



International Association of Consultants, Valuators and Analysts

707 Eglinton Avenue West, Suite 501
Toronto, Ontario M5N 1C8, Canada

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International Valuation Standards Council
1 King Street
London, EC2V 8AU
United Kingdom
By email: aaronsohn@ivsc.org or kprall@ivsc.org
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Attention Mr. Mark Zyla, Chairman, IVSC Standards Review Board

Dear Mark,

The International Association of Consultants, Valuators and Analysts (IACVA) has pleasure in submitting this letter of comment. As you know we are a member of the International Valuation Standards Council (IVSC) and the World Association of Valuation Organizations (WAVO). A knowledge transfer and credentialing organization since 2000, IACVA has Charters covering the 55 countries listed on the last page and serves more than 6,000 members who are mainly involved in business valuation (BV).

As a worldwide organization, we are extremely concerned with the development of the standards related to Business Valuation especially in Canada (an international Financial Reporting Standards "IFRS" country), where we are incorporated, Asia, which has, at the moment, many of our members, as well as in the United States, the largest market.

Before responding to the various questions included in the Invitation to Comment, we wish to put on record that IACVA, like nearly all Valuation Professional Organizations (VPOs), has long-established standards dealing with ethics and professional competence, a copy of which was attached to our 30 June 2016 comments on the Exposure Draft of IVS 2017.

As well, we require a case study and an examination to obtain our credential "ICVS"; we also insist on Continuing Professional Development (CPD) and participation in a Quality Control program (which is missing from the *IVS Framework*).

Our responses to the indicated questions are as follows:

IVS Gap Analysis

Question 1: Do you agree with the current categorisation and timings of the topics contained in the gap analysis and if not why?

The Critical section (0-2 years) includes 11 subjects of which five refer to BV standards. This is far too much for the available time. As a BV organization, we consider that a realistic BV work program would be Discount Rates (early 2018), Early Stage Entities/Complex Capital Structures (in collaboration with the AICPA late 2018) and Liabilities (2019). In the same time frame the Tangible Assets (TA) board could deal with Biological Assets, Mineral Properties and Oil & Gas assets. Inventory is more of an accounting than a valuation problem.

Question 2: Are there any other topics which you believe should be included or deleted from the IVS gap analysis and if so why? (Please state the relevant specialism, categorisation and timing for any proposed additional topics)

Climate change is the most important subject not covered in the document; it will have significant effects on both BV and TA. The expected impact is enormous; for example the International Energy Agency estimates the initiatives outlined the 2015 Paris agreement will cost US\$16.5 trillion by 2030, while the Obama administration projected that the annual incremental costs, mainly born by businesses, of each additional degree of warming will reach US\$700 billion in that year. In our view, this is the most important medium term project. Another significant omission is the concept of marketability, and related liquidity, which vary considerable between countries and over time.

Chapter 1 – Non-Financial Liabilities

Question 1.1: Is the valuation of non-financial liabilities a critical area that should be addressed by the IVSC? Please explain why.

Business valuation guidance is limited in relation to liabilities both financial (which tend to be assets of another entity) and non-financial. In our view, the whole concept of valuing liabilities needs a detailed standard as there are numerous complexities relating to: debt covenants, timing of payments and even the total amount involved. In this respect, we recommend Alternative B Liability Centre Methodology Approach.

Question 1.2: Should IVS provide a separate definition of liabilities? If yes, do you agree with the definitions provided by the FASB and IASB, please explain why?

With respect to a definition of liability, we prefer FASB's as it reflects quantifiable probable outflows of economic benefits rather than the IFRS's, which deals with "present obligation" of expected (unquantifiable) outflows.

Question 1.3: What non-financial liabilities do you observe in practice? For each liability, what valuation methods do you most commonly see used? Which of the non-financial liabilities you listed have the greatest diversity of valuation in practice?

In practice, the most common is “deferred revenue” followed by “product warranties” and in the U.S. “litigation contingencies”. The usual valuation methods for them are:

Deferred Revenues – fulfilment costs + profit margins
Product Warranties – historically determined percentage of retail sales
Litigation Contingencies – discussions with lawyers

In practice the greatest diversity is in none of those but in Asset Retirement Obligations especially for extractive industries such as mining or Oil & Gas where there may be legal requirements.

Question 1.4: Do you agree with the decision to exclude financial liabilities from this ITC? If yes, do you think IVSC should add financial liabilities as a possible project(s) in the future?

As nearly all financial liabilities are assets of another entity, they usually should be valued as such. Therefore, no separate standard is needed, merely a section in a general standard on Financial Instruments like IVS 500. However, there needs to be substantial discussion with respect to pension and other post retirements liabilities that are better determined by actuaries rather than valuers.

