INTERNATIONAL VALUATION STANDARDS COUNCIL

IVS 105: VALUATION APPROACHES AND METHODS

EXPOSURE DRAFT

Publication date: 7 April 2016

Comments on this Exposure Draft are invited before 7 July 2016. All replies may be put on public record unless confidentiality is requested by the respondent. Comments may be sent as email attachments to:

commentletters@ivsc.org

or by post to: IVSC, 1 King Street, LONDON EC2V 8AU, UK

International Valuation Standards Council
1 King Street
LONDON EC2V 8AU
United Kingdom
Email: ivsc@ivsc.org
www.ivsc.org

Introduction to Exposure Draft

Why is the International Valuation Standards Board (IVSB) Issuing IVS 105 on Valuation Approaches and Methods?

In October 2015 the IVSC published its *Purpose and Strategy Document* which stated that the priority of the IVSC is to expand the quality and depth of International Valuations Standards (IVS) and ensure they are fit for purpose and provide much needed clarity and market efficiency. Further to discussions with the Standards Board and other stakeholders the technical writers carried out a preliminary gap analysis on IVS 2013 and IVS 105 *Valuation Approaches and Methods* as a priority chapter within IVS 2017.

The IVS Framework chapter in IVS 2013 included a significant amount of foundational information on valuation approaches and methods. After consultation with stakeholders and the IVSC Purpose, Strategy and Structure Document consultation process the Standards Board (the "Board") has relocated most of the IVS Framework chapter to the IVS General Standards in IVS 104 *Bases of Value* and IVS 105 *Valuation Approaches and Methods*. The Board felt the issue of a new chapter on IVS 105 *Valuation Approaches and Methods* would assist both established and emerging markets in adopting International Valuation Standards across all valuation specialisms and provide further clarification on the mandatory part of the standards.

IVS 105 *Valuation Approaches and Methods* provides the overarching valuation approaches and methods applicable to all valuations and forms part of the extended General Standards Section within IVS 2017. The Board further noted that there was a significant amount of repetition throughout IVS 2013 related to valuation approaches and methods and have relocated much of the information in the IVS 2013 Framework chapter into IVS 105 *Valuation Approaches and Methods* in order to eliminate some of the repetition and related confusion.

Since the issuance of IVS 2013, the Board received feedback from many stakeholders that the sections on valuation approaches comprising the market approach, income approach and cost approach were insufficiently detailed to meet current market needs. Furthermore the Board felt the IVS content on valuation approaches and methods needed to be contained within the General Standards to highlight the mandatory nature of this part of the standard.

What are the Main Provisions?

As a result of the stakeholder feedback and the Board's views, the sections on valuation approaches and methods that were included in the IVS Framework chapter of IVS 2013 has been significantly revised and restructured in this standard. The new structure includes:

- an introductory section on Valuation Approaches and Methods describing the process for choosing one or more valuation approaches and methods,

- more detailed sections on each of the three approaches describing the circumstances under which the each approach should be chosen as the sole or primary basis of a valuation or used in combination with other approaches, and

- sections discussing certain valuation methods within each valuation approach, highlighting the key steps and guidelines for each method.

The chapter recommends that as part of the selection process the valuer should consider, at a minimum, the following:

> "a. the appropriate bases of value, determined by the terms and purpose of the valuation assignment,
>
> b. the respective strengths and weaknesses of the possible valuation approaches and methods,
>
> c the appropriateness of each method in view of the nature of the asset, and the approaches or methods used by participants in the relevant market,
>
> d. the availability of reliable information needed to apply the method(s)."

The chapter recognises that although no one approach or method is applicable in all circumstances valuers "should maximise the use of observable market information in all three approaches." Furthermore, the chapter includes a non-exhaustive list of valuation methods; however, compliance with IVS may also require the valuer to use a method not defined or mentioned in the IVS.

How do the Proposed Provisions Compare with IVS 2013?

This proposed chapter includes certain material that was previously contained within the IVS Framework and the IVS Asset Standards of IVS 2013, and new guidance developed by the Board considering feedback from stakeholders. The Board felt that the valuation approaches and methods are fundamental to any valuation instruction and to the IVS, and therefore merited inclusion as a separate chapter within IVS 2013. Furthermore the Board felt that by collating the existing approaches and methods contents within IVS 2013 into one standalone chapter this would provide further clarity to valuers, end users and other stakeholders.

The chapter includes a new introductory section on Valuation Approaches and Methods describing the selection process for choosing one or more valuation approaches and methods.

The chapter also includes a more detailed section on the Market, Income and Cost Approaches highlighting the circumstances under which the market approach should be chosen as the sole or primary basis of a valuation or used in combination with other approaches.

The section on the Market Approach highlights the key steps and guidelines for the comparable transactions method and the guideline publicly-traded comparable method.

The section on the Income Approach highlights the key steps and guidelines for the Discounted Cash Flow (DCF) Method including sections on the type of cash flow, explicit forecast period, cash flow forecasts, terminal value, the Gordon growth model/constant growth model, market approach/exit value, salvage value/disposal cost and discount rates.

The section on the Cost Approach highlights the key steps and guidelines for the Cost Approach incorporating subsections on the Replacement Cost Method, Reproduction Cost Method, Summation Method, Cost Considerations and Depreciation.

