomes, i.e. options • Bad decisions are avoided • Good decisions are taken

	– The options depend on volatility and time • Option value increases with higher volatility/uncertainty • Option value increases the more time there is – Inputs are adjusted for risk • Adjusted discount rate • Risk neutral model – Debated advantages of ROA over traditional DCF • Valuations reflect more of a real life-like scenario • More appropriate risk adjustments • Includes the management's value • Assists with decision-making The specific case study Mr Turnbull spoke about was a valuation dispute for mineral assets. This mineral asset was a mature and established mine and they required an evaluation backdated to 2016, which was unusual. There were two approaches/phases in this case. The first was the traditional kind of cashflow and the second was a Real Option Analysis. The US$200bn difference between the two approaches was quite significant and he wanted to talk about the value discrepancies between the two methodologies and essentially how value could be misconstrued through more complex methodology. The first thing he spoke about was consistency. The CV in this case elected to simulate these prices; nothing else was simulated, so exchange rates and costs were static. Because this ROA was relatively complex methodology, it was not incorrect that he did not simulate the exchange rate, but it may have been better practice if he did simulate it. The next consistency issue was relevant information being used in a valuation. This was a backdated valuation and the ROA actually did use two line items that were used in hindsight. The first was the production schedule and the second was the internal liability. The argument that the CV gave for this was that the production schedule was busy being built, so he used the year 2017; and that the internal liability was known the year before. The second thing he said was that if any due diligence was done by a separate CV, they should have come to the same answer and solution that he had come to. Mr Turnbull advised that he read through all the financial statement and did not come to the same conclusion as the CV, but that was just differing opinions. Regarding appropriateness, that needed to be cautioned in an ROA. – Can option be exercised (Real) • Option to put mine on care and maintenance, restart mine, or shut down • Not appropriate for a mine with a 12-year Life of Mine • It was deemed unfeasible to put it on care and maintenance and then restart over a relatively short period – What is the appropriate currency/associated volatility? • Functional currency ZAR • Parent company's currency USD

	A graph was presented by the CV, showing what the USD prices reflected at the time, from 2014 to 2016. However, when the exchange rate was applied to those prices, all the numbers changed and every number went up by about 20% due to the buffering effect of the Rand. He cautioned that one should be careful when deciding which currency to use.
	
	Regarding the risk neutral model concept, the CV for this specific case study decided that he was going to build a risk neutral model; which meant that every line had to be adjusted for risk before being discounted at the risk-free rate. He did this with the costs (because it was an established mine, there were very good records of the costs on site). His argument was that the costs essentially had no volatility. However, the pricing was a bit different.
	
	The CV used an economic model to forecast a futures price for each commodity that the mine had. An example was given of the outcome the CV came to. The CV's reasoning was that there should be no difference between using a futures price (risk free price) discounted by a risk-free rate and a consensus price (risky price) discounted by a risk adjusted rate.
	
	– Were these forecast futures really risk free?
	– Futures are bets between traders
	– Futures do not reflect future spot prices
	– Futures remove revenue's upside potential
	– These specific commodities' futures were all short-term and thinly traded
	– Business is created from finding a niche business opportunity
	    • Willing buyer/willing seller
	    • Many opportunities arise from risks taken in business
	– Is it appropriate to use futures to valuate a mineral asset when considering all of the above?
	
	Questions regarding best practice included:
	
	– Do the inconsistencies of not simulating costs at exchange rates affect valuations?
	– How are options deemed to be 'real' and not artificially inflated values?
	– What is the correct currency to use when undertaking a valuation?
	– Is a risk neutral model appropriate for valuating mineral assets?
	– Is an ROA (probabilistic methodology) appropriate for mineral asset valuations without the support of a traditional DCF?
	