Question 1.5: Do you think IVSC should add financial instruments, pension liabilities, and insurance liabilities as a possible project(s) in the future?

Financial instruments (some of which can switch from being an assets to a liability and back) are probably the second largest (after real estate) asset class. A derailed standard on their valuation (including probably a new fourth “Formula” Approach) are urgently needed to replace the existing IVS 500. Those, followed by insurance liabilities, should be the initial projects of the proposed IVSC *Financial Instruments* (not Assets) Board.

Question 1.6: Of the potential Standard Alternatives outlined above (A, B, C), which do you prefer and why?

As previously mentioned, non-financial (mainly operating) liabilities vary greatly and therefore we recommend Alternative B.

Question 1.7: Are there methodologies and best practices utilised by the insurance industry that the Boards should consider for inclusion in future standards? If so, please discuss.

Now that insurance accounting is slowly being standardized under US GAAP and IFRS, we suggest that the insurance industry’s practice of reflecting both risks and profit margins in estimating rates be reflected in all valuations of non-financial liabilities.

Chapter 2 – Discount Rates

Question 2.1: Are additional standards related to the derivation of discount rates a critical area that should be addressed by the IVSC? Please explain why.

IVS have to cover many countries and as an international organization, IACVA has seen a wide range of techniques for obtaining discount and capitalization rates depending on the degree of sophistication of the particular nation's financial markets.

Question 2.2: Given the extensive use of the CAPM for derivation of discount rates used in business enterprise and asset valuations, do you agree with the Boards proposal to issue new standards to target diversity in practice related to discount rate derivation? Please explain why.

While the CAPM may be used extensively in the developed world, it requires an active stock market from which Beta can be calculated and therefore is not suitable for most, or even many of the countries using IVS . In our view, while it should be discussed in any standard on discount (and capitalization) Rates, CAPM should not be suggested, much less recommended as the preferred method. Valuation is about required rates of return; they are not necessarily the same as the market's indication for expected return.

The CAPM assumes all investors:

- a) have homogeneous expectations (same expected return, volatility and correlations for every security);
- b) can lend and borrow unlimited amounts at the risk-free rate of interest;
- c) can sell short any asset, and hold a fraction of an asset;
- d) plan to invest over the same time horizon;
- e) only care about the expected return and the volatility of their holdings; those are obviously not true in the real world.

Such assumptions imply all investors will:

- a) always combine a risk free asset with the market portfolio;
- b) have the same (market) portfolio of risky assets;
- c) unite on the expected return and the anticipated variance of the portfolio;
- d) concur on the expected Equity Risk Premium and beta of every asset;
- e) agree the portfolio is on the minimum variance frontier and mean-variance efficient;
- f) expect returns from their investments will vary according to the betas;
- g) not trade actively as the expected value of each security is homogeneous.

Valuation is about expected cash flows, required returns related risks and estimated remaining useful lives (RUL). Various investors may have different expected cash flows, but the CAPM asserts that the required return (discount rate) should be uniform.

Accounting and valuation literature indicates the expected cash flows should be calculated using common sense inputs about the entity, its industry, and the relevant economies. Therefore using CAPM to determine an appropriate discount rate (instead of common sense) appears inconsistent.

In addition, there are significant problems estimating two key CAPM inputs (the beta and the ERP). Any investor's expected beta for a particular quoted share can be obtained by asking them. However, it is difficult, if not impossible to determine the market's expected beta for a company, even knowing the anticipated dividends, forecast growth in EPS and expected changes in multiples for it and for "the market" as a whole. An equivalent may be found in the aggregation theorems of microeconomics, which indicate that a model that works well individually for a number of people may not work for all of the people together.

The following table from "CAPM: an absurd model) by Pablo Fernandez of IESE Business School, compares CAPM with the real world.

CAPM	Real world
Homogeneous expectations All investors have equal expectations about asset returns	Heterogeneous expectations. Investors DO NOT have equal expectations about asset returns.
Investors only care about expected return and volatility of their investments	Investors also care about jumps, crashes and bankruptcies
All investors use the same beta for each share	Investors use different betas (required betas) for a share
All investors hold the market portfolio	Investors hold different portfolios
All investors have the same expected market risk premium	Investors have different expected market risk <i>premia</i> and use different required market risk <i>premia</i>
The market risk premium is the difference between the <i>expected</i> return on the market portfolio and the risk-free rate	The market risk premium is NOT the difference between the <i>expected</i> return on the market portfolio and the risk-free rate

Question 2.3: Which inputs have you observed to have diversity in practice that would benefit from additional guidance in IVS and why?

The major diversity in practice is that the Ibbotson build up method is sometimes combined with the use of a CAPM Beta suggesting double counting. To show differences between countries over time in derivatives, in July 2011, I prepared for IACVA "Do Equity Discount Rates Really Reflect Risk" attached as an Appendix.

