



INTERNATIONAL VALUATION STANDARDS COUNCIL

International Valuation Standards 2017

Redline Version

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Introduction

Valuations are widely used and relied upon in financial and other markets, whether for inclusion in financial statements, for regulatory compliance or to support secured lending and transactional activity. The IVSC is committed to advancing quality in the valuation profession. We are an independent, not-for-profit, private sector organisation ~~with an.~~ Our primary objective ~~of building~~ is to build confidence and public trust in ~~the valuation profession~~ by producing standards and securing their universal adoption and implementation for the valuation of assets across the world.

The International Valuation Standards (IVS) are standards for undertaking valuation assignments using generally recognised concepts and principles ~~to assist the consistent interpretation of those principles that promote transparency and consistency in valuation practice.~~ The IVSC also promotes standards for the conduct and competency of professional valuers.

The IVSC Standards Board is the body responsible for setting the IVS. The Board has autonomy in the development of its agenda and approval of its publications. In developing the IVS, the Board:

- follows established due process in the development of any new standard, including consultation with stakeholders (valuers, users of valuation services, regulators, valuation professional organisations, etc) and public exposure of all new standards or material alterations to existing standards,
- liaises with other bodies that have a standard-setting function in the financial markets,
- conducts outreach activities including round table discussions with invited constituents and targeted discussions with specific users or user groups.

The objective of the IVS is to increase the confidence and trust of users of valuation services by establishing transparent and consistent valuation practices. A standard will do one or more of the following:

- identify or develop globally accepted principles and definitions,
- identify and promulgate considerations for the undertaking of valuation assignments and the reporting of valuations,
- identify specific matters that require consideration and methods commonly used for valuing different types of assets s or liabilityties.

The IVS consist of mandatory requirements that must be followed in order to state that a valuation was performed in compliance with the IVS. Certain aspects of the standards do not direct or mandate any particular course of action, but provide fundamental principles and concepts that must be considered in undertaking a valuation.

The IVS are arranged as follows.

The IVS Framework

This serves as a preamble to the IVS. The IVS Framework consists of general principles for valuers following the IVS ~~with regard to~~regarding objectivity, judgement, competence, and acceptable departures from the IVS.

IVS General Standards

These set forth requirements for the conduct of all valuation assignments including establishing the terms of a valuation engagement, bases of value, valuation approaches and methods, and reporting. They are designed to be applicable to valuations of all types of *assets* and for any valuation purpose ~~to which the standards are applied.~~

IVS Asset Standards

The Asset Standards include ~~specific~~ requirements related to specific types of *assets*. These requirements must be followed in conjunction with the General Standards when performing a valuation of a specific *asset* type. The Asset Standards include certain background information on the characteristics of each *asset* type that influence value and additional asset-specific requirements on common valuation approaches and methods used.

What is in this Book?

This book includes the IVS Framework, the IVS General Standards and the IVS Asset Standards approved by the IVSC Standards Board ~~as at the 2016.~~on 15 December 2016, with an effective date of 01 July 2017. Early adoption of these standards is allowed.

Future Changes to these Standards

The IVSC Standards Board intends to continuously review the IVS and update or clarify the standards as needed to meet stakeholder and market needs. The Board has continuing projects that may result in additional standards being introduced or amendments being made to the standards in this publication at any time. News on current projects and any impending or approved changes can be found on the IVSC website at www.ivsc.org.

Glossary

10. Overview of Glossary

10.1. This glossary defines certain terms used in the International Valuation Standards.

10.2. This glossary does not attempt to define basic valuation, accounting or finance terms, as *valuers* are assumed to have an understanding of such terms (see definition of “*valuer*”).

20. Defined Terms

20.1. Asset or Assets

To assist in the readability of the standards and to avoid repetition, the words “*asset*” and “*assets*” refer generally to items that might be subject to a valuation engagement. Unless otherwise specified in the standard, these terms can be considered to mean “*asset*, group of *assets*, liability, group of liabilities, or group of *assets* and liabilities”.

20.2. Client

The word “*client*” refers to the person, persons, or entity for whom the valuation is performed. This *may* include external *clients* (i.e. when a *valuer* is engaged by a third party *client*) as well as internal *clients* (i.e. valuations performed for an employer).

20.3. Jurisdiction

The word “*jurisdiction*” refers to the legal and regulatory environment in which a valuation engagement is performed. This generally includes laws and regulations set by governments (e.g. country, state and municipal) and, depending on the *purpose*, rules set by certain regulators (e.g. banking authorities and securities regulators).

20.4. May

The word “*may*” describes actions and procedures that *valuers* have a responsibility to consider. Matters described in this fashion require the *valuer*’s attention and understanding. How and whether the *valuer* implements these matters in the valuation engagement will depend on the exercise of professional judgement in the circumstances consistent with the objectives of the standards.

20.5. Must

The word “*must*” indicates an unconditional responsibility. The *valuer must* fulfill responsibilities of this type in all cases in which the circumstances exist to which the requirement applies.

20.6. Participant

The word “*participant*” refers to the relevant *participants* pursuant to the basis (or bases) of value used in a valuation engagement (see IVS 104 *Bases of Value*). Different bases of value require *valuers* to consider different perspectives, such as those of “market

participants” (e.g. Market Value, IFRS Fair Value) or a particular owner or prospective buyer (e.g. Investment Value).

20.7. Purpose

The word “purpose” refers to the reason(s) a valuation is performed. Common purposes include (but are not limited to) financial reporting, tax reporting, litigation support, transaction support, and to support secured lending decisions.

20.8. Should

The word “should” indicates responsibilities that are presumptively mandatory. The valuer must comply with requirements of this type unless the valuer demonstrates that alternative actions which were followed under the circumstances were sufficient to achieve the objectives of the standards.

In the rare circumstances in which the valuer believes the objectives of the standard can be met by alternative means, the valuer must document why the indicated action was not deemed to be necessary and/or appropriate.

If a standard provides that the valuer “should consider” an action or procedure, consideration of the action or procedure is presumptively mandatory, while the action or procedure is not.

20.9. Significant and/or Material

Assessing significance and materiality require professional judgement. However, that judgement should be made in the following context:

Aspects of a valuation (including inputs, assumptions, special assumptions, and methods and approaches applied) are considered to be significant/material if their application and/or impact on the valuation could reasonably be expected to influence the economic or other decisions of users of the valuation; and judgments about materiality are made in light of the overall valuation engagement and are affected by the size or and nature of the subject asset.

As used in these standards, “material/materiality” refers to materiality to the valuation engagement, which may be different from materiality considerations for other purposes, such as financial statements and their audits.

20.10. Subject or Subject Asset

These terms refer to the asset(s) valued in a particular valuation engagement.

20.11. Valuation Purpose or Purpose of Valuation

See “Purpose”.

20.12. Valuation Reviewer

A “valuation reviewer” is a professional *valuer* engaged to review the work of another *valuer*. As part of a valuation review, that professional *may* perform certain valuation procedures and/or provide an opinion of value.

20.13. Valuer

A “*valuer*” is an individual, group of individuals or a firm who possesses the necessary qualifications, ability and experience to execute a valuation in an objective, unbiased and competent manner. In some *jurisdictions*, licensing is required before one can act as a *valuer*.

20.14. Weight

The word “*weight*” refers to the amount of reliance placed on a particular indication of value in reaching a conclusion of value (e.g. when a single method is used, it is afforded 100% *weight*).

20.15. Weighting

The word “*weighting*” refers to the process of analysing and reconciling differing indications of values, typically from different methods and/or approaches. This process does not include the averaging of valuations, which is not acceptable.

IVS Framework

10. Application of These Compliance with Standards

- 10.1. When a statement is made that a valuation will be, or has been, undertaken in accordance with the IVS, it is implicit that the valuation has been prepared in compliance with all relevant standards issued by the IVSC.

20. Assets and Liabilities

- 20.1. The standards can be applied to the valuation of both assets and liabilities. To assist the legibility of these standards, the words *asset* or *assets* ~~are deemed~~ have been defined to include liability or liabilities and groups of assets, liabilities, or assets and liabilities, except where it is expressly stated otherwise, or is clear from the context that liabilities are excluded.

30. Valuer

- 30.1. ~~The definition~~ Valuer has been defined as “an individual, group of ~~valuer is “one who possesses individuals, or a firm possessing~~ the necessary qualifications, ability, and experience to ~~execute~~ undertake a valuation ~~in an objective, unbiased and competent manner.~~ In some ~~States~~ jurisdictions, licensing is required before one can act as a *valuer*”. Because a *valuation reviewer* must also be a *valuer*, to assist with the legibility of these standards, the term *valuer* includes *valuation reviewers* except where it is expressly stated otherwise, or is clear from the context that *valuation reviewers* are excluded.

40. Objectivity

- 40.1. The process of valuation requires the *valuer* to make impartial judgements as to the reliability of ~~factual data~~ inputs and assumptions. For a valuation to be credible, it is important that those judgements are made in ~~an environmental~~ way that promotes transparency and minimises the influence of any subjective factors on the process. Judgement used in a valuation *must* be applied objectively ~~and should not be used to overstate or understate the valuation result~~ to avoid biased analyses, opinions and conclusions.
- 40.2. It is a fundamental expectation that, when applying these standards, appropriate controls and procedures are in place to ensure the necessary degree of objectivity in the valuation process so that the results are free from bias. The IVSC Code of Ethical Principles for Professional Valuers provides an example of an appropriate framework for professional conduct. ~~However, matters relating to conduct and ethical behaviour are not within the scope of IVS.~~

50. Competence

- 50.1. ~~Because valuation requires the exercise of skill and judgement,~~ Valuations *must* be prepared by an individual or firm having the appropriate technical skills, experience and knowledge of the *subject* of the valuation, the market(s) in which it trades and the *purpose of the valuation*.

- 50.2. If a *valuer* does not possess all of the necessary technical skills, experience and knowledge to perform all aspects of a valuation, it is acceptable for the *valuer* to seek assistance from specialists in certain aspects of the overall assignment, providing this is disclosed in the scope of work (see IVS 101 *Scope of Work*). ~~However, if the valuer lacks a significant amount of the technical skills, experience and knowledge needed to perform a valuation, the valuer should not accept the valuation assignment.) and the report (see IVS 103 Reporting).~~

~~60. Exceptions and Departures~~

- ~~50.3. An exception~~The valuer must have the technical skills, experience and knowledge to understand, interpret and utilise the work of any specialists.

60. Departures

- 60.1—A “departure” is any circumstance where ~~the mandatory application of IVS as a whole may be inappropriate or where the valuer is asked to comply with standards other than IVS (rather than in addition to IVS). In such circumstances, a valuer must not state that the valuation was performed in accordance with IVS.~~

- ~~50.3.60.1.~~ A departure is a circumstance where specific legislative, regulatory or other authoritative requirements *must* be followed that differ from some of the requirements within IVS. Departures are mandatory in that a *valuer must* comply with legislative, regulatory and other authoritative requirements appropriate to the *purpose and jurisdiction of the valuation* to be in compliance with IVS. A *valuer may* still state that the valuation was performed in accordance with IVS when there are departures ~~due to legislative, regulatory or other authoritative requirements~~in these circumstances.

- 60.2. The requirement to depart from IVS pursuant to legislative, regulatory or other authoritative requirements takes precedence over all other IVS requirements.

- ~~50.4.60.3.~~ As required by IVS ~~404~~101 *Scope of Work, para 2(k)* and IVS 103 ~~5(k), Reporting, para 10.2~~ the nature of any departures ~~shall~~must be identified (for example, identifying that the valuation was performed in accordance with IVS and local tax regulations). If there are any departures that significantly affect the nature of the procedures performed, inputs and assumptions used, and/or valuation conclusion(s), a valuer must also disclose the specific legislative, regulatory or other authoritative requirements and the significant ways in which they differ from the requirements of IVS (for example, identifying that the relevant jurisdiction requires the use of only a market approach in a circumstance where IVS would indicate that the income approach should be used).

- 60.4 ~~Departures~~Departure deviations from IVS that are not the result of legislative, regulatory or other authoritative requirements are not permitted in valuations performed in accordance with IVS.

General Standards

REDLINE VERSION

IVS 101 Scope of Work

10. Introduction

- 10.1. A scope of work (sometimes referred to as terms of engagement) describes the fundamental terms of a valuation engagement such as the *asset(s)* being valued, the *purpose of the valuation*, and the responsibilities of parties involved in the valuation.
- 10.2. This standard is intended to apply to a wide spectrum of valuation assignments, including:
- (a) valuations performed by *valuers* for their own employers (“in-house valuations”),
 - (b) valuations performed by *valuers* for *clients* other than their employers (“third-party valuations”), and
 - (c) valuation reviews where the reviewer may not be required to provide their own opinion of value.

20. General Requirements

- 20.1. All valuation advice and the work undertaken in its preparation *must* be appropriate for the intended *purpose*.
- 20.2. ~~It is important~~ A valuer must ensure that the intended recipient(s) of the valuation advice understands what is to be provided and any limitations on its use before it is finalised and reported.
- 20.3. ~~It is a valuer's responsibility to ensure that~~ A valuer must communicate the scope of work ~~has been communicated to all parties to a valuation assignment~~ to its client prior to completion of the assignment, including the following:
- (a) Identity of the *valuer*. The *valuer* may be an individual, group of individuals, or a firm. If the *valuer* has any *material* connection or involvement with the *subject asset* or the other parties to the valuation assignment, or if there are any other factors that could limit the *valuer's* ability to provide an unbiased and objective valuation, such factors *must* be disclosed ~~at the outset. If such disclosure does not take place, the valuation assignment is not in compliance with IVS.~~ If the *valuer* needs to seek *material* assistance from others in relation to any aspect of the assignment, the nature of such assistance and the extent of reliance *must* be made clear.
 - (b) Identity of the *client(s)* (if any): Confirmation of those for whom the valuation assignment is being produced is important when determining the form and content of the report to ensure that it contains information relevant to their needs.

(c) Identity of other intended users (if any): It is important to understand whether there are any other intended users of the valuation report, their identity, and their needs, to ensure that the report content and format meets those users' needs.

(d) Asset(s) being valued: The *subject asset* in the valuation assignment *must* be clearly identified. ~~For example, the subject asset may be:~~

~~1. An asset~~

~~2. A liability~~

~~3. A group of assets and/or liabilities~~

~~4. An ownership interest in any of the above~~

~~5. A right to use any of the above~~

~~6. An asset that is utilised in conjunction with other assets. In such cases, it will be necessary to further clarify whether those assets are included in the valuation assignment, excluded but assumed to be available or excluded and assumed not to be available.~~

(e) The valuation currency: The currency for the valuation and the final valuation report or conclusion *must* be established. For example, a valuation might be prepared in Euros or US Dollars. This requirement is particularly important for valuation assignments involving assets in multiple countries and/or cash flows in multiple currencies.

(f) *Purpose of the valuation*: The *purpose* for which the valuation assignment is being prepared ~~shall~~must be clearly identified as it is important that valuation advice is not used out of context or for *purposes* for which it is not intended. The *purpose of the valuation* will also typically influence or determine the basis/bases of value to be used.

(g) Basis/bases of value used: As required by IVS 104 *Bases of Value*, the valuation basis *must* be appropriate for the *purpose of the valuation*. The source of the definition of any basis of value used ~~shall~~must be cited or the basis explained. This requirement is not applicable to a valuation review where no opinion of value is to be provided and the reviewer is not required to comment on the basis of value used.

(h) Valuation date: The valuation date ~~may be~~must be stated. If the valuation date is different from the date on which the valuation report is ~~to be~~ issued or the date on which investigations are to be undertaken or completed, ~~then~~ where appropriate, these dates *should* be clearly distinguished.

(i) The nature and extent of the *valuer's* work, and any limitations thereon: Any limitations or restrictions on the inspection, ~~in~~enquiry and/or analysis in the valuation assignment *must* be identified. ~~— (see IVS Framework, paras 60.1–60.4)~~ If relevant information is not available because the conditions of the assignment restrict the investigation, these restrictions and any necessary assumptions or special assumptions (see IVS 104 *Bases of Value*, paras 210.1–210.5) made as a result of the restriction *must* be identified.

- (j) The nature and sources of information upon which the *valuer* relies: The nature and source of any relevant information that is to be relied upon and the extent of any verification to be undertaken during the valuation process *must* be identified.
 - (k) ~~Identify any Significant~~ assumptions and/or special assumptions: All *significant* assumptions and special assumptions that are to be made in the conduct and reporting of the valuation assignment *must* be identified.
 - (l) The type of report being prepared: The format of the report, that is, how the valuation will be communicated, *must* be ~~established.~~
described.
 - (m) Restrictions on use, distribution *and* publication of the report: Where it is necessary or desirable to restrict the use of the valuation ~~advice~~ or those relying ~~upon~~ it, the intended users and restrictions *must* be clearly communicated.
 - (n) That the valuation will be prepared in compliance with IVS and that the *valuer* will assess the appropriateness of all *significant* inputs: The nature of any departures *must* be explained, for example, identifying that the valuation was performed in accordance with IVS and local tax regulations. See *IVS Framework* paras 60.1–60.4 relating to ~~exceptions and~~ departures.
- 20.4. ~~When/Wherever~~ possible, the scope of work *should* be established and agreed between parties to a valuation assignment prior to the *valuer* beginning work. However, in certain circumstances, the scope of a valuation engagement may not be clear at the start of that engagement. In such cases, as the scope becomes clear, *valuers* ~~have a responsibility to ensure that all parties to the engagement understand that scope.~~ *must* communicate and agree the scope of work to their client.
- 20.5. A written scope of work may not be necessary ~~in certain circumstances, particularly for in-house valuations.~~ However, since *valuers* are responsible for ~~ensuring that all parties to the valuation engagement understand~~ communicating the scope of work to their client, a written scope of work ~~is strongly encouraged. In addition, a written scope of work is beneficial to the extent that a valuation engagement is viewed or relied upon at a later date.~~ *should* be prepared.
- 20.6. Some aspects of the scope of work *may* be addressed in documents such as standing engagement instructions, master services agreements, or a company's internal policies and procedures.

30. Changes to Scope of Work

- 30.1. Some of the items in para 20.23 above may not be determinable until the valuation assignment is in progress, or changes to the scope may become necessary during the course of the assignment due to additional information becoming available or matters emerging that require further investigation. As such, whilst the scope of work ~~can~~ may be

established at the outset, it *may* also be established over time throughout the course of the assignment.

- 30.2. In valuation assignments where the scope of work changes over time, the items in para 20.23 above and any changes made over time *must* be ~~understood by all parties~~ communicated to the *client* before the assignment is completed and the valuation report is issued.

IVS 102 Investigations and Compliance

10. General Principle

- 10.1. To be compliant with IVS, valuation assignments, including valuation reviews, *must* be conducted in accordance with all of the principles set out in IVS that are appropriate for the ~~intended purpose for which the assignment is required~~ and the terms and conditions set out in the scope of work.

20. Investigations

- 20.1. Investigations made during the course of a valuation assignment *must* be appropriate ~~to~~for the *purpose* of the valuation assignment and the basis(es) of value. References to a valuation or valuation assignment in this standard ~~shall~~ include a valuation review.
- 20.2. Sufficient evidence ~~shall~~must be assembled by means such as inspection, inquiry, computation and analysis to ensure that the valuation is properly supported. When determining the extent of evidence necessary, professional judgement is required to ensure the information to be obtained is adequate for the *purpose of the valuation*.
- 20.3. Limits may be agreed on the extent of the *valuer's* investigations. Any such limits ~~shall~~must be noted in the scope of work. However, IVS 105 *Valuation Approaches and Methods*, para 10.7 requires *valuers* to perform sufficient analysis to evaluate all inputs and assumptions and their appropriateness for the *valuation purpose*. If limitations on investigations are so substantial that the *valuer* cannot sufficiently evaluate the inputs and assumptions, the valuation engagement *must* not state that it has been performed in compliance with IVS.
- 20.4. When a valuation assignment involves reliance on information supplied by a party other than the *valuer*, consideration ~~should~~shall be given as to whether the information is credible or that the information may otherwise be relied upon without adversely affecting the credibility of the valuation opinion. *Significant* inputs provided to the *valuer* (~~eg~~e.g. by management/owners), ~~may~~ require ~~assessment~~consideration, investigation, and/or corroboration. In cases where credibility or reliability of information supplied cannot be supported, such information *should* not be used. ~~If such information must be used, the valuation has not been performed in compliance with IVS.~~
- 20.5. In considering the credibility and reliability of information provided, ~~account shall be taken of~~valuers should consider matters such as:
- (a) the *purpose of the valuation*,
 - (b) the *significance* of the information to the valuation conclusion,
 - ~~(a)~~ —the expertise of the source in relation to the subject matter,
 - (c) ~~the expertise of the valuer or subcontractor in relation to the subject matter~~, and

- (d) whether the source is independent of either the *subject asset* and/or the recipient of the valuation. ~~(see IVS 101 Scope of Work, paras 20.3 (a)).~~

20.6. The *purpose of the valuation*, the basis of value, the extent and limits on the investigations and any sources of information that may be relied upon are part of the valuation assignment's scope of work that *must* be communicated to all parties to the valuation assignment (see IVS 101 *Scope of Work*).

20.7. If, during the course of an assignment, it becomes clear that the investigations included in the scope of work will not result in a credible valuation, or information to be provided by third parties is either unavailable or inadequate, ~~an appropriate revision to the scope of work shall be made and~~ the valuation assignment ~~might no longer~~will not comply with IVS.

30. Valuation Record

30.1. A record ~~shall~~must be kept of the work ~~done~~performed during the valuation process ~~(and the basis for the work)~~ on which the conclusions were reached for a reasonable period after completion of the assignment, having regard to any relevant statutory, legal, or regulatory requirements. Subject to any such requirements, this record ~~shall~~must include the key inputs, all calculations, investigations and analyses relevant to the final conclusion, and a copy of any draft or final report~~(s)~~ provided to the *client*.

40. Compliance with Other Standards

40.1. As noted in the IVS *Framework*, when statutory, legal, regulatory, or other authoritative requirements *must* be followed that differ from some of the requirements within IVS, a *valuer* *must* follow the statutory, legal, regulatory, or other authoritative requirements (called a "*departure*"). Such a valuation has still been performed in overall compliance with IVS.

40.2. Most other sets of requirements, such as those written by VPOs, other professional bodies, or firms' internal policies and procedures, will not contradict IVS and, instead, typically impose additional requirements on *valuers*. Such standards may be followed in addition to IVS without being seen as *departures* ~~or exceptions~~ as long as all of the requirements in IVS are fulfilled.

IVS 103 Reporting

10. Introduction

- 10.1. It is essential that the valuation report communicates the information necessary for proper understanding of the valuation or valuation review. A report ~~shall not be ambiguous or misleading and shall~~must provide the intended users with a clear understanding of the valuation ~~or other advice provided~~.
- 10.2. To provide ~~comparability, relevance and credibility~~useful information, the report ~~shall~~must set out a clear and accurate description of the scope of the assignment, its *purpose* and intended use (including any limitations on that use) and disclosure of any assumptions, special assumptions (IVS 104 *Bases of Value*, para 210.4), *significant* uncertainty or limiting conditions that directly affect the valuation.
- 10.3. This standard applies to all valuation reports or reports on the outcome of a valuation review which may range from comprehensive narrative reports to abbreviated summary reports. ~~However, for certain report formats it may be challenging to comply with this standard (and therefore challenging to comply with IVS).~~
- 10.4. For certain asset classes there may be variations from ~~this standard~~these standards or additional requirements to be reported upon. These are found in the relevant IVS Asset Standards.

20. General Requirements

- 20.1. The *purpose of the valuation*, the complexity of the asset being valued and the users' requirements will determine the level of detail appropriate to the valuation report. The format of the report *should* be agreed with all parties as part of establishing a scope of work (see IVS 101 *Scope of Work*).
- 20.2. Compliance with this standard does not require a particular form or format of report₁; however, the report *must* be sufficient to communicate to the intended users the scope of the valuation assignment, the work performed₂, and the conclusions reached.
- 20.3. ~~Any~~The report *should* also be sufficient for an appropriately experienced valuation professional with no prior involvement with the valuation engagement to review the report and understand the items in paras 30.1 and 40.1, as applicable.

30. Valuation Reports

- 30.1. Where the report is the result of an assignment involving the valuation of an *asset* or *assets*, the report *must* convey the following, at a minimum:
- (a) the scope of the work performed, including the elements noted in para 20.3 of IVS 101 *Scope of Work*₁, to the extent that each is applicable to the assignment,
 - (b) the approach or approaches adopted,

(c) the method or methods applied,

(d) the key inputs used ~~and~~,

~~(e)~~(e) the assumptions made,

~~(e)~~(f) the conclusion(s) of value and principal reasons for any conclusions reached,
and

~~(f)~~(g) the date of the report ~~was prepared~~ (which may differ from the valuation date).

30.2. Some of the above requirements *may* be explicitly included in a report or incorporated into a report through reference to other documents (engagement letters, scope of work documents, internal policies and procedures, etc.).

40. Valuation Review Reports

40.1. Where the report is the result of a valuation review, the report *must* convey the following, at a minimum:

(a) the scope of the review performed, including the elements noted in para 20.3 of IVS 101 *Scope of Work* to the extent each is applicable to the assignment,

(b) the valuation report being reviewed and the inputs and assumptions upon which that valuation was based,

(c) the reviewer's conclusions about the work under review, including supporting reasons,
and

(d) the date of the report ~~was prepared~~ (which may differ from the valuation date).

40.2. Some of the above requirements *may* be explicitly included in a report or incorporated into a report through reference to other documents (e.g. engagement letters, scope of work documents, internal policies and procedures, etc.).

