Hong Kong Institute of
Certified Public Accountants
香港會計師公會

Our Ref.: C/FRSC

Sent electronically via email CommentLetters@ivsc.org

13 November 2012

International Valuation Professional Board
41 Moorgate
London EC2R 6PP
United Kingdom

Dear Sirs,

IVSC Discussion Paper of Valuations in the Extractive Industries

The Hong Kong Institute of Certified Public Accountants ("the Institute") is the only body authorised by law to promulgate financial reporting, auditing and ethical standards for professional accountants in Hong Kong. We welcome the opportunity to provide you with our comments on the above-mentioned Discussion Paper (DP).

The Institute issued a back-to-back invitation to comment on the Discussion Paper which has been posted on our website (http://www.hkicpa.org.hk/file/media/section6_standards/standards/FinancialReporting/ed-pdf-2012/i2c%20_val.pdf). Comments from our local constituents and other stakeholders have been received and their views are reflected in our responses to the questions raised in your DP, which are set out in the Appendix for your consideration.

If you have any questions on our comments, please do not hesitate to contact me at simonriley@hkicpa.org.hk.

Yours faithfully,

Simon Riley
Director, Standard Setting

SR/WC

Encl.

Hong Kong Institute of CPAs

Comments on the IVSC Discussion Paper of *Valuations in the Extractive Industries*

Question 1.1:

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.

We consider the IVSC should produce a combined standard and guidance. Though there are some differences between the classification of reserves and resources between mining and oil and gas operations, we believe the underlying techniques used for the valuation are relatively consistent.

Moreover, some existing international standards (e.g. VALMIN Code and CIMVAL Code) are using one standard for both mining and oil and gas valuations because the basic valuation standard and application of methodology for mining and for oil and gas are considered to be the same.

It would be useful, however, if the standard may state the specific consideration and factors that need to be taken into account when performing valuation for mining and for oil and gas assets.

Question 1.2:

a) 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.

b) 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?

We agree the project should extend to other assets employed in the industry and to entire businesses in the sector. It is because reserves and resources of minerals, oil and/or gas by themselves are not commodities, i.e. not readily tradable, and accordingly their values are greatly driven by the risks associated with the business process and other relevant tangible and intangible assets (including the relevant infrastructure).

Therefore, we suggest that the standard should focus on the entire mining business by using a comprehensive approach. The VALMIN Code defines reserves and resources as Mineral Asset and the mining business as Mineral or Petroleum Security. A good example of valuing a mining business and its assets (mining right, fixed assets such as drill holes and PPE, work force, technology, etc) is purchase price allocation of mining company where the mining company and all its underlying are required to perform valuation.

Question 1.3:

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.

We agree.

Question 2:

a) Are you familiar with the former GN14?
b) Is GN 14 used in the valuations that you provide or receive?
c) What elements of GN 14 do you find useful in either reporting or interpreting valuations?

a) One of our commentators, as a Certified Minerals Appraiser (CMA) of the American Institute of Minerals Appraisers, indicated they are required to issue a report in compliance with IVS but only use a few terms and concepts (e.g. Indented Use, Highest and Best Use) to complement the VALMIN Code which they are required to use by the Listing Rules in Hong Kong.

b) No. All listed companies in Hong Kong are required to use VALMIN Code, SAMVAL Code, CIMVAL or other acceptable but unspecified codes in Hong Kong under the Listing Rules of Hong Kong.

c) Please see answer a)

Question 3:

a) Which classification code or codes are most commonly used in your industry / sector?

Some of the mineral classification codes we have come across include:
- Australia - Australian Joint Ore Reserves Committee (JORC) Code
- Canada - National Instrument 43-101
- South Africa - South African Code for the Reporting of Exploration Results, Mineral Resources and Mineral Reserves (SAMREC Code)
- Petroleum Resources Management System (PRMS)
- China - the Solid Mineral Resources/Reserves Classfication Standard GB/T17766 – 1999
- Committee for Mineral Reserves International Reporting Standards (CRIRSCO)

b) Which code do you normally use or rely on?

One of our commentators indicated that, as an economic valuer who estimates values instead of quantities, they do not choose the code in which the level of reserves and resources are classified. Typically, the code is usually selected based on the geographical location of the project.

c) 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.

Our understanding is that all the codes are fairly consistent. Application of different codes does not typically influence the procedures undertaken for valuations as these codes are more relevant to the classification and quantities of the reserves and resources.

Question 4:

a) Please identify the valuation methods that you most commonly use or encounter for valuing:

• Producing reserves

Income approach, specifically the discounted cash flow analysis, is typically used as a primary methodology by using information provided in the technical report.