Questions for Respondents

The Board invites individuals and organisations to comment on all matters in this proposed update, particularly on the issues and questions below. Comments are requested from those who agree with the proposed guidance as well as from those who do not agree. Comments are most helpful if they identify and clearly explain the issue or question to which they relate. Those who disagree with the proposed guidance are asked to describe their suggested alternatives, supported by specific reasoning.

1) Do you agree that when selecting an appropriate valuation approaches and methods a valuer should consider the following?

    a) the appropriate bases of value, determined by the terms and purpose of the valuation assignment,

    b) the respective strengths and weaknesses of the possible valuation approaches and methods,

    c) the appropriateness of each method in view of the nature of the asset, and the approaches or methods used by participants in the relevant market,

    d) the availability of reliable information needed to apply the method(s), and

    e) if not, why? What considerations would you add to or remove from this list?

2) Under each valuation approach, this exposure draft includes criteria for when the approach should be used. Do you agree with the criteria presented under each approach? If no, what changes would you make? Why?

3) Are there areas of this chapter that you feel should be expanded upon in future board projects (eg, discount rates, discounts/premiums, etc)?

IVS 105 Valuation Approaches and Methods

10. Introduction

10.1 Consideration shall be given to the relevant and appropriate valuation approaches. The three approaches described and defined below are the main approaches used in valuation. They are all based on the economic principles of price equilibrium, anticipation of benefits or substitution. The principal valuation approaches are as follows:

(a) Market approach,

(b) Income approach, and

(c) Cost approach.

10.2 Each of these principal valuation approaches includes different detailed methods of application.

10.3 The goal in selecting valuation approaches and methods for an asset is to find the most appropriate method under the particular circumstances. No one method is suitable in every possible situation. The selection process should consider, at a minimum, the following:

(a) the appropriate bases of value, determined by the terms and purpose of the valuation assignment,

(b) the respective strengths and weaknesses of the possible valuation approaches and methods,

(c) the appropriateness of each method in view of the nature of the asset, and the approaches or methods used by participants in the relevant market, and

(d) the availability of reliable information needed to apply the method(s).

10.4 Valuers are not required to use more than one method for the valuation of an asset, particularly when the valuer has a high degree of confidence in the accuracy and reliability of a single method. More than one valuation approach or method may be used to arrive at an indication of value, particularly when there are insufficient factual or observable inputs for a single method to produce a reliable conclusion. Where more than one approach and method is used, or even multiple methods within a single approach, the conclusion of value based on those multiple approaches and/or methods should be reasonable and the process of analysing and reconciling the differing values into a single conclusion should be described by the valuer in the report.

10.5 While this chapter includes discussion of certain methods within the Cost, Market and Income approaches, it does not provide a comprehensive list of all possible methods that may be appropriate. It is the valuer's sole responsibility to choose the appropriate

method(s) for each valuation engagement. Compliance with IVS may require the valuer to use a method not defined or mentioned in the IVS.

10.6 When different approaches and/or methods result in widely divergent indications of value, a valuer should perform procedures to understand why the value indications differ, as it may not be appropriate to simply weight two or more divergent indications of value. In such cases, valuers should reconsider the guidance in para 10.3 to determine whether one of the approaches/methods provides a better or more reliable indication of value.

10.7 Valuers should maximise the use of observable market information in all three approaches. Regardless of the source of the inputs and assumptions used in a valuation, a valuer must perform analysis to evaluate those inputs and assumptions and their appropriateness for the valuation purpose.

10.8 Although no one approach or method is applicable in all circumstances, price information from an active market is generally considered to be the strongest evidence of value. Some bases of value may prohibit an appraiser from making subjective adjustments to price information from an active market. Price information from an inactive market may still be good evidence of value, but subjective adjustments may be needed.

20. Market Approach

20.1 The market approach provides an indication of value by comparing the asset with identical or comparable (that is similar) assets for which price information is available. When reliable, verifiable and relevant market information is available, the market approach is the preferred valuation approach.

20.2 The market approach should be used as the primary basis for a valuation under the following circumstances:

(a) the asset has recently been sold in a transaction appropriate for consideration under the basis of value,

(b) the asset or substantially similar assets are actively publicly traded, and

(c) there are frequent or recent observable transactions in substantially similar assets.

20.3 Although the above circumstances would indicate that the market approach should be the primary basis for a valuation, when the above criteria are not met, the following are additional circumstances where the market approach may be appropriate. When using the market approach under the following circumstances, a valuer should consider whether any other approaches can be used to corroborate the value indication from the market approach:

(a) transactions involving the subject asset or substantially similar assets are not recent enough considering the level of volatility in the market,

(b) the asset or substantially similar assets are publicly traded, but not actively,

(c) information on market transactions is available, but the comparable assets have significant differences to the subject asset, potentially requiring subjective adjustments,

(d) information on recent transactions is not reliable (ie, hearsay, missing information, synergistic purchaser, not arm's-length, distressed sale, etc),

(e) the critical element affecting the value of the asset is the price it would achieve in the market rather than the cost of reproduction or its income-producing ability (for example, shopping centre, artwork, heritage assets).

20.4 The heterogeneous nature of many assets means that it is often not possible to find market evidence of transactions involving identical assets. Even in circumstances where the market approach is not used, the use of market-based inputs should be maximised in the application of other approaches (eg, market-based interest rates/discount rates).

