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GUIDANCE NOTE 4

Valuation of Intangible Assets (Revised 2010)



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International Valuation Guidance Note No. 4 (Revised 2010)

Valuation of Intangible Assets

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1. Introduction and scope

- 1.1 The International Valuation Standards Board issues Guidance Notes (GNs) to guide experienced valuers on the application of the fundamental principles of the International Valuation Standards (IVS) to a specific asset type or for a specific valuation purpose. A GN is also intended to provide information to those who commission or rely on valuations and their professional advisors on the generally recognised principles that a valuer should follow and of the principal techniques and methods that may be used. Because of the range of asset types and purposes for which valuations are required, a GN cannot provide authoritative guidance for every valuation situation and therefore a departure from the principles described may be justified in certain situations. A GN does not provide instruction on how to value nor give detailed discussion on the merits of different valuation techniques.
- 1.2 The objective of this GN is to provide guidance on internationally recognised principles under which valuations of intangible assets are performed and the principal approaches and methods that are used for valuing this type of asset. Many of these are similar to those that apply to the valuation of other types of assets; this guidance should therefore be read in conjunction with the International Valuation Standards, in particular IVS 1 *'Market Value Basis of Valuation'*, IVS 2, *'Bases other than Market Value'*, and IVS 3, *'Valuation Reporting'*. The guidance provided in this GN is not intended to be restricted to a particular accounting environment, even if some references are made with regard to the presentation of categories of intangibles. Additional guidance on the valuation of intangible assets specifically for the purpose of financial reporting under International Financial Reporting Standards (IFRSs), will be developed in the forthcoming revised International Valuation Application 1 *'Valuation for Financial Reporting'*.¹
- 1.3. Valuations of intangible assets are required for different purposes including, but not limited to:
- acquisitions, mergers and sales of businesses or parts of businesses;
 - purchases and sales of intangible assets;
 - reporting to tax authorities;
 - litigation and insolvency proceedings; and
 - financial reporting.

¹ Due to the general nature of GN 4, certain definitions may not be identical with definitions in related financial reporting standards. Despite a possible deviation in wording, this GN is not intended to contradict or exclude such definitions and can be applied accordingly.

2. Definitions

- 2.1. *Goodwill*: In a valuation context, any future economic benefit arising from a business or a group of assets which is not separable from the business or group of assets in its entirety. From an accounting and tax perspective there may be other definitions of goodwill.
- 2.2 In general terms, the value of *goodwill* is the residual amount remaining after the value of all identifiable tangible, intangible and monetary assets less liabilities and potential liabilities have been deducted from the value of a business. Examples of certain components of *goodwill* include, but are not limited to:
- ability to develop new identifiable intangible assets in the future (such as technologies, customer relationships, etc.);
 - company specific synergies (such as reduction of operating costs, economies of scale, product mix dynamics, etc.);
 - growth opportunities (such as expansion into different markets, etc); or
 - organizational capital (such as assembled network, etc.).
- 2.3 *Intangible Asset*: A non-monetary asset that manifests itself by its economic properties. It does not have physical substance but grants rights and economic benefits to its owner or the holder of an interest.

3. Types of Intangible Assets

- 3.1 Similar to the accounting provisions², an intangible asset can be either identifiable or unidentifiable in a valuation context. An asset is identifiable if it either:
- is separable, 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
 - 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.

Any unidentifiable intangible asset associated with a business or group of assets is generally termed *goodwill*.

² The scope of the GN is not merely to provide valuation guidance for financial reporting purposes. However, the definitions of intangibles and the classification of various IFRS are used as they are considered to be clear and broad in scope.

- 3.2. **Identifiable** intangible assets may be contractual or non-contractual. Set out below are the principal classes of identifiable intangible assets. Within each class, assets may be either contractual or non-contractual.
- 3.3. **Marketing-related** intangible assets are used primarily in the marketing or promotion of products or services. Examples include, but are not limited to:
- trademarks, trade names, service marks, collective marks and certification marks;
 - trade dress (unique colour, shape or package design);
 - newspaper mastheads;
 - internet domain names; or
 - non-compete agreements.
- 3.4. **Customer or supplier-related** intangible assets arise from relationships with or knowledge of customers or suppliers. Examples include, but are not limited to:
- advertising, construction, management, service or supply agreements;
 - licensing and royalty agreements;
 - servicing contracts;
 - order books;
 - employment contracts;
 - use rights, such as drilling, water, air, timber cutting and airport landing slots;
 - franchise agreements;
 - customer relationships; or
 - customer lists.
- 3.5. **Technology-related** intangible assets arise from contractual or non-contractual rights to use technology (patented and unpatented), databases, formulae, designs, software, processes or recipes.
- 3.6. **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.