IVS 104 Bases of Value

Compliance with this mandatory standard requires a *valuer* to select the appropriate basis (or bases) of value and follow all applicable requirements associated with that basis of value, whether those requirements are included as part of this standard (for IVS-defined bases of value) or not (for non IVS-defined bases of value).

10. Introduction

- 10.1. Bases of value (sometimes called standards of value) ~~are statements of the fundamental measurement assumptions of a valuation. They describe the fundamental~~ assumptions/premises on which the reported values will be based ~~(eg, the nature of the hypothetical transaction, the relationship and motivation of the parties, the extent to which the asset is exposed to the market, and the unit of account for the valuation).~~ It is critical ~~for any valuation to be performed using that~~ the basis (or bases) of value ~~that is~~ be appropriate to the terms and *purpose of the valuation* assignment, as a basis of value may influence or dictate a *valuer's* selection of methods, inputs and assumptions, and the ultimate opinion of value.
- 10.2. A *valuer* may be required to use bases of value that are defined by statute, regulation, private contract or other document. Such bases have to be interpreted and applied accordingly.
- 10.3. While there are many different bases of value used in valuations, most have certain common elements: an assumed transaction, an assumed date of the transaction and the assumed parties to the transaction.
- 10.4. Depending on the basis of value, the assumed transaction could take a number of forms:
- (a) a hypothetical transaction,
 - (b) an actual transaction,
 - (c) a purchase (or entry) transaction,
 - (d) a sale (or exit) transaction, and/or
 - (e) a transaction in a particular or hypothetical market with specified characteristics.
- 10.5. The assumed date of a transaction will ~~usually~~ influence what information and data a *valuer* considers in a valuation. Most bases of value prohibit the consideration of information or market sentiment that would not be known or knowable with reasonable due diligence on the measurement/valuation date by ~~typical participants~~.

~~10.1 For most bases of value, although there is an assumed date of a transaction, a transaction does not necessarily have to take place.~~

10.6. Most bases of value reflect assumptions concerning the parties to a transaction and provide a certain level of description of the parties. In respect to these parties, they could include one or more actual or assumed characteristics, such as:

- (a) hypothetical,
- (b) known or specific parties,
- (c) members of an identified/described group of potential parties,
- (d) whether the parties are subject to particular conditions or motivations at the assumed date (~~eg, e.g.~~ duress), and/or
- (e) an assumed knowledge level.

20. Bases of Value

20.1. In addition to the IVS-defined bases of value listed below, the IVS have also provided a non-exhaustive list of other non-IVS-defined bases of value prescribed by individual jurisdictional law or those recognised and adopted by international agreement ~~and used by valuers.~~

(a) IVS-defined bases of value:

- 1. Market Value, (section 30).
- 2. Market Rent, (section 40).
- 3. Equitable Value (section 50).
- ~~3.4.~~ Investment Value/Worth, (section 60).
- ~~(i) — Equitable Value,~~
- ~~4.5.~~ Synergistic Value, (section 70), and
- ~~5.6.~~ Liquidation Value, and (section 80).

~~(ii) — Replacement Value.~~

(b) Other bases of value (non-exhaustive list):

- 1. Fair Value (International Financial Reporting Standards) (section 90),
- 2. Fair Market Value (Organisation for Economic Co-operation and Development) (section 100),
- 3. Fair Market Value (United States Internal Revenue Service) (section 110), and

4. Fair Value (Legal/Statutory~~;-~~) (section 120):

- a. the Model Business Corporation Act, and
- b. Canadian case law ~~Example~~ (Manning v Harris Steel Group Inc).

- 20.2. ~~It is the valuer's sole responsibility to~~ Valuers must choose the relevant basis (or bases) of value according to the terms and *purpose of the valuation* assignment. The valuer's choice of a basis (or bases) of value should consider instructions and input received from the client and/or its representatives. However, regardless of instructions and input provided to the valuer, the valuer should not use a basis (or bases) of value that is inappropriate for the intended purpose of the valuation (for example, if instructed to use an IVS-defined basis of value for financial reporting purposes under IFRS, compliance with IVS may also require the valuer to use a basis of value that is not defined or mentioned in the IVS-).
- 20.3. In accordance with IVS ~~403-Reporting~~ 101 Scope of Work, the basis of value: ~~"shall~~ must be appropriate for the *purpose* ~~- and~~ the source of the definition of any basis of value used ~~shall~~ must be cited or the basis explained. ~~Some common valuation bases are defined and discussed in the IVS Framework. This requirement is not applicable to a valuation review where no opinion of value is to be provided or no comment is required on the basis of value used."~~
- 20.4. *Valuers* are responsible for understanding the regulation, case law~~;~~ and other interpretive guidance related to ~~the basis~~ all bases of value used.
- 20.5. The ~~other~~ bases of value illustrated in sections 100-130 of this standard are defined by organisations other than the IVSC and the onus is on the *valuer* to ensure they are using the relevant definition.

30. IVS-Defined Basis of Value – Market Value

- 30.1. Market Value is the estimated amount for which an *asset* or liability *should* exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.
- 30.2. The definition of Market Value ~~shall~~ must be applied in accordance with the following conceptual framework:
- (a) "The estimated amount" refers to a price expressed in terms of money payable for the *asset* in an arm's length market transaction. *Market Value* is the most probable price reasonably obtainable in the market on the valuation date in keeping with the market value definition. It is the best price reasonably obtainable by the seller and the most advantageous price reasonably obtainable by the buyer. This estimate specifically excludes an estimated price inflated or deflated by special terms or circumstances such as atypical financing, sale and leaseback arrangements, special considerations or

concessions granted by anyone associated with the sale, or any element of value available only to a specific owner or purchaser^{7.2}.

- (b) “An *asset* or liability *should* exchange” refers to the fact that the value of an *asset* or liability is an estimated amount rather than a predetermined amount or actual sale price. It is the price in a transaction that meets all the elements of the Market Value definition at the valuation date^{7.2}.
- (c) “On the valuation date” requires that the value is time-specific as of a given date. Because markets and market conditions *may* change, the estimated value *may* be incorrect or inappropriate at another time. The valuation amount will reflect the market state and circumstances as at the valuation date, not those at any other date^{7.2}.
- (d) “Between a willing buyer” refers to one who is motivated, but not compelled to buy. This buyer is neither ~~over-eager~~^{overeager} nor determined to buy at any price. This buyer is also one who purchases in accordance with the realities of the current market and with current market expectations, rather than in relation to an imaginary or hypothetical market that cannot be demonstrated or anticipated to exist. The assumed buyer would not pay a higher price than the market requires. The present owner is included among those who constitute “the market”^{7.2}.
- (e) “And a willing seller” is neither an overeager nor a forced seller prepared to sell at any price, nor one prepared to hold out for a price not considered reasonable in the current market. The willing seller is motivated to sell the *asset* at market terms for the best price attainable in the open market after proper marketing, whatever that price *may* be. The factual circumstances of the actual owner are not a part of this consideration because the willing seller is a hypothetical owner^{7.2}.
- (f) “In an arm’s length transaction” is one between parties who do not have a particular or special relationship, ~~eg, e.g.~~ parent and subsidiary companies or landlord and tenant, that *may* make the price level uncharacteristic of the market or inflated~~because of an element of special value.~~ The Market Value transaction is presumed to be between unrelated parties, each acting independently^{7.2}.
- (g) “After proper marketing” means that the *asset* ~~would be~~^{has been} exposed to the market in the most appropriate manner to effect its disposal at the best price reasonably obtainable in accordance with the Market Value definition. The method of sale is deemed to be that most appropriate to obtain the best price in the market to which the seller has access. The length of exposure time is not a fixed period but will vary according to the type of *asset* and market conditions. The only criterion is that there *must* have been sufficient time to allow the *asset* to be brought to the attention of an adequate number of market *participants*. The exposure period occurs prior to the valuation date^{7.2}.
- (h) “Where the parties had each acted knowledgeably, prudently” presumes that both the willing buyer and the willing seller are reasonably informed about the nature and characteristics of the *asset*, its actual and potential uses, and the state of the market as

of the valuation date. Each is further presumed to use that knowledge prudently to seek the price that is most favourable for their respective positions in the transaction. Prudence is assessed by referring to the state of the market at the valuation date, not with the benefit of hindsight at some later date. For example, it is not necessarily imprudent for a seller to sell assets in a market with falling prices at a price that is lower than previous market levels. In such cases, as is true for other exchanges in markets with changing prices, the prudent buyer or seller will act in accordance with the best market information available at the time, ~~and~~.

- (i) "And without compulsion" establishes that each party is motivated to undertake the transaction, but neither is forced or unduly coerced to complete it.

30.3. The concept of Market Value presumes a price negotiated in an open and competitive market where the *participants* are acting freely. The market for an *asset* could be an international market or a local market. The market could consist of numerous buyers and sellers, or could be one characterised by a limited number of market *participants*. The market in which the *asset* is presumed exposed for sale is the one in which the *asset* notionally being exchanged is normally exchanged.

~~30.3.~~30.4. The Market Value of an *asset* will reflect its highest and best use. ~~(see paras 150.1-150.6).~~ The highest and best use is the use of an *asset* that maximises its potential and that is possible, legally permissible and financially feasible. The highest and best use *may* be for continuation of an *asset's* existing use or for some alternative use. This is determined by the use that a market *participant* would have in mind for the *asset* when formulating the price that it would be willing to bid.

30.5. The nature and source of the valuation inputs *must* be consistent with the basis of value, which in turn *must* have regard to the *valuation purpose*. For example, various approaches and methods *may* be used to arrive at an opinion of value providing they use market-derived data. The market approach will, by definition, use market-derived inputs. To indicate Market Value, the income approach *should* be applied, using inputs and assumptions that would be adopted by *participants*. To indicate Market Value using the cost approach, the cost of an *asset* of equal utility and the appropriate depreciation *should* be determined by analysis of market-based costs and depreciation.

30.6. The data available and the circumstances relating to the market for the *asset* being valued *must* determine which valuation method or methods are most relevant and appropriate. If based on appropriately analysed market-derived data, each approach or method used *should* provide an indication of Market Value.

~~30.4.~~30.7. Market Value does not reflect attributes of an *asset* that are of value to a specific owner or purchaser that are not available to other buyers in the market. Such advantages *may* relate to the physical, geographic, economic or legal characteristics of an *asset*. Market Value requires the disregard of any such

element of value because, at any given date, it is only assumed that there is a willing buyer, not a particular willing buyer.

40. IVS-Defined Basis of Value – Market Rent

40.1. Market Rent is the estimated amount for which an interest in real property *should* be leased on the valuation date between a willing lessor and a willing lessee on appropriate lease terms in an arm's length transaction, after proper marketing and where the parties had each acted knowledgeably, prudently and without compulsion.

40.2. Market Rent *may* be used as ~~the~~ basis of value when valuing ~~either a superior interest that is subject to~~ a lease or an interest created by a lease. In such cases, it is necessary to consider the contract rent and, where it is different, the market rent.

~~40.1. In some instances market rent can be seen as independent basis of value, whereas in other instances market rent is an intermediate step in determining value under other bases of value.~~

40.3. ~~The commentary on~~ The conceptual framework supporting the definition of Market Value shown above can be applied to assist in the interpretation of Market Rent. In particular, the estimated amount excludes a rent inflated or deflated by special terms, considerations or concessions. The "appropriate lease terms" are terms that would typically be agreed in the market for the type of property on the valuation date between market *participants*. ~~A valuation~~ An indication of Market Rent *should* only be provided in conjunction with an indication of the principal lease terms that have been assumed.

40.4. ~~The~~ Contract Rent is the rent payable under the terms of an actual lease. It *may* be fixed for the duration of the lease, or variable. The frequency and basis of calculating variations in the rent will be set out in the lease and *must* be identified and understood in order to establish the total benefits accruing to the lessor and the liability of the lessee.

~~40.5. 50. In some circumstances the Market Rent may have to be assessed based on terms of an existing lease (e.g. for rental determination purposes where the lease terms are existing and therefore not to be assumed as part of a notional lease).~~

40.6. In calculating Market Rent, the valuer must consider the following:

(a) in regard to a Market Rent subject to a lease, the terms and conditions of that lease are the appropriate lease terms unless those terms and conditions are illegal or contrary to overarching legislation, and

(b) in regard to a Market Rent that is not subject to a lease, the assumed terms and conditions are the terms that would typically be agreed in a market for the type of property on the valuation date between market participants.

41.50. IVS-Defined Basis of Value – Equitable Value

~~41.1.~~50.1. Equitable Value is the estimated price for the transfer of an *asset* or liability between identified knowledgeable and willing parties that reflects the respective interests of those parties.

~~41.2.~~50.2. Equitable Value requires the assessment of the price that is fair between two specific, identified parties considering the respective advantages or disadvantages that each will gain from the transaction. In contrast, Market Value requires any advantages or disadvantages that would not be available to, or incurred by, market *participants* generally to be disregarded.

~~41.3.~~50.3. Equitable Value is a broader concept than Market Value. Although in many cases the price that is fair between two parties will equate to that obtainable in the market, there will be cases where the assessment of Equitable Value will involve taking into account matters that have to be disregarded in the assessment of Market Value, such as certain elements of Synergistic Value arising because of the combination of the interests.

~~41.4.~~50.4. Examples of the use of Equitable Value include:

- (a) determination of a price that is equitable for a shareholding in a non-quoted business, where the holdings of two specific parties *may* mean that the price that is equitable between them is different from the price that might be obtainable in the market, and
- (b) determination of a price that would be equitable between a lessor and a lessee for either the permanent transfer of the leased *asset* or the cancellation of the lease liability.

60. IVS-Defined Basis of Value – Investment Value/Worth

~~50.1.~~60.1. Investment Value is the value of an *asset* to a particular owner or prospective owner for individual investment or operational objectives.

50.2.60.2. This Investment Value is an entity-specific basis of value. Although the value of an *asset* to the owner *may* be the same as the amount that could be realised from its sale to another party, this basis of value reflects the benefits received by an entity from holding the *asset* and, therefore, does not ~~necessarily~~ involve a presumed exchange. Investment Value reflects the circumstances and financial objectives of the entity for which the valuation is being produced. It is often used for measuring investment performance. ~~Differences between the Investment Value of an asset and its Market Value may provide the motivation for buyers or sellers to enter the marketplace.~~

70. IVS-Defined Basis of Value – Synergistic Value

70.1. Synergistic Value is the result of a combination of two or more *assets* or interests where the combined value is more than the sum of the separate values. If the

synergies are only available to one specific buyer then Synergistic Value will differ from Market Value, as the Synergistic Value will reflect particular attributes of an asset that are only of value to a specific purchaser. The added value above the aggregate of the respective interests is often referred to as “marriage value.”

~~70.1 — If the synergies are available to multiple market participants, then the Synergistic Value may be consistent with the Market Value, as the price the asset should exchange on the valuation date between a willing buyer and a willing seller would likely reflect the value of any synergies available to multiple market participants.~~

~~68.1.~~ **80. IVS-Defined Basis of Value – Liquidation Value**

~~68.2. 80.1. Liquidation Value is the amount that would be realised when an asset or group of assets are sold on a piecemeal basis, that is without consideration of benefits (or detriments) associated with a going-concern business. Liquidation value can be either in an orderly transaction with a typical marketing period or in a forced transaction with a shortened marketing period (See sections 170 and 180) and a valuer must disclose whether an orderly or forced transaction is assumed. Liquidation Value should take into account the costs of getting the assets into saleable condition as well as those of the disposal activity. Liquidation Value can be determined under two different premises of value:~~

90. IVS-Defined Basis of Value – Replacement Value

~~90.1 — Replacement Value is the total cost of replacing an asset, generally in its present form and in accordance with appropriate regulations and legal requirements. Replacement Value considers allowances for professional fees and, in the case of tangible assets, considers factors related to construction of a replacement asset (which may include demolition, debris removal and other factors).~~

~~90.2 — Replacement Value can often be based on the cost of a modern equivalent, for example, a replacement building with the same floor area.~~

~~(a) 100. an orderly transaction with a typical marketing period (see section 170), or~~

~~(b) a forced transaction with a shortened marketing period (see section 180).~~

~~80.2. A valuer must disclose which premise of value is assumed.~~

69.90. Other Basis of Value – Fair Value (International Financial Reporting Standards)

~~69.1. 90.1. IFRS 13 defines Fair Value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.~~

~~69.2. 90.2. For financial reporting purposes, over 130 countries require or permit the use of International Accounting Standards published by the International Accounting Standards Board. In addition, the Financial Accounting Standards Board in the United States uses the same definition of Fair Value in Topic 820.~~

~~79.100.~~ ~~440.~~ **Other Basis of Value – Fair Market Value (Organisation for Economic Co-operation and Development – (OECD))**

~~79.1.~~ **100.1.** The OECD defines Fair Market Value as the price a willing buyer would pay a willing seller in a transaction on the open market.

~~79.2.100.2.~~ ~~The OECD is made up of 34 member countries and has a mission to promote policies that will improve the economic and social well-being of people around the world.~~ OECD guidance is used in many engagements for international tax purposes.

~~89.110.~~ **120.** **Other Basis of Value – Fair Market Value (United States Internal Revenue Service)**

~~420.4~~ **110.1.** For United States tax purposes, Regulation §20.2031-1 states: “The fair market value is the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts.”

~~This definition applies to all taxes paid in the United States including citizens, residents, individuals and corporations doing business in/with the United States.~~

120. Other Basis of Value – Fair Value (Legal/Statutory) in different jurisdictions

120.1. Many national, state and local agencies use Fair Value as a basis of value in a legal context. The definitions can vary significantly and may be the result of legislative action or those established by courts in prior cases.

120.2 Examples of ~~different~~ US and Canadian definitions of Fair Value are as follows:

(a) The Model Business Corporation Act (MBCA) is a model set of law prepared by the Committee on Corporate Laws of the Section of Business Law of the American Bar Association and is followed by 24 States in the United States. The definition of Fair Value from the MBCA is the value of the corporation’s shares determined:

- (i) immediately before the effectuation of the corporate action to which the shareholder objects; ~~1~~
- (ii) using customary and current valuation concepts and techniques generally employed for similar businesses in the context of the transaction requiring appraisal; ~~1~~ and
- (iii) without discounting for lack of marketability or minority status except, if appropriate, for amendments to the articles pursuant to section 13.02(a)(5); ~~and~~.

(b) In 1986, the Supreme Court of British Columbia in Canada issued a ruling in *Manning v Harris Steel Group Inc.* that stated: “Thus, a ‘fair’ value is one which is just and equitable. That terminology contains within itself the concept of adequate compensation (indemnity), consistent with the requirements of justice and equity.”

130. ~~140.~~ Premise of Value/Assumed Use

130.1. A Premise of Value or Assumed Use describes the circumstances of how an asset or liability is used. Different bases of value *may* require a particular Premise of Value or allow the consideration of multiple Premises of Value. Some common Premises of Value are:

- (a) highest and best use,
- (b) current use/existing use,
- (c) orderly liquidation, and
- ~~iv.~~ (d) forced sale.

140. Premise of Value – Highest and Best Use

140.1. Highest and best use is the use, from a participant perspective, that would produce the highest value for an asset, ~~liability or a group of~~. Although the concept is most frequently applied to non-financial assets and/or liabilities, regardless of the actual current use, as many financial assets do not have alternative uses, there may be circumstances where the highest and best use of financial assets needs to be considered.

140.2. The highest and best use *must* be physically possible, (where applicable), financially feasible, legally allowed and result in the highest value. If different from the current use, the costs to convert an asset to its highest and best use would impact the value. ~~For example, a piece of property used as a manufacturing facility may be worth \$100 million in its current use but it would be worth \$120 million if converted to mixed commercial/residential use. The highest and best use of the property would be mixed commercial/residential use only if the cost to convert the property is less than \$20 million.~~

140.3. The highest and best use for an asset *may* be its current or existing use when it is being used optimally. However, highest and best use *may* differ from current use or even be an orderly liquidation. ~~For example, the highest and best use for assets employed in a loss-making business may be an orderly liquidation of the assets.~~

140.4. The highest and best use of an asset valued on a standalone basis *may* be different from its highest and best use as part of a group of assets, when its contribution to the overall value of the group *must* be considered.

140.5. The determination of the highest and best use involves consideration of the following:

- (a) To establish whether a use is physically possible, regard will be had to what would be considered reasonable by ~~market participants~~.
- (b) To reflect the requirement to be legally permissible, any legal restrictions on the use of the asset, ~~eg, e.g.~~ zoning designations, need to be taken into account as well as the likelihood that these restrictions will change, ~~and~~.

- (c) The requirement that the use be financially feasible takes into account whether an alternative use that is physically possible and legally permissible will generate sufficient return to a typical ~~market participant~~, after taking into account the costs of conversion to that use, over and above the return on the existing use.

~~150.6—It is generally assumed that knowledgeable buyers and sellers would be aware of the highest and best use and transact at prices reflecting that use. As such, bases of value that assume a market transaction between reasonably knowledgeable market participants generally require the consideration of highest and best use. These bases of value include Market Value (as discussed in paras 30.1 to 30.4) and Fair Value (as discussed in paras 100.1 and 100.2).~~

150. Premise of Value – Current Use/Existing Use

~~149.1.~~ **150.1** Current use/existing use is the current way an asset, liability, or group of assets and/or liabilities is used. The current use *may* be, but is not necessarily, also the highest and best use.

159. ~~160.~~ 170. Premise of Value – Orderly Liquidation

~~149.1.~~ **160.1** An orderly liquidation describes the value of a group of assets that could be realised in a liquidation sale, given a reasonable period of time to find a purchaser (or purchasers), with the seller being compelled to sell on an as-is, where-is basis.

~~160.2~~ The reasonable period of time to find a purchaser (or purchasers) *may* vary by asset type. ~~For example, the reasonable period of time to liquidate a portfolio of securities and financial instruments may differ from the reasonable period of time to liquidate a portfolio of real estate and market conditions.~~

170. ~~180.~~ Premise of Value – Forced Sale

170.1. The term “forced sale” is often used in circumstances where a seller is under compulsion to sell and that, as a consequence, a proper marketing period is not possible and buyers may not be able to undertake adequate due diligence. The price that could be obtained in these circumstances will depend upon the nature of the pressure on the seller and the reasons why proper marketing cannot be undertaken. It *may* also reflect the consequences for the seller of failing to sell within the period available. Unless the nature of ₁ and the reason for ₁ the constraints on the seller are known, the price obtainable in a forced sale cannot be realistically estimated. The price that a seller will accept in a forced sale will reflect its particular circumstances ₁ rather than those of the hypothetical willing seller in the Market Value definition. ~~The price obtainable in a forced sale has only a coincidental relationship to Market Value or any of the other bases defined in this standard.~~ A “forced sale” is a description of the situation under which the exchange takes place, not a distinct basis of value.

~~168.2.~~ **170.2.** If an indication of the price obtainable under forced sale circumstances is required, it will be necessary to clearly identify the reasons for the constraint on the seller ₁ including the consequences of failing to sell in the specified period by setting out appropriate assumptions. If

these circumstances do not exist at the valuation date, these *must* be clearly identified as special assumptions.

170.3. A forced sale typically reflects the most probable price that a specified property is likely to bring under all of the following conditions:

- (a) consummation of a sale within a short time period,
- (b) the asset is subjected to market conditions prevailing as of the date of valuation or assumed timescale within which the transaction is to be completed,
- (c) both the buyer and the seller are acting prudently and knowledgeably,
- (d) the seller is under ~~extreme~~ compulsion to sell,
- (e) the buyer is typically motivated,
- (f) both parties are acting in what they consider their best interests,
- (g) a normal marketing effort is not possible due to the brief exposure time, and
- (h) payment will be made in cash,
- (i) ~~the price represents the normal consideration for the property sold, unaffected by special or creative financing concessions granted by anyone associated with the sale.~~

170.4. Sales in an inactive or falling market are not automatically “forced sales” simply because a seller might hope for a better price if conditions improved. Unless the seller is compelled to sell by a deadline that prevents proper marketing, the seller will be a willing seller within the definition of Market Value (see paras 30.1 ~~to~~ 30.4).

170.5. While confirmed “forced sale” transactions would generally be excluded from consideration in a valuation where the basis of value is Market Value, it can be difficult to verify that an arm’s length transaction in a market was a forced sale.

180. Entity-Specific Factors

180.1. For most bases of value, the factors that are specific to a particular buyer or seller and not available to ~~market participants~~ generally are excluded from the inputs used in a market-based valuation. Examples of entity-specific factors that *may* not be available to ~~market participants~~ include ~~the following~~:

- (a) additional value or reduction in value derived from the creation of a portfolio of similar assets,
- (b) unique synergies between the asset and other assets owned by the entity,
- (c) legal rights or restrictions applicable only to the entity,
- (d) tax benefits or tax burdens unique to the entity, and

(e) an ability to exploit an asset that is unique to that entity.

180.2. Whether such factors are specific to the entity, or would be available to others in the market generally, is determined on a case-by-case basis. For example, an asset *may* not normally be transacted as a standalone item but as part of a group of assets. Any synergies with related assets would transfer to ~~market-participants~~ along with the transfer of the group and therefore are not entity-specific.

~~99.1.~~ 180.3. If the objective of the basis of value used in a valuation is to determine the value to a specific owner (such as Investment Value/Worth discussed in paras 60.1 and 60.2), entity-specific factors are reflected in the valuation of the asset. Situations in which the value to a specific owner *may* be required include the following examples:

- (a) supporting investment decisions, and
- (b) reviewing the performance of an asset.

190. Synergies

~~99.1.~~ 190.1. "Synergies" refer to the ~~financial~~ benefits associated with combining assets ~~and liabilities~~. When synergies are present, the value of a group of assets and liabilities is greater than the sum of the values of the individual assets and liabilities on a stand-alone basis. Synergies typically relate to a reduction in costs, and/or an increase in revenue, and/or a reduction in risk.