20.5 When the comparable market information does not relate to the exact or substantially the same asset, there needs to be a reasonable basis for comparison with and reliance upon comparable assets in the market approach. A comparative analysis of qualitative and quantitative similarities and differences between the comparable assets and the subject asset should be performed. It will often be necessary to make adjustments based on this comparative analysis. Those adjustments must be reasonable and valuers must document the reasons for the adjustments and how they were quantified.

20.6 The market approach often uses market multiples derived from a set of comparables. Multiples might be in ranges with a different multiple for each comparable. The selection of the appropriate multiple within the range requires judgement, considering qualitative and quantitative factors specific to the measurement.

30. Market Approach Methods

Comparable Transactions Method

30.1 The comparable transactions method, also known as the guideline transactions method, utilises information on transactions involving assets that are the same or similar to the subject asset to arrive at an indication of value.

30.2 When the comparable transactions considered involve the subject asset, this method is sometimes referred to as the prior transactions method.

30.3 If few recent transactions have occurred, it may also be appropriate to consider the prices of identical or similar assets that are listed or offered for sale provided the relevance of this information is clearly established, critically analysed, and documented. This is sometimes referred to as the comparable listings method and should not be used as the sole indication of value but can be appropriate for consideration together

with other methods. When considering listings or offers to buy or sell, the weight afforded to the listings/offer price should consider the level of commitment inherent in the price. For example, an offer that represents a commitment to purchase or sell an asset at a given price may be given more weight than a quoted price without such a commitment.

30.4 The comparable transaction method can use a variety of different comparable evidence, also known as units of comparison, which form the basis of the comparison. For example, a few of the many common units of comparison used for real property interests include price per square foot (or per square meter), rent per square foot and capitalisation rates. A few of the many common units of comparison used in business valuation include price/EBITDA multiples, price/earnings multiples and price/revenue multiples. Financial instrument valuations often consider metrics such as yields and interest rate spreads. The units of comparison used by market participants can differ between asset classes and even across industries and geographies.

30.5 A subset of the comparable transactions method is matrix pricing, which is principally used to value some types of financial instruments, such as debt securities, without relying exclusively on quoted prices for the specific securities, but rather relying on the securities' relationship to other benchmark quoted securities.

30.6 The key steps in the comparable transactions method are:

(a) identify the units of comparison that are used by participants in the relevant market,

(b) identify the relevant comparable transactions and calculate the key valuation metrics for those transactions,

(c) perform a consistent comparative analysis of qualitative and quantitative similarities and differences between the comparable assets and the subject asset,

(d) make necessary adjustments, if any, to the valuation metrics to reflect differences between the subject asset and the comparable assets (see para 30.12(d)),

(e) apply the adjusted valuation metrics to the subject asset, and

(f) if multiple valuation metrics were used, reconcile the indications of value.

30.7 A professional should choose comparable transactions within the following context:

(a) evidence of multiple transactions is preferable to a single transaction or event,

(b) evidence from transactions of very similar assets (ideally identical) provides a better indication of value than assets that require significant adjustments,

(c) transactions that happen closer to the valuation date are more representative of the market at that date than older/dated transactions,

(d) for most bases of value, the transactions should be "arm's length" between unrelated parties,

(e) sufficient information on the transaction should be available to allow the professional to fully understand the comparable asset and verify the valuation metrics/comparable evidence,

(f) information on the comparable transactions should be from a reliable and trusted source, and

(g) actual transactions provide better valuation evidence than intended or announced transactions.

30.8 A professional should make adjustments for any material differences between the comparable transactions and the subject asset. Examples of common differences that could warrant adjustments may include, but are not limited to:

(a) material physical characteristics (age, size, specifications, etc),

(b) relevant restrictions on either the subject asset or the comparable assets

(c) geographical location (location of the asset and/or location of where the asset is likely to be transacted/used) and the related economic and regulatory environments,

(d) profitability or profit-making capability of the assets,

(e) historical and expected growth,

(f) unusual terms in the comparable transactions,

(g) differences related to marketability and control characteristics of the comparable and the subject asset, and

(h) legal form of ownership.

Guideline publicly-traded comparable method

30.9 The guideline publicly-traded method utilises information on publicly-traded comparables that are the same or similar to the subject asset to arrive at an indication of value.

30.10 This method is similar to the guideline transactions method. However, there are several differences due to the comparables being publicly traded:

(a) the valuation metrics/comparable evidence are available as of the valuation date,

(b) detailed information on the comparables are readily available in public filings, and

(c) the information contained in public filings is prepared under well-understood accounting guidelines.

30.11 The method should be used only when the subject asset is sufficiently similar to the publicly traded comparables to allow for meaningful comparison.

30.12 The key steps in the guideline publicly-traded comparable method are:

(a) identify the valuation metrics/comparable evidence that are used by participants in the relevant market,

(b) identify the relevant guideline publicly-traded comparables and calculate the key valuation metrics for those transactions,

(c) perform a consistent comparative analysis of qualitative and quantitative similarities and differences between the comparable assets and the subject asset,

(d) make necessary adjustments, if any, to the valuation metrics to reflect differences between the subject asset and the comparable assets,

(e) apply the adjusted valuation metrics to the subject asset, and

(f) if multiple valuation metrics were used, reconcile the indications of value.