Question 2.4: What other methods of deriving discount rates for business enterprise valuation do you commonly observe in practice? For each method, do you commonly observe diversity in practice in its application?

The two methods used to generate discount & capitalization rate we most frequently find in practice are the Ibbotson Build-up method in North America and the Risk Rate Component Model in Asia. IACVA members indicate each has problems with diversity between, but not usually within countries.

Question 2.5: Of the potential Standard Alternatives outlined above (A, B, C), which do you prefer and why?

We prefer alternative C with Performance Framework for multiple methods to reflect the wide range of various real world situations and the need to keep common sense in mind..

Chapter 3 – Early Stage Company Valuation

Question 3.1: Are additional standards for the valuation of early-stage companies a critical area that should be addressed by the IVSC? Please explain why.

In most industries firms are remaining private, before undertaking a sale or IPO, for much longer periods than in the past. In the United States a large portion of new jobs are created by start-ups that often (50%) have effective lives of less than five years. According to the Bureau of Labor Statistics (based on 1995-2015), the cumulative failure rates of new businesses are:

Year	1	2	5	10	20
	21.2%	32.1%	51.2%	66.6%	79.6%

Anecdotally, the 50% of start-ups failing in five years seems to apply in most countries. The leading U.S. source of failure (82%) is cash flow problems due to “limited market” (42%) and “not the right team” (23%) both of which are essential components of a start-up’s value.

Question 3.2: In which areas of the valuation of early-stage companies do you see the greatest diversity in practice? Are there additional areas of concern not noted above in this ITC? If so, please discuss.

A major area of diversity is in the allocation of the en-bloc value to the different classes of securities in a complex corporate structure. The AICPA publication “Valuation of Privately-Held-Company Equity Securities Issued as Compensation - Accounting and Valuation Guide” is helpful in this respect. We recommend that an IVS on this subject be produced jointly with the AICPA.

A second area of diversity is the degree of reliance on management’s forecasts and the extent that alternative scenarios should be considered. We recommend that others (including failure) always be taken into account.

Question 3.3: Of the potential Standard Alternatives outlined above (A, B, C), which do you prefer and why?

We prefer alternative C with a strong emphasis on remaining useful life.

Chapter 4 – Biological Assets

Question 4.1: Should IVS provide a standard of Biological Assets? If yes, do you agree with the title of this standard and the distinction provided by the FASB and IASB between Biological Assets and Agricultural Produce, please explain why?

A standard on Biological Assets and Agricultural Products is important due to the significance of agriculture in the world economy (6.3% of world GDP). This should be a joint BV/TA project over the medium term (2020/21).

Question 4.2: Do you observe a significant variation in valuation practice for Biological Assets? For each type of Biological Asset, what methods do you most commonly see used? Which type of the Biological Asset you listed have the greatest diversity in practice?

Even though IAS 41 *Agriculture* does not separate bearer from consumable biological assets allocation, from a valuation point of view, they have very different characteristics; some examples:

<u>Bearer</u>	<u>Consumable</u>
Forest	Timber harvest
Orchard	Fruit crop
Irrigated field	Vegetable crop
Oil palm plantation	Palm oil
Dairy farm	Milk / Steers
Vineyard	Wine

The degree of processing varies greatly ranging from very little for a fruit crop to extensive for wine.

For bearer Biological Assets, value is usually determined from the end product sales return less processing costs (including storage & transportation) plus a historical profit margin valued over the RUL at a relatively high discount rate. For the consumable, it is based on the end product sales price less processing costs and profit, undiscounted.

Question 4.3: Do you observe a significant variation in valuation practice for Agricultural produce? For each type of Agricultural Produce, what methods do you most commonly see used? Which type of the Agricultural Produce you listed have the greatest diversity in practice?

Where market prices are available for consumable agricultural products, they are usually used. For others, the methods set out in our answer to question 4.2 are commonly used. There is not a lot of diversity in practice

Question 4.4 Is the valuation of Biological Assets critical area that should be addressed by the IVSC? Please explain why.

As set out in the answer to question 4.1, agriculture represents 6.3% of world GDP and in many countries, significantly more. Therefore, we suggest a joint BV/TA standard in the medium term (2020/21).

Question 4.5: Does the separation of value between the agricultural produce and its bearer plants cause issues within your market? Please explain why.

The separation is logical and does not appear to cause problems in any of the countries in which we have members.

Question 4.6: Do you feel that there is conceptual Issue in allocating components of Fair Value? Please explain why together with your recommendations for resolving these issues.

Separating the value of the raw land from a related biological assets such as an orchard, is complicated by the possible alternative land uses. However, basing allocated value of the improvement on the difference in the present values of the “with & without” expected cash flows seems satisfactorily.