	Mr Bornman advised that this reminded him of a case he had been involved in, where the modeller did not know the difference between Real and Nominal, so he kept the costs flat but inflated the prices themselves and the profit margin increased year by year. That was one of the reasons why he stayed away from nominal models; but it sounded like this was a nominal model that he worked with, rather than a real model. Mr Turnbull responded that it was a nominal value model. The CV did not fake the costs; but with the ten-year long-term USD bond, that was how he inflated for costs going forward. Mr Bornman added that a trader had explained that how to increase the commodity price was to take the difference in the inflation rate and the difference in the interest rate between the two countries. These were added together and that was the amount used to inflate the prices with. That

	was just a methodology and was one of the dangers of using nominal models. Mr Turnbull agreed. There was such a broad outcome of what simulations provided and he did not personally believe an ROA was appropriate. There needed to be a good business plan. Some discussion followed. Mr van Zyl was unsure that ROAs in that kind of traffic would really capture what happened in practice. Mr Turnbull concurred that it was quite tricky. Mr van Zyl added that one of the problems was the kind of feedback required at all stages of the life cycle to build some science and reality into your distribution was seldom available. Mr Bornman mentioned that his thesis for his MBA was on predicting a gold portfolio with futures. He built a sophisticated forecasting model, based on what happened in the past and then projected into the future, where one had to pay in weekly, up and down. In the end, it depended on whether the model did not correctly or totally simulate the market because it was more for a bull market than for a bear market. The mathematics were correct but it also depended on the market sentiment, so care had to be taken not to rely simply on mathematics but to also look at the market per se. That had also been Mr Duke's sentiment. One cannot just use a model, thinking it would give the answer; one had to look at what the market was actually doing. Mr van Zyl had looked for a CIMVAL guidance note that Mr Duke had mentioned, but could not find this on the web page. Mr Turnbull agreed to look for this for the next meeting. **Action**: Mike Turnbull The other thing that had been raised previously was whether another valuator would come to the same conclusion, based on the same information. Mr van Zyl believed that with these kinds of analyses, it was very difficult for people to come up with the same answer. This was quite a specialist skill and he believed valuators should be hesitant to claim competency in this. Mr Bornman believed that they still had to be auditable. Complexity did not necessarily mean accuracy.
4. Action items from previous meeting	***19 March 2021*** Mr van Zyl advised that he had not discussed the setting up of an SAIMM CPD structure with Prof Rupprecht. **Action**: Andrew van Zyl ***26 August 2021*** Regarding the action item for Mr Duke to pick up the issue of Brines and Non-solid minerals at IMVAL and reporting back, Mr van Zyl reported that there had not been an IMVAL meeting since the last SAMVAL meeting. **Action**: Vaughn Duke Regarding getting information from CIMVAL regarding the guidance note on the use of real options for valuations in the minerals industry, Mr van Zyl advised that hopefully this could be discussed at the next meeting **Action:** Andrew van Zyl In connection with making contact with mining houses regarding specific meetings with each, Mr van Zyl reported that he understood from Anglo that meeting rooms were available and the next meeting could be organised there. He requested suggestions on where the following meeting could be held. Mr Bornman mentioned that he was