30.13 A professional should choose guideline publicly-traded comparables within the following context:

(a) consideration of multiple publicly-traded comparables is preferred to the use of a single comparable,

(b) evidence from very similar publicly-traded comparables (for example market segment, geographic area, size such as in revenue and assets, growth rates, profit margins, leverage, liquidity and diversification) provides a better indication of value than comparables that require significant adjustments, and

(c) publicly-traded securities that are actively traded provide more meaningful evidence than thinly-traded securities.

30.14 A professional should make adjustments for any material differences between the guideline publicly-traded comparables and the subject asset. Examples of common differences that could warrant adjustments may include, but are not limited to:

(a) material physical characteristics (age, size, specifications, etc),

(b) relevant restrictions on either the subject asset or the comparable assets,

(c) geographical location of the underlying company and the related economic and regulatory environments,

(d) profitability or profit-making capability of the assets,

(e) historical and expected growth,

(f) differences related to marketability and control characteristics of the comparable and the subject asset, and

(g) type of ownership.

30.15 As prices in traded markets will generally incorporate credit risk, incremental credit risk adjustments may not be required. If prices do require adjustment for credit risk, these adjustments should be computed based on market observable information such as CDS rates and credit spreads.

Other Market Approach Considerations

30.16 The following paragraphs address a non-exhaustive list of certain special considerations that may form part of a market approach valuation.

30.17 Anecdotal or "rule-of-thumb" valuation benchmarks are sometimes used as a short-cut market approach. However, value indications derived from the use of such rules should not be given substantial weight unless it can be shown that buyers and sellers place significant reliance on them. Even where this is the case, a cross-check should be undertaken using at least one other method.

30.18 The fundamental basis for making adjustments in the market approach is to adjust for differences between the subject asset and the guideline transactions or publicly traded securities. Some of the most common adjustments made in the market approach are known as discounts and premiums.

(a) Discounts for Lack of Marketability (DLOM) should be applied when the comparables are deemed to have superior marketability to the subject asset. A DLOM reflects the concept that when comparing otherwise identical assets, a readily marketable asset would have a higher value than an asset with a long marketing period or restrictions on the ability to sell the asset. For example, publicly-traded securities can be bought and sold nearly instantaneously while shares in a private company may require a significant amount of time to identify potential buyers and complete a transaction. DLOMs may be quantified using any reasonable method, but are typically calculated using option pricing models, studies that compare the value of publicly traded shares and restricted shares in the same company, or studies that compare the value of shares in a company before and after an initial public offering.

(b) Control Premiums and Discounts for Lack of Control (DLOC) are applied to reflect differences between the comparables and the subject asset with regard to the ability to make decisions. For example, shares of public companies generally do not have the ability to make decisions related to the operations of the company (they lack control). As such, when applying the guideline public comparable method to value a subject asset that reflects a controlling interest, a control premium may be appropriate. Conversely, the guideline transactions in the guideline transaction method often reflect transactions of controlling interests. When using that method to value a subject asset that reflects a minority interest, a DLOC may be appropriate. Control Premiums and DLOCs may be quantified using any reasonable method, but are typically calculated based on observed prices paid for controlling interests in publicly-traded securities compared to the publicly-traded price before such a transaction is announced (often referred to as market participant acquisition premiums, or MPAPs).

(c) Blockage discounts are sometimes applied when the subject asset represents a large block of shares in a publicly-traded security such that an owner would not be able to quickly sell the block in the public market without negatively influencing the publicly-traded price. Blockage discounts may be quantified using any reasonable method but typically a model is used that considers the length of time over which a market participant could sell the subject shares without negatively impacting the publicly traded price (ie, selling a relatively small portion of the security's typical daily trading volume each day). It is important to note that under certain bases of value, particularly fair value for financial reporting purposes, blockage discounts are prohibited when the subject security is publicly traded in an active market.

40. Income Approach

40.1 The income approach provides an indication of value by converting future cash flow to a single current value. Under the income approach, the value of an asset is determined by reference to the value of income, cash flow or cost savings generated by the asset.

40.2 The income approach should be used as the primary basis for a valuation under the following circumstances:

(a) the income-producing ability of the asset is the critical element affecting value from a market participant perspective, and

(b) reliable projections of the amount and timing of future income are available for the subject asset, but there are few, if any, relevant market comparables.

40.3 Although the above circumstances would indicate that the income approach should be the primary basis for a valuation, the following are additional circumstances where the income approach may be appropriate. When using the income approach under the following circumstances, a valuer should consider whether any other approaches can be used to corroborate the value indication from the income approach:

(a) the income-producing ability of the asset is only one of several factors affecting value from a market participant perspective,

(b) there is significant uncertainty regarding the amount and timing of future income related to the subject asset,

(c) there is a lack of access to information related to the subject asset (for example, a minority owner may have access to historical financial statements but not forecasts/budgets), and

(d) the subject asset has not yet begun generating income, but is projected to do so.

40.4 A fundamental basis for the income approach is that investors expect to receive a return on their investments and that such a return should reflect the perceived level of risk in the investment. Investors in riskier assets demand a higher return to compensate for that risk.

40.5 Generally, investors can only expect to be compensated for systematic risk (also known as market risk or undiversifiable risk). For example, although it is more risky to invest in only one asset (or asset class) rather than to invest in a diversified portfolio of assets, rates of return on single assets would not be expected to exceed rates of return on the portfolio, all else being equal.