- 3.7 Specific intangible assets are defined and described by characteristics or attributes such as their function, market position, global reach, market profile, capability and image. These characteristics differentiate intangible assets from one another. For instance:
- food brands may be differentiated through differing taste, source of ingredients and quality; or
 - computer software products will typically be differentiated by reference to their functional specifications.
- 3.8 The characteristics or attributes of an intangible asset include, but are not limited to the ownership rights, privileges and conditions attributable to the subject asset. Ownership rights are generally set out in legal documents and include, according to the jurisdiction involved, patents, trademarks, and copyrights. Ownership rights and conditions may be set out in an agreement or exchange of correspondence and may or may not be transferable to a new owner. However, there are intangible assets that grant privileges without the existence of actual ownership rights, e. g. customer relationships or trade secrets. These intangibles do not necessarily have an underlying contract, yet a company or individual can be the owner of such intangibles and derive economic benefit. The identification and reporting of the characteristics of an intangible asset is an important part of a valuation.
- 3.9 Although it may at times be appropriate and possible to value an intangible asset on a stand-alone basis, it may be either impossible or impractical in other cases to value an intangible asset other than assessing it in conjunction with other [tangible or] intangible assets. It may be possible or practical to estimate the value of intangible assets on a stand-alone basis. The valuer should document clearly in the valuation report whether an intangible asset has been valued on a stand-alone basis or in conjunction with other assets. If the latter is the case, the valuer should explain why it is necessary to aggregate the subject intangible asset with other asset(s) for valuation purposes and describe clearly the asset(s) with which the subject intangible asset has been aggregated.

4. Valuation approaches and methods

- 4.1 This section of the Guidance Note considers the different valuation methods commonly used for valuing intangible assets, together with the valuation inputs, i.e. parameters in respect of which assumptions need to be made and which are usually associated with each of these valuation methods. These inputs are discussed in more detail in Section 5.
- 4.2 All intangible asset valuation methods fall within one of the three fundamental valuation approaches identified within the International Valuation Standards, which are based to some extent, at least, by reference to market data i.e.:
- the comparison approach;³
 - the income approach; and
 - the cost approach.

There are additional valuation approaches such as the real option approach, which are not discussed in this GN. Such approaches may be appropriate for the valuation of intangibles under certain circumstances.

- 4.3 The choice of valuation approach may depend upon the required valuation objective, or basis of valuation, see IVS 1, 'Market Value', or IVS 2, 'Bases Other than Market Value'.
- 4.4 It may be appropriate to consider more than one approach and within each approach there may be different methods available. When undertaking any valuation where the objective is to estimate a Market Value, the role of the valuer is to adopt the approach(es) and method(s) that most closely match those that would be used by the parties to the hypothetical transaction. Understanding the nature and attributes of the subject intangible asset and the nature and characteristics of the market for the subject intangible asset is generally critical to determining the most appropriate valuation approach.

³ Existing IVS refer to the "sales" comparison approach. However, it is also common when valuing intangible assets to refer to the "market" approach rather than comparison due to the relative scarcity of actual sales involving identical or similar assets. However, the difference in terminology does not imply any difference of approach; the techniques of observation and adjustment are identical and the terms should be considered synonymous except where indicated to the contrary.

- 4.5 The heterogeneous nature of intangible assets means that it is rarely possible to find direct market evidence of transactions involving identical assets. If there is market evidence at all, usually the only available evidence is in respect of assets that are similar, but not identical.
- 4.6 Except in rare cases where prices for an identical asset can be observed in the market at the valuation date it will be necessary to consider the most appropriate method or methods to use taking into account both the appropriateness of the method and the robustness of the required valuation inputs in the context of application of the method. The valuation method or methods used and the reason why they are considered appropriate should normally be documented in the Valuation Report.
- 4.7 Sufficient data may be available so that the required parameters to apply a secondary method can be deduced, from the value for the intangible asset calculated under the primary method. This is sometimes called 'reverse engineering'. For instance:
- if an intangible asset is valued using relief-from-royalty or premium profits as the primary method, the implied multiples of, say, revenues and contribution after marketing charges could be deduced ('reverse engineered') and compared with those from identified comparable market transactions; or
 - if an intangible asset is valued using multi-period excess earnings or replacement cost as the primary method, implied royalty rates could be deduced that would have applied if relief-from-royalty were used; such rates could then be considered for reasonableness.
- 4.8 Regardless of the valuation method applied, a sensitivity analysis can be an important part of performing cross-checks or reasonableness checks and its application should be considered if appropriate.

Market participants and entity-specific factors

- 4.9 If undertaking a valuation, the nature and circumstances of ownership may not be relevant when the willing seller is deemed to be hypothetical and with the attributes of a typical market participant. The conceptual framework for Market Value, set out in IVS 1, excludes any element of special value or any element of value that would not be available in a typical market transaction.