Question 4.7: Do you think that potential alternative uses should be considered when valuing land as part of a Biological Asset valuation? Please explain why.

The value of land is based on its highest and best use which, as in Chekhov’s Cherry Orchard, may be for housing. In that case, although producing revenue, the biological asset (the orchard) could have a minimal value but never a negative one.

Question 4.8: Do you think that there are four basic sampling and measurement techniques for the valuation of Biological Assets? If not, please explain what sampling techniques have seen used in practice.

We agree that all sampling and measurement techniques for the valuation of Biological Assets fall into one of the four listed classes. The most common appears to be (ii) random sampling stratified

Question 4.9: Do you think that there are four basic sampling and measurement techniques for the valuation of Biological Assets? Do you think that the inclusion of information on generally accepted sampling and measurement techniques would substantially reduce diversity of valuation practice and if so, how?

We would recommend the inclusion of information on generally accepted sampling and measurement techniques. The choice of an appropriate technique depends on the relevant facts and circumstances.

Chapter 5 – Extractive Industries

Question 5.1: 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 recommend separate standards for oil & gas and minerals as the nature of the ownership is totally different. Oil companies often have partial ownership in many wells, which are rarely owned outright, while mines tend to have only one or two owners.

Question 5.2: Should the standards 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.

Both mines and oil & gas properties require a great deal of infrastructure in addition to reserves and resources to generate cash flows. Substantial other capital expenditures, both above and below ground, are always needed. Therefore all the assets needed should be covered.

Question 5.3: Which classification code or codes are most commonly used in your industry / sector? Which code do you normally use or rely on? 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.

In Canada National Instrument 43-101 is the basis for disclosure of mineral projects; it is very similar to JORC in Australia. Similarly National Instrument 51-101 relates to oil & gas projects. While other jurisdictions have their own codes there is a great deal of conformity.

Question 5.4: When valuing with a discounted cashflow do you use internal production forecasts developed by the entity's own geological and engineering specialists, external forecasts, or a combination of both and you adjust the production forecasts for risk by reserve category?

When valuing a mineral property by using a Discounted Cash Flows method, it is preferable to use external forecasts but those are not always available. Therefore, in valuing many resource projects the only available inputs are internal data which has to be adopted usually in the form of scenarios to avoid management bias.

Question 5.5: 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. Please indicate in your experience how the cost of an equivalent asset is determined and 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?

Our members tend to use two methods under the Cost Approach in valuing mining properties; generally they do not use the Cost Approach for oil & gas.

Appraised Value Method: the amounts expended on the property to date adjusted for results plus the cost of the planned exploration program; this also considers previous transaction in the property .

Geoscience Factor Method: The original Geoscience Factor method was proposed in 1990 by Lionel C Kilburn in the CIM (Canadian Institute of Mining) Bulletin. It uses a base dollar value per claim to arrive at an overall property value.

“This geological engineering method is based on four main characteristics of mineral properties, viz.; location; inclusion of valuable mineralization; inclusion of geophysical and/or geochemical targets; and inclusion of geological targets.

These are subdivided into 19 subcategories, which are used to determine the value of the property. The 19 subcategories are prioritized and assigned relative value factors of 1.3 to 10. Value of each mineral claim is determined by applying the appropriate factor to a base value of [Canadian] \$400 per 16.2-hectare unit. Property value is calculated by totaling the values of such individual claim units. The value of a property is ultimately influenced by additional, subjective factors to arrive at a fair market value; the expertise of geologists and engineers, commodity markets, financial markets, stock markets, mineral property markets, metal prices and political and economic conditions which vary with time.”

Mike J. Lawrence, in 1994, prepared a modified template and proposed a slightly different maximum relative weightings, suitable for Australia: location (22%); volume/tonnage & grade (44%) geophysical/geochemical targets (16%); and favourable geological patterns (18%). Even though philosophically attracted to the systematic nature of such methods, he “believes that they are not suitable for use without support by other methods”. His view is that only experienced geologists can value properties at the Grass Roots or Early Exploration stage and regards site visits as critical. He states that “tenement (claim) size alone is no guarantee of value and offers a partial solution that only the relevant prospective portions of the total tenement should be used.”

In 1998 Kilburn revised and updated his method increasing the base amount to C\$450 for any claim unit up to 24 ha (60 acres) to cover the cost of prospecting, before staking. He also revised the maximum ratings to: grade (51%); location (30%); geophysical/geochemical targets (12%); and geology (7%).

“A major disadvantage of the method is that the degree of dependence of the property value on the assumed basic value of each claim (or area unit). A change in the basic claim value has a proportional effect on both the claim and the property value. In addition, large properties would tend to have very high values and very small properties tend to have very low values, which may not reflect the real exploration potential.”