50. Income Approach Methods

50.1 Although there are many ways to implement the income approach, all methods under the income approach are effectively based on discounting future amounts of cash flow to present value. They are all variations of the Discounted Cash Flow (DCF) method and the concepts below apply in part or in full to all income approach methods. For example, if an income capitalisation method is performed, the guidance related to explicit forecast periods (paras 50.8 to 50.11) would not apply.

Discounted Cash Flow (DCF) Method

50.2 Under the DCF method the forecasted cash flow is discounted back to the valuation date, resulting in a present value of the asset.

50.3 In some circumstances for long-lived or perpetual-lived assets DCF may include a terminal value which represents the value of the asset at the end of the explicit projection period. In other circumstances the value of an asset can be calculated solely using a terminal value with no explicit projection period. This is sometimes referred to as an income capitalisation method.

50.4 The key steps in the DCF method are:

(a) choose the most appropriate type of cash flow for the nature of the subject asset and the assignment (ie, gross or net, pre-tax or post-tax, total cash flows or cash flows to equity, real or nominal, etc),

(b) determine the most appropriate explicit period, if any, over which the cash flow will be forecast,

(c) prepare cash flow forecasts for that period,

(d) determine whether a terminal value is appropriate for the subject asset at the end of the explicit forecast period and then determine the appropriate terminal value for the nature of the asset,

(e) determine the appropriate discount rate, and

(f) apply the discount rate to the forecasted future cash flow, including the terminal value, if any.

Type of Cash Flow

50.5 When selecting the appropriate type of cash flow for the nature of asset or assignment the factors shown below need to be considered. However it is important to note that the discount rate and other inputs must be consistent with the basis chosen.

(a) cash flow to whole asset or partial interest: typically cash flow to the whole asset is used. However, occasionally other levels of income may be used as well, such as cash flow to equity (after payment of interest and principle on debt) or dividends (only the cash flow distributed to equity owners). Cash flow to the whole asset is most commonly used because an asset should theoretically have a single value that is independent of how it is financed or whether income is paid as dividends or reinvested,

(b) the cash flow can be pre-tax or post-tax. If a post-tax basis is used the tax rate applied should be consistent with the basis of value and in many instances would be a market participant tax rate rather than an owner specific one,

(c) nominal versus real: real cash flow does not consider inflation whereas nominal cash flows include expectations regarding inflation. If expected cash flow incorporates an expected inflation rate, the discount rate has to include the same inflation rate, and

(d) currency: the choice of currency used may have an impact on inflation and risk. This is particularly true in emerging markets or in currencies with high inflation rates.

50.6 The type of cash flow chosen should be in accordance with the investor's viewpoint and relevant market practice. For example cash flow for real property, ie, rents and discount rates are customarily developed on a pre-tax basis. Conversely, discount rate data for businesses is normally developed on a post-tax basis. Adjusting between pre-tax and post-tax rates can be complex and prone to error and should be approached with caution.

50.7 When a valuation is being developed in a currency ("the valuation currency") that differs from the currency used in the cash flow projections ("the functional currency"), a valuer should use one of the following two currency translation methods.

(a) discount the cash flows in the functional currency using a discount rate appropriate for that functional currency. Convert the present value of the cash flows to the valuation currency at the spot rate on the valuation date, or

(b) use a currency exchange forward curve to translate the functional currency projections into valuation currency projections and discount the projections using a discount rate appropriate for the valuation currency. When a reliable currency exchange forward curve is not available (for example, due to lack of liquidity in the relevant currency exchange markets) it may not be possible to use this method and only the method described in para 50.7(a) can be applied.

Explicit Forecast Period

50.8 The selection criteria will depend upon the purpose of the valuation, the nature of the asset, the information available and the required bases of value. For an asset with a short life it is more likely to be both possible and relevant to project cash flow over its entire life. For some assets there may be an accepted norm among market participants for the length of forecast period and this would need to be taken into account if the basis required is market value.

50.9 Key factors to consider in selecting the explicit forecast period include:

(a) the life of the asset,

(b) a reasonable period for which reliable data is available on which to base the projections,

(c) the minimum explicit forecast period which should be sufficient for an asset to achieve a stabilised level of growth and profits, after which a terminal value can be used, and

(d) In the valuation of cyclical assets, the explicit forecast period should generally include an entire cycle, when possible.

(e) For finite-lived assets such as most financial instruments, the cash flows will typically be forecast over the full life of the asset.

50.10 In some instances, particularly when the asset is operating at a stabilised level of growth and profits at the valuation date, it may not be necessary to consider an explicit forecast period and a terminal value may form the only basis for value (sometimes referred to as an income capitalisation method or the "shortcut DCF").

50.11 The intended holding period for one investor should not be the only consideration in selecting an explicit forecast period and should not impact the value of an asset. However, the period over which an asset is intended to be held may be considered in determining the explicit forecast period if the objective of the valuation is to determine its investment value.

Cash Flow Forecasts

50.12 Cash flow for the explicit forecast period is constructed using prospective financial information (PFI) (projected income/inflows and expenditure/outflows).