~~200.1—Cost synergies are generated by reducing expenses associated with the combined assets and liabilities, and are often the result of reduced overhead or improved purchasing power.~~

~~200.2—Revenue synergies can relate to the ability to sell more products and services, or the ability to charge higher prices for those products and services.~~

~~99.2.~~ 190.2. Whether synergies *should* be considered in a valuation depends on the basis of value. For most bases of value, only those synergies available to other ~~market-participants~~ generally will be considered (see discussion of Entity-Specific Factors in paras ~~198.1 to 190-180.3~~).

190.3. Generally—An assessment of whether synergies are available to other ~~market-participants~~ is may be based on the amount of the synergies rather than a specific way to achieve that synergy. ~~For example, if multiple market participants could improve cash flow from a subject asset by 10%, that increase in cash flows would typically be considered a market participant synergy even if the various market participants would achieve that 10% increase in cash flows in different ways (ie, increasing revenue vs lowering expenses).~~

~~108.1-200.~~ 240. Assumptions and Special Assumptions

~~108.2.~~ 200.1. In addition to stating the basis of value, it is often necessary to make an assumption or multiple assumptions to clarify either the state of the asset in the hypothetical exchange or the

circumstances under which the *asset* is assumed to be exchanged. Such assumptions can have a *significant* impact on value.

~~(a)~~ 200.2. These types of assumptions generally fall into one of two categories:

~~(b)~~ (a) assumed facts that are consistent with, or could be consistent with, those existing at the date of valuation, and

~~408.3.~~ (b) assumed facts that differ from those existing at the date of valuation.

~~(a)~~ 200.3. Assumptions related to facts that are consistent with, or could be consistent with, those existing at the date of valuation *may* be the result of a limitation on the extent of the investigations or enquiries undertaken by the *valuer*. Examples of such assumptions include, without limitation:

(a) an assumption that a business is transferred as a complete operational entity,

(b) an assumption that *assets* employed in a business are transferred without the business, either individually or as a group,

(c) an assumption that an individually valued *asset* is transferred together with other complementary *assets*, and

(d) an assumption that a holding of shares is transferred either as a block or individually.

~~(b)~~ 200.4. Where ~~an assumption is made that assumes~~assumed facts ~~that~~ differ from those existing at the date of valuation, it is referred to as a “special assumption-”. Special assumptions are often used to illustrate the effect of possible changes on the value of an *asset*. They are designated as “special” so as to highlight to a valuation user that the valuation conclusion is contingent upon a change in the current circumstances or that it reflects a view that would not be taken by ~~market~~*participants* generally on the valuation date. Examples of such assumptions include, without limitation:

(a) an assumption that a property is freehold with vacant possession,

~~(e)~~ (b) an assumption ~~that a~~ that a proposed building had actually been completed on the valuation date,

(c) an assumption that a specific contract was in existence on the valuation date which had not actually been completed, and

~~(d)~~ (d) an assumption that a financial instrument is valued using a yield curve that is different from that which would be used by a ~~market~~*participant*.

~~408.4.~~ 200.5. All assumptions and special assumptions *must* be reasonable ~~and~~under the circumstances, be supported by evidence, and be relevant having regard to the *purpose* for which the valuation is required.

~~118.210.~~ 220. Transaction Costs

210.1. Most bases of value represent the estimated exchange price of an asset without regard to ~~transactions costs. Value is not generally adjusted to reflect~~ the seller's costs of sale, or the buyer's costs of purchase, ~~or and without adjustment for~~ any taxes payable by either party as a direct result of the transaction.

~~However, a valuer may need to consider transaction costs when determining highest and best use, the market for a transaction, and the likely market participants.~~

IVS 105 Valuation Approaches and Methods

10. Introduction

- 10.1. Consideration ~~shall~~must 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 and premise(s) 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. given the facts and circumstances of the valuation engagement. However, valuers should consider the use of multiple approaches and methods and more than one valuation approach or method should be considered and 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, without averaging, *should* be described by the *valuer* in the report.
- 10.5. While this ~~chapter~~standard 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 ~~Some of the many methods not addressed in this standard include option pricing methods (OPMs), simulation/Monte Carlo methods and~~

probability-weighted expected-return methods (PWERM). It is the valuer's 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 mayis generally 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 relevant observable market information in all three approaches. Regardless of the source of the inputs and assumptions used in a valuation, a *valuer must* perform appropriate 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~~ a valuer 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~~ applied and afforded significant weight under the following circumstances:
- (a) the subject asset has recently been sold in a transaction appropriate for consideration under the basis of value,
 - (b) the subject asset or substantially similar assets are actively publicly traded, and/or
 - (c) there are frequent and/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~~ applied and afforded significant weight, when the above criteria are not met, the following are additional circumstances where the market approach *may* be ~~appropriate~~ applied and afforded significant weight. When using the market approach under the following circumstances, a *valuer should* consider whether any other approaches can be ~~used~~ applied and weighted 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 s of volatility and activity in the market~~;~~.

- (b) The *asset* or substantially similar *assets* are publicly traded, but not actively₂.
 - (c) Information on market transactions is available, but the comparable *assets* have *significant* differences to the *subject asset*, potentially requiring subjective adjustments₂.
 - (d) Information on recent transactions is not reliable (ie, hearsay, missing information, synergistic purchaser, not arm's-length, distressed sale, etc)₂.
 - (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)~~₂.
- 20.4. The heterogeneous nature of many *assets* means that it is often not possible to find market evidence of transactions involving identical or similar *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, e.g. market-based interest valuation metrics such as effective yields and rates/discount rates of return).
- 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. the valuer must perform~~ 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, each~~ with a different ~~multiple for each comparable multiples~~. 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, ~~the valuer may also be appropriate to~~ consider the prices of identical or similar *assets* that are listed or offered for sale₂ provided the relevance of this information is clearly established, critically analysed₂ 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- and how long the listing/offer has been on the market. For example, an offer that represents a binding commitment to purchase or sell an *asset* at a given price *may* be given more *weight* than a quoted price without such a binding 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 metre), rent per square foot (or per square metre) 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- and book value multiples. A few of the many common units of comparison used in financial instrument valuations often consider valuation include 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- and their attributes (i.e. yield).
- 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~~ valuer *should* choose comparable transactions within the following context:
- (a) evidence of ~~multiple~~ several transactions is generally 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~~ where the transaction prices 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, particularly in volatile markets.

- (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 valuer to ~~fully understand~~ develop a reasonable understanding of the comparable asset and ~~verify~~ assess 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 valuer *should* analyse and 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) yields/coupon rates,
 - (g) types of collateral,
 - (h) unusual terms in the comparable transactions,
 - (i) differences related to marketability and control characteristics of the comparable and the *subject asset*, and
 - (j) ownership characteristics (e.g. legal form of ownership, amount/percentage held).

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 comparable transactions method. However, there are several differences due to the comparables being publicly traded, as follows:
- (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~~standards.
- 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 to:
- (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~~publicly-traded comparables 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~~publicly-traded comparables,
 - (e) apply the adjusted valuation metrics to the *subject asset*, and
 - (f) if multiple valuation metrics were used, reconcile weight the indications of value.
- 30.13. A ~~professional valuer~~ 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, with similar market segment, geographic area, size ~~such as~~ in revenue and/or 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 valuer~~ should analyse and 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 discounts and premiums (see para 30.18),
 - (c) relevant restrictions on either the *subject asset* or the comparable assets,

- (d) geographical location of the underlying company and the related economic and regulatory environments,
- (e) profitability or profit-making capability of the *assets*,
- (f) historical and expected growth,
- (g) differences related to marketability and control characteristics of the comparable and the *subject asset*, and
- (h) type of ownership.

~~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

- 30.15. The following paragraphs address a non-exhaustive list of certain special considerations that *may* form part of a market approach valuation.
- 30.16. Anecdotal or “rule-of-thumb” valuation benchmarks are sometimes ~~used as~~ considered to be 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.~~
- 30.17. In the market approach, 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. Many bases of value allow the consideration of restrictions on marketability that are inherent in the *subject asset* but prohibit consideration of marketability restrictions that are specific to a particular owner. 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 (sometimes referred to as Market Participant Acquisition Premiums or MPAPs) 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, and the changes that can be made as a result of exercising control. All else being equal, *participants* would generally prefer to have control over a *subject asset* than not. However, *participants*' willingness to pay a Control Premium or Discount for Lack of Control will generally be a factor of whether the ability to exercise control enhances the economic benefits available to the owner of the *subject asset*. Control Premiums and DLOCs may be quantified using any reasonable method, but are typically calculated based on either an analysis of the specific cash flow enhancements or reductions in risk associated with control or by comparing observed prices paid for controlling interests in publicly-traded securities to the publicly-traded price before such a transaction is announced. Examples of circumstances where Control Premiums and Discounts for Lack of Control should be considered include where:

1. 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, or~~

4.2. 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).~~

~~(b)~~(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, i.e.~~ 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~~applied and afforded significant weight under the following circumstances:
- (a) the income-producing ability of the *asset* is the critical element affecting value from a ~~market participant~~ perspective, and/or
 - (b) ~~re~~reasonable 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~~applied and afforded significant weight, the following are additional circumstances where the income approach *may* be ~~appropriate~~applied and afforded significant weight. When using the income approach under the following circumstances, a *valuer* *should* consider whether any other approaches can be ~~used~~applied and weighted to corroborate the value indication from the income approach:
- (a) the income-producing ability of the subject *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/or
 - (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 systemic 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~~*indefinite*-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~~*may* 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, i.e.~~ 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 (*if any*) 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, valuers must consider the factors ~~shown below need to be considered. However it is important to note that.~~ In addition, the discount rate and other inputs *must* be consistent with the basis type of cash flow 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 assumptions related to 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~~ participant's viewpoints. For example, cash ~~flow~~ flows and discount rates for real property, ~~ie, rents and discount rates~~ are customarily developed on a pre-tax basis. ~~Conversely, while cash flows and~~ discount ~~rate~~ data rates for businesses ~~is~~ are 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~~ Valuers should consider ~~in~~ the following factors when 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-and
 - (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, e.g. 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, e.g. 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) contractual or promised cash flow,
 - ~~(a)~~(b) the single most likely set of cash flow,
 - ~~(b)~~(c) the probability-weighted expected cash flow, or
 - ~~(c)~~(d) 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. (note that when a probability-weighted expected cash flow is used, it is not always necessary for valuers to take into account distributions of all possible cash flows using complex models and techniques. Rather, valuers may develop a limited number of discrete scenarios and probabilities that capture the array of possible cash flows). A single most likely set of cash flows *may* be conditional on certain future events and therefore could reflect different risks and warrant a different ~~set~~ discount rate.

50.18. While *valuers* often receive PFI that reflects accounting income and expenses, it is generally preferable to use cash flow that would be anticipated by participants 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.

50.19. ~~60.~~ Valuers must ensure that seasonality and cyclicity in the subject has been appropriately considered in the cash flow forecasts.

Terminal Value

~~50.19-50.20.~~ Where the asset is expected to continue beyond the explicit forecast period, ~~it is necessary to~~ valuers must 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.

~~50.20-50.21.~~ The terminal value *should* consider ~~the following~~:

- (a) whether the asset is deteriorating/finite-lived in nature or indefinite-lived as this 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 should not be performed in a way that assumes "peak" or "trough" levels of cash flows in perpetuity and
- (f) the tax attributes inherent in the asset at the end of the explicit forecast period (if any) and whether those tax attributes would be expected to continue into perpetuity. For example, an asset being depreciated/amortised

~~50.21. 50.22.~~ Valuers may apply any reasonable method for tax purposes will eventually be fully depreciated/amortised, potentially increasing the effective tax rate. calculating a terminal

value. While there are many different approaches to calculating a terminal value, 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

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

Market Approach/Exit Value

~~118.2.~~ 50.24. 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.

~~118.3.~~ 50.25. Common ways to calculate the terminal value under this method include application of a market-evidence based capitalisation factor or a market multiple.

50.26. When a market approach/exit value is used, valuers should comply with the requirements in the market approach section of this standard (sections 20 and 30). However, valuers should also consider the expected market conditions at the end of the explicit forecast period and make adjustments accordingly.

Salvage Value/Disposal Cost

~~118.4.~~50.27. 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.

~~118.5.~~50.28. 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

~~118.6.~~50.29. 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 type of cash flow and the future operations of the asset ~~or business~~.

~~(a)~~50.30. Valuers may use any reasonable method for developing a discount rate. 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 includes:

- (a) the capital asset pricing model (CAPM),
- (b) the weighted average cost of capital (WACC),
- (c) the observed or inferred rates/yields,
- ~~(c)~~(d) the internal rate of return (IRR),
- ~~(d)~~(e) the weighted average return on assets (WARA), and
- ~~(e)~~(f) the build-up method (generally used only in the absence of market inputs).

~~(f)~~ 50.31. In developing a discount rate, a professional valuer 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,
- ~~(g)~~ (c) the rates implicit in transactions in the market,
- ~~(h)~~ (d) the geographic location of the asset and/or the location of the markets in which it would trade,
- ~~(i)~~ (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,
- ~~(j)~~ (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 (see para 50.5), 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.~~

~~128.~~ 60. Cost Approach

~~128.1.~~ 60.1. 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.

60.2. The cost approach *should be* ~~used as the primary basis for a valuation~~applied and afforded significant weight 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 directly income-generating (~~directly or indirectly~~) and the unique nature of the *asset* makes using an income approach or market approach unfeasible, and/or
- (c) the basis of value being used is fundamentally based on replacement cost, such as re~~inst~~placement value.

60.3. Although the above circumstances would indicate that the cost approach *should be* ~~the primary basis for a valuation~~applied and afforded significant weight, the following are additional circumstances where the cost approach *may be* ~~appropriate~~applied and afforded significant weight. When using the cost approach under the following circumstances, a *valuer should* consider whether any other approaches can be ~~used~~applied and weighted to corroborate the value indication from the cost approach:

- (b)(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*,
- (e)(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), and/or
- (d)(c) the *asset* was recently created, such that there is a high degree of reliability in the assumptions used in the cost approach.

~~128.2.~~ 60.4. 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~~regarding~~ 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.

138.70. 80. Cost Approach Methods

~~138.1.~~70.1. 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

~~138.2.70.2.~~ 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*.

~~138.3.70.3.~~ 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.

~~138.4.70.4.~~ 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 or obtain an *asset* providing equivalent utility,
- (b) determine whether there is any depreciation related to physical, functional and external obsolescence associated with the *subject asset*, and
- (c) deduct total depreciation from the total costs to arrive at a value for the *subject asset*.

~~138.5.70.5.~~ 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

~~138.6.70.6.~~ 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.

~~70.7.~~ The only stepkey steps in the reproduction cost method ~~is to are:~~

- (a) calculate all of the costs that would be incurred by a typical ~~market~~-*participant* seeking to create an exact replica of the *subject asset*.
- (b) determine whether there is any depreciation related to physical, functional and external obsolescence associated with the *subject asset*, and
- (c) deduct total depreciation from the total costs to arrive at a value for the *subject asset*.

Summation Method

70.8. The summation method, also referred to as the underlying asset 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.

438.7-70.9. The key steps in the summation method are:

- (a) value each of the component *assets* that are part of the *subject* ~~apart~~asset 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

438.8-70.10. The cost approach *should* capture all of the costs that would be incurred by a typical ~~market~~ *participant*.

438.9-70.11. 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:
 - 1. materials, potentially including land, and and
 - 2. labour.
- (b) indirect costs:
 - 1. transport costs,
 - 2. installation costs,
 - 3. professional fees (design, permit, architectural, legal, etc),
 - 4. other fees (commissions, etc),
 - 5. overheads,
 - 6. taxes,
 - 7. finance costs (eg, e.g. interest on debt financing), and
 - 8. profit margin/entrepreneurial profit to the creator of the *asset* (eg, e.g. return to investors).

438.10-70.12. 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. However, financing costs, if included, *may* already reflect *participants'* required return on capital deployed, so *valuers* should be cautious when including both financing costs and profit margins.

138.11-70.13. 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.

138.12-70.14. 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.

~~148.80. 90.~~ Depreciation/Obsolescence

148.1-80.1. 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.

148.2-80.2. 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_{7.2}.
- (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_{7.2} ~~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.

148.3-80.3. Depreciation/obsolescence *should* consider the physical and economic lives of the ~~asset~~_{7.2}:

- (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 exposed.~~

148.4-80.4. 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. However, when market evidence of the effect of obsolescence on value is available, that evidence should be considered.

148.5-80.5. Physical obsolescence can be measured in two different ways:

- (a) curable physical obsolescence, ~~ie, i.e.~~ 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. Total expected life may be expressed in any reasonable way, including expected life in years, mileage, units produced, etc.

148.6-80.6. 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*.

148.7-80.7. 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.

148.8-80.8. 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.

Asset Standards

IVS 200 Businesses and Business Interests

10. OverviewRequirements

- 10.1. The principles contained in the General Standards apply to valuations of businesses and business interests. This standard contains additional requirements that apply to valuations of businesses and business interests.

20. IntroductionOverview

- 20.1. The definition of what constitutes a business *may* differ depending on the *purpose of a valuation*. However, generally a business conducts a commercial, industrial, service, or investment activity. Businesses can take many forms, such as corporations, partnerships, joint ventures, and sole proprietorships. The value of a business *may* differ from the value sum of the values of the individual assets or liabilities that make up that business. When a business' value is greater than the sum of the individual recorded and unrecorded net tangible and identifiable intangible assets or liabilities that make up that of the business, the excess value is often referred to as going concern value or goodwill.
- 20.2. When valuing individual assets or liabilities owned by a business, *valuers should* follow the applicable standard for that type of asset or liability (IVS 210 ~~for Intangible Assets~~, IVS ~~230 for real property~~ 400 Real Property Interests, etc.).
- 20.3. ~~It is important to~~ Valuers must establish whether the valuation is of the entire entity, shares or a shareholding in the entity, (whether a controlling or non-controlling interest), or a specific business activity of the entity. The type of value being provided must be appropriate to the purpose of the valuation and communicated as part of the scope of the engagement (see IVS 101 Scope of Work). It is especially critical to clearly define the business or business interest being valued, as, even when a valuation is performed on an entire entity, there *may* be different levels at which that value could be expressed. For example:
- (a) Enterprise value: Often described as the total value of the equity in a business plus the value of its debt or debt-related liabilities, minus any cash or cash equivalents available to meet those liabilities.
 - (b) Total invested capital value: The total amount of money currently invested in a business, regardless of the source, often reflected as the value of total assets less current liabilities and cash.
 - (c) Operating Value: The total value of the operations of the business, excluding the value of any non-operating assets and liabilities.
 - (d) Equity value: The value of a business to all of its equity shareholders.
- 20.4. Valuations of businesses are required for different *purposes* including acquisitions, mergers and sales of businesses, taxation, litigation, insolvency proceedings and financial reporting. Business valuations *may* also be needed as an input or step in other valuations such as the valuation of stock options, particular class(es) of stock, or debt.

30 Bases of Value

30.1. In accordance with IVS 104 *Bases of Value*, a *valuer must* select the appropriate basis(es) of value when valuing a business or business interest.

30.2. Often, business valuations are performed using bases of value defined by entities/organizations other than the IVSC (some examples of which are mentioned in IVS 104 *Bases of Value*) and it is the *valuer's* responsibility to understand and follow the regulation, case law, and/or other interpretive guidance related to those bases of value as of the valuation date.

40. Valuation Approaches and Methods

40.1. The three principal valuation approaches described in IVS 105 *Valuation Approaches and Methods* ~~can all~~may be applied to the valuation of businesses and business interests.

40.2. When selecting an approach and method, in addition to the requirements of this ~~chapter~~standard, a *valuer must* follow the requirements of IVS 105 *Valuation Approaches and Methods*, including para 10.3.

50. Market Approach

50.1. The market approach is frequently applied in the valuation of businesses and business interests as these assets often meet the criteria in IVS 105 *Valuation Approaches and Methods*, para 20.2 or 20.3. When valuing businesses and business interests under the Market Approach, *valuers should* follow the requirements of IVS 105 *Valuation Approaches and Methods*, sections 20 and 30.

50.2. The three most common sources of data used to value businesses and business interests using the market approach are:

- (a) public stock markets in which ownership interests of similar businesses are traded,
- (b) the acquisition market in which entire businesses or controlling interests in businesses are bought and sold, and
- (c) prior transactions in shares or offers for the ownership of the *subject* business.

50.3. There ~~needs to~~must be a reasonable basis for comparison with, and reliance upon, similar businesses in the market approach. These similar businesses *should* be in the same industry as the *subject* business or in an industry that responds to the same economic variables. Factors ~~that should~~ be considered in assessing whether a reasonable basis for comparison exists include ~~the following~~:

- (a) similarity to the *subject* business in terms of qualitative and quantitative business characteristics,
- (b) amount and verifiability of data on the similar business, and
- (c) whether the price of the similar business represents an arm's length and orderly transaction.

- 50.4. When applying a market multiple, adjustments such as those in para ~~50~~60.8 below may be appropriate to both the subject company and the comparable companies.
- 50.5. *Valuers should* follow the requirements of IVS 105 *Valuation Approaches and Methods*, paras 30.7 ~~and~~ 30.8 when selecting and adjusting comparable transactions.
- 50.6. *Valuers should* follow the requirements of IVS 105 *Valuation Approaches and Methods*, paras 30.13 ~~and~~ 30.14 when selecting and adjusting comparable public company information.

60. Income Approach

- 60.1. The income approach is frequently applied in the valuation of businesses and business interests as these assets often meet the criteria in IVS 105 *Valuation Approaches and Methods*, paras 40.2 or 40.3.
- 60.2. When the income approach is applied, *valuers should* follow the requirements of IVS 105 *Valuation Approaches and Methods*, sections 40, 50, and 60.
- 60.3. Income and cash flow ~~related~~ to a business or business interest can be measured in a variety of ways and ~~may be on a pre-tax or post-tax basis, although the use of post-tax income is more common.~~ The capitalisation or discount rate applied *must* be consistent with the type of income or cash flow used.
- 60.4. The type of income or cash flow used *should* be consistent with the type of interest being valued. For example:
- (a) enterprise value is typically derived using cash flows before debt servicing costs and an appropriate discount rate applicable to enterprise-level cash flows, such as a weighted-average cost of capital, and
 - (b) equity value *may* be derived using cash flows to equity, that is, after debt servicing costs and an appropriate discount rate applicable to equity-level cash flows, such as a cost of equity.
- 60.5. The income approach requires the estimation of a capitalisation rate when capitalising income or cash flow and a discount rate when discounting cash flow. In estimating the appropriate rate, factors such as the level of interest rates, rates of return expected by ~~market participants~~ for similar investments and the risk inherent in the anticipated benefit stream are considered. ~~— (see IVS 105 *Valuation Approaches and Methods*, paras 60.9–60.11).~~
- 60.6. In methods that employ discounting, expected growth *may* be explicitly considered in the forecasted income or cash flow. In capitalisation methods, expected growth is normally reflected in the capitalisation rate. If a forecasted cash flow is expressed in nominal terms, a discount rate that takes into account the expectation of future price changes due to inflation or deflation *should* be used. If a forecasted cash flow is expressed in real terms, a discount rate that takes no account of expected price changes due to inflation or deflation *should* be used.
- 60.7. Under the income approach, the historical financial statements of a business entity are often used as guide to estimate the future income or cash flow of the business. Determining the

historical trends over time through ratio analysis *may* help provide the necessary information to assess the risks inherent in the business operations in the context of the industry and the prospects for future performance.

60.8. Adjustments *may* be appropriate to reflect differences between the actual historic cash flows and those that would be experienced by a buyer of the business interest on the valuation date. Examples include:

- (a) ~~to adjust~~adjusting revenues and expenses to levels that are reasonably representative of expected continuing operations,
- (b) ~~to present~~presenting financial data of the *subject* business and comparison businesses on a consistent basis,
- (c) ~~to adjust~~adjusting non-arm's length transactions ~~to commercial~~(such as contracts with customers or suppliers) to market rates,
- (d) ~~to adjust~~adjusting the cost of labour or of items leased or otherwise contracted from related parties to reflect market prices or rates,
- (e) ~~to reflect~~reflecting the impact of non-recurring events from historic revenue and expense items. Examples of non-recurring events include losses caused by strikes, new plant start-up and weather phenomena. However, the forecast cash flows *should* reflect any non-recurring revenues or expenses that can be reasonably anticipated and past occurrences *may* be indicative of similar events in the future, and
 - (a) ~~to adjust the reported depreciation and tax basis to an estimate that compares to depreciation used in similar businesses,~~
- ~~to adjust~~adjusting
- (f) adjusting the inventory accounting to compare to similar businesses, whose accounts *may* be kept on a different basis from the *subject* business, or to more accurately reflect economic reality.

~~60.9. Inventory adjustments may be different when considering the income statement and when considering the balance sheet. For example, a first-in-first-out method of costing inventory may~~

~~most accurately represent the value of the inventory when constructing a market value balance sheet. When examining the income statement, a last-in-first-out method of costing inventory may more accurately represent the income level in times of inflation or deflation.~~

- 60.9. ~~60.10.~~ When using an income approach it *may* also be necessary to make adjustments to the valuation to reflect matters that are not captured in either the cash flow forecasts or the discount rate adopted. Examples *may* include adjustments for the marketability of the interest being valued or whether the interest being valued is a controlling or non-controlling interest in the business. However, valuers should ensure that adjustments to the valuation do not reflect factors that were already reflected in the cash flows or discount rate. For example, whether the interest being valued is a controlling or non-controlling interest is often already reflected in the forecasted cash flows.