4.10 Factors that are specific to the ownership entity and which are not available to market participants generally should be excluded from the inputs used in assessing Market Value. Examples of entity-specific factors that may not be available to the generality of market participants include:

- additional value derived from the existence or creation of a portfolio of similar intangible assets;
- where the asset is valued alone, synergies between the asset and other assets owned by the entity;
- legal rights or restrictions;
- tax benefits or tax burdens;
- the ability to use a brand name globally rather than in a specific geographic area;
- the ability to sell a product in the business-to-business as well as business-to-consumer market; and
- specific cost and revenue synergies.

However, an intangible asset may often not be transacted on a “stand alone” basis, and any synergies inherent in its related group of assets would transfer to market participants along with the transfer of the entire group. It is advisable to determine whether the above-mentioned factors are specific to the entity or would be available to others in the market generally on a case-by-case basis.

4.11 If the valuation objective is not Market Value but is to reflect the value of an asset to a specific owner, it follows that entity-specific factors will be included. Examples of situations in which the values to a specific owner may be required include:

- testing intangible assets for impairment under IFRS guidance by reference to their value in use;
- to support investment decisions;
- reviewing the performance of an asset; or
- liquidation decisions (which would require additional assumptions on the timing of the liquidation and the expected cash flows and costs).

Comparison approach

4.12 Valuation methods that use the comparison approach determine the value of an intangible asset by reference to market activity, e.g. transaction prices, bids or offers involving identical or similar assets.

- 4.13 An example of the comparison approach is the market transactions method, which determines the value of an asset by reference to transaction prices, or 'valuation multiples' implicit in the transaction prices of identical or similar assets.
- 4.14 A valuation multiple is a multiple often determined by dividing the transaction price of an asset by a financial parameter, such as historical or prospective revenues or profit at a given level. Valuation multiples are not limited solely to financial parameters and in certain instances may be calculated by reference to non-financial parameters (price per room, bed etc).
- 4.15 The required inputs for the market transactions method are:
- prices and/or valuation multiples in respect of identical or similar intangible assets; and
 - adjustments as required to such transaction prices or valuation multiples, to reflect the differentiating characteristics or attributes of the subject asset and the assets involved in the transactions.
- 4.16 There are practical difficulties that hinder the use of this method for intangible assets. Often, there are either very few or no transactions involving identical or similar assets for which price information is available. Even where transactions can be identified and information regarding prices paid is available, it can be difficult to determine the appropriate adjustments to the prices or the valuation multiples necessary to reflect the differentiating characteristics or attributes of the subject intangible asset as compared to those of the assets involved in the transactions. In practice, such adjustments may only be determinable at a qualitative, rather than quantitative, level. For example:
- the brand being valued may be considered to command a more dominant position in the market than those involved in the transactions; or
 - a drug patent being valued may have greater efficacy and fewer side effects than those involved in the transactions.
- 4.17 The difficulties described may restrict the appropriateness of the market transactions method in the valuation of intangible assets. Consequently, in practice this method is often only used as a cross check.

Income approach

- 4.18 Valuation methods under the income approach determine the value of an intangible asset, by reference to the present value of income, cash flows or cost savings that could actually or hypothetically be achieved by a market participant owning the asset.
- 4.19 Thus, any method under the income approach is heavily reliant on prospective financial information (PFI). PFI can be any type of forecast financial data and, hence, includes:
- forecast revenues;
 - forecast gross profit, operating profit and net profit;
 - forecast profits before and after tax;
 - forecast cash flows before or after interest and/or tax; and
 - the estimated remaining useful life.
- 4.20 The principal intangible asset valuation methods under the income approach are:
- relief-from-royalty method, sometimes known as royalty savings method;
 - premium profits method, sometimes known as incremental income method; and
 - excess earnings method.
- 4.21 Each of these methods involve the discounting of forecast cash flows using either discounted cash flow techniques or, in simple cases, the application of a valuation multiple.
- 4.22 In addition to capitalising the income, cash flows or cost savings that may be derived from use of the asset, it may be appropriate to take account of any tax relief available on amortisation of the capitalised asset. Such an adjustment, known as the tax amortisation benefit (TAB), reflects the fact that the income derivable from an asset includes not only the income directly achievable from its use but also the reduction in tax payable by a business using the asset. The benefit is highly dependent on the ability to amortise the intangible asset under the underlying tax jurisdiction as well as the assumptions for relevant tax rates and amortisation conventions.
- 4.23 If estimating the Market Value, an adjustment to the cash flows for tax amortisation should be made only if this benefit would be available to market participants generally under the relevant tax regime.

- 4.24 When performing a valuation under a basis other than Market Value, a TAB adjustment should be made if availability of amortisation would be consistent with the basis of valuation and the approach adopted. Thus, if an entity-specific valuation is being performed, a TAB adjustment should be included only if the tax amortisation would be available to the specific entity concerned under the application of an income approach.