50.13 As required by para 50.12, regardless of the source of the PFI (eg, management forecast), a valuer must perform analysis to evaluate the PFI, the assumptions underlying the PFI, and their appropriateness for the valuation purpose. The suitability of the PFI and the underlying assumptions will depend upon the purpose of the valuation and the required bases of value. For example, cash flow used to determine market value should reflect PFI that would be anticipated by market participants; in contrast investment value can be measured using cash flow that is based on the reasonable forecasts from the perspective of a particular investor.

50.14 The cash flow is divided into suitable periodic intervals (eg, weekly, monthly, quarterly or annually) with the choice of interval depending upon the nature of the asset, the pattern of the cash flow, the data available, and the length of the forecast period.

50.15 The projected cash flow should capture the amount and timing of all future cash inflows and outflows associated with the subject asset from the perspective appropriate to the basis of value.

50.16 Typically, the projected cash flow will reflect one of the following:

(a) the single most likely set of cash flow,

(b) the probability-weighted expected cash flow, or

(c) multiple scenarios of possible future cash flow.

50.17 These different types of cash flow often reflect different levels of risk and may require different discount rates. For example, probability-weighted expected cash flows incorporate expectations regarding all possible outcomes and are not dependent on any particular conditions or events. A single most likely set of cash flows may be conditional on certain future events and therefore could reflect different risks and warrant a difference discount rate.

50.18 While valuers often receive PFI that reflects accounting income and expenses, it is generally preferable to use cash flow as the basis for valuations. For example, accounting non-cash expenses, such as depreciation and amortisation, should be added back, and expected cash outflows relating to capital expenditures or to changes in working capital should be deducted in calculating cash flow.

60. Terminal Value

60.1 Where the asset is expected to continue beyond the explicit forecast period, it is necessary to estimate the value of the asset at the end of that period. The terminal value is then discounted back to the valuation date, normally using the same discount rate as applied to the forecast cash flow.

60.2 The terminal value should consider the following:

(a) whether the asset is deteriorating/finite-lived in nature or indefinite-lived will influence the method used to calculate a terminal value,

(b) whether there is future growth potential for the asset beyond the explicit forecast period,

(c) whether there is a predetermined fixed capital amount expected to be received at the end of the explicit forecast period,

(d) the expected risk level of the asset at the time the terminal value is calculated,

(e) for cyclical assets, the terminal value should consider the cyclical nature of the asset, and

(f) the tax attributes inherent in the asset at the end of the explicit forecast period and whether those tax attributes would be expected to continue into perpetuity. For example, an asset being depreciated/amortised for tax purposes will eventually be fully depreciated/amortised, potentially increasing the effective tax rate.

60.3 The three most commonly used methods for calculating a terminal value are:

(a) Gordon growth model/constant growth model (appropriate only for indefinite-lived assets),

(b) market approach/exit value (appropriate for both deteriorating/finite-lived assets and indefinite-lived assets), and

(c) salvage value/disposal cost (appropriate only for deteriorating/finite-lived assets).

Gordon Growth Model/Constant Growth Model

60.4 The constant growth model assumes that the asset grows (or declines) at a constant rate into perpetuity.

Market Approach/Exit Value

60.5 The market approach/exit value method can be performed in a number of ways, but the ultimate goal is to calculate the value of the asset at the end of the explicit cash flow forecast.

60.6 Common ways to calculate the terminal value under this method include application of a market-evidence based capitalisation factor or a market multiple.

Salvage Value/Disposal Cost

60.7 The terminal value of some assets may have little or no relationship to the preceding cash flow. Examples of such assets include wasting assets such as a mine or an oil well.

60.8 In such cases, the terminal value is typically calculated as the salvage value of the asset, less costs to dispose of the asset. In circumstances where the costs exceed the salvage value, the terminal value is negative and referred to as a disposal cost or an asset retirement obligation.

Discount Rate

60.9 The rate at which the forecast cash flow is discounted should reflect not only the time value of money, but also the risks associated with the future operations of the asset or business.

60.10 While there are many methods for developing or determining the reasonableness of a discount rate, they commonly consider a risk-free rate plus some form of risk premium. A non-exhaustive list of common methods include:

(a) capital asset pricing model (CAPM),

(b) weighted average cost of capital (WACC),

(c) internal rate of return (IRR),

(d) weighted average return on assets (WARA), and

(e) build-up method (generally used only in the absence of market inputs).

60.11 In developing a discount rate, a professional should consider the following:

(a) The risk associated with the projections made in the cash flow used,

(b) the type of asset being valued. For example, discount rates used in valuing debt would be different than those used when valuing real property or a business,

(c) the rates implicit in transactions in the market,

(d) the geographic location of the asset and/or the location of the markets in which it would trade,

(e) the life/term of the asset and the consistency of inputs. For example, the risk-free rate considered would differ for an asset with a three-year life versus a 30-year life,

(f) the type of cash flow being used. For example, in business valuation the WACC is a discount rate that weights debt and equity rates of return and should be applied to free cash flow to the firm, while the CAPM results in an equity rate of return that would be applied to free cash flow to equity, and

(g) the bases of value being applied. For most bases of value, the discount rate should be developed from the perspective of a market participant rather than the view of a particular investor.

70. Cost Approach

70.1 The cost approach provides an indication of value using the economic principle that a buyer will pay no more for an asset than the cost to obtain an asset of equal utility, whether by purchase or by construction, unless undue time, inconvenience, risk or other factors are involved. The approach provides an indication of value by calculating the current replacement or reproduction cost of an asset and making deductions for physical deterioration and all other relevant forms of obsolescence.