~~60.11. Small and medium-sized businesses are often transferred as an asset sale rather than by transfer of the equity interest. In such cases it is common for items such as debtors, creditors and working capital to be excluded and for the value of the assets to be determined by applying an appropriate valuation multiple to the earnings before interest, tax and depreciation. Care should be taken to ensure that the multiple used is based on analysis of other similar asset sales.~~

- 60.10. While many businesses *may* be valued using a single cash flow scenario, valuers *may* also apply multi-scenario or simulation models, particularly when there is *significant* uncertainty as to the amount and/or timing of future cash flows.

70. Cost Approach

- 70.1. The cost approach cannot normally be applied in the valuation of businesses and business interests as these assets seldom meet the criteria in IVS 105 *Valuation Approaches and Methods*, paras 70.2 or 70.3. However, the cost approach is sometimes applied in the valuation of businesses, particularly ~~in the following circumstances when:~~

- (a) the business is an early stage or start-up business where profits and/or cash flow cannot be reliably determined and comparisons to other businesses under the market approach is impractical or unreliable. ~~—~~
- (b) the business is an investment or holding business, in which case the summation method is as described in IVS 105 *Valuation Approaches and Methods*, paras 80.8 ~~and~~ 80.9. , and/or
- (c) the business does not represent a going concern and/or the value of its assets in a liquidation *may* exceed the business' value as a going concern.

- 70.2. In the circumstances where a business or business interest is valued using a cost approach, valuers *should* follow the requirements of IVS 105 *Valuation Approaches and Methods*, sections 70 and 80.

80. Special Considerations for Businesses and Business Interests

80.1. The following sections address a non-exhaustive list of topics relevant to the valuation of businesses and business interests:

- (a) Ownership Rights (section ~~89~~0).
- (b) Business Information (section ~~99~~ 100).
- (c) Economic and Industry Considerations (section 1~~10~~9).
- (d) Operating and Non-Operating Assets (section 1~~42~~0).
- (e) Capital Structure Considerations (section 1~~23~~0).

90. Ownership Rights

90.1. The rights, privileges or conditions that attach to the ownership interest, whether held in proprietorship, corporate or partnership form, require consideration in the valuation process. Ownership rights are usually defined within a *jurisdiction* by legal documents such as articles of association, clauses in the memorandum of the business, articles of incorporation, bylaws, partnership agreements and shareholder agreements (collectively “corporate documents”). In some situations, it *may* also be necessary to distinguish between legal and beneficial ownership.

90.2. Corporate documents *may* contain restrictions on the transfer of the interest or other provisions relevant to value. For example, corporate documents *may* stipulate that the interest *should* be valued as a pro rata fraction of the entire issued share capital regardless of whether it is a controlling or ~~minority~~non-controlling interest. In each case, the rights of the interest being valued and the rights attaching to any other class of interest ~~needs~~ to be considered at the outset.

90.3. Care *should* be taken to distinguish between rights and obligations inherent to the interest and those that *may* be applicable only to a particular shareholder (~~ie i.e.~~ those contained in an agreement between current shareholders which *may* not apply to a potential buyer of the ownership interest). Depending on the basis(es) of value used, the valuer may be required to consider only the rights and obligations inherent to the subject interest or both those rights and considerations inherent to the subject interest and those that apply to a particular owner.

90.4. ~~All of~~ the rights and preferences associated with a *subject* business or business interest *should* be considered in a valuation, including:

- (a) if there are multiple classes of stock, the valuation *should* consider the rights of the each different class, including:
 - , but not limited to:
 - 1. liquidation preferences,
 - 2. voting rights,
 - 3. redemption, conversion and participation provisions, and

4. put and/or call rights.

- (b) When a controlling interest in a business *may* have a higher value than a non-controlling interest. Control premiums or discounts for lack of control *may* be appropriate depending on the valuation method(s) applied.—(see IVS 105 *Valuation Approaches and Methods*, para 30.4817.(b)). In respect of actual premiums paid in completed transactions, the valuer should consider whether the synergies and other factors that caused the acquirer to pay those premiums are applicable to the subject asset to a comparable degree.

100. Business Information

100.1. The valuation of a business entity or interest frequently requires reliance upon information received from management, representatives of the management or other experts. As required by IVS 105 *Valuation Approaches and Methods*, para 10.7, a valuer ~~must perform analysis—on~~assess the reasonableness of information received from management, representatives of management, or other experts ~~to~~and evaluate whether it is appropriate to rely on that information for the *valuation purpose*. For example, prospective financial information provided by management *may* reflect owner-specific synergies that *may* not be appropriate when using a basis of value that requires a ~~market~~ participant perspective.

100.2. Although the value on a given date reflects the anticipated benefits of future ownership, the history of a business is useful in that it *may* give guidance as to the expectations for the future. *Valuers should* therefore consider the business' historical financial statements as part of a valuation engagement. To the extent the ~~business'~~ future performance of the business is expected to deviate *significantly* from historical experience, a valuer *must* understand why historical performance is not representative of the future expectations of the business.

110. Economic and Industry Considerations

110.1. Awareness of relevant economic developments and specific industry trends is essential for all valuations. Matters such as political outlook, government policy, exchange rates, inflation, interest rates and market activity *may* affect *assets* in different locations and/or sectors of the economy quite differently. These factors can be particularly important in the valuation of businesses and business interests, as businesses *may* have complex structures involving multiple locations and types of operations. For example, a business *may* be impacted by economic and industry factors specific related to:

- (a) the registered location of the business' headquarters, and legal form of the business.
- (b) the nature of the business' operations and where each aspect of the business is conducted (~~ie i.e.~~ manufacturing *may* be done in a different location to where research and development is conducted),
- (c) where the business sells its goods and/or services, ~~and~~

(d) the currency(ies) the business uses,

(e) where the business' suppliers of the business are located,
and

(f) 120. what tax and legal jurisdictions the business is subject to.

444-120. Operating and Non-Operating Assets

120.1 The valuation of an ownership interest in a business is only relevant in the context of the financial position of the business at a point in time. It is important to understand the nature of assets and liabilities of the business and to determine which items are required for use in the income-producing process operations of the business and which ones are redundant or "excess" to the business at the *valuation date*.

~~120.1~~ 120.2 Most valuation methods do not capture the value of assets that are not required for the operation of the business. For example, a business valued using a multiple of EBITDA would only capture the value the assets utilized in generating that level of EBITDA. If the business had non-operating assets or liabilities such as an idle manufacturing plant, the value of that non-operating plant would not be captured in the value. When Depending on the objective level of a value appropriate for the valuation assignment is to determine the total value of a business, engagement (see para 20.3), the value of ~~such~~ non-operating assets should may need to be separately determined and added to the operating value of the business.

120.3. Businesses *may* have unrecorded assets and/or liabilities that are not reflected on the balance sheet. Such *assets* could include intangible *assets*, machinery and equipment that is fully depreciated, and legal liabilities/lawsuits.

120.4. When separately considering non-operating *assets* and liabilities, a *valuer* *should* ensure that the income and expenses associated with non-operating *assets* are excluded from the cash flow measurements and projections used in the valuation. For example, if a business has a *significant* liability associated with an underfunded pension and that liability is valued separately, the cash flows used in the valuation of the business *should* exclude any "catch-up" payments related to that liability.

120.5 If the valuation considers information from publicly-traded businesses, the publicly-traded stock prices implicitly include the value of non-operating assets, if any. As such, valuers must consider adjusting information from publicly-traded businesses to exclude the value, income and expenses associated with non-operating assets.

a- 130. Capital Structure Considerations

~~b-~~ 130.1. Businesses are often financed through a combination of debt and equity. However, in many cases, *valuers may* be asked to value only equity or a particular class of equity in a business. While equity or a particular class of equity can occasionally be valued directly, more often the enterprise value of the business is determined and then that value is allocated between debt and any types of equity.

¶ 130.2. When the value of debt is equal to its carrying value/book value, allocations of value *may* be straightforward. For example, in such cases it *may* be appropriate to deduct the book value of debt from enterprise value to calculate equity value (sometimes referred to as a “waterfall” method of value allocation). However, *valuers should* not necessarily assume that the value of debt and its book value are equal.

130.3 In circumstances where the value of debt *may* differ from its book value, *valuers should either value the debt directly or* use a method that appropriately allocates value to debt and any equity securities such as a probability-*weighted* expected return method or an option-pricing model.

IVS 210 Intangible Assets

10. OverviewRequirements

- 10.1. The principles contained in the General Standards apply to valuations of intangible assets and valuations with an intangible assets component. This standard contains additional requirements that apply to valuations of intangible assets.

20. IntroductionOverview

- 20.1. An intangible asset is a non-monetary asset that manifests itself by its economic properties. It does not have physical substance but grants rights and/or economic benefits to its owner.
- 20.2. Specific intangible assets are defined and described by characteristics such as their ownership, function, market position and image. These characteristics differentiate intangible assets from one another.
- 20.3. There are many types of intangible assets, but they are often considered to fall into one or more of the following ~~five~~ categories (or goodwill):
- (a) Marketing-related: Marketing-related intangible assets are used primarily in the marketing or promotion of products or services. Examples include trademarks, trade names, unique trade design and internet domain names_{7.2}.
 - (b) Customer-related: Customer-related intangible assets include customer lists, backlog, customer contracts, and contractual and non-contractual customer relationships_{7.2}.
 - (c) Artistic-related: Artistic-related intangible assets arise from the right to benefits ~~such as royalties~~ from artistic works such as plays, books, films and music, and from non-contractual copyright protection_{7.2}.
 - (d) Contract-related: Contract-related intangible assets represent the value of rights that arise from contractual agreements. Examples include licensing and royalty agreements, service or supply contracts, lease agreements, permits, broadcast rights, servicing contracts, employment contracts and non-competition agreements and natural resource rights, ~~and~~.
 - (e) Technology-based: Technology-related intangible assets arise from contractual or non-contractual rights to use patented technology, unpatented technology, databases, formulae, designs, software, processes or recipes.
- 20.4. Although similar intangible assets within the same class will share some characteristics with one another, they will also have differentiating characteristics that will vary according to the type of intangible asset. In addition, certain intangible assets, such as brands, may represent a combination of categories in para 20.3.

- 20.5. Particularly in valuing an intangible asset, ~~it is critical to thoroughly~~ valuers must understand specifically what needs to be valued, and the purpose of the valuation. For example, customer data (names, addresses, etc.) typically has a very different value from customer contracts (those contracts in place on the valuation date) and customer relationships (the value of the ongoing customer relationship including existing and future contracts). What intangible assets need to be valued and how those intangible assets are defined *may* differ depending on the purpose of the valuation, and the differences in how intangible assets are defined can lead to significant differences in value.
- 20.6. Generally, goodwill is any future economic benefit arising from a business, an interest in a business or from the use of a group of assets which has not been separately recognised in another asset. ~~In general terms,~~ The value of goodwill is typically measured as the residual amount remaining after the values of all identifiable tangible, intangible and monetary assets, adjusted for actual or potential liabilities, have been deducted from the value of a business. It is ~~typically~~ often represented as the excess of the price paid in a real or hypothetical acquisition of a company over the value of the company's other identified assets and liabilities. For some purposes, goodwill may need to be further divided into transferable goodwill (that which can be transferred to third parties) and non-transferable or "personal" goodwill.
- 20.7. As the amount of goodwill is dependent on which other tangible and intangible assets are recognised, its value can be different when calculated for different *purposes*. For example, in a business combination accounted for under IFRS or US GAAP, an intangible asset is only recognised to the extent that it:
- (a) is separable, ~~ie, i.e.~~ capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable asset or liability, regardless of whether the entity intends to do so, or
 - (b) arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.
- 20.8. While the aspects of goodwill can vary depending on the *purpose of the valuation*, goodwill frequently includes elements such as:
- (a) company-specific synergies arising from a combination of two or more businesses (e.g. reductions in operating costs, economies of scale or product mix dynamics),
 - (b) opportunities to expand the business into new and different markets,
 - (c) the benefit of an assembled workforce (but generally not any intellectual property developed by members of that workforce),
 - (d) the benefit to be derived from future assets, such as new customers and future technologies, and
 - (e) assemblage and going concern value.

- 20.9. *Valuers may perform direct valuations of intangible assets where the value of the intangible assets is the purpose of the analysis or one part of the analysis. However, when valuing businesses, business interests, real property, and machinery and equipment, valuers should consider whether there are intangible assets associated with those assets and whether those directly or indirectly impact the asset being valued. For example, when valuing a hotel based on an income approach, the contribution to value of the hotel's brand may already be reflected in the profit generated by the hotel.*
- 20.10. Intangible asset valuations are performed for a variety of purposes. It is the ~~valuer's sole~~ responsibility to understand the *purpose of a valuation* and whether intangible assets should be valued, whether separately or grouped with other assets. A non-exhaustive list of examples of circumstances that commonly include an intangible asset valuation component is provided below:
- (a) For financial reporting purposes, valuations of intangible assets are often required in connection with accounting for business combinations, asset acquisitions and sales, and impairment analysis.
 - (b) For tax reporting purposes, intangible asset valuations are frequently needed for transfer pricing analyses, estate and gift tax planning and reporting, and ad valorem taxation analyses.
 - (c) Intangible assets may be the subject of litigation, requiring valuation analysis in circumstances such as shareholder disputes, damage calculations and marital dissolutions (divorce).
 - (d) Other statutory or legal events may require the valuation of intangible assets such as compulsory purchases/ eminent domain proceedings.
 - (e) Valuers are often asked to value intangible assets as part of general consulting, collateral lending and transactional support engagements.

30. Bases of Value

30.1. In accordance with IVS 104 Bases of Value, a valuer must select the appropriate basis(es) of value when valuing intangible assets.

30.2. Often, intangible asset valuations are performed using bases of value defined by entities/organisations other than the IVSC (some examples of which are mentioned in IVS 104 Bases of Value) and the valuer must understand and follow the regulation, case law, and other interpretive guidance related to those bases of value as of the valuation date.

~~30.~~ 40. Valuation Approaches and Methods

40.1. The three ~~principal~~ valuation approaches described in IVS 105 *Valuation Approaches* can all be applied to the valuation of intangible assets.

40.2. When selecting an approach and method, in addition to the requirements of this ~~chapter~~standard, a *valuer* must follow the requirements of IVS 105 *Valuation Approaches*, including para 10.3.

50. 40- Market Approach

50.1. Under the market approach, the value of an intangible asset is determined by reference to market activity (for example, transactions involving identical or similar assets).

50.2. Transactions involving intangible assets frequently also include other assets, such as a business combination that includes intangible assets.

50.3. *Valuers* must comply with paras 20.2 and 20.3 of IVS 105 when determining whether to apply the market approach to the valuation of intangible assets. In addition, *valuers* should only apply the market approach to value intangible assets if both of the following criteria are met:

- (a) information is available on arm's length transactions involving identical or similar intangible assets on or near the valuation date, and
- (b) sufficient information is available to allow the *valuer* to adjust for all *significant* differences between the *subject* intangible asset and those involved in the transactions.

50.4. The heterogeneous nature of intangible assets and the fact that intangible assets seldom transact separately from other assets means that it is rarely possible to find market evidence of transactions involving identical assets. If there is market evidence at all, it is usually in respect of assets that are similar, but not identical.

50.5. Where evidence of either prices or valuation multiples is available, *valuers* should make adjustments to these to reflect differences between the *subject* asset and those involved in the transactions. These adjustments are necessary to reflect the differentiating characteristics of the *subject* intangible asset and the assets involved in the transactions. Such adjustments *may* only be determinable at a qualitative, rather than quantitative, level. However, the need for *significant* qualitative adjustments *may* indicate that another approach would be more appropriate for the valuation.

50.6. Consistent with the above, examples of intangible assets for which the market approach is sometimes used include:

- (a) broadcast spectrum,
- (b) internet domain names, and
- (c) taxi medallions.

50.7. The guideline transactions method is generally the only market approach method that can be applied to intangible assets.

50.8. In rare circumstances, a security sufficiently similar to a *subject* intangible asset *may* be publicly traded, allowing the use of the guideline public company method. One example of such securities

is contingent value rights (CVRs) that are tied to the performance of a particular product or technology.

31.60. Income Approach

31.4.60.1. Under the income approach, the value of an intangible asset is determined by reference to the present value of income, cash flows or cost savings attributable to the intangible asset over its economic life.

31.2.60.2. ~~Generally, Valuers must comply with paras 40.2 and 40.3 of IVS 105 Valuation Approaches and Methods when determining whether to apply the income approach should be used as to the primary basis valuation of value for intangible assets only if the following criteria are met:~~

- ~~(a) the primary economic benefit associated with ownership of the subject intangible asset is the ability to generate income, additional income, or reduced costs, and~~
- ~~(b) those future economic benefits can be reasonably forecast.~~

31.3.60.3. Income related to intangible assets is frequently included in the price paid for goods or a good or service. It may be challenging to separate the income related to the intangible asset from income related to other tangible and intangible assets. Many of the income approach methods are designed to separate the economic benefits associated with a *subject* intangible asset.

31.4.60.4. The income approach is the most common method applied to the valuation of intangible assets and is frequently used to value intangible assets including the following:

- (a) Technology.
- (b) customer-related intangibles (e.g. backlog, contracts, relationships).
- (c) tradenames/trademarks/brands.
- (d) operating licenses (e.g. franchise agreements, gaming licenses, broadcast spectrum), and
- (e) non-competition agreements.

Income Approach Methods

31.5.60.5. There are many income approach methods. The following methods are discussed in this chapter standard in more detail:

- (a) excess earnings method,
- (b) relief-from-royalty method,
- (c) premium profit method or with-and-without method,
- (d) greenfield method, and
- (e) distributor method.

Excess Earnings Method

~~31.6.60.6.~~ The excess earnings method ~~determines~~estimates the value of an intangible asset as the present value of the cash flows attributable to the *subject* intangible asset after excluding the proportion of the cash flows that are attributable to other assets: required to generate the cash flows ("contributory assets"). It is often used for valuations where there is a requirement for the acquirer to allocate the overall price paid for a business between tangible assets, identifiable intangible assets and goodwill.

~~60.1. The concepts behind the excess earnings method were first described in 1920 in the United States Internal Revenue Services' Appeals and Revenue Memorandum (ARM) 34. The method was developed to provide a way to calculate the intangible and goodwill value lost by business owners as a result of the prohibition of alcohol.~~

60.7. Contributory assets are assets that are used in conjunction with the *subject* intangible asset in the realisation of prospective cash flows associated with the *subject* intangible asset. Assets that do not contribute to the prospective cash flows associated with the *subject* intangible asset are not contributory assets.

~~31.7.60.8.~~ The excess earnings method can be applied using several periods of forecasted cash flows ("multi-period excess earnings method" or "MPEEM"), a single period of forecasted cash flows ("single-period excess earnings method"~~),~~) or by capitalising a single period of forecasted cash flows ("capitalised excess earnings method" or the "formula method").

~~31.8.60.9.~~ The capitalised excess earnings method or formula method is generally only appropriate if the intangible asset is operating in a steady state with stable growth/decay rates, constant profit margins and consistent contributory asset levels/charges.

~~60.2. The single-period excess earnings method is only appropriate for intangibles that will be used/consumed in a single period.~~

~~31.9.60.10.~~ As most intangible assets have economic lives exceeding one period, frequently follow non-linear growth/decay patterns, and *may* require different levels of contributory assets over time, the MPEEM is the most commonly used excess earnings method as it offers the most flexibility and allows *valuers* to explicitly forecast changes in such inputs.

~~31.10.60.11.~~ Whether applied in a single-period, multi-period, or capitalised manner, the key steps in applying an excess earnings method are to:

- (a) forecast the amount and timing of future revenues driven by the *subject* intangible asset and ~~other supporting (i.e. related~~ contributory assets~~),~~s,
- (b) forecast the amount and timing of expenses that are required to generate the revenue from the *subject* intangible asset and related contributory assets~~s~~,
- (c) adjust the expenses to exclude those related to creation of new intangible assets that are not required to generate the forecasted revenue and expenses. Profit margins in the excess earnings method *may* be higher than profit margins for the overall business because the

excess earnings method excludes investment in certain new intangible assets. For example:

~~1.~~ 1. research and development expenditures related to development of new technology would not be required when valuing only existing technology, and

~~(e)~~ 2. marketing expenses related to obtaining new customers would not be required when valuing existing customer-related intangible assets.

(d) identify the contributory assets that are needed to achieve the forecasted revenue and expenses. Contributory assets often include working capital, fixed assets, assembled workforce and identified intangible assets other than the *subject* intangible asset,

(e) determine the appropriate rate of return on each contributory asset based on an assessment of the risk associated with that asset. For example, low-risk assets like working capital will typically have a lowrelatively lower required return. Contributory intangible assets and highly specialised machinery and equipment often require highrelatively higher rates of return,

(f) in each forecast period, deduct the required returns on contributory assets from the forecast profit to arrive at the excess earnings attributable to only the *subject* intangible asset,

(g) determine the appropriate discount rate ~~of return~~ for the *subject* intangible asset and present value or capitalise the excess earnings, and

(h) if appropriate for the *purpose of the valuation* (see paras ~~1810.1 to 180-110.4~~), calculate and add the tax amortisation benefit (TAB) for the *subject* intangible asset.

~~34.14-60.12.~~ Contributory asset charges (CACs) *should* be made for all the current and future tangible, intangible and financial assets that contribute to the generation of the cash flow, and if an asset for which a CAC is required is involved in more than one line of business, its CAC *should* be allocated to the different lines of business involved. ~~While a CAC may be taken for an identifiable component of goodwill such as assembled workforce, it is not appropriate to take a CAC on goodwill as a whole, assemblage value or going-concern value.~~

60.13. The determination of whether a CAC for elements of goodwill is appropriate *should* be based on an assessment of the relevant facts and circumstances of the situation, and the valuer *should* not mechanically apply CACs or alternative adjustments for elements of goodwill if the circumstances do not warrant such a charge. Assembled workforce, as it is quantifiable, is typically the only element of goodwill for which a CAC *should* be taken. Accordingly, valuers *must* ensure they have a strong basis for applying CACs for any elements of goodwill other than assembled workforce.

~~34.12-60.14.~~ CACs are generally computed on an after-tax basis as a fair return on ~~and of~~ the value of the contributory asset. ~~and in some cases a return of the contributory asset is also deducted.~~ The appropriate return on a contributory asset is the investment return a typical ~~market~~ participant would require on the asset. The return of a contributory asset is a recovery of the initial investment in the asset. ~~Although rare, CACs may be computed on a pre-tax basis. However, if done correctly,~~ There *should* be no difference in value regardless of whether CACs are computed on a pre-tax or after-tax basis.

31.13-60.15. If the contributory asset is not wasting in nature, like working capital, only a fair return on the asset is required.

31.14-60.16. For contributory intangible assets that were valued under a relief-from-royalty method, the CAC *should* be equal to the royalty (generally adjusted to an after-tax royalty rate).

31.15-60.17. The excess ~~earnings~~ method ~~should~~~~generally~~ be applied only to a single intangible asset for any given stream of revenue and income (generally the primary or most important intangible asset). For example, in valuing the intangible assets of a company utilising both technology and a tradename in delivering a product or service (~~ie i.e.~~ the revenue associated with the technology and the tradename is the same), the excess earnings method *should* only be used to value one of the intangible assets and an alternative method *should* be used for the other asset. However, if the company had multiple product lines, each using a different technology and each generating distinct revenue and profit, the excess earnings method ~~could~~*may* be applied in the valuation of the multiple different technologies.

Relief-from-Royalty Method

31.16-60.18. Under the relief-from-royalty method, the value of an intangible asset is determined by reference to the value of the hypothetical royalty payments that would be saved through owning the asset, as compared with licensing the intangible asset from a third party. ~~The hypothetical royalty payments over the life of the intangible asset are adjusted for tax and discounted to present value at the valuation date. In some cases, royalty payments may include an initial payment in addition to periodic amounts based on a percentage of the revenues or some other financial parameter.~~ Conceptually, the method *may* also be viewed as a discounted cash flow method applied to the cash flow that the owner of the intangible asset could receive through licensing the intangible asset to third parties.

31.17-60.19. The key steps ~~to in applying~~ a relief-from-royalty method are to:

- (a) develop projections associated with the intangible asset being valued for the life of the *subject* intangible asset. The most common metric projected is revenue, as most royalties are paid as a percentage of revenue. However, other metrics such as a per-unit royalty *may* be appropriate in certain valuations,
- (b) develop a royalty rate for the *subject* intangible asset. Two methods can be used to derive a hypothetical royalty rate. The first is based on market royalty rates for comparable or similar transactions. A prerequisite for this method is the existence of comparable intangible assets that are licensed at arm's length on a regular basis. The second method is based on a split of profits that would hypothetically be paid in an arm's length transaction by a willing licensee to a willing licensor for the rights to use the *subject* intangible asset,
- (c) apply the selected royalty rate to the projections to calculate the royalty payments avoided by owning the intangible asset,
- (d) estimate any additional expenses for which a licensee of the *subject* asset would be responsible. This can include upfront payments required by some licensors. ~~Some licensing arrangements may require licensees to pay for certain expenses associated with the licensed property,~~

~~however, frequently there are no additional expenses falling under this category, as often a licensee's sole responsibility is payment of the royalty and most or all expenses associated with the intangible asset are paid by the licensor.~~ A royalty rate *should* be analysed to determine whether it assumes expenses (such as maintenance, marketing and advertising) are the responsibility of the licensor or the licensee. A royalty rate that is "gross" would consider all responsibilities and expenses associated with ownership of a licensed asset to reside with the licensor, while a royalty that is "net" would consider some or all responsibilities and expenses associated with the licensed asset to reside with the licensee. Depending on whether the royalty is "gross" or "net", the valuation *should* exclude or include, respectively, a deduction for expenses such as maintenance, marketing or advertising expenses related to the hypothetically licensed asset.

