Pricing to market

Property valuation revisited: the hierarchy of valuation approaches, methods and models

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Abstract

Purpose – Since the global financial economic crisis hit the world markets in 2007/2008, the role of property valuation has been under greater and greater scrutiny. The process of valuation and its quality assurance has been addressed by the higher prominence of the International Valuation Standards Council (IVSC). This is a significant initiative worldwide. However, there has been little written on the appropriate use of valuation approaches and methods in market valuations. There is now a hierarchy of valuation definitions. In order, there are valuation approaches, valuation methods and, as a subset of the methods, techniques or models. The purpose of this paper is to look at the importance of identifying the appropriate approach to be adopted in market valuations and the methods, techniques and models that should be applied to determine market value.
Design/methodology/approach – This practice briefing is an overview of the valuation approaches, methods and models available to the valuer and comments on the appropriateness of valuation each in assessing market value.
Findings – This paper reviews the IVSC-recognised approaches and prompts the valuer to be careful with the semantics involved so that they are better placed to provide an unambiguous service to their clients.
Practical implications – The role of the valuer in practice is to identify the appropriate approach for the valuation of the subject property, choose the right method and then apply the correct mathematical model for the valuation task in hand.
Originality/value – This provides guidance on how valuations can be presented to the client in accordance with the International Valuation Standards.

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1. Introduction

> It's simply to say that managers and investors alike must understand that numbers are the beginning, not the end, of valuation. (Warren Buffett, 1982)

The role of the valuer is to use the most appropriate valuation approach to determine market value, an estimate of price in the market place. In undertaking this task, depending upon their international location, they will be required to follow a set of standards to ensure quality in the valuation. In most mature markets, the agreed and principal standards are those published by the International Valuation Standards Council (IVSC)[1] and the International Valuation Standards (IVS, 2017)[2].

This briefing looks at a possible hierarchy of definitions in the IVS and proffers a hierarchy for undertaking any property valuation[3]. In order, there are valuation approaches, valuation methods and, as a subset of the methods, techniques or models. In fairness, many valuers and commentators use the terms interchangeably and, indeed, the IVS, whilst clear on "Approaches", does blur the lines when talking about "Methods" and "Models" particularly as the use of these words is not consistent between sections (e.g. the section on "Business Interests" uses the terms differently to the section on "Real Property Interests"). But it is suggested that by adopting a distinct semantic demarcation, it will aid the valuer and the user of valuations in understanding the valuation. But, before, discussing this in more depth, it is useful to revisit the bases of valuation as defined in the IVS.

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2. Market value and worth

In business, the concept that seems to be most misunderstood is "value". Despite definitions that clearly distinguish between value and worth. Market value is:

> IVS 104 Bases of value
>
> 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.

IVS 104 then offers an explanation of this basis and states that:

> 30.3. The concept of Market Value presumes a price negotiated in an open and competitive market where the participants are acting freely.

This can be emphasised by some simple emendations to the words and tenses in the definition so it becomes market price (this is shown for illustration but is not an accepted IVS definition):

> Market Price is the estimated amount for which an asset or liability did exchange on the date of sale 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.

Market value is a price definition. Conversely, the basis of worth (called investment value[4]) is the subjective judgement of the benefits of ownership of that asset to a specific investor (or owner occupier):

> IVS 104 Bases of value
>
> 60. IVS-defined basis of value – investment value/worth
>
> 60.1. Investment Value is the value of an asset to a particular owner or prospective owner for individual investment or operational objectives.
>
> 60.2. 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 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.

Many users of valuation cannot distinguish between the price that they would get for the property (were it to be sold, on the date of the valuation) in the open market (market value/price) and what they believe the asset is worth to them (2orth). In simple terms, in an investment market, an owner of a property would, all other things being equal, sell their property if the value is above their calculation of worth (i.e. a purchaser will give them more than they want). Conversely, if the market value is below their assessment of worth, they would retain the property. That said, further discussion of this point is outwith the ambit of this briefing note. For a more detailed analysis, see French (1997).

3. Reporting value

One element of valuation reporting that is often omitted relates to the valuer, informing the client of approach(es) and method(s) used. This requirement is in addition to the basis of valuation. IVS 400, Real Property Interests, says:

> IVS 400, Real Property Interests

30. Bases of value (IVS400)

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.

The requirement to report the approach and method is contained in IVS 103, Valuation Reports.

IVS 103 Reporting

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:

(1) the scope of the work performed, including the elements noted in para 20.3 of IVS 101 Scope of Work, to the extent that each is applicable to the assignment;

(2) the approach or approaches adopted;

(3) the method or methods applied;

(4) the key inputs used;

(5) the assumptions made;

(6) the conclusion(s) of value and principal reasons for any conclusions reached; and

(7) the date of the report (which may differ from the valuation date).

There is no mention (or distinction) of a requirement to report the model or technique used. Indeed, the terms are not used as much in the 2017 edition of IVSC as they were in the 2013 predecessor. And they are not discussed as part of a hierarchy.

4. The standards – valuation approaches and methods (and models)

IVS 105 Valuation approaches and methods

10.1. Consideration 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:

(1) market approach;

(2) income approach; and

(3) cost approach.

10.2. Each of these 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.

This distinction between Approaches and Methods is reinforced in Real Property Interests section where it reads:

IVS 400 Real property interests

40. Valuation approaches and methods

40.1. The three valuation approaches described in the IVS 105 Valuation Approaches and Methods can all be applicable for the valuation of a real property interest.