Relief-from-royalty, or royalty savings method

- 4.25 The relief-from-royalty method calculates the value of an intangible asset by reference to the value of the hypothetical royalty payments that would be saved through owning the asset, as compared with licensing the asset from a third party. It involves estimating the total royalty payments that would need to be made over the asset's life, by a hypothetical licensee to a hypothetical licensor. Where appropriate, the royalty payments over the life of the asset are adjusted for tax and discounted to present value.
- 4.26 Royalty rates are typically applied as a percentage of the revenues expected to be generated when using the asset. In some cases, royalty payments may include an upfront lump sum in addition to periodic amounts based on revenues or some other financial parameter.
- 4.27 The hypothetical royalty rate is usually derived from market-based royalty rates for guideline or similar transactions. A prerequisite for this method is the existence of comparable assets that are licensed at arm's length on a regular basis. The following valuation inputs may need to be considered to apply the relief-from-royalty method:
- the royalty rate and corresponding financial parameters, such as revenues, 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;
 - projections for the financial parameters, such as revenues, that the royalty rate would be applied to over the life of the asset together with an estimate of the life of the asset;
 - rate at which tax relief would be obtainable on hypothetical royalty payments;
 - if appropriate, the cost of marketing and any other costs that would be borne by a licensor in utilising the asset;
 - a discount rate to enable estimated periodic royalty payments to be brought to a present value;
 - in simple cases where a constant growth is expected, a capitalisation (present value) multiple to apply to a base period level of cash flows; or
 - if appropriate, a Tax Amortization Benefit on the respective intangible asset.

- 4.28 Royalty rates can often vary significantly in the market for apparently similar assets. It could be useful to cross-check the assumed royalty input by reference to the operating margin that a typical operator would require from sales generated from use of the asset.

Premium profits or incremental income method

- 4.29 The premium profits method involves comparing the forecast profit stream or cash flows that would be earned by a business using the intangible asset with those that would be earned by a business that does not use the asset. The forecast incremental profits or cash flows achievable through use of the asset are then computed. Forecast periodic amounts are brought to a present value through use of either a suitable discount factor or suitable capitalisation multiple.
- 4.30 Depending on the basis of valuation required, the forecast cash flows may or may not include entity specific factors that are not available to the generality of market participants.
- 4.31 Some or all of the following valuation inputs should be considered when applying the premium profits method:
- forecast periodic profit, cost savings or cash flows expected to be generated by a market participant using the intangible asset;
 - forecast periodic profit, cost savings or cash flows expected to be generated by a market participant not using the intangible asset; and
 - an appropriate capitalisation multiple or discount rate to capitalise forecast periodic profit or cash flows.
- 4.32 The method can be used to value both intangible assets whose use will save costs and those whose use will generate additional profit.

Excess earnings method

- 4.33 The excess earnings method determines 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.
- 4.34 The excess earnings method can either be applied using several periods of forecast cash flows – the “multi-period excess earnings method” or using a single period of forecast cash flows – the “single-period excess earnings method”. In practice, because an intangible asset will normally bring monetary benefits over an extended period, the multi-period excess earnings method is more commonly used.

- 4.35 The excess earnings method is generally used in practice for those intangibles which have the biggest impact on the cash flows. Contributory assets are effectively only secondary assets in the business model.
- 4.36 The method first involves forecasting the total cash flows expected to arise from the business or group of assets that use the subject intangible asset. From this forecast of cash flows, a deduction is made in respect of the contributions to the cash flows that are made by assets, tangible, intangible and financial, other than the subject intangible asset. Typically, the types of intangible assets that are valued using the excess earnings method are those that contribute to cash flows in combination with other assets in a group. While it is important to assess the cash flows in the context of the business, the excess earnings method is generally applied at a level of cash flows below that of the business. Typically the lowest level of cash flows is identified for a group of assets all of which contribute to the cash flows of the group of assets. For example, a product line's expected cash flows can be estimated and a contributory asset charge deducted for the assets used in the manufacturing and marketing of the product.
- 4.37 When calculating the intangible asset value it is important to ensure that the forecast cash flows are reflected in the projection only to the extent that it is expected to arise from the asset being valued in existence at the valuation date.
- 4.38 Forecast cash flows are brought to a Present Value by application of Present Value techniques and a suitable discount rate or, in simple case with infinite or indefinite Remaining Useful Life (RUL), a capitalisation factor.
- 4.39 The contribution to cash flows made by assets other than the subject intangible asset is known as the 'contributory asset charge' (CAC) or 'economic rent'. These contributory assets support the subject intangible asset in generating cash flows. The CAC is discussed further in Section 5, paragraphs 5.28 to 5.38.
- 4.40 In order to determine a fair return on or of a contributory asset (Section 5, paragraphs 5.29 to 5.39), its value must be determined.