~~(a) add the avoided additional expenses to the avoided royalty payments to calculate the total costs associated with licensing the subject intangible asset. This is the total amount avoided through ownership of the intangible asset,~~

- (e) if the hypothetical costs and royalty payments would be tax deductible, it may be appropriate to apply the appropriate tax rate to determine the after-tax savings associated with ownership of the intangible asset. However, for certain purposes (such as transfer pricing), the effects of taxes are generally not considered in the valuation and this step should be skipped,
- (f) determine the appropriate discount ~~rate-of-return~~ for the *subject* intangible asset and present value or capitalise the savings associated with ownership of the intangible asset, and
- (g) if appropriate for the *purpose of the valuation* (see paras ~~1810.1 to 180.3-110.4~~), calculate and add the TAB for the *subject* intangible asset.

~~34.18-60.20.~~ Whether a royalty rate is based on market transactions or a profit split method (or both), its selection *should* consider the characteristics of the *subject* intangible asset and the environment in which it is utilised. The consideration of those characteristics form the basis for selection of a royalty rate within a range of observed transactions and/or the range of profit available to the *subject* intangible asset in a profit split. Factors that *should* be considered include the following:

- (a) Competitive environment: The size of the market for the intangible asset, the availability of realistic alternatives, the number of competitors, barriers to entry and presence (or absence) of switching costs₇₂.
- (b) Importance of the *subject* intangible to the owner: Whether the *subject* asset is a key factor of differentiation from competitors, the importance it plays in the owner's marketing strategy, its relative importance compared to other tangible and intangible assets, and the amount the owner spends on creation, upkeep and improvement of the *subject* asset, ~~and~~.
- (c) Life cycle of the *subject* intangible: The expected economic life of the *subject* asset and any risks of the *subject* intangible becoming obsolete.

~~34.19-60.21.~~ When selecting a royalty rate, ~~an appraiser~~ a valuer *should* also consider the following:

- (a) When entering a license arrangement, the royalty rate ~~market~~ *participants* would be willing to pay depends on their profit levels and the relative contribution of the licensed intangible *asset* to that profit. For example, a manufacturer of consumer products would not license a tradename at a royalty rate that leads to the manufacturer realising a lower profit selling branded products compared to selling generic products.
- (b) When considering observed royalty transactions, ~~an appraiser~~ *a valuer* *should* understand the specific rights transferred to the licensee and any limitations. For example, royalty agreements *may* include *significant* restrictions on the use of a licensed intangible *asset* such as a restriction to a particular geographic area or for a particular type of product. In addition, the *valuer should* understand how the payments under the licensing agreement are structured, including whether there are upfront payments, milestone payments, puts/calls to acquire the licensed property outright, etc.

Premium Profit Method ~~or~~ With-and-Without Method

~~31.20-60.22. The premium profit method, sometimes referred to as~~ The with-and-without method, indicates the value of an intangible *asset* by comparing two scenarios: one in which the business uses the *subject* intangible *asset* and one in which the business does not use the *subject* intangible *asset* (but all other factors are kept constant). ~~The relief from royalty method is sometimes viewed as a subset of the premium profit method, as the royalty payments represent the payments that would have to be made by a business that did not own the subject intangible asset.~~

~~31.21-60.23.~~ The comparison of the two scenarios can be done in two ways:

- (a) calculating the value of the business under each scenario with the difference in the business values being the value of the *subject* intangible *asset*, and
- (b) calculating, for each future period, the difference between the profits in the two scenarios. The present value of those amounts is then used to reach the value of the *subject* intangible *asset*.

~~31.22-60.24.~~ In theory, either method *should* reach a similar value for the intangible *asset* provided the *valuer* considers not only the impact on the entity's profit, but additional factors such as differences between the two scenarios in working capital needs and capital expenditures.

~~31.23-60.25.~~ The ~~premium profit~~with-and-without method is frequently used in the valuation of non-competition agreements but *may* be appropriate in the valuation of other intangible *assets* in certain circumstances.

~~31.24-60.26.~~ The key steps ~~to~~in applying the ~~premium profit~~with-and-without method are to:

- (a) prepare projections of revenue, expenses, capital expenditures and working capital needs for the business assuming the use of all of the *assets* of the business including the *subject* intangible *asset*. These are the cash flows in the "with" scenario ~~and will typically be the same projections used in the internal rate of return (IRR) calculation if the analysis is being performed as part of a business combination,~~

- (b) ~~if comparing the value of the business with and without the asset rather than directly comparing profit,~~ use an appropriate discount rate ~~for the business~~ to present value the future cash flows ~~to determine the value of the subject business with all assets in place. This is in the “with” scenario, and/or calculate~~ the value of the business in the “with” scenario,
- (c) prepare projections of revenue, expenses, capital expenditures and working capital needs for the business assuming the use of all of the assets of the business except the *subject* intangible asset. These are the cash flows in the “without” scenario,
- (d) ~~if comparing the value of the business with and without the asset rather than directly comparing profit,~~ use an appropriate discount rate for the business ~~to~~, present value the future cash flows ~~to determine the value of the subject business with all assets in place except the subject intangible. This is the “with” scenario and/or calculate~~ the value of the business in the “without” scenario,
- (e) deduct the present value of cash flows or the value of the business in the “without” scenario from the present value of cash flows or value of the business in the “with” scenario, and
- (f) if appropriate for the *purpose of the valuation* (see paras ~~1810.1 to 180.3-110.4~~), calculate and add the TAB for the *subject* intangible asset.

34.25-60.27. As an additional step, the difference between the two scenarios *may* need to be probability-weighted. For example, when valuing a non-competition agreement, the individual or business subject to the agreement *may* choose not to compete, even if the agreement were not in place.

34.26-60.28. The differences in value between the two scenarios *should* be reflected solely in the cash flow projections rather than by using different discount rates in the two scenarios.

Greenfield Method

34.27-60.29. Under the greenfield method, the value of the *subject* intangible is determined using cash flow projections that assume the only *asset* of the business at the valuation date is the *subject* intangible. All other tangible and intangible *assets must* be bought, built or rented.

34.28-60.30. The greenfield method is conceptually similar to the excess earnings method ~~in that it identifies the incremental or “excess” cash flow associated with the subject asset.~~ However, instead of subtracting contributory asset charges from the cash flow to reflect the contribution of contributory assets, the greenfield method assumes that the owner of the *subject* asset would have to build, buy or rent the contributory assets. When building or buying the contributory assets, the cost of a replacement asset of equivalent utility is used rather than a reproduction cost.

34.29-60.31. The greenfield method is often used to estimate the value of ~~franchise-based~~ “enabling” intangible assets such as franchise agreements and broadcast spectrum.

34.30-60.32. The key steps ~~to in~~ applying the greenfield method are:
to:

- (a) prepare projections of revenue, expenses, capital expenditures and working capital needs for the business assuming the *subject* intangible asset is the only asset owned by the *subject* business at the valuation date, including the time period needed to “ramp up” to stabilised levels,
- (b) estimate the timing and amount of expenditures related to the acquisition, creation or rental of all other assets needed to operate the *subject* business,
- (c) using an appropriate discount rate for the business, present value the future cash flows to determine the value of the *subject* business with only the *subject* intangible in place, and
- ~~(a)~~(d) if appropriate for the *purpose of the valuation* (see paras ~~1810.1 to 180.3-110.4~~), calculate and add the TAB for the *subject* intangible asset.

Distributor Method

~~34.34-60.33.~~ The distributor method, sometimes referred to as the disaggregated method, is a variation of the multi-period excess earnings method sometimes used to value customer-related intangible assets. The underlying theory of the distributor method is that businesses that are comprised of various functions are expected to generate profits associated with each function. As distributors generally only perform functions related to distribution of products to customers rather than development of intellectual property or manufacturing, information on profit margins earned by distributors is used to estimate the excess earnings attributable to customer-related intangible assets.

~~100.1 The distributor method is also similar to the relief from royalty method when a profit-split is used to estimate an appropriate royalty rate.~~

~~34.32-60.34.~~ The distributor method is appropriate to value customer-related intangible assets when another intangible asset (for example, technology or a brand) is deemed to be the primary or most *significant* intangible asset and is valued under a multi-period excess earnings method.

~~34.33-60.35.~~ The key steps ~~to~~in applying the distributor method are to:

- (a) prepare projections of revenue associated with existing customer relationships. This *should* reflect expected growth in revenue from existing customers as well as the effects of customer attrition,
- (b) identify comparable distributors that have customer relationships similar to the *subject* business and calculate the profit margins achieved by those distributors,
- (c) apply the distributor profit margin to the projected revenue,
- (d) identify the contributory assets related to performing a distribution function that are needed to achieve the forecast revenue and expenses. Generally distributor contributory assets include working capital, fixed assets and workforce. However, distributors seldom require other assets such as trademarks or technology. The level of required contributory assets *should* also be consistent with ~~market participants~~ performing only a distribution function,

- (e) determine the appropriate rate of return on each contributory *asset* based on an assessment of the risk associated with that *asset*,
- (f) in each forecast period, deduct the required returns on contributory *assets* from the forecast distributor profit to arrive at the excess earnings attributable to only the *subject* intangible *asset*,
- (g) determine the appropriate discount rate ~~of return~~ for the *subject* intangible *asset* and present value the excess earnings, and
- (h) if appropriate for the *purpose of the valuation* (see paras ~~1810.1 to 180.3~~ 110.4), calculate and add the TAB for the *subject* intangible *asset*.

110. Market Approach

~~110.1 Under the market approach, the value of an intangible asset is determined by reference to market activity (for example, transactions involving identical or similar assets).~~

~~110.2 Transactions involving intangible assets frequently also include other assets, such as a business combination that includes intangible assets.~~

~~110.3 Generally, the market approach should be used as the primary basis for value of intangible assets only if the following criteria are met:~~

- ~~(a) information is available on arm's length transactions involving identical or similar intangible assets on or near the valuation date, and~~
- ~~(b) sufficient information is available to allow the valuer to adjust for all significant differences between the subject intangible asset and those involved in the transactions.~~

~~110.4 The heterogeneous nature of intangible assets means that it is rarely possible to find market evidence of transactions involving identical assets. If there is market evidence at all it is usually in respect of assets that are similar, but not identical.~~

~~110.5 Where evidence of either prices or valuation multiples is available, it will often be necessary to make adjustments to these to reflect differences between the subject asset and those involved in the transactions. These adjustments are necessary to reflect the differentiating characteristics of the subject intangible asset and the assets involved in the transactions. Such adjustments may only be determinable at a qualitative, rather than quantitative, level. However, the need for significant qualitative adjustments may indicate that another approach would be appropriate for the valuation.~~

~~110.6 Consistent with the above, examples of intangible assets for which the market approach is sometimes used include:~~

- ~~(a) broadcast spectrum,~~
- ~~(b) technology/patents,~~

~~(c) internet domain names, and~~

~~(d) taxi medallions.~~

~~120. Market Approach Methods~~

~~120.1 The guideline transactions method is generally the only market approach method that can be applied to intangible assets.~~

~~120.2 In rare circumstances, a security sufficiently similar to a subject intangible asset may be publicly traded, allowing the use of the guideline public company method. One example of such securities is contingent value rights (CVRs) that are tied to the performance of a particular product or technology.~~

~~41.70. 130. Cost Approach~~

~~41.1.70.1. Under the cost approach, the value of an intangible asset is determined based on the replacement cost of a similar asset or an asset providing similar service potential or utility.~~

~~41.2.70.2. Generally, Valuers must comply with paras 60.2 and 60.3 of IVS 105 Valuation Approaches and Methods when determining whether to apply the cost approach should be used as the primary basis for the to the valuation of intangible assets only if the following criteria are met:~~

~~(a) it would be possible for market participants to recreate an intangible asset of similar utility to the subject asset,~~

~~(b) there are no legal protections (eg, patents, trademarks) or other barriers to entry (eg trade secrets) preventing market participants from recreating an asset of similar utility or profiting from such a recreated asset, and~~

~~(c) the intangible 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.~~

~~41.3.70.3. Consistent with these criteria, the cost approach is commonly used for intangible assets such as the following:~~

- ~~(a) acquired third-party software,~~
- ~~(b) internally-developed and internally-used, non-marketable software, or and~~
- ~~(c) assembled workforce.~~

~~41.4.70.4. The cost approach may also be used when no other approach is able to be applied; however, a valuer should make every effort attempt to identify an alternative method before applying the cost approach in situations where the subject asset does not meet the criteria in para 130.2. It is occasionally also used as a supporting or corroborative indication of value when another approach is used as the primary basis for value paras 60.2 and 60.3 of IVS 105 Valuation Approaches and Methods.~~

140. Cost Approach Methods

~~41.5.70.5.~~ There are broadly two main methods that fall under the cost approach: replacement cost and reproduction cost. However, many intangible assets do not have physical form that can be reproduced and assets such as software, which can be reproduced, generally derive value from their function/utility rather than their exact lines of code. As such, the replacement cost is most commonly applied to the valuation of intangible assets.

~~41.6.70.6.~~ The replacement cost method assumes that a ~~market participant~~ would pay no more for the asset than the cost that would be incurred to replace the asset with a substitute of comparable utility or functionality.

~~41.7.70.7.~~ Valuers should consider the following when applying the replacement cost method:

- (a) the direct and indirect costs of replacing the utility of the asset, including labour, materials and overhead,
- (b) whether the *subject* intangible asset is subject to obsolescence. While intangible assets do not become functionally or physically obsolete, they can be subject to economic obsolescence,
- (c) whether it is appropriate to include a profit ~~margin~~mark-up on the included costs. 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 investment. As such, under bases of value (see IVS 104 *Bases of Value*) that assume a hypothetical transaction, it *may* be appropriate to include an assumed profit ~~margin on costs~~mark-up on costs. As noted in IVS 105 *Valuation Approaches and Methods*, costs developed based on estimates from third parties would be presumed to already reflect a profit mark-up, and
- ~~(b)(d)~~ opportunity costs *may* also be included, which ~~recognise that deploying assets in the recreation of reflect costs associated with not having~~ the *subject* intangible asset ~~may have certain associated costs~~in place for some period of time during its creation.

80. Special Considerations for Intangible Assets

~~41.8.~~ 80.1 The following sections address a non-exhaustive list of topics relevant to the valuation of intangible assets.

~~(a) 160.~~ Discount Rates/Rates of Return for Intangible Assets (section 90).

~~(b)~~ Intangible Asset Economic Lives (section 100).

~~(c)~~ Tax Amortisation Benefit (section 110).

42.90. Discount Rates/Rates of Return for Intangible Assets

~~42.1.90.1.~~ Selecting discount rates for intangible assets can be challenging as observable market evidence of discount rates for intangible assets is rare. The selection of a discount rate for an intangible asset generally requires *significant* professional judgment.

42.2.90.2. In selecting a discount rate for an intangible asset, *valuers should* perform an assessment of the risks associated with the *subject* intangible asset and consider observable discount rate benchmarks.

42.3.90.3. When assessing the risks associated with an intangible asset, a *valuer should* consider factors including the following:

- (a) intangible assets often have higher risk than tangible assets,
- (b) if an intangible asset is highly specialised to its current use, it *may* have higher risk than assets with ~~other~~multiple potential uses,
- (c) single intangible assets *may* have more risk than groups of assets (or businesses),
- (d) intangible assets used in risky (sometimes referred to as non-routine) functions *may* have higher risk than intangible assets used in more low-risk or routine activities. For example, intangible assets used in research and development activities *may* be higher risk than those used in delivering existing products or services,
- (e) the life of the asset. Similar to other investments, intangible assets with longer lives are often considered to have higher risk, all else being equal,
- (f) intangible assets with more readily estimable cash flow streams, such as backlog, *may* have lower risk than similar intangible assets with less estimable cash flows, such as customer relationships.

42.4.90.4. Discount rate benchmarks are rates that are observable based on market evidence or observed transactions. The following are some of the benchmark rates that a *valuer should* consider:

- (a) risk-free rates with similar maturities to the life of the *subject* intangible asset,
- (b) cost of debt or borrowing rates with maturities similar to the life of the *subject* intangible asset,
- (c) cost of equity or equity rates or return for ~~market~~ participants for the *subject* intangible asset,
- (d) *weighted* -average cost of capital (WACC) of ~~market~~ participants for the *subject* intangible asset or of the company owning/using the *subject* intangible asset,
- (e) in contexts involving a recent ~~arms-length~~ business acquisition including the *subject* intangible asset, the Internal Rate of Return (IRR) for the transaction *should* be considered, and
- (f) in contexts involving a valuation of all assets of a business, the *valuer should* perform a *weighted* average return on assets (WARA) analysis to confirm reasonableness of selected discount rates.

~~52.100.~~ **170-Intangible Asset Economic Lives**

~~52.1.100.1.~~ An important consideration in the valuation of an intangible asset, particularly under the income approach, is the economic life of the asset. This *may* be a finite period limited by legal, technological, functional or economic factors; other assets *may* have an indefinite life. The economic life of an intangible asset is a different concept than the remaining useful life for accounting or tax purposes.

~~52.2.100.2.~~ Legal, technological, functional and economic factors *must* be considered individually and together in making an assessment of the economic life. For example, a pharmaceutical technology protected by a patent *may* have a remaining legal life of five years before expiry of the patent, but a competitor drug with improved efficacy *may* be expected to reach the market in three years. This might cause the economic life of the patent to be assessed as only three years. In contrast, the expected economic life of the technology could extend beyond the life of the patent if the knowhow associated with the technology would have value in production of a generic drug beyond the expiration of the patent.

~~52.3.100.3.~~ In estimating the economic life of an intangible asset, a *valuer should* also consider the pattern of use or replacement. Certain intangible assets *may* be abruptly replaced when a new, better or cheaper alternative becomes available, while others *may* be replaced slowly over time, such as when a software developer releases a new version of software every year but only replaces a portion of the existing code with each new release.

~~52.4.100.4.~~ For customer-related intangibles, attrition is a key factor in estimating an economic life as well as the cash flows used to value the customer-related intangibles. Attrition applied in the valuation of intangible assets is a quantification of expectations regarding future losses of customers. While it is a forward-looking estimate, attrition is often based on historical observations of attrition.

~~52.5.100.5.~~ There are a number of ways to measure and apply historical attrition:

- (a) a constant rate of loss (as a percentage of prior year balance) over the life of the customer relationships *may* be assumed if customer loss does not appear to be dependent on age of the customer relationship,
- (b) a variable rate of loss *may* be used over the life of the customer relationships if customer loss is dependent on age of ~~customers~~ the customer relationship. In such circumstances, generally younger/new customers are lost at a higher rate than older, more established customer relationships,
- (c) attrition *may* be measured based on either revenue or number of customers/customer count as appropriate, based on the characteristics of the customer group,
- (d) customers *may* need to be segregated into different groups. For example, a company that sells products to distributors and retailers *may* experience different attrition rates for each group. Customers *may* also be segregated based on other factors such as geography, size of customer, and type of product or service purchased, and

- (e) the period used to measure attrition *may* vary depending on circumstances. For example, for a business with monthly subscribers, one month without revenue from a particular customer would indicate a loss of that customer. In contrast, for larger industrial products, a customer might not be considered “lost” unless there has been no sales to that customer for a year or more.

~~52.6.100.6.~~ The application of any attrition factor *should* be consistent with the way attrition was measured. Correct application of attrition factor in first projection year (and therefore all subsequent years) *must* be consistent with form of measurement.

- (a) If attrition is measured based on the number of customers at the beginning-of-period versus end-of-period (typically a year), the attrition factor *should* be applied using a “mid-period” convention for the first projection year (as it is usually assumed that customers were lost throughout the year). For example, if attrition is measured by looking at the number of customers at the beginning of the year (100) versus the number remaining at the end of the year (90), on average the company had 95 customers during that year, assuming they were lost evenly throughout the year. Although the attrition rate could be described as 10%, only half of that *should* be applied in the first year.
- (b) If attrition is measured by analysing year-over-year revenue or customer count, the resulting attrition factor *should* generally be applied without a mid-period adjustment. For example, if attrition is measured by looking at the number of customers that generated revenue in Year 1 (100) versus the number of those same customers that had revenue in Year 2 (90), application would be different even though the attrition rate could again be described as 10%.

~~52.7.100.7.~~ Revenue-based attrition *may* include growth in revenue from existing customers unless adjustments are made. It is generally a best practice to make adjustments to separate growth and attrition in measurement and application.

~~52.8.100.8.~~ It is a best practice for *valuers* to input historical revenue into the model being used and check how closely it predicts actual revenue from existing customers in subsequent years. If attrition has been measured and applied appropriately, the model *should* be reasonably accurate. For example, if estimates of future attrition were developed based on historical attrition observed from 20X0 through 20X5, a *valuer* *should* input the 20X0 customer revenue into the model and check whether it accurately predicts the revenue achieved from existing customers in 20X1, 20X2, etc.

~~62.110.180.~~ Tax Amortisation Benefit (TAB)

~~62.1.110.1.~~ In many tax *jurisdictions*, intangible *assets* can be amortised for tax *purposes*, reducing a taxpayer’s tax burden- and effectively increasing cash flows. Depending on the *purpose of a valuation* and the valuation method used, it *may* be appropriate to include the value of TAB in the value of the intangible.

~~62.2.110.2.~~ If the market or cost approach is used to value an intangible *asset*, the price paid to create or purchase the *asset* would already reflect the ability to amortise the *asset*. However, in the income approach, a TAB needs to be explicitly calculated and included, if appropriate.

~~62.3.110.3.~~ For some *valuation purposes*, such as financial reporting, the appropriate basis of value assumes a hypothetical sale of the *subject* intangible asset. Generally, for those *purposes*, a TAB *should* be included when the income approach is used because a typical ~~market participant~~ would be able to amortise an intangible asset acquired in such a hypothetical transaction. For other *valuation purposes*, the assumed transaction might be of a business or group of *assets*. For those bases of value, it *may* be appropriate to include a TAB only if the transaction would result in a step-up in basis for the intangible *assets*.

~~62.4.110.4.~~ There is some diversity in practice related to the appropriate discount rate to be used in calculating a TAB. ~~Generally,~~ Valuers may use either of the following ~~are acceptable~~:

- (a) a discount rate appropriate for a business utilising the *subject* asset, such as a *weighted* average cost of capital. Proponents of this view believe that, since amortisation can be used to offset the taxes on any income produced by the business, a discount rate appropriate for the business as a whole *should* be used, or
- (b) a discount rate appropriate for the *subject* asset (ie i.e. the one used in the valuation of the *asset*). Proponents of this view believe that the valuation *should* not assume the owner of the *subject* asset has operations and income separate from the *subject* asset and that the discount rate used in the TAB calculation *should* be the same as that used in the valuation of the *subject* asset.

IVS 300 Plant and Equipment

10. Overview~~Introduction~~

- 10.1. The principles contained in the General Standards apply to valuations of plant and equipment. This standard only includes modifications, additional ~~requirements~~principles or specific examples of how the General Standards apply for valuations to which this standard applies.

20. Introduction~~Overview~~

- 20.1. Items of plant and equipment (~~which may~~ sometimes ~~referred to as~~ categorised as a type of personal property) are tangible assets that are usually held by an entity for use in the manufacturing/production or supply of goods or services, for rental by others or for administrative *purposes* and that are expected to be used over a period of time.

- 20.2. For lease of machinery and equipment, the right to use an item of ~~plant~~machinery and equipment (such as a right arising from a lease) would also follow the ~~requirements~~guidance of this ~~chapter~~standard. It must also be noted that the "right to use" an asset could have a different life span than the service life (that takes into consideration of both preventive and predictive maintenance) of the underlying machinery and equipment itself and, in such circumstances, the service life span must be stated.

- 20.3. Assets for which the highest and best use is "in use" as part of a group of assets must be valued using consistent assumptions. Unless the assets belonging to the sub-systems may reasonably be separated independently from its main system, then the sub-systems may be valued separately, having consistent assumptions within the sub-systems. This will also cascade down to sub-sub-systems and so on.

- ~~20.1-20.4.~~ Intangible assets fall outside the classification of plant and equipment assets. However, an intangible *asset may* have an impact on the value of plant and equipment *assets*. For example, the value of patterns and dies is often inextricably linked to associated intellectual property rights. Operating software, technical data, production records and patents are further examples of intangible assets that can have an impact on the value of plant and equipment *assets*, depending on whether or not they are included in the valuation. In such cases, the valuation process will involve consideration of the inclusion of intangible assets and their impact on the valuation of the plant and equipment *assets*. When there is an intangible asset component, the *valuer should* also follow IVS 210 *Intangible Assets*.

- ~~20.2-20.5.~~ A valuation of plant and equipment will normally require consideration of a range of factors relating to the asset itself, its environment and ~~its economic potential~~physical, functional and economic potential. Therefore, all plant and equipment valuers should normally inspect the subject assets to ascertain the condition of the plant and also to determine if the information provided to them is usable and related to the subject assets being valued. Examples of factors that *may* need to be considered under each of these headings include the following:

(a) Asset-related:

1. the asset's technical specification,
2. the remaining ~~physical~~ useful, economic or effective life, considering both preventive and predictive maintenance.
3. the asset's condition, including maintenance history,
4. any functional, physical and technological obsolescence.
- 4-5. if the asset is not valued in its current location, the costs of decommissioning and removal, and any costs associated with the asset's existing in-place location, such as installation and re-commissioning of assets to its optimum status.
6. for machinery and equipment that are used for rental purposes, the lease renewal options and other end-of-lease possibilities.
- 5-7. any potential loss of a complementary asset, e.g. the operational life of a machine may be curtailed by the length of lease on the building in which it is located.
8. additional costs associated with additional equipment, transport, installation and commissioning, etc. and
9. in cases where the historical costs are not available for the machinery and equipment that may reside within a plant during a construction, the valuer may take references from the Engineering, Procurement, Construction ("EPC") contract.