70.2 The cost approach should be used as the primary basis for a valuation under the following circumstances:

(a) market participants would be able to recreate an asset with substantially the same utility as the subject asset, without regulatory or legal restrictions, and the asset could be recreated quickly enough that a market participant would not be willing to pay a significant premium for the ability to use the subject asset immediately,

(b) the asset is not income-generating (directly or indirectly) and the unique nature of the asset makes using an income approach or market approach unfeasible, and

(c) the basis of value being used is fundamentally based on replacement cost, such as reinstatement value.

70.3 Although the above circumstances would indicate that the cost approach should be the primary basis for a valuation, the following are additional circumstances where the cost approach may be appropriate. When using the cost approach under the following

circumstances, a valuer should consider whether any other approaches can be used to corroborate the value indication from the cost approach:

(a) market participants might consider recreating an asset of similar utility, but there are potential legal or regulatory hurdles or significant time involved in recreating the asset,

(b) when the cost approach is being used as a reasonableness check to other approaches (for example, using the cost approach to confirm whether a business valued as a going-concern might be more valuable on a liquidation basis), or

(c) the asset was recently created, such that there is a high degree of reliability in the assumptions used in the cost approach.

70.4 The value of a partially completed asset will generally reflect the costs incurred to date in the creation of the asset (and whether those costs contributed to value) and the expectations of market participants of the value of the property when complete, but consider the costs and time required to complete the asset and appropriate adjustments for profit and risk.

80. Cost Approach Methods

80.1 Broadly, there are three cost approach methods:

(a) replacement cost method: a method that indicates value by calculating the cost of a similar asset offering equivalent utility,

(b) reproduction cost method: a method under the cost that indicates value by calculating the cost to recreating a replica of an asset, and

(c) summation method: a method that calculates the value of an asset by the addition of the separate values of its component parts.

Replacement Cost Method

80.2 Generally, replacement cost is the cost that is relevant to determining the price that a market participant would pay as it is based on replicating the utility of the asset, not the exact physical properties of the asset.

80.3 Usually replacement cost is adjusted for physical deterioration and all relevant forms of obsolescence. After such adjustments, this can be referred to as depreciated replacement cost.

80.4 The key steps in the replacement cost method are:

(a) calculate all of the costs that would be incurred by a typical market participant seeking to create an asset providing equivalent utility,

(b) determine whether there is any deprecation related to physical, functional and external obsolescence associated with the subject asset, and

(c) deduct total deprecation from the total costs to arrive at a value for the subject asset.

80.5 The replacement cost is generally that of a modern equivalent asset, which is one that provides similar function and equivalent utility to the asset being valued, but which is of a current design and constructed or made using current cost-effective materials and techniques.

Reproduction Cost Method

80.6 Reproduction cost is appropriate in circumstances such as the following:

(a) the cost of a modern equivalent asset is greater than the cost of recreating a replica of the subject asset, or

(b) the utility offered by the subject asset could only be provided by a replica rather than a modern equivalent.

80.7 The only step in the reproduction cost method is to calculate all of the costs that would be incurred by a typical market participant seeking to create an exact replica of the subject asset.

Summation Method

80.8 The summation method is typically used for investment companies or other types of assets or entities for which value is primarily a factor of the values of their holdings.

80.9 The key steps in summation method are:

(a) value each of the component assets that are part of the subject apart using the appropriate valuation approaches and methods, and

(b) add the value of the component assets together to reach the value of the subject asset.

Cost Considerations

80.10 The cost approach should capture all of the costs that would be incurred by a typical market participant.

80.11 The cost elements may differ depending on the type of the asset and should include the direct and indirect costs that would be required to replace/recreate the asset as of the valuation date. Some common items to consider include:

(a) direct costs:

(i) materials, potentially including land, and

(ii) labour.

(b) indirect costs:

(i) transport costs,

(ii) installation costs,

(iii) professional fees (design, permit, architectural, legal, etc),

(iv) other fees (commissions, etc),

(v) overheads,

(vi) taxes,

(vii) finance costs (eg, interest on debt financing), and

(viii) profit margin/entrepreneurial profit to the creator of the asset (eg, return to investors).

80.12 An asset acquired from a third party would presumably reflect their costs associated with creating the asset as well as some form of profit margin to provide a return on their investment. As such, under bases of value that assume a hypothetical transaction, it may be appropriate to include an assumed profit margin on certain costs which can be expressed as a target profit, either a lump sum or a percentage return on cost or value.

80.13 When costs are derived from actual, quoted or estimated prices by third party suppliers or contractors, these costs will already include a third parties' desired level of profit.

80.14 The actual costs incurred in creating the subject asset (or a comparable reference asset) may be available and provide a relevant indicator of the cost of the asset. However, adjustments may need to be made to reflect the following:

(a) cost fluctuations between the date on which this cost was incurred and the valuation date, and

(b) any atypical or exceptional costs, or savings, that are reflected in the cost data but that would not arise in creating an equivalent.

90. Depreciation

90.1 In the context of the cost approach, depreciation refers to adjustments made to the estimated cost of creating an asset of equal utility to reflect the impact on value of any obsolescence affecting the subject asset. This meaning is different from the use of the word in financial reporting or tax law where it generally refers to a method for systematically expensing capital expenditure over time.