The market approach (multiple of reserves and resources levels) is typically used as a secondary methodology. It is however not uncommon for petroleum (oil and gas) assets to use the market approach as a primary methodology. Based on industry experience, the risks and uncertainty involved in the extraction of petroleum assets are sometimes better reflected using the market approach.

For financial reporting purposes, Multi-period Excess Earnings Method (MEEM) under the income approach is often used.

• Reserves undergoing development

Similar valuation methodologies employed to be similar to producing reserves, but certain discounts on the appraised values may be required due to higher uncertainties (risks).

• Reserves or resources subject to exploration

Our understanding is mining engineers are better placed to value these projects as the process requires analysing geological information. Based on our observations, these projects are typically valued using market or cost approach (or combination) depending on availability of relevant information and stages of the exploration.

Question 5: (we note there is no Question 5(a) in the DP)

b) If you have experience of using the market approach to value assets, please indicate the sectors and asset types where this is used.

Our experience is market approach is usually used as a secondary check to valuation of reserves under income approach, but for resources valuation, we may use market approach as a primary approach.

c) Please identify the three most important factors for which you frequently need to adjust price data when applying this approach.

Comparable companies are typically selected based on companies in the same industry (minerals). However, adjustments unique to the extraction industry (in additional to those adjustments related control/size/liquidity) include:

- Potential capital expenditure and operating cost to be spent in developing project. As the market approach does not necessarily reflect the same level of capital expenditure involved in the development of a mine which has its own characteristic. Further, a development asset should be compared with multiples derived from multiples/transaction prices which mainly have development assets. On the other hand, a producing asset should be compared with comparables of producing assets. However, it is difficult to obtain clear-cut information in real life and the valuer needs to exercise judgement.

- Potential cash costs (transportation and operating costs) – similarly, the market approach does not reflect the potential costs involved in extracting the ore (different mining methodology and the difficulties in extraction would naturally have different costs) and transportation costs to end user may influence the value of the projects.

- Change in commodity price between the transaction date and valuation date.

- Grade or quality of mineral ore.

Adjustments in market approach as below:

1. Time and Price Adjustment
2. Developed vs. Undeveloped Adjustment
3. Reserves vs. Resources Adjustment
4. Project size Adjustment
5. Discovery and Expansion Potential Adjustment
6. Country Risk Adjustment
7. Other Risk Adjustment

Question 6.1:

a) 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?

Depending on the scope of the engagement and the level of comfort required by the valuation user, we as accountants could rely on internal production forecasts (lower level of comfort), external forecasts (higher level of comfort) or a combination of both.

As required by VALMIN Code, valuers may use the Feasibility Study of the Mineral or Petroleum Asset provided by Qualified Person.

b) Do you adjust the production forecasts for risk by reserve category?

For mineral projects the reserves and resources should have been classified using the codes mentioned in 3(a) and therefore typically no adjustments to the production forecast are required. However, for petroleum assets, it is common to use scenario and probability analysis to model on the level of 2P reserves. In all cases, these analyses are typically done in conjunction with oil and gas engineers or technical specialists. A sensitivity analysis may also be often performed.

c) 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?

Typically explicit cash flow forecast is used, on a "life of mine" basis according to the Feasibility Study. In addition to the limited life of a mining project, which should be modelled using the explicit cash flows, changes in mining engineering factors would be better reflected using the explicit cash flow forecast approach. Mining engineering factors would typically change during the course of the extraction and include:

- stripping ratio – direct impact on cash costs
- quality of the ore
- rehabilitation costs – typically incurred when mine closes

d) Do you use an internal management estimate for future pricing, e.g. 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?

If off-take contacts or bilateral agreements are in place, the terms of these contacts will be used as pricing. Otherwise, pricing could be determined using a combination of forecasts (industry, investment banks), exchanges (NYMEX, or London Metal Exchange) and/or Bloomberg and other independent market forecasts. More emphasis is typically placed on exchange prices derived from forward/future contracts, as these are more objective.

Prices beyond forward/future contracts are typically assumed to be flat (no inflationary growth). The cash flows for most mineral/petroleum assets are prepared on a real (exclusion of inflationary growth) basis as mining engineers typically prepare cost components on a real basis.

If management has entered into contracts for future prices of reserves, e.g. hedging contracts, futures etc, a valuer may take them into consideration.

e) Do you apply differentials to the future price estimates? If so, what is your source for estimated differentials?

Please see d) above.

f) Do you reflect currency exchange risks to future income and operating cost projections in the cash flow or in the discount rate?