	attending a function and would approach some of the other delegates in this regard. **Action:** All Members Mr van Zyl advised that the discussion point of ESG valuation would be added to the agenda for the next meeting. He asked members to give their thoughts for this discussion. **Action:** Camielah Jardine / All Members It was not confirmed whether Mr Rob Ingram had been requested to give a presentation on what had been picked up on the Readers Panel regarding ESG input. **Action**: Vaughn Duke Keep a list of relevant issues regarding items to be included in SAMESG update and include at the end of the minutes. This was ongoing. **Action**: Andrew van Zyl Ms de Bruyn advised that she had received a few comments on the JSE Guidance on ESG disclosure. The launch was on 14 June. Mr van Zyl asked that an agenda item be added if there was anything to discuss. **Action**: Camielah Jardine It was not confirmed whether the ESG information from Ms Steele-Schober had been circulated to all members. **Action**: Tania Marshall WACC was to be added to the agenda for the next meeting. **Action**: Camielah Jardine
5. SK-1300 and comparison to CPR	Some discussion had been held on this previously and Dr Marshall advised that Mr van Zyl had spoken to Mr Siwela. They were busy considering their options and would revert in due course. Mr van Zyl added that that was something that they had learned a lot about, having successfully completed the process for a couple of reports. He believed some of the lessons learned could be shared.
6. Working groups, sub-committees and special projects	Mr van Zyl suggested that the only thing that might qualify here was that there was quite a bit of work going on in terms of ESG and the SAMESG Code. Dr Marshall advised that there was a link to the questionnaire and a report on what had taken place to date. She asked members to check on the home page of the website, i.e. both a presentation on what the group had been doing and where they were going, as well as a link to the questionnaire which will assist with the direction of the working group. The other thing happening was that there would be a preliminary feedback session early in November, where there would be a follow up to the ESG inquisition held last year. This would be freely available online for everybody, where the working group would give a report back on what they had done; where they see the programme going, and then giving feedback again for the next round of work. This would hopefully summarise everything with the following year. She encouraged everyone to go to the website and participate in the survey.

	Mr van Zyl knew that Mr McDonald wanted to talk about valuation of ESG-related issues and there was a comment on the valuation of Governance. Mr Bornman made mention of making comments about competence of Governance. He asked whether that would include the mining management. Mr van Zyl confirmed this. Mr Bornman advised that if a due diligence was done, it involved spending at least one day at the mine and interaction with management. That did not give a good indication about how good or bad the management was at handling issues, etc. He believed it was very dangerous to quote on first impressions. Mr van Zyl believed those were the kind of comments that needed to be collected. Dr Marshall advised that at the last SAMESG meeting, Ms Wrigley had given a very interesting presentation on some aspects of Governance in terms of what the 'G' in ESG might actually represent in a practical application. It was suggested that this presentation be either given to the committee; or whether Ms Jardine would circulate it to members. It gave some ideas and thoughts of where most people were thinking about Governance in ESG as opposed to Governance in general. **Action**: Camielah Jardine
3. General	There was no discussion under 'General'.
Next meeting	The next meeting was scheduled to take place at 08:00 on 25 August 2022.
Meeting closure	Mr van Zyl thanked everyone for their attendance and input. The meeting ended at 09:00.

Matters arising/Action Items

Meeting Date	Action	Responsible	Due	Status	Comments
19/03/21	Discuss the setting up of an SAIMM CPD structure with Prof Rupprecht	Andrew van Zyl	25/08/22		
06/06/22	Pick up issue of Brines and Non-solid minerals at IMVAL and report back	Vaughn Duke	25/08/22		
06/06/22	Get information from CIMVAL regarding guidance note on use of real options for valuations in minerals industry	Andrew van Zyl & M Turnbull	25/08/22		
06/06/22	Make contact with mining houses regarding specific meetings with each	All members	Ongoing		
06/06/22	Put discussion point of ESG valuation on agenda for next meeting	Andrew van Zyl & Camielah Jardine	25/08/22		
06/06/22	Provide some links to document to be used for ESG valuation	Andrew Kinghorn	25/08/22		
06/06/22	Share work scope lifecycle on information gathered at ESG inquisition (ToR). Keep as standing item on agenda.	Andy MacDonald	Ongoing		
06/06/22	Request Rob Ingram to give presentation on what had been picked up on Readers Panel regarding ESG input.	Vaughn Duke	25/08/22		
06/06/22	Keep as list of relevant issues regarding items to be included in SAMESG update and include at the end of minutes	Andrew van Zyl	Ongoing		
06/06/22	Add agenda item re JSE guidance on ESG disclosure to members	Camielah Jardine	25/08/22		
06/06/22	Request and circulate ESG information from TSS to all members	Tania Marshall	25/08/22		
06/06/22	Add item of WACC understanding to next agenda	Camielah Jardine	25/08/22		
06/06/22	Either circulate Ms Wrigley's presentation on Governance, or invite her to present	Camielah Jardine	25/08/22		