It is essential that all components of a property’s value (geology, commodity prices, available financing, stock markets activity and mining property sales) should be identified separately in a valuation although this can be very subjective. The Geoscience Factor method is a means whereby a geologist tries to convert subjective scientific opinions into a numeric system and, as the VALMIN code states: “this method should not be used in isolation from other methods”.

Question 5.6: 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.

- (i) Geophysical, geochemical & geological data; 2D & 3D seismic information; well logs; and digital models of an ore body.
- (ii) All of the above.

Question 5.7: 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.

For mines, an assembled workforce is essential asset, not so much for oil & gas operations which are often handled by contractors. In business combinations an assembled workforce is normally valued under the cost approach.

Question 5.8: 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. Please indicate how “country risk” factors are reflected in the way in which you price or value extractive assets.

Our member, Samuel Chan ICVS, CMA, of Hong Kong, a Certified Minerals Appraiser (a professional license in mining valuation issued by the International Institute of Minerals Appraisers) was a member of the Working Group of Extractive Industries of the IVSC in 2014. He has supplied an example of the valuation of an extractive industry in Hong Kong being modified by a regulator.

Before 2014, any valuers or geologists could do mining valuation and anything goes, exploration right with only Inferred Resources were valued over US\$ 100 million by DCF, which is clearly forbidden by current valuation rules (e.g. CIMVAI, VALMIN). At that time, the Hong Kong Stock Exchange (“HKSE”) made a complaint to IVS as follows:

“The difficulties caused by a lack of a single, well recognised international valuation code has been publicly commented upon by Hong Kong Exchanges and Clearing Ltd, which is one of the leading global exchanges in the minerals sector.”

In the end, HKSE went to, we believe, an extreme and forbid the inclusion of values for any Inferred Resources, which can be valued by Cost and Market Approach under CIMVAL and VALMIN and are very well accepted in other countries. Their rule is:

“(3) Indicated Resources and Measured Resources are only included in economic analyses if the basis on which they are considered to be economically extractable is explained and they are appropriately discounted for the probabilities of their conversion to mineral Reserves. All assumptions must be clearly disclosed. Valuations for Inferred Resources are not permitted;

https://www.hkex.com.hk/eng/rulesreg/listrules/mbrules/documents/chapter_18.pdf”

The result is as follows with the probability range values being dependent on the facts and circumstances:

Cumulative Production	IDENTIFIED RESOURCES			UNDISCOVERED RESOURCES	
	Demonstrated		Inferred	Probability Range (or)	
	Measured	Indicated		Hypothetical	Speculative
ECONOMIC	Reserves		Inferred Reserves		
MARGINALLY ECONOMIC	Marginal Reserves		Inferred Marginal Reserves		
SUB-ECONOMIC	Demonstrated Subeconomic Resources		Inferred Subeconomic Resources		
Other Occurrences	Includes nonconventional and low-grade materials				

Bennet Kpentey MA, CPC, CVA & David Dzorkah MGHIS from Ghana gave us the following example:

In Ghana, the Local Government Act (Act 462, 1993) provided discount rate limits applicable for the valuation of premises, buildings, structures and any other development for the purposes of compensation. It stipulated that the preferred valuation method for Government compensation is replacement cost after deducting the expense at the time of valuation, to restore the premises to an original state. According to the law, the rateable value (which feeds into the determination of the discount rate), shall not be more than 50% of the replacement cost for the premises of an owner occupier and not less than 75% of the replacement cost in other cases.

The Land Use and Spatial Planning Bill (2016) proposed that contrary to Act 462, valuers should be given the flexibility and discretion to determine a suitable discount rate depending of the circumstances.

Under those two laws, the difference in the valuation conclusion for the same asset could be as high as 25% even when using the same replacement cost method.

Chapter 6 – Inventory

Question 6.1: Should IVS provide separate standards for valuing inventory? Please explain why.

The assessment of inventory values is more an accounting than a valuation function therefore, in our view, a separate standard is not needed.

Question 6.2: What methods for the valuation of inventory do you most commonly see used in practice?

The lower of full cost (including overhead) and market (less costs to sell).

Question 6.3: Do you agree with the decision to focus on the application of the Comparative Sales Method? If not, please discuss the other methods that should be included in the performance framework.

We agree with this decision.

Should a Board or staff member wish to discuss this matter further, you may contact me during normal business hours (Eastern Time) at 416-865-9766.

Respectfully submitted on behalf of IACVA

Per



James P. Catty, MA ICVS CPA•CA CBV (Canada) CPA/ABV (US) CFA CGMA CFE
Chair

Appendix

DO EQUITY DISCOUNT RATES REALLY REFLECT RISK?