Commodities are typically priced in USD. Depending on the geographical location of the assets, USD based income would need to be translated into local currencies using observable exchange rates (those consistent with commodity prices forward rates are typically used).

A country risk premium would typically be incorporated in the discount rate.

g) 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?

Depending on the scope of the valuation, if a valuation is being carried out at the project level, corporate overheads would need to be reflected.

h) How often do you use the DCF method to value probable or possible reserves?

Presumably this refers to petroleum projects. Probable and proved reserves (2P reserves) are typically valued together and are seldom separately evaluated. Refer to 4(a) above for valuation methodology. Possible reserves are seldom valued due to their low economic value.

Question 6.2:

a) What methods do you use or are familiar with for determining the discount rate used for valuations of reserves and resources?

A discount rate can be derived by applying a build up approach (e.g. Ibbotson Build-Up Model) or using CAPM model and the weighted average cost of capital (WACC) as a base rate.

b) Do you separately consider and evaluate market (systemic) risk and asset specific risk?

Systematic risks are being captured in the CAPM. Asset specific risks are typically evaluated separately.

c) 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.

In addition to above, we also consider factors, such as aggressiveness of the projections, historical track records, and any specific risk, such as political, etc. The sources include research papers, books and market practices, etc.

d) Do you use multiple discount rates to reflect the changing risk profile as an extractive process moves through its life cycle?

Some commentators indicated that they do whereas others indicated not on the basis that the risk of the project would not typically change in accordance to the extractive process moving through its life cycle.

For valuation purposes, typically one discount rate is considered appropriate unless there is sufficient information to support the changes in the discount rate throughout the life of the business or such changes are considered necessary due to its materiality.

Question 7:

a) 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.

b) If you use or are familiar with the Cost Approach, please indicate in your experience how the cost of an equivalent asset is determined.

Replacement cost approach and the acquisition cost are used.

Appraised Value: value is based on past and planned expenditures.

Multiple of Expenditures (Historical cost x multiple): value is based on past and planned expenditures with potentially more value attributable to future work.

Cost approach could be used to value very early stage exploration projects. Based on our observation, the total costs invested in drilling, gathering information, analysis samples etc could be used as a base for the cost approach. The rationale is that the hypothetical investor would have invested the same amount of capital to obtain the relevant mining information.

Depreciated replacement cost (DRC) method is used to value the fixed assets, such as machinery and equipment in the Extractive Industries. Under DRC method, replacement/reproduction cost of similar asset is first assessed. We will take into consideration of physical, functional and economic obsolescence to assess depreciation of value so as to determine the fair value.

c) 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.

Three most common adjustments include age, usage and condition/maintenance (cost, time and multiple). Straight line depreciation, double declining or Iowa curves are commonly used to determine the adjustments.

Question 8:

a) How should the unit of valuation (unit of account) be determined in the valuation of extractive activities?

There are pros and cons of grouping all mining assets together. Since the mining assets are highly dependent to each other, it would be easier to group all the assets in one unit, using principles similar to the cash-generating unit approach under IFRS. This however would give less transparent information in the financial information and it would be preferable to divide it into smaller units (i.e. differentiate the mining reserves from the real properties).

The unit of valuation should be closely/properly related to purpose of valuation. From our experience as part of the purchase price allocation exercise for financial reporting purpose, property, plant and equipment assets are typically excluded from the relevant land use rights.

b) How is double counting of the contribution of different assets avoided?

To avoid double counting, the subject asset should be clearly defined and separated from other contributing assets. Appropriate valuation method is also critical. For example, by using MEEM to value the mining rights where there are contributory asset charges, such as those from plant and equipment and working capital are considered from the cash flows generated from production/sale of mineral assets. Alternatively, apply an approach whereby all identifiable assets are valued individually and apply Multi Period Excess Earning Method.

c) How should economic obsolescence or impairment, if present, be allocated proportionally to all contributory assets of the mineral asset?

Across the assets on a pro-rata basis unless there is clear evidence that the fair value of certain assets are higher than their carrying value.

If economic obsolescence is deemed to be allocated proportionally to all contributory assets, we are of the view that it may be firstly allocated to different categories of fixed assets on a fair value basis.

d) What methods do you use or are familiar with to attribute value to specific contributory assets?

For intangible assets, the relief-from-royalty method and the MEEM under the income approach are usually used.

Property, plant and equipment is typically the largest contributory asset group and deprecated replacement cost method is commonly used.

e) Are entity specific inputs appropriate when valuing contributory assets in extractive activities? What checks can be made on the reasonableness of entity specific inputs?

