

VALMIN response to the IVSC Discussion Paper

The Committee which oversees the Australian Code for the Technical Assessment and Valuation of Mineral Assets and Securities for Independent Expert Reports (the “VALMIN Code”) has reviewed and formed a response to the IVSC Discussion Paper: *Valuations in the Extractive Industries*. The VALMIN Committee has provided an Australian perspective on Mineral Asset Valuation and how the points in the Discussion Paper may be viewed by practitioners in that jurisdiction and treated by its regulatory regime.

The scope of the VALMIN Code is at the level of mineral assets and while it may feed into, does not directly relate to the valuation and pricing of corporations/businesses and their securities. In Australia, the assessment of corporations and securities necessitates the inclusion and consideration of other regulatory mechanisms such as the Corporations Act, legal precedents and the Australian Securities and Investment Commission (“ASIC”) regulatory guidelines. While reports created in accordance with the minimum criteria set out in the VALMIN Code may be used in the process, there is no compulsion to use them in assessing securities. Given the scope of the VALMIN Code the following responses do not relate to corporation/business valuation and are to be read entirely from an asset-level perspective.

The VALMIN Committee notes that the Discussion Paper uses terminology that is inconsistent with that defined by CRIRSCO and SPE (OGRC). It is important to use consistent and accepted terms to ensure clear and concise communication and understanding. The Committee would also like to highlight that the IMVAL Working Group is currently moving towards standardizing definitions and terms for the common international valuation codes and that IVSC may want to adopt these terms as they develop.

The VALMIN Committee’s responses to the questions presented in the Discussion Paper are outlined in the table below.

Number	Question	VALMIN Committee response
Q1.1	Should IVSC produce combined standards and guidance for Extractive Industries or produce separate pronouncements for mining and for oil and gas? If you believe the latter please indicate the reasons why you consider separate guidance is appropriate.	Combined principle based standards for both Extractive Industries and Oil and Gas appears to be appropriate.
Q1.2a	Should the project focus just on the valuation of reserves and resources or should it extend to other assets employed in the industry and to entire businesses in the sector? Please provide reasons for your answer.	<p>Clarification is required on what defines ‘other assets’.</p> <p>It <u>should</u> extend to:</p> <ul style="list-style-type: none"> • exploration projects. Almost every mineral asset has exploration potential which needs to be quantified and therefore needs to be addressed. <p>It should <u>not</u> extend to:</p> <ul style="list-style-type: none"> • real assets such as infrastructure or other significant capital items which may be the subject of other codes, guidelines or regulations. • intellectual property, for reasons similar to those above. • corporation/businesses and their securities. <p>Where there are other codes that more specifically address values of these assets.</p>
Q1.2b	How often do you assess or use (if it is readily ascertainable) the value of an extractive business as a starting point for the valuation of reserves and resources?	Market based comparable valuations are widely used in the industry. Whilst widely used they are often flawed because companies are not truly comparable as risks and opportunities can be very different between compared projects/companies.
Q1.3	Do you agree with the Board’s preliminary view as to the type of pronouncements that IVSC should be making in relation to valuations in the Extractive Industries? If not please explain what alternative or additional material you believe would be useful.	VALMIN may support principle-based guidelines and technical papers that align with the widely accepted VALMIN, CIMVAL, SAMVAL and RICS Codes.
Q2.0a	Are you familiar with the former GN14?	One of the seven in the VALMIN Committee is familiar with GN14. The person familiar with GN14 is knowledgeable only because of compliance.
Q2.0b	Is GN 14 used in the valuations that you provide or receive?	No.
Q2.0c	What elements of GN 14 do you find useful in either reporting or interpreting valuations?	Not applicable.

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Q3.0a	Which classification code or codes are most commonly used in your industry / sector?	JORC, CIM Definitions, PERC, SAMREC and SME.
Q3.0b	Which code do you normally use or rely on?	JORC, CIM.
Q3.0c	Are you aware of differences across your / industry sector on the classification codes used? If so please indicate whether these differences cause problems in undertaking or understanding valuations.	Yes, practitioners are generally aware of the differences between the above mentioned codes. The differences are subtle and unlikely to have a material impact on estimating value and price.
Q4.0	Please identify the valuation methods that you most commonly use or encounter for valuing: <ul style="list-style-type: none"> • Producing reserves, • Reserves undergoing development, • Reserves or resources subject to exploration. 	<p>Ore Reserves of all categories are most commonly valued using the DCF method. Other methods within the Income-based approach may be appropriate but are less common.</p> <p>The Income-based approach may be supported by a cost- or market-based approach, but are generally considered to be of secondary importance as they may not take into account all the available technical information.</p> <p>For projects requiring additional risk adjustment to reflect future exploration or evaluation, the cost-based approach (such as expected value) may take primary importance.</p>
Q5.0a	If you have experience of using the market approach to value assets, please indicate the sectors and asset types where this is used.	<p>The market-based approach is appropriate for the majority of sectors within Extractive Industries. The main exception relates to:</p> <ul style="list-style-type: none"> • industrial minerals • those entirely contingent on off-take agreements • highly-illiquid/unusual sectors where there is no effective market
Q5.0b	Please identify the three most important factors for which you frequently need to adjust price data when applying this approach.	<ul style="list-style-type: none"> • Core assumptions – account for changes in commodity prices, capital and operating costs. • Resources, Reserves & exploration potential – adjust for quantity, quality and confidence differences. • Location – to reflect for sovereign risk, infrastructure, regulatory and taxation regimes
Q6.1a	Production forecast – do you use internal production forecasts developed by the entity's own geological and engineering specialists, external forecasts, or a combination of both?	Both as a combination