- 4.41 The inputs that should be considered when applying the excess earnings method include, but are not limited to:
- forecast cash flows obtainable from the business to which the subject intangible asset contributes to cash flows – this will involve allocating both income and expenses appropriately to the pertinent business or group of assets of the entity that includes all the income derivable from the subject intangible asset;
 - contributory asset charges in respect of all other assets in such business(es), including other intangible assets;
 - an appropriate discount rate to enable expected cash flows attributable to the subject intangible asset alone to be brought to a present value; and
 - if appropriate and applicable, tax amortization benefit.
- 4.42 The method is frequently used in practice to value in-process research and development (IPR&D), projects which are difficult to value by other methods. As each IPR&D project is likely to be unique, it is unlikely that there will be market transactions in similar assets so a comparison approach is unlikely to be possible. The nature of an IPR&D project is that additional development time and costs are anticipated prior to the asset generating cash flows (or cost savings). A discounted cash flow exercise, such as multi-period excess earnings, can be adapted to reflect these costs prior to the asset generating cash flows (or cost savings), whereas such adaptation is difficult with either the relief-from-royalty or premium profits methods.
- 4.43 The method is also frequently used in practice to value customer relationships or customer contracts. Again, there are rarely market transactions in similar assets for which price information is available so a comparison valuation method is unlikely to be possible. Also, it is difficult to apply relief-from-royalty to such assets as these assets are not leased in the market and so there is no data available on which to base royalty rates. Similarly, it is not possible to apply the premium profits method as it would be difficult to find a comparable business that did not have customer relationships.

Cost approach

- 4.44 The cost approach, often known as the depreciated replacement cost approach, determines the value of an intangible asset by calculating the cost of replacing it with an asset with similar or identical service capacity. It may also be appropriate to consider the opportunity costs as part of the replacement costs in association with such a replacement. Adjustments, including that in respect of depreciation, may be required to reflect differences between the cost of replacing the asset with one with similar service capacity and replacing it with one with the depreciated service capacity of the subject asset.

- 4.45 This approach is mainly used for those intangible assets that have no identifiable income streams or other economic benefits.
- 4.46 To apply the cost approach, the replacement cost of a similar asset or one with similar service potential must be estimated. This may be done either by identifying:
- the costs of reproducing an **identical** asset in the market; or
 - the costs of developing, replacing or building a **similar** asset.
- 4.47 In practice, there are only a few types of intangible asset for which either of these can be estimated:
- the method may be applied to self-developed software.
 - it may be applied to web site contents as it may be possible to estimate the cost of constructing the web site.
 - it may be applied to value the intangible benefit of the workforce through determining the cost of building up the workforce. Although the workforce is not usually considered to be an identifiable intangible asset because it may be difficult to separate from the business, a contributory asset charge may be required in respect of the workforce.
- 4.48 The valuation inputs required to apply the replacement cost method include some or all of the following factors:
- the cost of developing or purchasing an identical asset with the same production or service potential;
 - the cost of developing or purchasing a similar asset with the same or similar production or service potential;
 - in the case of the cost of a similar, rather than identical, asset with the same or similar production or service potential being identified, the adjustments required, including amortisation if appropriate, to that cost in order to reflect the specific characteristics or attributes of the subject asset;
 - consideration of the tax deductibility of certain costs to replace an asset (e. g. personnel expense for the generation of software).

5. Valuation inputs

5.1 This section examines the eight most frequently used valuation inputs identified in the various valuation methods discussed in the previous section. These are:

1. prospective financial information;
2. comparable transaction prices and implied valuation multiples;
3. royalty rates;
4. premium profits;
5. contributory asset charges;
6. discount rates or capitalisation multiples;
7. remaining useful life: and
8. replacement cost.

5.2 This section provides guidance on how these valuation inputs may be determined. The degree to which different inputs will require to be investigated or verified by the valuer will depend on the purpose of the valuation and the scope of the valuation exercise. In practice, there may be other critical inputs – it is not possible to provide an exhaustive list.

Prospective financial information (PFI)

5.3 All the intangible asset valuation methods under the income approach require PFI for some of their inputs. The income stream will relate to financial parameters such as revenues, operating profit, cash flow or some other measure. Estimates of these financial parameters are critical to derive a credible valuation.

5.4 There is a direct relationship between the PFI and an appropriate discount rate.

5.4.1 Under the “traditional” approach, the forecast cash flows reflect the future cash flows and are discounted at a rate commensurate with the risk attaching to the underlying asset.

5.4.2 Under the “certainty-equivalent” approach, assumptions are built into the forecast cash flows to reflect the performance risk of the asset so that they are adjusted downward using certainty equivalents or using weighted scenarios (expected cash flows) to arrive at certainty-equivalent cash flows. These certainty-equivalent cash flows are discounted at a rate that reflects the time value of money only, which is a risk-free rate. However, this approach is rarely applied in practice.