(b) Environment-related:

1. the location in relation to the source of raw material and market for the product. The suitability of a location *may* also have a limited life, e.g. where raw materials are finite or where demand is transitory, and
2. the impact of any environmental or other legislation that either restricts utilisation or imposes additional operating or decommissioning costs.
3. radioactive substances that may be in certain machinery and equipment have a severe impact if not used or disposed of appropriately. This will have a major impact on expense consideration and the environment.
4. toxic wastes which may be chemical in the form of a solid, liquid or gaseous state must be professionally stored or disposed of. This is critical for all industrial manufacturing, and

5. licenses to operate certain machines in certain countries may be restricted.

(c) Economic-related:

1. the actual or potential profitability of the asset based on comparison of ~~running~~operating costs with earnings or potential earnings, (see IVS 200 Business and Business Interests).
2. the demand for the product ~~from~~manufactured by the plant ~~and equipment~~ with regard to both macro- and micro-economic factors ~~that~~ could impact on demand, and
3. the potential for the asset to be put to a more valuable use than the current use- (i.e. highest and best use).

20.6. Valuations of plant and equipment should reflect the impact of all forms of obsolescence on value.

20.3-20.7. To comply with the requirement to identify the asset or liability to be valued in IVS 101 *Scope of Work*, para 20.3-~~(d)~~, to the extent it impacts on value, consideration ~~shall~~must be given to the degree to which the ~~item of plant and equipment-asset~~ is attached to, or integrated with, other assets. For example:

- (a) assets may be permanently attached to the land and could not be removed without substantial demolition of either the asset or any surrounding structure or building,
- (b) an individual machine may be part of an integrated production line where its functionality is dependent upon other assets-₁

(c) an asset may be considered to be classified as a component of the real property (e.g. a Heating, Ventilation and Air Conditioning System (HVAC) system).

In such cases, it will be necessary to clearly define what is to be included or excluded from the valuation. ~~Any necessary assumptions or~~Any special assumptions relating to the availability of any complementary assets ~~shall~~must also be stated, ~~(see also para 20.38 below).~~

20.4-20.8. Plant and equipment connected with the supply or provision of services to a building are often integrated within the building and, once installed, are not separable from it. These items will normally form part of the real property interest. Examples include plant ~~and equipment~~ with the primary function of supplying electricity, gas, heating, cooling or ventilation to a building and equipment such as elevators. If the *purpose of the valuation* requires these items to be valued separately, the scope of work ~~shall~~must include a statement to the effect that the value of these items would normally be included in the real property interest and may not be separately realisable. When different valuation assignments are undertaken to carry out valuations of the real property interest and plant

and equipment assets at the same location, care is necessary to avoid either omissions or double counting.

~~20.5-20.9.~~ Because of the diverse nature and transportability of many items of plant and equipment, additional assumptions will normally be required to describe the ~~situation~~ and circumstances in which the ~~assets~~ are valued. In order to comply with IVS 101 *Scope of Work*, para 20.3-~~4~~(k) these ~~must~~ be considered and included in the scope of work. Examples of assumptions that ~~may~~ be appropriate in different circumstances include:

(a) that the plant and equipment assets are valued as a whole, in place and as part of ~~the an~~ operating business, ~~considered as a going concern,~~

(b) that the plant and equipment assets are valued as a whole, in place but on the assumption that the business is not yet in production,

~~(b)(c)~~ (c) that the plant and equipment assets are valued as a whole, in place but on the assumption that the business is closed, ~~and~~

(d) that the plant and equipment assets are valued as a whole, in place but on the assumption that it is a forced sale (See IVS 104 Bases of Value),

~~(e)(e)~~ (e) that the plant and equipment assets are valued as individual items for removal from their current location.

~~20.6-20.10.~~ In some circumstances, it ~~may~~ be appropriate to report on more than one set of assumptions, ~~e.g.g.~~ in order to illustrate the effect of business closure or cessation of operations on the value of plant and equipment.

~~20.7-20.11.~~ In addition to the minimum requirements in IVS 103 *Reporting*, a valuation report on plant and equipment ~~shall~~must include appropriate references to matters addressed in the scope of work ~~in accordance with paras 20.1 to 20.3 above.~~ The report ~~shall~~must also include comment on the effect on the reported value of any associated tangible or intangible assets excluded from the ~~valuation, e.g. actual or assumed transaction scenario, e.g.~~ operating software for a machine or a continued right to occupy the land on which the item is situated.

~~20.8-20.12.~~ Valuations of plant and equipment are often required for different *purposes* including financial reporting, leasing, secured lending, ~~sales of real property disposal,~~ taxation, litigation, and insolvency proceedings ~~and financial reporting.~~

30. **Bases of Value**

30.1. In accordance with IVS 104 *Bases of Value*, a *valuer must* select the appropriate basis(es) of value when valuing plant and equipment.

30.2. Using the appropriate basis(es) of value and associated premise of value (see IVS 104 *Bases of Value*, sections 140–180) is particularly crucial in the valuation of plant and equipment because differences in value can be pronounced, depending on whether an item

of plant and equipment is valued under an “in use” premise, orderly liquidation, or forced liquidation. (see IVS 104 Bases of Value, para 80.1). The value of ~~highly specialised~~ most plant and equipment is particularly sensitive to different premises of value.

- 30.3. An example of forced liquidation conditions is where the assets have to be removed from a property in a timeframe that precludes proper marketing because a lease of the property is being terminated. The impact of such circumstances on value needs careful consideration. In order to advise on the value likely to be realised, it will be necessary to consider any alternatives to a sale from the current location, such as the practicality and cost of removing the items to another location for disposal within the available time limit, and any diminution in value due to moving the item from its working location.

40. Valuation Approaches and Methods

- 40.1. The three principal valuation approaches described in the IVS ~~can~~ may all be applied to the valuation of plant and equipment assets depending on the nature of the assets, the information available, and the facts and circumstances surrounding the valuation.

50. Market Approach

- 50.1. For classes of plant and equipment that are homogenous, e.g. motor vehicles and certain types of office equipment or industrial machinery, the market approach is commonly used as there ~~is~~ may be sufficient data of recent sales of similar assets. However, many types of plant and equipment are specialised and where direct sales evidence for such items will not be available, ~~necessitating the use of care~~ must be exercised in offering an income or cost approach opinion of value when available market data is poor or non-existent. In such circumstances it may be appropriate to adopt either the income approach or the cost approach to the valuation.

60. Income Approach

- 60.1. The income approach to the valuation of plant and equipment can be used where specific cash flows can be identified for the asset or a group of complementary assets, e.g. where a group of assets forming a process plant is operating to produce a marketable product. However, some of the cash flows may be attributable to intangible assets and difficult to separate from the cash flow contribution of the plant and equipment. Use of the income approach is not normally practical for many individual items of plant or equipment; however, it can be utilised in assessing the existence and quantum of economic obsolescence for an asset or asset group.
- 60.2. When an income approach is used to value plant and equipment, the valuation must consider the cash flows expected to be generated over the life of the asset(s) as well as the value of the asset at the end of its life. ~~The value of the asset at the end of its life might be an asset (sometimes called salvage value) or a liability (sometimes called an asset retirement obligation or ARO)~~ Care must be exercised when plant and equipment is valued on an income approach to ensure that elements of value relating to intangible assets, goodwill and other contributory assets is excluded (see IVS 210 Intangible Assets).

70. Cost Approach

- 70.1. The cost approach is commonly adopted for plant and equipment, particularly in the case of individual assets that are specialised. ~~This or special-use facilities. The first step is done by calculating the depreciated replacement cost of the asset to estimate~~ the cost to a market participant of replacing the subject asset ~~is estimated by reference to the lower of either reproduction or replacement cost.~~ The replacement cost is the cost of obtaining an alternative asset of equivalent utility; this can either be a modern equivalent providing the same functionality or the cost of reproducing an exact replica of the subject asset. ~~The latter is only appropriate where the cost of a replica would be less than the cost of a modern equivalent or where the utility offered by the subject asset could only be provided by a replica rather than a modern equivalent.~~ After concluding on a replacement cost, the value *should* be adjusted to reflect the impact on value of physical, functional, technological and economic obsolescence on value. In any event, adjustments made to any particular replacement cost *should* be designed to produce the same cost as the modern equivalent asset from an output and utility point of view.
- 70.2. An entity's actual costs incurred in the acquisition or construction ~~creation~~ of an asset may be appropriate for use as the replacement cost of an asset under certain circumstances. However, prior to using such historical cost information, the valuer *should* consider the following:
- (a) Timing of the historical expenditures: An entity's actual costs *may* not be relevant, or may need to be adjusted for inflation/indexation to an equivalent as of the valuation date, if they were not incurred recently due to changes in market prices, inflation/deflation, or other factors.
 - (b) The basis of value: ~~Particularly for bases of value that assume a transaction between~~ Care *must* be taken when adopting a particular market participant's own costings or profit margins, as they *may* not represent what typical market participants, ~~an~~ might have paid. The valuer *must* also consider the possibility that the entity's ~~own~~ costs incurred *may* not be ~~an~~ historical in nature due to prior purchase accounting or the purchase of used plant and equipment assets. In any case, historical costs *must* be trended using appropriate measure of value. For example, an asset that is only or primarily useful to a particular entity may have very little value to market participants. In addition, for some bases of value, some amount of profit margin on costs incurred may be appropriate. indices.
 - (c) Specific costs included: A valuer *must* understand ~~consider~~ all ~~of the~~ significant costs that have been included and whether those costs contribute to the value of the asset and for some bases of value, some amount of profit margin on costs incurred may be appropriate.
 - ~~(e)~~(d) Non-market components: Any costs, discounts or rebates that would not be incurred by, or available to, typical market participants *should* be excluded.

70.3. Having established the replacement cost, deductions *must* be made to reflect the physical, functional, technological and economic obsolescence ~~of the subject asset when compared to the alternative asset that could be acquired at the replacement cost~~ as applicable (see IVS 105 *Valuation Approaches and Methods*, section 9080).

~~10.1. One way to quantify functional and economic obsolescence is to use the cost-to-capacity method depending on the cause of the obsolescence.~~

Cost-to-Capacity Method

70.4. Under the cost-to-capacity method, the replacement cost of an asset with an actual or required capacity can be determined by reference to the cost of a similar asset with a different capacity.

70.5. The cost-to-capacity method is generally used in one of two ways:

- (a) to estimate the replacement cost for an asset or assets with one capacity where the replacement costs of an asset or assets with a different capacity are known, (such as when the capacity of two subject assets could be replaced by a single asset with a known cost), or
- (b) to estimate the replacement cost for a modern equivalent asset with capacity that matches foreseeable demand where the subject asset has excess capacity (as a means of measuring the penalty for the lack of utility to be applied as part of an economic obsolescence adjustment).

70.6. This method may only be used as a check method unless there is an existence of an exact comparison plant of the same designed capacity that resides within the same geographical area.

70.7. It is noted that the relationship between cost and capacity is often not linear, so some form of exponential adjustment may also be required.

80. Special Considerations for Plant and Equipment

80.1. ~~Section 90 Financing Arrangements addresses~~The following sections address a non-exhaustive list of topics relevant to the valuation of plant and equipment.

(a) Financing Arrangements (section 90)

90. Financing Arrangements

90.1. Generally, the value of an asset is independent of how it is financed. However, in some circumstances the way items of plant and equipment are financed and the stability of that financing *may* need to be considered in valuation.

90.2. An item of plant and equipment *may* be subject to a leasing or financing arrangement. Accordingly, the asset cannot be sold without the lender or lessor being paid any balance outstanding under the financing arrangement. This payment *may or may not* exceed the

unencumbered value of the item- to the extent unusual/excessive for the industry. Depending upon the *purpose of the valuation*, it may be appropriate to identify any encumbered assets and to report their values separately from the unencumbered assets.

- 90.3. Items of plant and equipment that are subject to operating leases are the property of third parties and are therefore not included in a valuation of the assets of the lessee-, subject to the lease meeting certain conditions. However, such assets may need to be recorded as their presence may impact on the value of owned assets used in association. In any event, prior to undertaking a valuation, the valuer should establish (in conjunction with client and/or advisors) whether assets are subject to operating lease, finance lease or loan, or other secured lending. The conclusion on this regard and wider purpose of the valuation will then dictate the appropriate basis and valuation methodology.

IVS 400 Real Property Interests

10. OverviewRequirements

- 10.1. The principles contained in the General Standards apply to valuations of real property interests. This standard contains additional requirements for valuations of real property interests.

20. IntroductionOverview

20.1. Property interests are normally defined by state or the law of individual jurisdictions and are often regulated by national or local legislation. Before undertaking a valuation of a real property interest, a valuer must understand the relevant legal framework that affects the interest being valued.

20.1.20.2. A real property interest is a right of ownership, control, use or occupation of land and buildings. There are three basemain types of interest:

- (a) the superior interest in any defined area of land. The owner of this interest has an absolute right of possession and control of the land and any buildings upon it in perpetuity, subject only to any subordinate interests and any statutory or other legally enforceable constraints;
- (b) a subordinate interest that normally gives the holder rights of exclusive possession and control of a defined area of land or buildings for a defined period, e.g. under the terms of a lease contract; and/or
- (c) a right to use land or buildings but without a right of exclusive possession or control, e.g. a right to pass over land or to use it only for a specified activity.

~~20.2. Interests in real property may be held jointly, where a number of parties have the right to the share the whole interest, or severally, where each party has a defined proportion of the whole interest.~~

20.3. Intangible assets fall outside the classification of real property assets. However, an intangible asset may be associated with, and have a material impact on, the value of real property assets. It is therefore essential to be clear in the scope of work precisely what the valuation assignment is to include or exclude. For example, the valuation of a hotel can be inextricably linked to the hotel brand. In such cases, the valuation process will involve consideration of the inclusion of intangible assets and their impact on the valuation of the real property and plant and equipment assets. When there is an intangible asset component, valuer should also follow IVS 210 Intangible Assets.

20.2.20.4. Although different words and terms are used to describe these types of real property interest in different statesjurisdictions, the concepts of an unlimited absolute right of ownership, an exclusive interest for a limited period or a non-exclusive right for a specified purpose are common to most jurisdictions. The immovability of land and buildings means that it is the right that a party holds that is transferred in an exchange, not the physical land and buildings. The value, therefore, attaches to the propertylegal interest rather than to the physical land and buildings.

~~20.3.20.5.~~ ~~20.4.~~—To comply with the requirement to identify the asset to be valued in IVS 101 *Scope of Work*, para ~~2(20.3.)~~(d) the following matters ~~shall~~must be included:

- (a) a description of the real property interest to be valued, and
- (b) identification of any superior or subordinate interests that affect the interest to be valued.

~~20.4.20.6.~~ ~~20.5.~~—To comply with the requirements to state the extent of the investigation and the nature and source of the information to be relied upon in IVS 101 *Scope of Work*, para 20.3~~(j)~~ and IVS 102 *Investigations and Compliance*, the following matters ~~shall~~must be considered:

- (a) the evidence required to verify the real property interest and any relevant related interests,
- (b) the extent of any inspection,
- (c) responsibility for information on the site area and any building floor areas,
- (d) responsibility for confirming the specification and condition of any building,
- (e) the extent of investigation into the nature, specification and adequacy of services,
- (f) the existence of any information on ground and foundation conditions,
- (g) responsibility for the identification of actual or potential environmental risks,
- (h) legal permissions or restrictions on the use of the property and any buildings, as well as any expected or potential changes to legal permissions and restrictions.

~~20.5.20.7.~~ ~~20.6.~~—Typical examples of special assumptions that *may* need to be agreed and confirmed in order to comply with IVS 101 *Scope of Work*, para 20.3~~(k)~~ include:

- (a) that a defined physical change had occurred, e.g. a proposed building is valued as if complete at the valuation date,
- (b) that there had been a change in the status of the property, e.g. a vacant building had been leased or a leased building had become vacant at the valuation date.

(c) 20.7.—that the interest is being valued without taking into account other existing interests, and

(d) that the property is free from contamination or other environmental risks.

~~20.6.20.8.~~ Valuations of real property interests are often required for different *purposes* including secured lending, sales ~~of real property~~, taxation, litigation, compensation, insolvency proceedings and financial reporting.

30. **Baseis of Value**

- 30.1. In accordance with IVS 104 *Bases of Value*, a *valuer must* select the appropriate basis(es) of value when valuing real property interests.

~~30.2. Understanding the purpose of a real property interest valuation and the appropriate basis(es) of value is critical to the identification of the specific asset(s) that need to be valued. For example, for many purposes and bases of value, a piece of real property may be valued and reported as a single unit of account including land, buildings, and leases in place, net of any associated liabilities (such as environmental liabilities). However, for other purposes and bases of value, a valuer may be required to separately identify and value such items (for example, when the value of a building is needed for depreciation purposes or when liabilities need to be recorded separately).~~

- 30.2. ~~30.3.~~ Under most bases of value, a *valuer must* consider the highest and best use of the real property, which *may* differ from its current use (see IVS 104 *Bases of Value*, para 30.3). This assessment is particularly important to real property interests which can be ~~transitioned~~changed from one use to another or that have development potential.

40. Valuation Approaches and Methods

- 40.1. The three ~~principal~~ valuation approaches described in the IVS 105 *Valuation Approaches and Methods* can all be applicable for the valuation of a real property interest.
- 40.2. When selecting an approach and method, in addition to the requirements of this ~~chapter~~standard, a *valuer must* follow the requirements of IVS 105 *Valuation Approaches and Methods*, including para 10.3 and 10.4.

50. Market Approaches

- 50.1. Property interests are generally heterogeneous (~~ie i.e.~~ with different characteristics). Even if the land and buildings have identical physical characteristics to others being exchanged in the market, the location will be different. Notwithstanding these dissimilarities, the market approach is commonly applied for the valuation of real property interests.

- 50.2. In order to compare the subject of the valuation with the price of other real property interests ~~that have been recently exchanged or that may be currently available in the market, it is usual to, valuers should~~ adopt a suitable unit of comparison, generally accepted and appropriate units of comparison that are considered by participants, dependent upon the type of asset being valued. Units of comparison that are commonly used include:

- (a) price per square metre (or per square foot) of a building or per hectare for land,
- (b) price per room, and
- (c) price per unit of output, e.g. crop yields.

50.3. A unit of comparison is only useful when it is consistently selected and applied to the *subject* property and the comparable properties in each analysis. To the extent possible, any unit of comparison used *should* be one commonly used by *participants* in the relevant market.

50.4. The reliance that can be applied to any comparable price data in the valuation process is determined by comparing various characteristics of the property and transaction from which the data was derived with the property being valued. Differences between the following *should* be considered in accordance with IVS 105 *Valuation Approaches and Methods*, para 30.8. Specific differences that ~~may need to~~*should* be considered in valuing real property interests include, but are not limited to:

- (a) the type of interest providing the price evidence and the type of interest being valued,
- (b) the respective locations,
- (c) the respective quality of the land or the age and specification of the buildings,
- (d) the permitted use or zoning at each property,
- (e) the circumstances under which the price was determined and the basis of value required,
- (f) the effective date of the price evidence and the valuation date, and
- (g) 60.——market conditions at the time of the relevant transactions and how they differ from conditions at the valuation date.

51.60. Income Approaches

~~51.4.60.1.~~ Various methods are used to indicate value under the general heading of the income approach, all of which share the common characteristic that the value is based upon an actual or estimated income that either is, or could be, generated by an owner of the interest. In the case of an investment property, that income could be in the form of rent (see paras 90.1 ~~through~~ 90.3); in an owner-occupied building, it could be an assumed rent (or rent saved) based on what it would cost the owner to lease equivalent space.

~~60.2.——As noted in IVS 105 *Valuation Approaches and Methods* all income approach methods are essentially a discounted cash flow, but for real estate the two most common income approach methods are described in IVS 105 *Valuation Approaches and Methods*:~~

- ~~(a)——Income capitalisation method.~~
- ~~(b)——Traditional discounted cash flow method.~~

60.2. 60.3.——For some real property interests, the income-generating ability of the property is closely tied to a particular use or business/trading activity (for example, hotels, golf courses, etc.). Where a building is suitable for only a particular type of

trading activity, the income is often related to the actual or potential cash flows that would accrue to the owner of that building from the trading activity. The use of a property's trading potential to indicate its value is often referred to as the "profits method".

51.2.60.3. When the income used in the income approach represents cash flow from a business/trading activity (rather than cash flow related to rent, maintenance and other real property-specific costs), the *valuer should* also comply as appropriate with the requirements of IVS 200 ~~on the Valuation of Business and Business Interests~~ and, where applicable, IVS 210 ~~on Intangible Assets~~.

~~60.4. The use of a property's trading potential to indicate its value is often referred to as the "profits method".~~

~~60.5. The income capitalisation method (profits method) referred to in IVS 105- Valuation Approaches and Methods, section 50.10 cannot be reliably used where the income is expected to change in future periods to an extent greater than that generally expected in the market or where a more sophisticated analysis of risk is required.~~

51.3.60.4. ~~60.6.~~ For real property interests, various forms of discounted cash flow models can may be used. These vary ~~significantly~~ in detail but share the basic characteristic that the cash flow for a defined future period is adjusted to a present ~~day~~ value using a discount rate. The sum of the present day values for the individual periods represents an estimate of the capital value. ~~As in the case of the all risks yield method,~~ The discount rate in a discounted cash flow model will be based on the time cost of money and the risks and rewards attaching to of the income stream in question.

51.4.60.5. ~~60.7.~~ Further information on the derivation of discount rates is included in IVS 105 *Valuation Approaches and Methods*, paras 60.09 ~~to~~ 60.11. The development of a yield or discount rate will should be influenced by the objective of the valuation. For example:

- (a) if the objective of the valuation is to establish the value to a particular owner or potential owner based on their own investment criteria, the rate used *may* reflect their required rate of return or their *weighted* average cost of capital ~~-, and~~
- (b) if the objective of the valuation is to establish the market value, the discount rate *may* be derived from observation of the returns implicit in the price paid for real property interests traded in the market between ~~market participants~~ or from hypothetical ~~market participants'~~ required rates or return ~~or weighted average cost of capital.~~

~~60.8. For real estate the appropriate discount rate can be determined from analysis of the rates implicit in transactions in the market.-~~ When a discount rate is based on an analysis of market transactions, *valuers should* also follow the guidance contained in IVS 105 *Valuation Approaches and Methods*, paras 30.7 and 30.8.

~~51.5-60.6.~~ ~~60.9.~~—An appropriate discount rate *may* also be built up from a typical “risk free” return adjusted for the additional risks and opportunities specific to the particular real property interest.

~~60.10.~~—The appropriate yield or discount rate will also depend on whether the income inputs or cash flows used are based on current levels or whether projections have been made to reflect anticipated future inflation or deflation.

~~61.70.~~ —Cost Approach

~~61.1-70.1.~~ In applying the cost approach, valuers ~~should~~must follow the guidance contained in IVS 105 *Valuation Approaches and Methods*, paras 80.1 ~~to~~ 80.98.

~~61.2-70.2.~~ This approach is generally applied to the valuation of real property interests through the depreciated replacement cost method.

~~61.3-70.3.~~ It ~~is normally~~may be used as the primary approach when there is either no evidence of transaction prices for similar property or no identifiable actual or notional income stream that would accrue to the owner of the relevant interest.

~~61.4-70.4.~~ In some cases, even when evidence of market transaction prices or an identifiable income stream is available, the cost approach *may* be used as a secondary or corroborating approach.

~~70.5.~~—The cost approach is commonly used for the valuation of specialised property, which is property that is rarely if ever sold in the market, except by way of sale of the business or entity of which it is part.

~~61.5-70.5.~~ ~~70.6.~~—The first step requires a replacement cost to be calculated. This is normally the cost of replacing the property with a modern equivalent at the relevant valuation date. An exception is where an equivalent property would need to be a replica of the *subject* property in order to provide a ~~market~~participant with the same utility, in which case the replacement cost would be that of reproducing or replicating the *subject* building rather than replacing it with a modern equivalent. The replacement cost ~~needs to~~must reflect all incidental costs, as appropriate, such as the value of the land, infrastructure, design fees ~~and~~, finance costs and developer profit that would be incurred by a ~~market~~ *participant* in creating an equivalent asset.

~~61.6-70.6.~~ ~~70.7.~~—The cost of the modern equivalent ~~is~~must then, as appropriate, be subject to adjustment for physical, functional, technological and economic obsolescence (see IVS 105 *Valuation Approaches and Methods*, section ~~9080~~). The objective of ~~the an~~ adjustment for obsolescence is to estimate how much less valuable the *subject* property might, or would be, to a potential buyer than the modern equivalent. Obsolescence considers the physical condition, functionality and economic utility of the *subject* property compared to the modern equivalent.

71.80. Special Considerations for Real Property Interests

71.1.80.1. The following sections address a non-exhaustive list of topics relevant to the valuation of real property interests.

- (a) Hierarchy of Interests (section 90)).
- (b) Rent (section 100)).

81.90. —Hierarchy of Interests

81.1.90.1. The different types of real property interests are not mutually exclusive. For example, a superior interest *may* be subject to one or more subordinate interests. The owner of the absolute interest *may* grant a lease interest in respect of part or all of his interest. Lease interests granted directly by the owner of the absolute interest are “head lease” interests. Unless prohibited by the terms of the lease contract, the holder of a head lease interest can grant a lease of part or all of that interest to a third party, which is known as a sub-lease interest. A sub-lease interest will always be shorter than, or coterminous with, the head lease out of which it is created, even if only by one day.