James P. Catty

For the last six years, since 2011, Pablo Fernandez, Professor of Corporate Finance, IESE Business School, Madrid, Spain and his colleagues have been polling academics and valuation professionals in various countries on the figure they use for the Equity Risk Premium (ERP). The figures for a select group of 33 countries for all six years are set out in Schedule A with the related standard deviations in Schedule B. The International Association of Consultants, Valuators and Analysts (IACVA) with Professor Fernandez's approval, has looked at those figures to answer the question "Do equity discount rates really reflect risk?"

In the six years covered by the tables (spring 2011 to spring 2016), ERPs have been remarkably steady, as shown by their means and medians. Those measure premiums to the USA which have been virtually static especially for the Median. Over the same period, interest rates as reported by the OECD and Investing.com, have for most countries, declined significantly; both absolutely and compared with the USA. This year an increasing amount of short and medium term government debt are priced for negative real returns.

As a result, the indicated Discount Rates (Schedule D – Cost of Equity Capital) in most countries (obtained by totalling the ten year risk free rate, the ERP and one ERP standard deviation to represent firm specific risks, see Schedule C) has significantly declined in absolute terms with the premium to USA roughly unchanged. Yet during this time, there have been substantial increases in corporate profits nearly everywhere and since 2009 there has not been a worldwide downturn, much less a recession.

While such an event in the US is not on the horizon, growth in its real GDP, due to demographic and productivity factors, is likely to be anemic for a number of years and several well-known economic commentators believe that a downturn is likely during the next presidential term (2017 to 2021). Therefore, in my humble view, the risks facing businesses worldwide are greater now, in the summer of 2016, than they were in the spring of 2011, when we were only two years, rather than seven, into a recovery.

In choosing the appropriate Cost of Equity Capital in valuing both publicly traded and privately owned entities valuers should review the figures in Schedule D and consider if they give a satisfactory answer to the complex question: Do Equity Discount Rates Really Reflect Risks in a particular country? In many situations, I think they do not.

Do Equity Discount Rates Really Reflect Risk?

Schedule A

	Average ERP					
	2016	2015	2014	2013	2012	2011
Australia	6.0	6.0	5.9	6.8	5.9	5.8
Austria	5.4	5.7	5.5	6.0	5.7	6.0
Brazil	8.2	7.5	7.8	6.5	7.9	7.7
Canada	5.4	5.9	5.3	5.4	5.4	5.9
Chile	6.1	6.5	6.0	5.0	6.1	5.7
China	8.3	8.1	8.1	7.7	8.7	9.4
Colombia	8.1	8.3	8.1	8.4	7.9	7.5
Czech Republic	6.3	5.6	6.5	6.5	6.8	6.1
Denmark	5.3	5.5	5.1	6.4	5.5	5.4
Finland	5.5	5.7	5.6	6.8	6.0	5.4
France	5.8	5.6	5.8	6.1	5.9	6.0
Germany	5.3	5.3	5.4	5.5	5.5	5.4
Greece	13.0	14.3	15.0	7.3	9.6	7.4
Hungary	8.1	8.8	8.3	13.2	7.4	8.0
India	8.1	8.4	8.0	8.5	8.0	8.5
Ireland	6.6	5.5	6.8	6.2	6.6	6.0
Israel	5.9	5.2	5.8	6.4	6.0	5.6
Italy	5.6	5.4	5.6	5.7	5.6	5.5
Japan	5.4	5.8	5.3	6.6	5.5	5.0
Korea (South)	6.7	6.2	6.3	7.0	6.7	6.4
Mexico	7.4	8.0	7.4	6.7	7.5	7.3
Netherlands	5.1	5.9	5.2	6.0	5.4	5.5
New Zealand	5.8	6.6	5.6	5.4	6.2	6.0
Norway	5.5	5.5	5.8	6.0	5.8	5.5
Poland	6.2	5.2	6.3	6.3	6.4	6.2
Portugal	7.9	5.7	8.5	6.1	7.2	6.5
Russia	7.9	9.7	7.9	7.3	7.6	7.5
South Africa	6.3	7.7	6.3	6.8	6.5	6.3
Sprain	6.2	5.9	6.2	6.0	6.0	5.9
Sweden	5.2	5.4	5.3	6.0	5.9	5.9
Switzerland	5.1	5.4	5.2	5.6	5.4	5.7
United Kingdom	5.3	5.2	5.1	5.5	5.5	5.3
United States of America	5.3	5.5	5.4	5.7	5.5	5.5
Mean	6.49	6.58	6.56	6.59	6.47	6.30
Median	6.00	5.80	5.90	6.30	6.00	6.00
<u>Premium to USA</u>						
Mean	1.19	1.08	1.16	0.89	0.97	0.80
Median	0.70	0.30	0.50	0.60	0.50	0.50

Do Equity Discount Rates Really Reflect Risk?