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Q6.1b	Do you adjust the production forecasts for risk by reserve category?	Generally not for reserve categories, but resources may be adjusted by different recovery/conversion factors or by the application of higher discount rates.
Q6.1c	Do you make an explicit cash flow forecast through the term of expected production, even though it might be a very long period of time, or do you use a “remainder period” for long lived reserves? If you use a remainder period, typically over what period is your explicit forecast?	This is variable from person to person. A Terminal Value DCF is considered accepted practice.
Q6.1d	Do you use an internal management estimate for future pricing, eg the NYMEX, investment bank analysts’ estimates, industry sources, or a combination thereof to estimate future prices? If using the NYMEX strip pricing, what are the typical assumptions you make for prices beyond the NYMEX strip (e.g., flat, inflationary growth, etc.) Do you consider the impact of any hedging of future prices that might be in place in estimating the future revenue stream?	No. Consensus or third-party forecasts are often used.
Q6.1e	Do you apply differentials to the future price estimates? If so, what is your source for estimated differentials?	No.
Q6.1f	Do you reflect currency exchange risks to future income and operating cost projections in the cash flow or in the discount rate?	Yes. This is often discretely modelled and presented within a sensitivity analysis. However, this is not generally captured in the discount rate as they are generally ‘all-in’ risk figures that do not permit such level of risk differentiation.
Q6.1g	Do you include corporate overheads when estimating the value of mining, oil and gas reserves, or just the selling, general and administrative costs associated with operating and producing the reserves?	<p>This question needs to differentiate between Mineral Assets and corporations.</p> <p>Corporate overheads are not appropriate when considering a mineral asset as the acquiring party will have its own over-head cost structure.</p> <p>G&A (General and Admin) and marketing costs are relevant at an asset level as they are costs relevant to the operation..</p>
Q6.1h	How often do you use the DCF method to value probable or possible reserves?	<p>Possible reserves are not recognised in the CRIRSCO family of codes.</p> <p>DCF’s are almost always used as the core-building block for all Reserve valuations. While a DCF value may not equal the assets price, the DCF’s strength lies in its transparency and universal acceptance and understanding.</p>

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Q6.2a	What methods do you use or are familiar with for determining the discount rate used for valuations of reserves and resources?	Discount rates may be estimated using: <ul style="list-style-type: none"> • Management estimates • Capital Asset Pricing Model • Weighted Average Cost of Capital
Q6.2b	Do you separately consider and evaluate market (systemic) risk and asset specific risk?	Yes.
Q6.2c	Please indicate the factors that you normally consider and reflect in the discount rate and any source you use to determine the appropriate rate adjustment.	Considerations may include sovereign risk, systematic risk, project risk and inflation. Sources are likely to be derived from management or third-party estimates.
Q6.2d	Do you use multiple discount rates to reflect the changing risk profile as an extractive process moves through its life cycle?	Variable or multiple discount rates are not commonly used although they may be valid.
Q7.0a	Please indicate what methods you use or are familiar with that fall under the Cost Approach and that are used in valuing assets in the Extractive Industries.	If only sunk costs are used then: <ul style="list-style-type: none"> • Multiples of exploration expenditure • Replacement cost If forward looking costs are include then: <ul style="list-style-type: none"> • Expected values • Kilburn Method
Q7.0b	If you use or are familiar with the Cost Approach, please indicate in your experience how the cost of an equivalent asset is determined.	The cost-based approach is one that is project specific as it largely relates to sunk or future costs that may have no relationship with other projects. Therefore it is not appropriate to make sunk/future-cost comparisons with other projects. If capital or operating costs of comparable assets/transactions are being considered, then this is deemed to be sourced from a market-based approach.