- 5.5 When making estimates of PFI, it is important to be clear which approach is being used, so that risks are not double counted or missed. The implications on the selection of an appropriate discount rate are discussed in paragraph 5.39 et seq below.
- 5.6 PFI should be estimated with respect to factors, such as:
- revenues anticipated through use of the asset or asset group and the forecast share of the market;
 - historic profit margins achieved and any variations from those margins anticipated taking account of market expectations;
 - tax charges on income derived from the asset or asset group;
 - working capital and capital expenditure requirements of the business using the asset; and
 - growth rates after the explicit forecast period appropriate to the asset's expected life reflecting the industry involved, the economies involved and market expectations to provide realism to management's estimates.
- The assumptions behind these inputs should be documented in the valuation report together with their source.
- 5.7 The forecast period needs to be assessed consistently with the expected remaining useful life of the subject intangible asset. As the life of an intangible asset may be finite or assumed to be indefinite or even infinite, forecast cash flows may be for a finite period or may run into perpetuity.
- 5.8 PFI obtained from different sources should be benchmarked to assess its appropriateness for use in the valuation. Benchmarking is the process of performing consistency checks on the PFI assumptions. When performing valuations under a Market Value basis, this will include comparing the inputs with data derived from the market to assess and improve their accuracy and reliability.
- 5.9 For PFI being used to determine the Market Value of intangible assets, growth rates, margins, tax rates, working capital and capital expenditure, benchmarking should include a comparison with the corresponding data from market participants.
- 5.10 Other factors affecting PFI inputs may include the economic and political outlook and related government policy. Matters such as currency exchange rates, inflation and interest rates may affect intangible assets that operate in different economic environments quite differently. Consideration should be given to how such factors affect the specific market and industry in which the subject asset is being valued.

- 5.11 When cash flows are forecast into perpetuity, specific consideration should be given to the growth rates used. These should not exceed the long-term average growth rates for the products, industries, country or countries involved, unless a higher growth rate can be justified.
- 5.12 When using PFI to determine the value of an intangible asset, a sensitivity analysis of the resulting asset value should be performed to assess the impact of possible variations in the underlying assumptions. Those elements of PFI to which the resulting asset value is most sensitive, should be reviewed to ensure that the assumptions underlying them are as robust as possible with all available relevant factors being reflected.

Comparable transaction prices

- 5.13 In the rare cases in which the subject asset is identical to others traded in an active market, obtaining a reliable market price is straightforward. The market price in the active market is the only input required in such cases. No adjustments will be required to the market price.
- 5.14 Because of the heterogeneous nature of most intangible assets, information from comparable transactions will usually involve similar rather than identical assets. In some cases, the nature of the comparable transaction may also be different from the valuation objective, e.g. it may relate to a transaction between market participants when an entity specific based valuation such as value in use is required. In spite of these differences, the information from these transactions may still be relevant although a benchmarking exercise may be needed to address:
- differentiating characteristics of the assets involved including geographical coverage, functionality, market coverage or markets accessed (for example one asset may be in the business-to-business market and the other in the business-to-consumer market);
 - specific purchaser or seller factors that might impact price such as a forced sale or related party transaction as part of group restructuring; or
 - difference in the market between the guideline transaction date and the valuation date.
- 5.15 It is often the case that full transaction information is difficult or impossible to obtain and may be subject to confidentiality. The valuer may not know the detailed terms, for example whether warranties and indemnities were given by the seller, whether incentives were involved, or the impact of tax planning on the transaction. Reliance on such transactions where full information is not available may be unwise.

5.16 Comparable transactions may produce direct evidence of price or be analysed to provide valuation multiples as described earlier. The output from the benchmarking exercise should be to determine whether the identified factors would result in the price in the comparable transaction being higher or lower than the price in a hypothetical transaction involving the subject asset. If possible, any increase or decrease should be quantified. If this is not possible, as much qualitative information as available should be documented, such as whether the factor is likely to 'significantly' or 'slightly' increase value as compared with the asset transacted.

Royalty rates or amounts

5.17 Under the relief-from-royalty method, a key input is the hypothetical royalty rate that would be paid by a willing licensee to a willing licensor to license the asset over its useful life.

5.18 Royalty rates may be obtained by reference to any existing or previous arrangements in which the subject asset was licensed or by reference to licensing arrangements in the market for identical or similar assets.

5.19 Any royalty information obtained should be adjusted to reflect the differences between the comparable royalty arrangement and the subject asset. Factors to benchmark when comparing the subject asset and other royalty agreements include:

- specific licensor or licensee factors that might impact the royalty rate such as their being related parties;
- exclusivity terms;
- whether the licensor or licensee has responsibility for certain costs, such as marketing and advertising;
- licence inception date and period of effect;
- duration of licence; or
- differentiating characteristics such as market position, geographical coverage, functionality, whether they are used in connection with B2B or B2C products etc.