Schedule B

	Standard Deviation ERP					
	2016	2015	2014	2013	2012	2011
Australia	1.6	4.0	1.6	4.9	1.4	1.9
Austria	1.4	0.3	1.5	1.9	1.6	1.8
Brazil	4.9	2.1	4.2	2.1	4.7	4.6
Canada	1.3	1.3	1.2	1.3	1.3	2.1
Chile	1.6	0.9	1.5	2.2	1.7	2.1
China	4.4	5.6	3.5	2.3	4.6	5.1
Colombia	3.9	1.4	3.8	3.4	3.7	4.3
Czech Republic	1.0	0.7	1.6	1.1	1.6	0.9
Denmark	1.7	1.2	1.8	0.8	1.9	3.3
Finland	1.6	1.1	1.6	1.2	1.6	2.0
France	1.6	1.4	1.5	1.6	1.5	1.5
Germany	1.7	1.5	1.7	1.7	1.9	1.4
Greece	5.2	5.8	4.7	4.1	4.4	2.7
Hungary	2.5	0.8	2.3	1.6	2.3	2.4
India	2.4	2.5	2.4	2.9	2.4	2.8
Ireland	2.2	1.3	2.4	3.3	2.3	2.2
Israel	2.2	1.1	2.1	1.1	2.3	1.7
Italy	1.5	1.5	1.5	1.5	1.4	1.4
Japan	2.3	2.0	2.4	2.7	2.7	3.7
Korea (South)	1.8	1.5	1.8	1.8	1.4	2.5
Mexico	2.3	1.5	2.4	2.4	2.6	2.7
Netherlands	1.2	0.6	1.2	1.3	1.3	1.9
New Zealand	1.4	1.3	1.4	1.8	1.1	1.0
Norway	1.8	1.2	2.0	1.8	1.6	1.6
Poland	1.5	1.0	1.5	1.0	1.6	1.1
Portugal	2.1	1.5	2.0	2.3	2.0	1.7
Russia	3.5	2.9	3.4	4.1	2.9	3.7
South Africa	1.5	2.3	1.4	1.4	1.5	1.5
Sprain	1.4	1.6	1.6	1.7	1.6	1.6
Sweden	1.0	1.3	1.0	1.7	1.2	1.4
Switzerland	1.1	1.2	1.1	1.5	1.2	1.3
United Kingdom	1.4	1.7	1.4	1.4	1.9	2.2
United States of America	1.3	1.4	1.4	1.6	1.6	1.7
Mean	2.07	1.74	2.03	2.05	2.08	2.24
Median	1.60	1.40	1.60	1.70	1.60	1.90
<u>Premium to USA</u>						
Mean	0.77	0.34	0.63	0.45	0.48	0.54
Median	0.30	-	0.20	0.10	-	0.20

Do Equity Discount Rates Really Reflect Risk?

Schedule C

	10-Year Q1 Interest Rates					
	2016	2015	2014	2013	2012	2011
Australia	2.60	2.54	4.13	3.47	3.97	5.52
Austria	0.60	0.45	1.98	1.88	3.05	3.63
Brazil	15.91	12.44	12.47	9.52	11.00	12.50
Canada	1.20	1.44	2.47	1.92	2.04	3.31
Chile	4.40	4.19	5.03	5.76	5.52	6.81
China	2.89	2.86	3.65	4.62	3.59	3.44
Colombia	8.90	7.13	7.34	5.17	7.43	8.71
Czech Republic	0.50	0.37	2.30	1.98	3.34	4.03
Denmark	0.60	0.38	1.71	1.64	1.82	3.19
Finland	0.60	0.50	1.94	1.72	2.31	3.38
France	0.60	0.59	2.26	2.16	3.05	3.55
Germany	0.30	0.31	1.61	1.47	1.83	3.14
Greece	9.50	9.91	7.59	11.14	24.74	11.86
Hungary	3.30	3.18	5.82	6.30	8.95	7.46
India	7.78	7.68	8.75	7.91	8.13	8.15
Ireland	0.90	0.92	3.14	4.02	7.05	9.55
Israel	1.90	1.78	3.57	4.02	4.61	5.01
Italy	1.50	1.52	3.64	4.45	5.71	4.78
Japan	0.00	0.34	0.60	0.65	0.96	1.22
Korea (South)	1.90	2.35	3.57	3.00	3.85	4.65
Mexico	6.10	5.68	6.39	5.25	6.08	7.10
Netherlands	0.40	0.42	1.93	1.74	2.23	3.35
New Zealand	3.10	3.33	4.60	3.69	4.00	5.58
Norway	1.40	1.46	2.91	2.35	2.37	3.78
Poland	3.00	2.24	4.38	3.94	5.50	6.26
Portugal	2.90	2.18	4.86	6.25	13.22	7.36
Russia	11.20	10.53	7.96	7.02	8.17	8.02
South Africa	9.40	7.56	8.56	7.31	8.33	8.72
Sprain	1.70	1.43	3.55	5.06	5.23	5.30
Sweden	0.80	0.66	2.25	1.91	1.85	3.35
Switzerland	-0.40	-0.02	0.96	0.75	0.77	1.88
United Kingdom	1.60	1.71	2.84	2.08	2.22	3.78
United States of America	1.90	1.97	2.76	1.95	2.04	3.46
Mean	3.30	3.03	4.17	4.00	5.30	5.51
Median	1.90	1.78	3.57	3.69	3.97	4.78
<u>Premium to USA</u>						
Mean	1.40	1.06	1.40	2.05	3.26	2.05
Median	-	(0.19)	0.80	1.74	1.94	1.32