90.2 Depreciation adjustments are normally considered for the following types of obsolescence, which may be further divided into subcategories when making adjustments:

(a) physical obsolescence: any loss of utility due to the physical deterioration of the asset or its components resulting from its age and normal usage,

(b) functional obsolescence: any loss of utility resulting from inefficiencies in the subject asset compared to its replacement such as its design, specification or technology being outdated, and

(c) external or economic or external obsolescence: any loss of utility caused by economic or locational factors external to the asset. This type of obsolescence can be temporary or permanent.

90.3 Depreciation/obsolescence should consider the physical and economic lives of the asset.

(a) The physical life is how long the asset could be used before it would be worn out or beyond economic repair, assuming routine maintenance but disregarding any potential for refurbishment or reconstruction.

(b) The economic life is how long it is anticipated that the asset could generate financial returns or provide a non-financial benefit in its current use. It will be influenced by the degree of functional or economic obsolescence to which the asset is subject. The economic life cannot exceed the physical life.

90.4 Except for some types of economic or external obsolescence, most types of obsolescence are measured by making comparisons between the subject asset and the hypothetical asset on which the estimated replacement or reproduction cost is based.

90.5 Physical obsolescence can be measured in two different ways:

(a) curable physical obsolescence, ie, the cost to fix/cure the obsolescence, or

(b) incurable physical obsolescence which considers the asset's age, expected total and remaining life where the adjustment for physical obsolescence is equivalent to the proportion of the expected total life consumed.

90.6 There are two forms of functional obsolescence:

(a) excess capital cost, which can be caused by changes in design, materials of construction, technology or manufacturing techniques resulting in the availability of modern equivalent assets with lower capital costs than the subject asset, and

(b) excess operating cost, which can be caused by improvements in design or excess capacity resulting in the availability of modern equivalent assets with lower operating costs than the subject asset.

90.7 Economic obsolescence may arise when external factors affect an individual asset or all the assets employed in a business and should be deducted after physical deterioration and functional obsolescence. For real estate, external obsolescence affects both the land and the improvements. Examples of economic obsolescence include:

(a) adverse changes to demand for the products or services produced by the asset,

(b) oversupply in the market for the asset,

(c) a disruption or loss of a supply of labour or raw material, or

(d) the asset being used by a business that cannot afford to pay a market rent for the assets and still generate a market rate of return.

90.8 Cash or cash equivalents do not suffer obsolescence and are not adjusted. Marketable assets are not adjusted below their market value determined using the market approach.

IVS 105 Valuation Approaches and Methods: Basis for Conclusions

The basis for conclusions do not form part of IVS 2017 and will not be included in the finalised document, but have been drafted to provide the reader with the rationale behind certain changes made within this Exposure Draft. The Board feels that the inclusion of this section is a necessary part of the consultative process is in line with the recommendation contained within the IVS Purpose and Strategy Document requirement that "standards need sufficient consultation" and that the IVSC should be "operating in an open and transparent way".

In October 2015 IVSC published their *Purpose and Strategy Document* which stated that the priority of the IVSC is to expand the quality and depth of International Valuations Standards and ensure they are fit for purpose and provide much needed clarity and market efficiency. Further to discussions with the Standards Board and other stakeholders the technical writers carried out a preliminary gap analysis on IVS 2013 and IVS 105 *Valuation Approaches and Methods* as a priority chapter within IVS 2017.

The IVS Framework chapter in IVS 2013 included a significant amount of foundational information on valuation approaches and methods. After consultation with stakeholders and the IVSC Purpose, Strategy and Structure Document consultation process the Board has relocated most of the IVS Framework chapter to the IVS General Standards in IVS 104 *Bases of Value* and IVS 105 *Valuation Approaches and Methods*. The Board felt the issue of a new chapter on IVS 105 *Valuation Approaches and Methods* would assist both established and emerging markets in adopting IVS across all valuation specialisms and provide further clarification on the mandatory part of the standards.

IVS 105 *Bases of Value* provides the overarching valuation approaches and methods applicable to all valuations and form part of the extended General Standards Section within IVS 2017. The Board further noted that there was a significant amount of repetition throughout IVS 2013 related to valuation approaches and methods and have relocated much of the information in the IVS 2013 Framework chapter into IVS 105 *Valuation Approaches and Methods* in order to eliminate some of the repetition and related confusion.

Since the issuance of IVS 2013, the Board received feedback from many stakeholders that the sections on valuation approaches comprising market approach, income approach and cost approach were insufficiently detailed to meet current market needs. Furthermore the Board felt the IVS content on valuation approaches and methods needed to be contained within the General Standards to highlight the mandatory nature of the standard.

As a result of the stakeholder feedback and the Board's views on valuation, the sections on valuation approaches and methods that were included in the IVS Framework chapter of IVS 2013 has been significantly revised and restructured in this chapter. The new structure includes:

- an introductory section on Valuation Approaches and Methods describing the process for choosing one or more valuation approaches and methods,
- more detailed sections on each of the three approaches describing the circumstances under which the each approach should be chosen as the sole or primary basis of a valuation or used in combination with other approaches, and
- non-comprehensive sections on certain valuation methods within each valuation approach highlighting the key steps and guidelines for each method.