5.20 When performing royalty cash flow calculations, maintenance and other support expenditure must be treated consistently. Thus, if the licensor is responsible for maintenance expenditure, for example advertising or maintenance research and development, the royalty rate should reflect this as should the royalty cash flows. Alternatively, if maintenance expenditure is not included in the royalty rate, it should also be excluded from the royalty cash flows. Similarly, taxes must be treated consistently in the royalty cash flows.

- 5.21 Reasonableness checks should also be performed in respect of the selected royalty rate. One such check compares the total profit at a particular level, such as gross or operating profit, and how much of that profit would accrue to each of licensee and licensor if a selected royalty rate were used in determination of the licence fee. The reasonableness of such a profit split can then be reviewed.
- 5.22 If the resulting profit splits are significantly different from the ranges indicated by market evidence then:
- this may be explicable by reference to specific factors – for instance, the subject asset may be especially complex and, hence, expected to earn a higher than normal return for the licensor;
 - it may be necessary to reconsider whether the selected royalty rate is appropriate; or
 - depending on the basis of valuation being adopted, a royalty rate might be appropriate that is different from that adopted by market participants.

The above are indications of potential shortcomings. There may be other reasons for deviations and respective adjustments require professional judgement.

Premium profits

- 5.23 The key inputs in the premium profits method of valuation are the forecast premium profits, which are a type of PFI. Forecasts of the cash flows achievable both with and without the subject intangible asset should be made by reference to:
- activities of the owning entity;
 - any entities using similar or identical intangible assets for which information is available publicly;
 - any proprietary databases of the valuer; and
 - other research as available.
- 5.24 Examples of where different profits may be generated with or without an asset include:
- a beverage being sold by the same entity under both a branded and non-branded label; and
 - a non-compete agreement creating different projected cash flows.
- 5.25 Where such data is obtained from the owning entity it should be tested or benchmarked against other data in the market. Depending on the basis of valuation required, adjustments may be required in respect of entity-specific factors in the forecasts.

- 5.26 The application of this approach should reflect the extent to which the profit or cash flow forecast, excluding the use of the intangible asset, is unrepresentative to any degree through reliance on another intangible asset. This could happen, for instance, through the comparable profits being reliant on an 'own-name' brand rather than no brand. In such cases, the identified premium profit and resulting value attributable to the intangible subject asset would be understated.
- 5.27 Account also needs to be taken of any differences in the level of investment that may exist between an apparently comparable brand and the subject. A branded product may produce higher gross profits than an unbranded product due to higher selling price. However, sales of the branded product may require advertising and marketing expenses that the unbranded product does not. Similarly, a new manufacturing technology may reduce manufacturing costs, but require the purchase of additional machinery. The return on and of the additional machinery needs to be considered in the valuation of the technology.

Contributory asset charges

- 5.28 When applying the excess earnings approach to the valuation of a specific asset, the contributions of other assets to the cash flow are deducted. This is done by deducting a contributory asset charge (CAC) for the other assets. Such charges are a type of PFI.
- if cash flows are forecast on a post-tax basis, CACs should be determined on a post-tax basis.
 - if cash flows are forecast on a pre-tax basis, CACs should be determined on a pre-tax basis.

In practice, it is more common to value intangible assets on a post-tax basis.

- 5.29 The determination of CACs generally comprises three steps:

- identification of the assets contributing to the cash flows;
- measurement of the values of the assets; and
- determination of an appropriate fair return in relation to the value of the assets.

Alternatively, the CAC can be charged directly, e. g. by using appropriate royalty charges.

5.30 The underlying principles are that:

- CACs should be made for all the identified contributory assets including pertinent elements of goodwill (which is in practice, for financial reporting purposes, mostly limited to workforce) that contribute to the generation of cash flows; 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.

5.31 Assets for which CACs are typically assessed include working capital, fixed assets, intangible assets other than the subject intangible asset, and workforce-based intangible assets. Precautions are taken to ensure that there is no double counting between charges in the profit and loss account and the CACs, and similarly that no CACs are omitted.

5.32 CACs are generally computed as a fair return on and of the value of the contributory asset.

- The appropriate return on a contributory asset is the investment return a typical prudent investor would require on the asset. This return that an investor would require is computed with respect to the Market Value of the asset.
- The return of a contributory asset is a recovery of the original investment in respect of assets that deteriorate over time. Thus, in the case of a tangible fixed asset, the return of such asset could be represented by its depreciation charge.

5.33 For tangible assets, a fair return on and of the asset is the amount that would be required to be paid for the use of the asset. This might be determinable from leasing or hire purchase arrangements which would provide a composite figure for returns on and of the asset.

5.34 Alternatively, a notional depreciation charge or similar charges (as the excess earnings method uses discounted cash flows, depreciation should be added back initially as a non-cash charge), could be used as a surrogate for the return **of** the asset. A return **on** the asset could then be determined by reference to interest rates that would be charged in the market to purchase the asset.