It depends on individual situation and whether the entity specific inputs are expected from general market participants' point of view. It also depends on the purpose of valuation and basis of values.

Industry research benchmark research and discussion with on-site management and engineers would be very helpful to understand whether the situation is in-line with general practice of the industry.

f) Should components of goodwill other than value of assembled workforce be recognised?

Yes. We believe that goodwill other than assembled workforce may arise in a mining transaction. We consider that the presumption that there are no synergies incorporated in the mining transaction, or all transactions are conducted on an arm's length basis may not be reflective of the actual situation.

Question 9:

a) How do you estimate the cost of future reinstatement or environmental protection obligations?

As indicated, these costs are typically driven by the terms of the production licence and the engineering of the mine as well as the requirements of the local legislation and regulation. Management's estimate from their experience, existing contribution to related funds, and any external expert report or study (such as a Feasibility Study or Technical Report) as well as the legal counsel's appropriate interpretation of the local legislation and regulation with this regard would be the major source of data.

b) 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.

The cash outflows required to support the reinstatement obligations have embedded uncertainties and are not risk-free by themselves. Also, the sources of such capital are typically from the debt and equity holders of the firm and they would require a certain return (in addition to risk-free rate) on such capital. Therefore, the firm's WACC should be used as the appropriate discount rate to discount such cash flows.

Question 10:

a) 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:
- Through discussions with the technical specialist in relation to their scope and limitations of their engagement;

- By considering whether the relevant reserve/resources classification codes have been followed, and whether the technical specialist has followed the relevant valuation guidelines;
- By reviewing the assumptions in the Technical Report provided by geologist and by taking sample during the site visit for mineral testing.

In conjunction with the reserve/resources classification codes, relevant professional bodies have issued corresponding valuation guidelines for mineral/petroleum assets.

b) 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?

Depending on the scope of the engagement, in most cases these costs are provided by the independent technical specialist. Enquiries that a valuer may make would be similar to 10 (a) above.

Valuers can research and compare costs provided by the engineers with public information and/or may consider historical information or comparable market data.

c) 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?

We believe the approach on this matter depends on what steps the valuer has performed to form the base of valuation and what the valuer has provided to support the valuation assumptions and the source of information. Benchmarking, crosscheck and sensitivity analysis are also very helpful to assess how reliable the valuation conclusion would be achieved. Valuer should identify key value drivers, such as commodity price and production cost, and conduct scenario and sensitivity analysis accordingly.

We believe the current issues in mineral valuation would include:

1. lack of a single and well recognised international valuation code
2. users of valuation report do not have qualified in-house reviewers for mining valuations
3. some valuation reports are not in compliance with recognised reporting standard (e.g. CIMVAL report standard)

Question 11

a) 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.

Mining assets (mining rights and exploration rights), customer relationships and technology.

b) In your experience what, if any, value is attributed to components of goodwill, e.g. 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.

We believe that goodwill should be the residual value of the consideration less identifiable assets and liabilities. While it is seen in the market that residual method is commonly used (i.e. Assume no goodwill in mining transactions), we consider this approach is conceptually incorrect.

Other than an assembled work force, buyer specific synergies if any, and gold premium (on gold mine specifically) are common components of goodwill. Buyer specific synergies will take detail analysis on projection basis and assumptions to separate them from the standalone projections. There are some historical study data to assess gold premium.

Another valuation technique applied would be to value all identifiable assets individually and apply Multi Period Excess Earning Method.

c) When considering the valuation of previously uneconomic reserves that can now be recovered using advanced technology, e.g. 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.

One commentator indicated that they do not have the experience valuing this type of reserves under the situation as described. Conceptually this should be considered and it may be possible to use either with/without method or MEEM method to estimate the value of the IPR. We believe generally the approach would be "no", unless the company owns this technology and is unique in the market.

However, for the valuation purposes, with technological advancements, the market values of mining/exploration rights or relevant assets/properties could be revised upwards if new valuations incorporating the technology or intellectual property are performed.

Question 12

a) 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.

One commentator observed an example between the Export tax (e.g. recently proposed in Indonesia), and a royalty rate and local valuation practices (e.g. inferred resources have no economic value under Listing Rules of Hong Kong).

b) Please indicate how "country risk" factors are reflected in the way in which you price or value extractive assets.

Typically country risk is reflected in the country risk premium as as an additional component to the cost of equity in forming the discount rate (WACC) as at the date of valuation. Such risk may also be considered in the financial projections to certain extent. The unexpected or unforeseen changes would be a subsequent value impacting event that cannot be factored in as at the date of valuation.

~ End ~