81.2.90.2. These property interests will have their own characteristics, as illustrated in the following examples:

- (a) Although an absolute interest provides outright ownership in perpetuity, it *may* be subject to the effect of subordinate interests. These subordinate interests could include leases, restrictions imposed by a previous owner or restrictions imposed by statute.
- (b) A lease interest will be for a defined period, at the end of which the property reverts to the holder of the superior interest out of which it was created. The lease contract will normally impose obligations on the lessee, e.g. the payment of rent and other expenses. It *may* also impose conditions or restrictions, such as in the way the property *may* be used or on any transfer of the interest to a third party.
- (c) A right of use *may* be held in perpetuity or *may* be for a defined period. The right *may* be dependent on the holder making payments or complying with certain other conditions.

81.3.90.3. When valuing a real property interest it is therefore necessary to identify the nature of the rights accruing to the holder of that interest and reflect any constraints or encumbrances imposed by the existence of other interests in the same property. The sum of the individual values of various different interests in the same property will frequently differ from the value of the unencumbered superior interest.

~~90.4. —Property interests are normally defined by state law and are often regulated by national or local legislation. Before undertaking a valuation of a real property interest, an understanding of the relevant legal framework that affects the interest being valued is essential.~~

94.100. Rent

94.1.100.1. Market rent is addressed as a basis of value in IVS 104 *Bases of Value*.

94.2.100.2. When valuing either a superior interest that is subject to a lease or an interest created by a lease, ~~it is necessary to~~ *valuers must* consider the contract rent and, in cases where it is different, the market rent.

94.3.100.3. The contract rent is the rent payable under the terms of an actual lease. It *may* be fixed for the duration of the lease or variable. The frequency and basis of calculating variations in the rent will be set out in the lease and *must* be identified and understood in order to establish the total benefits accruing to the lessor and the liability of the lessee.

IVS 410 Development Property

10. Overview~~Introduction~~

- 10.1. The principles contained in the General Standards IVS 101 to IVS 105 apply to valuations of development property. This standard only includes modifications, additional requirements or specific examples of how the General Standards apply for valuations to which this standard applies. Valuations of development property *must* also follow IVS 400 *Real Property Interests*.

20. Introduction~~Overview~~

- 20.1. ~~A Development Property can generally be defined as any property, which has development potential and where its existing use value is below the market value.~~ In the context of this ~~chapter~~standard, development properties are defined as interests where redevelopment delivers the highest and best use, or where improvements are either being contemplated or are in progress at the valuation date and include:

- (a) the construction of buildings ~~on previously undeveloped land~~,
- (b) previously undeveloped land which is being provided with infrastructure,
- (c) the redevelopment of previously developed land,
- (d) the improvement or alteration of existing buildings or structures,
- (e) land allocated for development in a statutory plan, and
- (f) land allocated for a higher value uses or higher density in a statutory plan.

- 20.2. Valuations of development property *may* be required for different ~~purposes including~~. It is the valuer's responsibility to understand the purpose of a valuation. A non-exhaustive list of examples of circumstances that *may* require a development valuation is provided below:

- (a) when establishing whether proposed projects are ~~economically viable~~financially feasible,

• ~~loan security,~~

• ~~acquisition,~~

• ~~taxation,~~

• ~~litigation, and~~

• ~~financial reporting.~~

- (b) 20.3.—as part of general consulting and transactional support engagements for acquisition and loan security.

(c) for tax reporting purposes, development valuations are frequently needed for ad valorem taxation analyses.

(d) for litigation requiring valuation analysis in circumstances such as shareholder disputes and damage calculations.

(e) for financial reporting purposes, valuation of a development property is often required in connection with accounting for business combinations, asset acquisitions and sales, and impairment analysis, and

(f) for other statutory or legal events that may require the valuation of development property such as compulsory purchases.

20.3. When valuing development property, *valuers should*~~*must*~~ follow the applicable standard for that type of asset or liability (~~IVS General Standards (IVS 101, 102, 103, 104 and 105), for example, IVS 400 for real property, etc.)~~ Real Property Interests).

~~20.4. In addition to the requirements of IVS 103 Reporting, valuations of development property should include additional information. Whilst the following is not intended as an exhaustive list and regard should always be had to the purpose for which the valuation is prepared, a valuation report on a development property should also contain the following where relevant and appropriate:~~

~~(a) confirmation of the current status of the development property, eg its physical properties and current use and description of the stage of planning consent or development reached,~~

~~(b) a description of the project,~~

~~(c) the estimated time and cost to complete,~~

~~(d) identification of and, where possible, quantification of the remaining risks associated with the project, distinguishing construction risks from risks associated with ownership and marketing of the completed project,~~

~~(e) an appropriate level of detail on the key inputs to the valuation and the assumptions made in determining those inputs.~~

~~20.5. Where any of the above information is either provided by, The residual value or based on information provided by, a party other than the valuer, see IVS 101 Scope of Work, para 20.3 and IVS 103 Reporting.~~

20.4. ~~20.6.~~ The~~land~~ value of a development property can be very sensitive to changes in either assumptions or projections concerning the value of income or revenue to be derived from the completed project or in any of the development costs that will be incurred in completing the project. This remains the case regardless of the method or methods used or however diligently the various inputs are researched ~~on the valuation date. Depending on~~

~~the purpose for which the valuation is required, it may be necessary to highlight any material uncertainty in the valuation in relation to the valuation date.~~

- 20.5. ~~20.7.~~ This sensitivity also applies to the impact of future significant changes in either the costs of the project or the value on completion ~~on~~ of the current value. If the valuation is required for a *purpose* where future significant changes in value over the duration of a construction project *may* be of concern to the user (e.g. where the valuation is for loan security or to establish a project's viability), ~~it may be appropriate to the~~ valuer must highlight the potentially disproportionate effect of possible changes in either the construction costs or end value on the profitability of the project and the value of the partially completed property. A sensitivity analysis ~~is sometimes may be~~ useful for this *purpose* provided it is accompanied ~~with~~by a suitable explanation.

30. **Baseis of Value**

- 30.1. In accordance with IVS 104 *Bases of Value*, a *valuer must* select the appropriate basis(es) of value when valuing development property.
- 30.2. The valuation of development property often includes a *significant* number of assumptions and special assumptions regarding the condition or status of the building project when complete. For example, special assumptions *may* be made that the development has been completed or that the property is fully leased. As required by IVS 101 *Scope of Work*, *significant* assumptions and special assumptions used in a valuation *must* be communicated to all parties to the valuation engagement—~~and must be agreed and confirmed in the scope of work. Particular care may also be required where reliance may be placed by third parties on the valuation outcome.~~
- 30.3. Frequently it will be either impracticable or impossible to verify every feature of a development property which could have an impact on potential future development, such as where ground conditions have yet to be investigated. When this is the case, it *may* be appropriate to make assumptions (~~e.g.~~ that there are no abnormal ground conditions that would result in *significantly* increased costs). If this was an assumption that a market participant would not make, it would need to be presented as a special assumption.
- 30.4. In situations where there has been a change in the market since a project was originally conceived, a project under construction *may* no longer represent the highest and best use of the land. In such cases, the costs to complete the project originally proposed *may* be irrelevant as a buyer in the market would either demolish any partially completed structures or adapt them for an alternative project. The value of the development property under construction would need to reflect the current value of the alternative project and the costs and risks associated with completing that project.
- 30.5. For some development properties, the property is closely tied to a particular use or business/trading activity or a special assumption is made that the completed property ~~represents an operating business will trade at specified and sustainable levels.~~ In such cases, the *valuer should must, as appropriate*, also comply with the requirements of IVS 200

~~on the Valuation of Business and Business Interests~~ and, where applicable, IVS 210 ~~on Intangible Assets~~.

40. Valuation Approaches and Methods

40.1. The three principal valuation approaches described in IVS 105 *Valuation Approaches and Methods* ~~can may~~ all be applicable for the valuation of a real property interest. ~~However,~~ There are two ~~primary methods used~~ main approaches in relation to the valuation ~~of the~~ development property. These are:-

- (a) the market approach, (see section 50 below), and
- (b) ~~a hybrid of all three approaches often referred to as the “residual approach” method,~~ which is a hybrid of the market approach, the income approach and the cost approach (see sections 40-70 below). This is based on the completed “gross development value” and ~~then deducting the deduction of~~ development costs and the developer’s return to arrive at the residual value of the development property (see section 90 below).

40.2. When selecting an approach and method, in addition to the requirements of this ~~chapter standard~~, a *valuer must* follow the requirements of IVS 105 *Valuation Approaches and Methods*, including para 10.3.

40.3. The valuation approach to be used will depend on the required basis of value as well as specific facts and circumstances, e.g. the level of recent transactions, the stage of development of the project and movements ~~in~~ in property markets since the project started, and *should* always be that which is most appropriate to those circumstances. Therefore, the exercise of judgement in the selection of the most suitable approach is critical.

50. Market Approach

50.1. Some types of development property such as warehouses can be sufficiently homogenous and frequently exchanged in an active market for there to be sufficient data from recent sales to use as a direct comparison where a valuation is required. ~~An example could be relatively small plots of land suitable for similar types of building with all necessary off site infrastructure in place.~~

50.2. In most markets, the market approach ~~has limited application~~ may have limitations for larger or more complex development property, or smaller properties where the proposed improvements are heterogeneous. This is because the number and extent of the variables between different properties make ~~comparisons unreliable. Examples of variables which can render the market approach unreliable for development properties that may appear superficially similar include differences in what may be legally built, different ground conditions, different on or offsite infrastructure requirements and differences in the availability of services.~~ direct comparisons of all variables ~~inapplicable though correctly adjusted market evidence~~ (See IVS 105 *Valuation Approaches and Methods*, section 20.5) may be used as the basis for a number of variables within the valuation.

- 50.3. For development property where work on the improvements has commenced but is incomplete, the application of the market approach is even more problematic. Such properties are rarely transferred between ~~market participants~~ in their partially-completed state, except as either part of a transfer of the owning entity or where the seller is either insolvent or facing insolvency and therefore unable to complete the project. Even in the unlikely event of there being evidence of a transfer of another partially-completed development property close to the valuation date, the degree to which work has been completed would almost certainly differ, even if the properties were otherwise similar.
- 50.4. The market approach *may* also be appropriate for establishing the value of a completed property as one of the inputs required under the residual method, which is explained more fully in the section on the residual method (section 90 below).

60. Income Approach

~~60.1. The market value of a development property will reflect the expectations of market participants of the value of the property when complete, less deductions for the costs that they will incur to complete the project with appropriate allowances for profit and risk. These expectations can be reflected in an income approach that allows the anticipated cash outflows and inflows over the duration of the project to be modelled in order to give an indication of the present value by applying an appropriate discount rate to reflect the anticipated timing and risk of those cash flows in relation to the valuation date.~~

~~60.1.~~ 60.2. Establishing the residual value of a development property *may* involve the use of a cash flow model in some markets.

~~60.1-60.2.~~ The income approach *may* also be appropriate for establishing the value of a completed property as one of the inputs required under the residual method, which is explained more fully in the section on the residual method (see section 90 below).

~~60.3. A valuation of development property may be undertaken using either a nominal or a real cash flow model. In either model, the objective is to estimate the value on the special assumption that the property is complete, from which appropriate deductions are then made in order to estimate the value of the property in its present condition. The more appropriate of these alternatives will be the one prevailing in the market for the class of property on the valuation date. Inputs from one model should not be used in the other, and the report should make clear which approach is being adopted.~~

70. Cost Approach

70.1. Establishing the development costs is a key component of the residual approach (see para 90.5).

~~70.1-70.2.~~ The cost approach *may* also exclusively be ~~more relevant than other approaches used~~ as a means of indicating the value of development property ~~where the~~ such as a proposed development ~~is of~~ a building or other structure for which there is no active market on completion ~~or which will generate no income or benefits in lieu of income.~~

~~70.2.~~70.3. The cost approach is based on the economic principle that a buyer will pay no more for an asset than the cost of it obtaining an asset of equal utility. To apply this principle to development property ~~it is necessary to, the valuer must~~ consider the cost that a prospective buyer would incur in acquiring a similar asset with the potential to earn a similar profit from development as could be obtained from development of the *subject* property. However, unless there are unusual circumstances affecting the *subject* development property, the process of analysing a proposed development and determining the anticipated costs for a hypothetical alternative would effectively replicate either the market approach or the residual method as described above, which can be applied directly to the *subject* property.

~~70.3.~~70.4. Another difficulty in applying the cost approach to development property is in determining the profit level, which is its “utility” to a prospective buyer. Although a developer *may* have a target profit at the commencement of a project, the actual profit is normally determined by the value of the property at completion. Moreover, as the property approaches completion, some of the risks associated with development are likely to reduce, which *may* impact on the required return of a buyer. Unless a fixed price has been agreed, profit is not determined by the costs incurred in acquiring the land and undertaking the improvements. ~~Consequently, unless the property interest being valued is subject to a sale agreement on completion that guarantees a return on cost that is either fixed or defined within specified limits, an approach that relies only on the cost of completing the development plus a target profit is unlikely to give as reliable an indication of the current value of that interest as the residual approach.~~

80. Special Considerations for a Development Property

80.1. The following sections address a non-exhaustive list of topics relevant to the valuation of development property:

- (a) Residual Method (section 90~~)).~~
- (b) Existing Asset (section 100~~)).~~
- (c) Special Considerations for Financial Reporting (section 110~~)).~~
- (d) Special Considerations for Secured Lending (section 120~~)).~~

90. Residual Method

90.1. The residual method is so called because ~~the current value of the development property is indicated by it indicates~~ the residual amount after deducting all known or anticipated costs required to complete the development from the anticipated value ~~following completion. Many of the project when completed. This is known as the~~ residual value ~~models can be adapted so that.~~ The residual ~~amount relates to other elements of the project, for example value, derived from the estimated profit that a project will return for a given land cost~~ residual method, *may* or ~~construction cost. However, this chapter only relates to its use to indicate~~ *may not equate to* the market value of the development property: in its current condition.

90.2. The residual value can be highly sensitive to relatively small changes in the forecast cash flows and the practitioner *should* provide separate sensitivity analyses for each *significant* factor.

90.2.90.3. Caution is required in the use of this method because of the sensitivity of the result to changes in many of the inputs, which *may* not be precisely known on the valuation date, and therefore have to be estimated ~~and may be based on~~ with the use of assumptions.

~~90.3. The residual value can be highly sensitive to relatively small changes in the forecast cash flows. For example, a relatively minor change in either the anticipated value on completion, the costs of completing the project or the time required to complete the project has a much greater relative impact as a percentage of the current value. The reliability of this method is therefore dependent upon the quality of the information available on the timing and costs that are anticipated and the accuracy with which the value of the completed project can be estimated. As the residual value of land can vary greatly when different cash flow assumptions are used, land values derived by this method should be checked against a market approach wherever comparable data is available.~~

90.3.90.4. The models used to apply the residual method vary considerably in complexity and sophistication, with the more complex models allowing for greater granularity of inputs, multiple development phases and sophisticated analytical tools. The most suitable model will depend on the size, duration and complexity of the proposed development.

90.4.90.5. In applying the residual method, a *valuer should* consider and evaluate the reasonableness and reliability of the following:

- (a) the source of information on any proposed building or structure, ~~e.g.~~ any plans and specification that are to be relied on in the valuation, and
- (b) any source of information on the construction and other costs that will be incurred in completing the project and which will be used in the valuation.

90.5.90.6. The following basic elements require consideration in any application of the method to estimate the market value of development property and if another basis is required, alternative inputs *may* be required.

- (a) Completed property value.
- (b) Construction costs.
- (c) Consultants fees.
- (d) Marketing costs.
- (e) Timetable.
- (f) Finance costs.
- (g) Development profit.

- (h) Discount rate.

Value of Completed Property

~~90.6.~~90.7. The first step requires an estimate of the value of the relevant interest in the real property following notional completion of the development project, which *should* be developed in accordance with IVS 105 *Valuation Methods and Approaches*.

~~90.8.~~ In the residual approach, calculation of “gross development value” will depend on the type and complexity of property being considered. With commercial property the income approach is usually more appropriate based on anticipated cash flows being discounted to the date of valuation. Similarly, large scale multi-phased residential and mixed use developments for sale or for rent may rely on the income approach in calculating gross development value. For smaller scale developments where dwelling units are for sale, direct comparable evidence may be used to calculate gross development value.

~~90.7.~~90.8. ~~90.9.~~ Regardless of the approach~~methods~~ adopted, under either the market or income approach, the valuer must adopt one of the two alternative~~basic~~ underlying assumptions ~~are available~~:

- (a) the estimated ~~gross development~~market value on completion is based on values that are current on the valuation date ~~but~~ on the special assumption the project had already been completed in accordance with the defined plans and specification; ~~or~~
- (b) the estimated ~~gross development~~ value on completion is based on the ~~expected value on the date special assumption that~~ the project is ~~due to be~~ completed in accordance with the defined plans and specification on the anticipated date of completion.

~~90.8.~~90.9. ~~90.10.~~ Market practice and availability of relevant data *should* determine which of these assumptions is more appropriate. However, it is important that there is clarity as to whether current or projected values are being used.

~~90.9.~~90.10. ~~90.11.~~ If ~~projected values are being estimated~~ gross development value is used, it *should* be made clear that these are based on ~~expectations~~special assumptions that a ~~market participant~~ would make based on information available on the valuation date.

~~90.10.~~90.11. ~~90.12.~~ It is also important that care is taken to ensure that consistent assumptions are used throughout the residual value calculation, ~~i.e.~~ if current values are used then the costs *should* also be current and discount rates derived from analysis of current prices.

~~90.11.~~90.12. ~~90.13.~~ If there is a pre-sale or pre-lease agreement in place that is conditional on the project, or a relevant part, being completed, this will be reflected in the valuation of the completed property. Care *should* be taken to establish whether the price in a pre-sale agreement or the rent and other terms in a pre-lease agreement reflect those that would be agreed between ~~market participants~~ on the valuation date.

~~90.12.~~90.13. ~~90.14.~~ If the terms are not reflective of the market, adjustments *may* need to be made to the valuation.

~~90.13-90.14.~~ ~~90.15.~~—It would also be appropriate to establish if these agreements would be assignable to a purchaser of the relevant interest in the development property prior to the completion of the project.

Construction Costs

~~90.14-90.15.~~ ~~90.16.~~—The costs of all work required at the valuation date to complete the project to the defined specification need to be identified. Where no work has started, this will include any preparatory work required prior to the main building contract, such as the costs of obtaining statutory permissions, demolition or off-site enabling work.

~~90.15-90.16.~~ ~~90.17.~~—Where work has commenced, or is about to commence, there will normally be a contract or contracts in place that can provide ~~best evidence~~ the independent confirmation of cost. However, if there are no ~~fixed-price~~ contracts in place, or if the actual contract costs are not typical of those that would be agreed in the market on the valuation date, then it *may* be necessary to estimate these costs reflecting the reasonable expectation of ~~market~~ *participants* on the valuation date of the probable costs.

~~90.16-90.17.~~ ~~90.18.~~—The benefit of any work carried out prior to the valuation date will be reflected in the value, but will not determine that value. Similarly, previous payments under the actual building contract for work completed prior to the valuation date are not relevant to current value.

~~90.17-90.18.~~ ~~90.19.~~—In contrast, if payments under a building contract are geared to the work completed, the sums remaining to be paid for work not yet undertaken at the valuation date *may* be the best evidence of the construction costs required to complete the work.

~~90.18-90.19.~~ ~~90.20.~~—However, contractual costs *may* include special requirements of a specific end user and therefore *may* not reflect the general requirements of ~~market-participants~~.

~~90.19-90.20.~~ ~~90.21.~~—Moreover, if there is a *material* risk that the contract *may* not be fulfilled, (~~e.g.~~ due to a dispute or insolvency of one of the parties), it *may* be more appropriate to reflect the cost of engaging a new contractor to complete the outstanding work.

~~90.20-90.21.~~ ~~90.22.~~—When valuing a partly completed development property, it is not appropriate to rely solely on projected costs and income contained in any project plan or feasibility study produced at the commencement of the project.

~~90.21-90.22.~~ ~~90.23.~~—Once the project has commenced, this is not a reliable tool for measuring value as the inputs will be historic. Likewise, an approach based on estimating the percentage of the project that has been completed prior to the valuation date is unlikely to be relevant in determining the current market value.

Consultants' Fees

~~90.22-90.23.~~ ~~90.24.~~—These ~~must~~ include legal and professional costs that would be reasonably incurred by a ~~market-participant~~ at various stages through ~~to~~ the completion of the project.

Marketing Costs

~~90.23-90.24.~~ ~~90.25.~~—If there is no identified buyer or lessee for the completed project, it will normally be appropriate to allow for the costs associated with appropriate marketing, and for any leasing commissions and consultants' fees incurred for marketing not included under para 90.23.

Timetable

~~90.24-90.25.~~ ~~90.26.~~—The duration of the project from the valuation date to the expected date of physical completion of the project needs to be considered, together with the phasing of all cash outflows for construction costs, consultants' fees, etc.

~~90.25-90.26.~~ ~~90.27.~~—If there is no sale agreement in place for the relevant interest in the development property following practical completion, an estimate *should* be made of the marketing period that might typically be required following completion of construction until a sale is achieved.

~~90.26-90.27.~~ ~~90.28.~~—If the property is to be held for investment after completion and if there are no pre-leasing agreements, the time required to reach stabilised occupancy needs to be considered (ie i.e. the period required to reach a realistic long-term occupancy level). For a project where there will be ~~many~~ individual letting units, the stabilised occupancy levels may be less than 100 ~~per cent~~percent if market experience indicates that a number of units ~~will~~may be expected to always be vacant, and allowance ~~must also~~should be ~~made~~considered for costs incurred by the owner during this period such as additional marketing costs, incentives, maintenance and ~~or~~ unrecoverable service charges.

Finance Costs

~~90.27-90.28.~~ ~~90.29.~~—These represent the cost of finance for the project from the valuation date through to the completion of the project, including any period required after physical completion to either sell the interest or achieve stabilised occupancy. As a lender *may* perceive the risks during construction to differ substantially from the risks following completion of construction, the finance cost during each period *may* also need to be considered separately. Even if an entity is intending to self-fund the project, an allowance *should* be made for interest at a rate which would be obtainable by a ~~market~~ *participant* for borrowing to fund the completion of the project on the valuation date.

Development Profit

~~90.28-90.29.~~ ~~90.30.~~—Allowance *should* be made for development profit, or the return that would be required by a buyer of the development property in the market place for taking on the risks associated with completion of the project on the valuation date. This will include the risks involved in achieving the anticipated income or capital value following physical completion of the project.

~~90.29-90.30.~~ 90.31.—This target profit can be expressed as a lump sum, a percentage return on the costs incurred or a percentage of the anticipated value of the project on completion ~~or a rate of return.~~ Market practice for the type of property in question will normally indicate the most appropriate option. The amount of profit that would be required will reflect the level of risk that would be perceived by a prospective buyer on the valuation date and will vary according to factors such as:

- (a) the stage which the project has reached on the valuation date. A project which is nearing completion will normally be viewed as being less risky than one at an early stage, with the exception of situations where a party to the development is insolvent~~;~~
- (b) whether a buyer or lessee has been secured for the completed project~~;~~ and
- (c) the size and anticipated remaining duration of the project. The longer the project, the greater the risk caused by exposure to fluctuations in future costs and receipts and changing economic conditions generally.

~~90.30-90.31.~~ 90.32.—The following are examples of factors that *may* typically need to be considered in an assessment of the relative risks associated with the completion of a development project:

- (a) unforeseen complications that increase construction costs,
- (b) potential for contract delays caused by adverse weather or other matters outside of developer's control,
- (c) delays in obtaining statutory consents,
- (d) supplier failures,
- (e) entitlement risk and changes in entitlements over the development period,
- ~~(e)~~(f) regulatory changes, and
- ~~(f)~~(g) ~~(f)~~—delays in finding a buyer or lessee for the completed project.

~~90.31-90.32.~~ 90.33.—Whilst all of the above factors will impact ~~on~~ the perceived riskiness of a project and the profit that a buyer or the development property would require, care *must* be taken to avoid double counting, either where contingencies are already reflected in the residual valuation model or risks in the discount rate used to bring future cash flows to present value.

~~90.32-90.33.~~ 90.34.—The risk of the estimated value of the completed development project changing due to changed market conditions over the duration of the project will normally be reflected in the discount rate or capitalisation rate used to value the completed project.

~~90.33-90.34.~~ 90.35.—The profit anticipated by the owner of an interest in development property at the commencement of a development project ~~is irrelevant~~will vary according to the valuation of its interest in the project once construction has commenced. ~~As the project achieves development milestones, the risks associated with the project are likely to reduce,~~

~~albeit not in a consistent manner as some projects are riskier in the planning phase, others in the construction phase and others in the revenue-generating phase.~~ The valuation *should* reflect those risks remaining at the valuation date and the discount or return that a buyer of the partially completed project would require for bringing it to a successful conclusion.

Discount Rate

~~90.34-90.35.~~ 90.36. In order to arrive at an indication of the value of the development property on the valuation date, the residual method requires the application of a discount rate to all future cash flows in order to arrive at a net present value, ~~ie the present value of all anticipated cash inflows less the present value of all anticipated cash outflows.~~ This discount rate *may* be derived using a variety of methods. (see IVS 105 *Valuation Approaches and Methods*, paras ~~60.9-60.11~~50.29-50.31)

~~90.35-90.36.~~ 90.37. If the cash flows are based on values and costs that are current on the valuation date, the risk of these changing between the valuation date and the anticipated completion date *should* be considered and reflected in the discount rate used to determine the present value. If the cash flows are based on prospective values and costs, the risk of those projections proving to be inaccurate *should* be considered and reflected in the discount rate.