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Q7.0c	If you use or are familiar with the Cost Approach, please indicate the three most common adjustments that are made in your experience to reflect physical, functional or economic obsolescence, and what metrics are used to determine these adjustments.	<ul style="list-style-type: none"> • Market conditions. This may include excessive speculation (boom/bust zeal) the time-value of money: <ul style="list-style-type: none"> ○ Interest rates that have been foregone by sinking the funds into a venture ○ Real-nominal cash adjustments • Replacement – In the even the information needed to be replaced, what proportion would be recaptured and in what order. If the information is entirely available in the public domain then there is no need to replace the information and the Intellectual Property (“IP”) value is eroded. Has there been sector specific inflation?... • Quality – obsolete methods may no longer have relevance. Information gathered using currently valid methods may no longer be as reliable due solely to the passage of time (e.g. old diamond-drillhole information).
Q8.0a-f	<ul style="list-style-type: none"> • How should the unit of valuation (unit of account) be determined in the valuation of extractive activities? • How is double counting of the contribution of different assets avoided? • How should economic obsolescence or impairment, if present, be allocated proportionally to all contributory assets of the mineral asset? • What methods do you use or are familiar with to attribute value to specific contributory assets? • Are entity specific inputs appropriate when valuing contributory assets in extractive activities? What checks can be made on the reasonableness of entity specific inputs? • Should components of goodwill other than value of assembled workforce be recognised? 	These questions appear to relate to the assessment of corporations and therefore may not be relevant VALMIN Code practitioners valuing and pricing at an asset level.
Q9.0a	How do you estimate the cost of future reinstatement or environmental protection obligations?	DCF’s are the dominant means of assessing an obligation/liability.
Q9.0b	Do you discount the future cost of reinstatement obligations using a risk free rate or another rate? If another rate please identify and provide rationale for this approach.	Liabilities should be quantified in the same manner as the revenue stream is handled. To treat liabilities separately contravenes the concept of the time-value-of-money.
Q10.0a	If you provide valuations of mineral assets, what investigations do you undertake to established the reasonableness or otherwise of estimates of the extent of reserves or resources provided by geologists?	Generally rely upon the Competent Person under the JORC Code. If there is reason to query the expert form a foreign jurisdiction, then it is common to obtain a second opinion.

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Q10.0b	If you provide valuations of mineral assets, are you routinely provided with estimates from engineers of the cost and feasibility of extraction? What enquiries do you make to satisfy yourself as to the reasonableness of these estimates?	Same as above with the addition of benchmarking. There is an extensive body of private and public domain literature available on which judgements can be made as to whether the cost estimates are of the correct order of magnitude.
Q10.0c	If you are a recipient or other user of valuations of assets in the Extractive Industries, are you satisfied that the valuations properly reflect any uncertainties in the current estimates of either the extent of the reserves or the costs of recovery? What information would you expect to see in a valuation report that would improve your understanding of the sensitivity of the reported value to uncertainties in the identified reserve or the costs of recovery?	Discrete sensitivity analysis is common and Monte-Carlo simulations are sometimes used. Valuations must be reported in ranges. Sensitivity analysis and range reporting are suggested practice according to the VALMIN Code.
Q11.0a	Please identify any intangible assets that are normally separately identified and valued: i. In transactions between entities in the Extractive Industries and ii. When accounting for the acquisition of a business in the Extractive Industries.	Rarely is there be need for identify intangibilities relating to a Mineral Asset. Where segregation does occur, it is generally for tax assessment purposes where there may be need to identify the individual contribution of the real assets, real assets or other items. However, the VALMIN Code is likely only to concern the Mineral Asset component upon which there is no further segregation.
Q11.0b	In your experience what, if any, value is attributed to components of goodwill, eg an assembled skilled workforce, in corporate transactions in the Extractive Industries. Please briefly indicate any valuation techniques used to establish the value of goodwill in such circumstances.	This is only of significance at a company level, not an asset level. In Australia, there is legal precedent that the value of a management team/work-force be included in assessing corporations. However, there is debate about this ruling given that a good management team can be assembled for a relatively small amount of money (in the scheme of things) and therefore may not be material to the transaction.
Q11.0c	When considering the valuation of previously uneconomic reserves that can now be recovered using advanced technology, eg shale gas, deep water drilling, do you attribute an element of the overall value to the intellectual property involved? If so please explain briefly the method used to estimate this.	If the intellectual property patented and transferrable to other mineral assets, then its value and price needs to be estimate with the assistance of an IP specialist.
Q12.0a	Please provide any examples of which you are aware of significant differences between the value of otherwise similar resources arising solely from different Governmental policies.	Australia and more recently Ghana have proposed to introduce a Super Profits tax that has the potential to erode a significant amount of value as it reduces the 'blue-sky' upside.
Q12.0b	Please indicate how "country risk" factors are reflected in the way in which you price or value extractive assets.	<ul style="list-style-type: none"> • Capital Asset Pricing Model • Fraser Institute's Annual Survey of Mining Companies, or similar publications. • OECD country risk ratings • Transparency International's corruption index • Political risk insurance