Again, there is no mention of using Models and techniques as the third part of a hierarchical trinity, yet it is argued that this would make the understanding of the process of valuation easier. This briefing paper is not talking about the techniques themselves (for a detailed discussion on that aspect, see French, 2013) but the need to differentiate techniques/models from the broader term of method.

5. The hierarchy – valuation approaches and methods and models

So, to recap, the process of valuation and its quality assurance is overseen by the IVS. This suggests, in most places, a simple two-layer hierarchy of valuation approaches (income, cost and market) and valuation methods. This briefing suggests a third layer that differentiates, as a subset of the methods, techniques or models. Thus, it will be as noted in Table I.

Distinguishing between methods (an overall structure for the valuation) and models (the detailed application of a mathematical technique) concentrates the valuer's mind. For example, with the investment method, the valuer can choose an implicit or explicit model; both will be discounting a future cash flow, but the technique for doing so is very different.

6. The importance of models

The purpose of any method of valuation is to determine the price at which it is expected that a property asset might change hands in the open market. The model, which is a subset of the method, should therefore attempt to reflect how the buyers in that market would assess the market value of that property.

If all property and all buyers were homogeneous, there would be one model of valuation. On a pro-rata basis, all property would tend towards one unit price. An analogy to this hypothetical situation is the stock market. Any one share is priced the same as any other share in the same company, and that price is determined by what buyers in the market are currently willing to pay. At a fundamental level, the buyers will assess the worth of the shares to them, based on their own perceptions and expectations on the future performance of that company. If they think the future cash flow to be generated from the dividends (and/or capital changes) will produce satisfactory returns, they will pay a high price to receive that cash flow. If they believe the growth prospects are less attractive, they will pay less for the shares. In other words, prices are determined by the buyers' perception of worth. The sale will occur at the point that reflects the worth of that share to the investor with the highest expectation of growth. That investor will outbid those with lower expectations. If the market is efficient, it is likely that this price will reflect the consensus view.

A fundamental valuation model should therefore reflect this thought process of determining worth. However, in a market where there are frequent transactions, it is possible to observe the level of prices without the need to interpret the underlying fundamentals. Price is determined by comparison. This is regardless of the approach or method. In the market approach, the comparison is direct. In the cost approach, comparison determines the cost of construction, land value and depreciation, and in the income approach (in all methods), comparison is needed to determine rental (on a pro-rata basis) and the initial yield achieved on the sale of similar properties.

The role of any model (implicit or explicit) is therefore to take the figures determined by comparison and apply them to a mathematical technique to estimate market value. By decanting out "models" from the "methods", it allows the valuer and the client to understand more fully how the valuation has been undertaken.

7. Conclusions

The briefing paper has looked at the required use of approaches and methods in the IVSC's IVSs. It then proffers the adoption of a hierarchy within the valuation process: approaches,

Hierarchy level	Title	Comment
Approach	Income approach	The income approach provides an indication of value by converting future cash flows to a single current capital value
Method	Investment method	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; in an owner-occupied building, it could be an assumed rent (or rent saved)
Model	Implicit capitalisation	Income capitalisation (implicit), where an all-risks or overall capitalisation rate is applied to a representative single period income to determine the capital value
Model	Explicit DCF	DCF (explicit) where a discount rate is applied to a series of cash flows for future periods to discount them to a present value or capital value
Method	Profits method	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"
Model	Implicit ARY	Rent is determined by analysing the trading activity and then the capitalisation model is used
Model	Explicit DCF	Rent is determined by analysing the trading activity and then the DCF model is used
Method	Residual method	The residual method is a hybrid of the market approach, the income approach, and the cost approach. It is based on the completed "gross development value" and the deduction of development costs and the developer's return to arrive at the residual value of the land
Model	Implicit	All assumptions of development timing are ignored and completion and cost are calculated in current-day terms
Model	Cash flow or DCF	The timing of costs and income are made explicit to determine value based on an explicit cash flow
Approach	Cost approach	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
Method	Depreciated replacement cost	Replacement cost is calculated. The replacement cost must reflect all incidental costs including the value of the land, to build a modern equivalent. The cost of the modern equivalent must then, be depreciated for physical, functional, technological and economic obsolescence
Approach	Market approach	The market approach provides an indication of value by comparing the subject asset with identical or similar assets for which price information is available
Method	Comparable method	Property interests are generally heterogeneous (i.e. with different characteristics) but direct capital comparison assumes that, with suitable adjustments, the value of one property type can be an indication of the estimated price of another either as a total price or price per unit area

Table I.
Valuation process hierarchy

methods and models. It is the role of the valuer to understand the importance of adopting the appropriate approach, the right method and the detailed model to determine the market value.

Notes

1. The International Valuation Standards Council (IVSC) is an independent, not-for-profit organisation that acts as the global standard setter for valuation practice and the valuation profession, serving the public interest.
2. The IVS are fully incorporated in the Royal Institution of Chartered Surveyors (RICS, 2017) Valuation – Global Standards.

3. The International Valuation Standards apply to all assets and not just property. However, in this briefing, the commentary is restricted to property assets only.
4. It is strongly suggested that the term "Investment Value" is dropped from this definition as, in the opinion of the authors, this causes confusion. Many valuers erroneously refer to the market value of an investment property as "Investment Value" rather than recognising it as "Worth". This confusion would be avoided if the basis was only called "Worth".

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