Do Equity Discount Rates Really Reflect Risk?

Schedule D

	Indicated Equity Discount Rate					
	2016	2015	2014	2013	2012	2011
Australia	10.2	12.5	11.6	15.2	11.3	13.2
Austria	7.4	6.5	9.0	9.8	10.3	11.4
Brazil	29.0	22.0	24.5	18.1	23.6	24.8
Canada	7.9	8.6	9.0	8.6	8.7	11.3
Chile	12.1	11.6	12.5	13.0	13.3	14.6
China	15.6	16.6	15.3	14.6	16.9	17.9
Colombia	20.9	16.8	19.2	17.0	19.0	20.5
Czech Republic	7.8	6.7	10.4	9.6	11.7	11.0
Denmark	7.6	7.1	8.6	8.8	9.2	11.9
Finland	7.7	7.3	9.1	9.7	9.9	10.8
France	8.0	7.6	9.6	9.9	10.4	11.1
Germany	7.3	7.1	8.7	8.7	9.2	9.9
Greece	27.7	30.0	27.3	22.5	38.7	22.0
Hungary	13.9	12.8	16.4	21.1	18.6	17.9
India	18.3	18.6	19.1	19.3	18.5	19.4
Ireland	9.7	7.7	12.3	13.5	15.9	17.8
Israel	10.0	8.1	11.5	11.5	12.9	12.3
Italy	8.6	8.4	10.7	11.6	12.7	11.7
Japan	7.7	8.1	8.3	9.9	9.2	9.9
Korea (South)	10.4	10.0	11.7	11.8	12.0	13.6
Mexico	15.8	15.2	16.2	14.4	16.2	17.1
Netherlands	6.7	6.9	8.3	9.0	8.9	10.8
New Zealand	10.3	11.2	11.6	10.9	11.3	12.6
Norway	8.7	8.2	10.7	10.1	9.8	10.9
Poland	10.7	8.4	12.2	11.2	13.5	13.6
Portugal	12.9	9.4	15.4	14.6	22.4	15.6
Russia	22.6	23.1	19.3	18.4	18.7	19.2
South Africa	17.2	17.6	16.3	15.5	16.3	16.5
Sprain	9.3	8.9	11.4	12.8	12.8	12.8
Sweden	7.0	7.4	8.6	9.6	8.9	10.6
Switzerland	5.8	6.6	7.3	7.9	7.4	8.9
United Kingdom	8.3	8.6	9.3	9.0	9.6	11.3
United States of America	8.5	8.9	9.6	9.3	9.1	10.7
Mean	11.87	11.35	12.75	12.64	13.86	14.04
Median	9.70	8.64	11.47	11.52	11.95	12.58
<u>Premium to USA</u>						
Mean	3.37	2.48	3.19	3.39	4.72	3.38
Median	1.20	(0.22)	1.90	2.27	2.82	1.92

End

IACVA Member's Countries

Americas

Bahamas
Argentina
Brazil
Canada
Grenadine Islands
Guatemala
Mexico
Puerto Rico
United States

Africa

Africa Uganda
Ghana Kenya
Nigeria South

Europe

Austria
Germany
Ireland
Netherlands
Romania
Switzerland
United Kingdom

Asia/Pacifica

Australia
China
Hong Kong
India
Japan
Malaysia
Singapore
South Korea
Taiwan
Thailand

Middle East

Bahrain
Egypt
Israel
Jordan
Kuwait
Lebanon
Saudi Arabia
Syria
United Arab Emirates

Commonwealth of Independent States

Armenia
Azerbaijan
Estonia
Georgia
Kazakhstan
Kyrgyzstan
Latvia
Lithuania
Moldova
Russia
Tajikistan
The Republic of Belarus
Turkmenistan
Ukraine
Uzbekistan