5.35 In respect of working capital, care must be taken as to whether interest charges are deducted in the cash flow forecasts. Typically, interest charges are excluded from cash flows but are reflected through discounting at a cost of capital that reflects the extent of debt financing for tangible and intangible assets. In order to reflect an additional fair return on working capital, interest rates on bank lending with an appropriate term could

be used. As working capital is not an asset that deteriorates over time, i.e. is not a 'wasting' asset, returns of working capital are not required.

- 5.36 In respect of the workforce, there is a cost associated with getting this in place and a return on the workforce charge may be required in that respect. Returns on the workforce can be determined as a return charged on the Market Value of the workforce asset. The workforce asset is usually valued using a cost approach, as described in paragraph 4.44 et seq. and a fair return on this value is usually determined by reference to the cost of capital for the business employing the workforce.
- 5.37 A fair return on and of an intangible asset can be estimated by reference to a hypothetical royalty rate that would be charged to lease the asset.
- 5.38 A check should be performed on the reasonableness of all the CACs used. The weighted average rate of return on assets (WARA) should be calculated by multiplying the return for each asset by its value and summing the results. The sum of these computations should be divided by the total value of all the assets (net of the non-interest-bearing debts) used in the business and the result should approximate to the weighted average cost of capital (WACC) for the entity.

Discount rates

- 5.39 As discussed in paragraph 5.4 above, the appropriate discount rate to use depends upon whether the 'traditional' approach or the 'riskless' approach has been used.
- 5.40 A discount rate under the traditional approach reflects both the time value of money and the risks attaching to the asset being valued. This may be a different rate from that attaching to the business or businesses that use the asset. The following methods are available to determine this discount rate:
- the 'build-up' approach that attaches a premium or a discount to a rate observed in the market to reflect different risks; and
 - direct observation in the market of the cost of capital for a business that relies only on the subject asset or a similar intangible asset in theory.

An intangible asset's discount rate is not by definition always different to that of the business (the WACC). There are instances where the subject intangible asset is the most significant asset and the WACC could be the appropriate discount rate to apply. In practice, a valuer would normally estimate the discount rate for an intangible asset with respect to the WACC applicable to the underlying business where the subject intangible asset is an integral part of it.

- 5.41 In applying the build-up approach, the starting point is often to find the WACC for a typical business in the sector.
- 5.42 In practice, it is usually difficult to observe costs of capital in the market for similar assets as most businesses rely on more assets than just the subject asset. However, it may be possible to use rates from the market as reasonableness cross-checks of results from application of the build-up method.
- 5.43 In applying the discount rate and calculating a respective discount factor for the respective periods, the assumptions on the timing of the cash flows to be discounted should be reflected. If it is assumed that the cash flows are distributed equally over the year, the mid-year convention should be applied.

Capitalisation multiples

- 5.44 As noted earlier, when cash flows for different periods grow at a constant amount, they can be brought to a single amount through applying an appropriate capitalisation multiple.
- 5.45 Capitalisation multiples can be applied to forecast cash flows either:
- by use of valuation multiples, such as price/earnings multiples, for similar assets in the market (this information is available only rarely); or
 - by adjusting the discount rate obtained above to reflect the remaining useful life of the subject asset and any anticipated growth.

Remaining Useful Life

- 5.46 An important consideration is the remaining useful life (RUL) of an intangible asset. This may be a finite period limited by either contract or typical life cycles in the sector; other assets may effectively have an indefinite or even infinite life. Estimating the RUL will include consideration of legal, technological or functional and economic factors. For instance, an asset comprising a drug patent may have a remaining legal life of five years before expiry of the patent, but a competitor drug with expected improved efficacy may be expected to reach the market in three years. This might cause the RUL of the first product to be assessed as only three years.

Replacement cost

- 5.47 The inputs when using the replacement cost method are discussed at 4.48 above. A benchmarking exercise should be performed to assess the suitability of the replacement cost information to include:
- differentiating characteristics of the replacement asset measured and the subject asset, such as service and production capacity; and
 - date at which replacement cost has been estimated as compared with valuation date.
- 5.48 The extent of adjustments to replacement cost obtained from research and any preference for one measure of cost over another, if more than one has been found, should be documented.

6 Reporting the Valuation

- 6.1 A valuation report should be prepared in accordance with IVS 3 *Valuation Reporting*.
- 6.2 The valuation report should include an explanation of differences in valuation results between the primary method and any secondary methods or cross-checks if applicable and reasonable. This explanation should highlight the valuation inputs that are perceived as being the most and least reliable and, hence, the reliability of the different results obtained.
- 6.3 Whenever data can be obtained without undue cost or effort that would allow an intangible asset to be valued using alternative methods, it is good practice to undertake valuations using those different methods in order to cross check the result of the primary method selected. In general however, the value of an intangible asset will be estimated and reported based on the result of the selected primary valuation method(s).

7. Effective Date

- 7.1 This International Valuation Guidance Note is effective from 1 March 2010.