100. Existing Asset

100.1. In the valuation of development property, it is necessary to establish the suitability of the real property in question for the proposed development. Some matters *may* be within the valuer's knowledge and experience but some *may* require information or reports from other specialists. Matters that typically need to be considered for specific investigation when undertaking a valuation of a development property before a project commences include:

- ~~(a)~~ (a) ~~{whether or not there is a}~~ market for the proposed development,
- ~~(b)~~ (b) ~~is the proposed development the highest and best use of the property in the current market,~~
- ~~(c)~~ (c) ~~whether there are other non-financial obligations that need to be considered (political or social criteria),~~
- ~~(a)(d)~~ (d) legal permissions or zoning, including any conditions or constraints on permitted development,
- ~~(b)(e)~~ (e) limitations, encumbrances or conditions imposed on the relevant interest by private contract,
- ~~(e)(f)~~ (f) rights of access to public highways or other public areas,
- ~~(e)(g)~~ (g) geotechnical conditions, including potential for contamination or other environmental risks,
- ~~(e)(h)~~ (h) the availability of, and requirements to, provide or improve necessary services, ~~eg~~ g. water, drainage and power,

~~(f)~~(i) the need for any off-site infrastructure improvements and the rights required to undertake this work,

~~(g)~~(i) any archaeological constraints or the need for archaeological investigations,

~~(k)~~ sustainability and any *client* requirements in relation to green buildings,

~~(h)~~(l) economic conditions and trends and their potential impact on costs and receipts during the development period,

~~(j)~~(m) current and projected supply and demand for the proposed future uses,

~~(i)~~(n) the availability and cost of funding,

~~(k)~~(o) the expected time required to deal with preparatory matters prior to starting work, for the completion of the work and, if appropriate, to rent or sell the completed property, and

~~(j)~~(p) any other risks associated with the proposed development.

100.2. Where a project is in progress, additional enquires or investigations will typically be needed into the contracts in place for the design of the project, for its construction and for supervision of the construction.

110. Special Consideration for Financial Reporting

110.1. The accounting treatment of development property can vary depending on how it is classified by the reporting entity (e.g. whether it is being held for sale, for owner occupation or as investment property). This *may* affect the valuation requirements and therefore the classification and the relevant accounting requirements need to be determined before selecting an appropriate valuation method.

110.2. Financial statements are normally produced on the assumption that the entity is a going concern. It is therefore normally appropriate to assume that any contracts (e.g. for the construction of a development property or for its sale or leasing on completion), would pass to the buyer in the hypothetical exchange, even if those contracts *may* not be assignable in an actual exchange. An exception would be if there was evidence of an abnormal risk of default by a contracted party on the valuation date.

120. Special Considerations for Secured Lending

120.1. The appropriate basis of valuation for secured lending is normally market value. However, in considering the value of a development property, regard *should* be ~~had given~~ to the probability that any contracts in place, e.g. for construction or for the sale or leasing of the completed project *may*, become void or voidable in the event of one of the parties being the subject of formal insolvency proceedings. Further regard should be given to any contractual obligations that may have a material impact on market value. Therefore, it *may* be appropriate to highlight the risk to a lender caused by a prospective buyer of the ~~partially-completed-project property~~

not having the benefit of existing building contracts and /or pre-leases, and pre-sales and any associated warrantees and guarantees in the event of a default by the borrower.

REDLINE VERSION

IVS 500 Financial Instruments

10. Overview~~Introduction~~

- 10.1. The principles contained in the General Standards apply to valuations of financial instruments. This standard only includes modifications, additional requirements or specific examples of how the General Standards apply for valuations to which this standard applies.

20. Introduction~~Overview~~

- 20.1. A financial instrument is a contract that creates rights or obligations between specified parties to receive or pay cash or other financial consideration, ~~or an equity instrument. An equity instrument is any contract that creates a residual interest in the assets of an entity after deducting all of its liabilities.~~ Such instruments include but are not limited to, derivatives or other contingent instruments, hybrid instruments, fixed income, structured products and equity instruments. A financial instrument can also be created through the combination of other financial instruments in a portfolio to achieve a specific net financial outcome.

- 20.2. Valuations of financial instruments conducted under IVS 500 *Financial Instruments* can be performed for many different *purposes* including, but not limited to:

(a) acquisitions, mergers and sales of businesses or parts of businesses,

(b) purchase and sale,

(b)(c) financial reporting~~and audit,~~

(e)(d) legal or regulatory requirements (subject to any specific requirements set by the relevant authority),

(d)(e) internal risk and compliance procedures,

(e)(f) tax, and

(f)(g) litigation.

- 20.3. A thorough understanding of the instrument being valued is required to identify and evaluate the relevant market information available for identical or similar comparable instruments. Such information includes prices from recent transactions in the same or a similar

instrument, quotes from brokers or pricing services, credit ratings, yields, volatility, indices or any other inputs relevant to the valuation process, ~~such as the appropriate interest rate curve.~~

20.4. When valuations are being undertaken by the holding entity that are intended for use by external investors, regulatory authorities or other entities, to comply with the requirement to confirm the identity and status of the *valuer* in IVS 101 *Scope of Work*, para 20.3-~~(a)~~, reference ~~shall~~must be made to the control environment in place, ~~see Control Environments as required by IVS 105 Valuation Approaches and Methods and~~ paras 14-~~20.1-440.5~~120.3 below regarding control environment.

20.5. To comply with the requirement to identify the asset or liability to be valued as in IVS 101 *Scope of Work*, para 20.3-~~(d)~~, the following matters ~~shall~~must be addressed:

- (a) the class or classes of instrument to be valued, ~~and~~
- (b) whether the valuation is to be of individual instruments or a portfolio, ~~and~~
- ~~(c) 20.6. the unit of account.~~

20.6. IVS 102 *Investigations and Compliance*, paras 20.2–20.4 provide that the investigations required to support the valuation *must* be adequate having regard to the *purpose* of the assignment. To support these investigations, sufficient evidence supplied by the *valuer* and/or a credible and reliable third party *must* be assembled. To comply with these requirements, the following are to be considered:

- (a) All market data used or considered as an input into the valuation process *must* be understood and, as necessary, validated.
- (b) Any model used to estimate the value of a financial instrument shall be selected to appropriately capture the contractual ~~and financial~~ terms and economics of the financial instrument.
- (c) ~~(e)~~Where observable prices of, or market inputs from, similar financial instruments are available, ~~any model used to estimate value should also be calibrated to the similar, those imputed inputs from comparable financial instruments price(s) and/or observable inputs should be adjusted to reflect the contractual and economic terms of the financial instrument being valued.~~
- ~~(d) 20.7. Where possible, multiple valuation approaches are preferred. If differences in value occur between the valuation approaches, the valuer must explain and document the differences in value.~~

20.7. To comply with the requirement to disclose the valuation approach(es) and reasoning in IVS 103 *Reporting*, para 20.1, consideration ~~shall~~must be given to the appropriate degree of reporting detail. ~~This~~The requirement to disclose this information in the valuation report will differ for different categories of financial instruments. Sufficient information *should* be provided to allow users to understand the nature of each class of instrument valued and the primary factors influencing the values. Information that adds little to a users' understanding as to the nature of the asset or liability, or that obscures the primary factors influencing value ~~shall~~, must be avoided. In determining the level of disclosure that is appropriate, regard ~~shall~~must be had to the following:

- (a) *Materiality*: The value of an instrument or class of instruments in relation to the total value of the holding entity's assets and liabilities or the portfolio that is valued.
- (b) *Uncertainty*: The value of the instrument *may* be subject to ~~material~~significant uncertainty on the valuation date due to the nature of the instrument, the model or inputs used or to market abnormalities. Disclosure of the cause and nature of any *material* uncertainty *should* be made.
- (c) *Complexity*: The greater the complexity of the instrument, the greater the appropriate level of detail to ensure that the assumptions and inputs affecting value are identified and explained.
- (d) *Comparability*: The instruments that are of particular interest to users *may* differ with the passage of time. The usefulness of the valuation report, or any other reference to the valuation, is enhanced if it reflects the information demands of users as market conditions change, although, to be meaningful, the information presented *should* allow comparison with previous periods.
- (e) *Underlying instruments*: If the cash flows of a financial instrument are generated from or secured by identifiable underlying *assets* or liabilities, the relevant factors that influence the underlying value ~~shall~~must be provided in order to help users understand how the underlying value impacts the estimated value of the financial instrument.

30. Bases of Value

- 30.1. In accordance with IVS 104 *Bases of Value*, a *valuer must* select the appropriate basis(es) of value when valuing financial instruments.
- 30.2. Often, financial instrument valuations are performed using bases of value defined by entities/organisations other than the IVSC (some examples of which are mentioned in IVS

104 *Bases of Value*) and it is the *valuer's* responsibility to understand and follow the regulation, case law, tax law and other interpretive guidance related to those bases of value as of the valuation date.

40. Valuation Approaches and Methods

~~40.1. The three principal valuation approaches described in IVS 105 *Valuation Approaches and Methods* can all be applied to the valuation of financial instruments.~~

40.1. ~~40.2.~~ When selecting an approach and method, in addition to the requirements of this chapter, a *valuer must* follow the requirements of IVS 105 *Valuation Approaches and Methods*, ~~including para 40.3.~~

~~40.2. 40.3.~~ The three valuation approaches described in IVS 105 *Valuation Approaches and Methods* may be applied to the valuation of financial instruments.

~~40.2.~~ 40.3. The various valuation methods used in financial markets are based on variations of the market approach, the income approach or the cost approach as described in the IVS 105 *Valuation Approaches and Methods*. This standard describes the commonly used methods and matters that need to be considered or the inputs needed when applying these methods.

40.4. When using a particular valuation method or model, it is important to ensure that it is calibrated with observable market information, where available, on a regular basis to ensure that the model reflects current market conditions. As market conditions change, it *may* become necessary ~~either to change the~~ to a more suitable model(s) ~~used and/or to modify the existing model and recalibrate and/or~~ make additional adjustments to the valuation inputs. Those adjustments *should* be made to ensure consistency with the required valuation basis, which in turn is determined by the *purpose* for which the valuation is required; see the IVS *Framework*.

50. Market Approach

50.1. A price obtained from trading on an liquid exchange on, or very close to, the time or date of valuation is normally the best indication of the market value of a holding of the identical instrument. In cases where there have not been recent relevant transactions, the evidence of quoted or consensus prices, or private transactions *may* also be relevant.

50.2. It *may* be necessary to make adjustments to the price information if the observed instrument is dissimilar to that being valued or if the information is not recent enough to be relevant. For example, if an observable price is available for similar instruments with one or more different characteristics to the instrument being valued, then the implied inputs from the comparable observable price are to be adjusted to reflect the specific terms of the financial instrument being valued.

~~50.2.~~

~~50.3.~~ ~~60.~~ When relying on a price from a pricing service, the valuer must understand how the price was derived.

~~51.~~60. Income Approach

~~51.1.~~60.1. The value of ~~a~~-financial instruments ~~s~~ may be determined using a discounted cash flow method. The terms of an instrument determine, or allow estimation of, the undiscounted cash flows. The terms of a financial instrument typically set out:

- (a) the timing of the cash flows, ~~ie i.e.~~ when the entity expects to realise the cash flows related to the instrument,
- (b) the calculation of the cash flows, eg for a debt instrument, the interest rate that applies, or for a derivative instrument, how the cash flows are calculated in relation to the underlying instrument or index (or indices),
- (c) the timing and conditions for any options in the contract, ~~eg e.g.~~ put or, call, prepayment, extension or conversion options, and
- (d) protection of the rights of the parties to the instrument, ~~eg e.g.~~ terms relating to credit risk in debt instruments or the priority over, or subordination to, other instruments held.

~~51.2.~~60.2. In establishing the appropriate discount rate, it is necessary to assess the return that would be required on the instrument to compensate for the time value of money and potential additional risks ~~related from, but not limited to~~ the following:

- (a) the terms and conditions of the instrument, ~~eg e.g.~~ subordination,
- (b) the credit risk, ~~ie i.e.~~ uncertainty about the ability of the counterparty to make payments when due,
- (c) the liquidity and marketability of the instrument,
- (d) the risk of changes to the regulatory or legal environment, and
- (e) the tax status of the instrument.

60.3. Where future cash flows are not based on fixed contracted amounts, estimates of the ~~probable income~~expected cash flows will need to be made in order to ~~providedetermine~~ the necessary inputs. The determination of the discount rate ~~will also require assumptions about~~must reflect the risks of ~~the expected cash flows. The discount rate also needs to~~and be consistent with the cash flows,~~eg. For example,~~ if the ~~tax-expected cash~~ flows are ~~grossmeasured net~~ of ~~taxcredit losses~~ then the discount rate ~~should~~must be ~~derived from other gross of tax instruments. reduced by the credit risk component.~~ Depending upon the *purpose of the valuation*, the inputs and assumptions made into the cash flow model will need to reflect either those that would be made by ~~market~~ participants, or those that would be based on the holder's current expectations or targets. For example, if the *purpose of the valuation* is to determine market value, or fair value as defined in IFRS, the assumptions *should* reflect those of ~~market~~ participants. If the *purpose* is to measure performance of an asset against management determined benchmarks, ~~eg~~e.g. a target internal rate of return, then alternative assumptions *may* be appropriate.

61.70. Cost Approach

~~70.1. The substitution principle inherent in the cost approach is applied to the valuation of financial instruments through the use of the replication method. This method provides an indication of the current value of an instrument or portfolio by reproducing or "replicating" its risks and cash flows in a hypothetical, or synthetic, alternative. This alternative is based on a combination of securities and/or simple derivatives in order to estimate the cost of offsetting, or hedging, the position at the valuation date. Portfolio replication is often used to simplify the procedures applied to value a portfolio of complex financial instruments (e.g. expected insurance claims or structured products) by substituting a replicating portfolio of assets that are easier to value and therefore more efficiently risk managed on a daily basis.~~

~~61.1.70.1.~~ 80.—In applying the cost approach, *valuers must follow the guidance contained in IVS 105 Valuation Approaches and Methods, paras 80.1 to 80.8.*

62.80. Special Considerations for Financial Instruments

~~62.1.80.1.~~ 80.1.—The following sections address a non-exhaustive list of topics relevant to the valuation of financial instruments:

- (a) ~~90.~~—Valuation Inputs (section 90).
- (b) ~~90.1.~~—Credit Risk (section 100).
- (c) Liquidity and Market Activity (section 110).
- ~~(b)~~(d) Control Environment (section 120).

90. Valuation Inputs

90.1. As per IVS 105 Valuation Approaches and Methods, para 10.7, any data set used as a valuation input, understanding the sources and how inputs are adjusted by the provider, if any, is essential to understanding the reliance that should be given to the use of the valuation input.

62.2-90.2. Valuation inputs **may** come from a variety of sources. Commonly used valuation input sources are broker quotations, consensus pricing services, ~~and~~ the prices of comparable instruments from third ~~party~~ parties and market data pricing services. Implied inputs can often be derived from such observable prices such as volatility and yields.

62.3-90.3. ~~As with any data set used as a valuation input, understanding the sources and how these are statistically adjusted by the provider, if any, is essential to understanding the reliance that should be given to the use~~ When assessing the validity of the valuation input, broker quotations provide, as evidence of how market participants would price the asset. However, there are factors that can affect their reliability as a valuation input, including, the valuer should consider the following:

- (a) Brokers ~~will normally only be willing to~~ generally make markets and provide bids in respect of more popular instruments and *may* not extend coverage to less liquid instruments. Because liquidity often reduces with time, quotations *may* be harder to find for older instruments.
- (b) A broker is concerned with trading, not supporting valuation, and they have little incentive to research an indicative quotation as thoroughly as they would an executable quotation. ~~This can impact on the quality of the information. A valuer is required to understand whether the broker quote is a binding, executable quote or a non-binding, theoretical quote. In the case of a non-binding quote, the valuer is required to gather additional information to understand if the quote should be adjusted or omitted from the valuation.~~
- (c) There is an inherent conflict of interest where the broker is the counterparty to an instrument.
- (d) Brokers have an incentive to encourage trading.

62.4-90.4. Consensus pricing services operate by collecting price or valuation input information about an instrument from several participating subscribers. They reflect a pool of quotations from different sources, sometimes with ~~statistical~~ adjustment to compensate for any sampling bias. This overcomes the conflict of interest problems associated with single brokers. However, as with a broker quotation, ~~it~~ *may* not be possible to find a suitable input for all instruments in all markets. Additionally, despite its name, a consensus price *may* not

necessarily constitute a true market “consensus”, but rather is more of a ~~mean or median~~ statistical estimate of recent market transactions or quoted prices. Therefore, the ~~resulting price may not necessarily~~ valuer needs to understand how the consensus pricing was estimated and if such estimates are reasonable, given the instrument being valued. Information and inputs relevant to the valuation of an illiquid instrument can often be ~~representative of real market activity~~ gleaned through comparable transactions (see section 110 for further details).

~~90.5. Comparable financial instrument prices serve to provide information regarding financial instruments that share certain base characteristics. Assumptions regarding the valuation of an illiquid instrument can often be gleaned through comparable transactions.~~

72-100. Credit Risk Adjustments

72-1-100.1. Understanding the credit risk is often an important aspect of valuing any financial instrument and most importantly the issuer¹. Some of the common factors that need to be considered in establishing and measuring credit risk include the following:

(a) Own credit and counterparty risk: Assessing the financial strength of the issuer or any credit support providers will involve consideration of not only ~~the trading history~~ historical and ~~profitability~~ projected financial performance of the relevant entity or entities but also consideration of performance and prospects for the industry sector ~~generally in which the business operates.~~ In addition to issuer credit, the valuer must also consider the credit exposure of any counterparties to the asset or liability being valued. In the case of a clearing house settlement process, many jurisdictions now require certain derivatives to be transacted through a central counterparty (CCP). Although a CCP mitigates which can mitigate risk, the however residual counterparty risk needs to be considered.

~~(b) Collateral: The assets to which the holder of an instrument has recourse in the event of default need to be considered. In particular, it needs to be understood whether recourse is to all the assets of the issuer or only to specified assets. The greater the value and quality of the assets to which an entity has recourse in the event of default, the lower the credit risk of the instrument. Additionally, the more frequently any collateral is exchanged between entities, the lower the resulting credit risk.~~

~~(b) (c)~~ The valuer also needs to be able to differentiate between the credit risk of the instrument and the credit risk of the issuer and/or counterparty. Generally, the credit risk of the issuer or counterparty does not consider specific collateral related to the instrument.

~~(b) (c)~~ Subordination: Establishing the priority of an instrument is critical in assessing the default risk. Other instruments may have priority over an issuer’s assets or the cash flows that support the instrument.

¹ See Interim Guidance on “Credit & Debit Valuation Adjustments” for further guidance concerning the measurement of credit risk when valuing derivatives.

~~(e)~~(d) Leverage: The amount of debt used to fund the assets from which an instrument's return is derived ~~affects~~can affect the volatility of returns to the issuer and ~~can affect~~ credit risk.

~~(e)~~(e) Netting agreements: Where derivative instruments are held between counterparties, credit risk *may* be reduced by a netting or offset agreement that limits the obligations to the net value of the transactions, ~~ie i.e.~~ if one party becomes insolvent, the other party has the right to offset sums owed to the insolvent party against sums due under other instruments.

~~(e)~~(f) Default protection: Many instruments contain some form of protection to reduce the risk of non-payment to the holder. Protection might take the form of a guarantee by a third party, an insurance contract, a credit default swap or more *assets* to support the instrument than are needed to make the payments. ~~The credit risk~~Credit exposure is also reduced if subordinated instruments take the first losses on the underlying *assets* and therefore reduce the risk to more senior instruments. When protection is in the form of a guarantee, an insurance contract or a credit default swap, it is necessary to identify the party providing the protection and assess that party's creditworthiness. Considering the credit worthiness of a third party involves not only the current position but also the possible effect of any other guarantees or insurance contracts ~~that it might have the entity has~~ written. If the provider of a guarantee has also guaranteed ~~many other~~ correlated debt securities, the risk of its non-performance ~~might~~will likely increase ~~significantly~~.

72-2-100.2. For parties for which limited information is available, if secondary trading in ~~structured debt~~a financial instrument exists, there *may* be sufficient market data to provide evidence of the appropriate risk adjustment. If not, it might be necessary to look to credit indices, information available for entities with similar risk characteristics, or estimate a credit rating for the party using its own financial information. The varying sensitivities of different liabilities to credit risk, such as collateral and/or maturity differences, *should* be taken into account in evaluating which source of credit data provides the most relevant information. The risk adjustment or credit spread applied is based on the amount a ~~market participant~~ would require for the particular instrument being valued.

72-3-100.3. The own credit risk associated with a liability is important to its value as the credit risk of the issuer is relevant to the value in any transfer of that liability. Where it is necessary to assume a transfer of the liability regardless of any actual constraints on the ability of the counterparties to do so, e.g. in order to comply with financial reporting requirements, there are various potential sources for reflecting own credit risk in the valuation of liabilities. These include the yield curve for the entity's own bonds or other debt issued, credit default swap spreads, or by reference to the value of the corresponding asset. However, in many cases the issuer of a liability will not have the ability to transfer it and can only settle the liability with the counterparty.

100.4. Collateral: The assets to which the holder of an instrument has recourse in the event of default need to be considered. In particular, the valuer needs to be understand whether recourse is to all the assets of the issuer or only to specified asset(s). The greater the value and liquidity of the asset(s) to which an entity has recourse in the event of default, the lower the overall risk of the instrument due to increased recovery. In order not to double count, the valuer also needs to consider if the collateral is already accounted for in another area of the balance sheet.

72.4.100.5. When adjusting for ~~an entity's~~ own credit risk of the instrument, it is also important to consider the nature of the collateral available for the liabilities being valued. Collateral that is legally separated from the issuer normally reduces the credit ~~risk~~ exposure. If liabilities are subject to a frequent collateralisation process, there might not be a *material* own credit risk adjustment because the counterparty is mostly protected from loss in the event of default. ~~However, collateral provided to one counterparty is not available to other counterparties. Thus, although some collateralised liabilities might not be subject to significant credit risk, the existence of that earmarked collateral may reduce the overall collateral available to other creditors which might affect the credit risk of other liabilities.~~

82.110. Liquidity and Market Activity

82.1.110.1. The liquidity of financial instruments range from those that are standardised and regularly transacted in high volumes to those that are agreed between counterparties that are incapable of assignment to a third party. This range means that consideration of the liquidity of an instrument or the current level of market activity is important in determining the most appropriate valuation approach.

82.2.110.2. Liquidity and market activity are distinct. The liquidity of an asset is a measure of how easily and quickly it can be transferred in return for cash or a cash equivalent. Market activity is a measure of the volume of trading at any given time, and is a relative rather than an absolute measure. Low market activity for an instrument does not necessarily imply the instrument is illiquid.

82.3.110.3. Although separate concepts, illiquidity or low levels of market activity pose similar valuation challenges through a lack of relevant market data, ~~ie i.e.~~ data that is either current at the valuation date or that relates to a sufficiently similar asset to be reliable. The lower the liquidity or market activity, the greater the reliance that will be needed on valuation approaches that use techniques to adjust or *weight* the inputs based on the evidence of other comparable transactions to reflect either market changes or differing characteristics of the asset.

84.120. Valuation Control Environment and Objectivity

84.1.120.1. The control environment consists of the internal governance and control procedures that are in place with the objective of increasing the confidence of those who *may* rely on the

valuation in the valuation process and conclusion. Where an external valuer is placing reliance upon an internally performed valuation, the external valuer must consider the adequacy and independence of the valuation control environment.

84.2.120.2. In comparison to other asset classes, financial instruments are more commonly valued internally by the same entity that creates and trades them. Internal valuations bring into question the independence of the valuer and hence this creates ~~a significant~~ risk to the perceived objectivity of valuations. ~~Where valuations are~~ Please reference 40.1 and 40.2 of the IVS Framework regarding valuation performed by internal valuers and the need for external parties, procedures to be in place to ensure the objectivity of the valuation and steps *should* be taken to ensure that an adequate control environment exists to minimise threats to the independence of the valuation. Many entities which deal with the valuation of financial instruments are registered and regulated by statutory financial regulators. Most financial regulators require banks or other regulated entities that deal with financial instruments to have independent price verification procedures ~~that~~. These operate separately from trading desks to produce valuations required for financial reporting or the calculation of regulatory capital guidance on the specific valuation controls required by different regulatory regimes. This is outside the scope of this standard. However, as a general principle, valuations produced by one department of an entity that are to be included in financial statements or otherwise relied on by third parties *should* be subject to scrutiny and approval by an independent department of the entity. Ultimate authority for such valuations *should* be separate from, and fully independent of, the risk taking functions. The practical means of achieving a separation of the function will vary according to the nature of the entity, the type of instrument being valued and the *materiality* of the value of the particular class of instrument to the overall objective. The appropriate protocols and controls *should* be determined by careful consideration of the threats to objectivity that would be perceived by a third party relying on the valuation.

~~120.4. Examples of typical components of an appropriate control environment include:~~

120.3. (a) When accessing your valuation controls, the following include items you *should* consider in the valuation process:

- (a) establishing a governance group responsible for valuation policies and procedures and for oversight of the entity's valuation process, including some members external to the entity,
- (b) systems for regulatory compliance if applicable,
- (c) a protocol for the frequency and methods for calibration and testing of valuation models,
- (d) criteria for verification of certain valuations by different internal or external experts,

(e) periodic independent validation of the valuation model(s).

(e)(f) identifying thresholds or events that trigger more thorough investigation or secondary approval requirements, and

(f)(g) identifying procedures for establishing *significant* inputs that are not directly observable in the market, e.g. by establishing pricing or audit committees.