

Pricing to market: property valuation methods – a practical review

A review of
property
valuation
methods

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Abstract

Purpose – Valuation is the process of determining Market Value. Property valuation, as with the valuation of all assets, is an estimation of price in the market. It is value in exchange. The valuer role is to determine the appropriate approach, the method and use the right model to achieve this aim as best as possible. It is a combination of analysing the market and determining the critical variables for the valuation method/model. The method is separate from the valuation process which should be followed (according to the International Valuation Standards Council Valuation Standards) regardless the valuation method chosen. There are valuation approaches, valuation methods and, as a subset of the methods, techniques or models.

Design/methodology/approach – This practice briefing is an overview of the Valuation Methods and Models available to the valuer and comments on the appropriateness of valuation each in assessing Market Value for specific property types.

Findings – This briefing is a review of the valuation methods and models and models that can be applied to determine market value.

Practical implications – The role of the valuer in practice is to identify the method of valuation 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.

Keywords Property valuation, Valuation approaches, Valuation methods, Valuation models, Market value, IVSC

Paper type Technical paper

A cynic is a man who knows the price of everything, and the value of nothing. Oscar Wilde (1892)

Introduction

The quote above is semantically looking at the words “price” and “value” in a deeper and wittier connotation than that of property valuation, but it does highlight the importance of precision in language. There are three words in common parlance in the English language (and other languages) can commonly be used interchangeably. These are “price”, “value” and “worth”. Yet in the context of property (and economics), the words have distinct meanings.

- (1) Price is the actual observable figure at which a property asset is sold in the open market. By definition, it is an historic fact and can only be observed once the sale has been made.
- (2) (Market) Value is an estimate of price where there is no actual sale. It is a proxy. An estimate of the figure that would be paid for the property asset in the open market were the property to be sold (after marketing) on the date of the valuation.
- (3) Worth is a not a market-based figure. It is a subjective assessment of the financial benefit of that asset to a particular owner or potential purchaser at a particular moment in time.



In simple terms, an investor may look at the cash flow that a property investment generates and calculate that the property is worth “X” to them at their internal discount rate and based on their forecasts of the future. The Open Market Valuation for the same property, however, may be “X-1” based on market evidence. Thus the Investor will be interested in purchasing the property; the difference being a reflection of the divergence between their forecasts and market expectations. Conversely, if an investor thinks that that a property that they own is worth less than the Market Value, then they would consider selling that asset.

Worth is the driver that stimulates offers in the market; value is an estimate of the sale price in that market and price is the actual amount paid. These are three different concepts. But, all of them are at a specific point in time. Just as prices fluctuate in the market according to economic conditions, so will value (as an estimate of price) and worth. Valuations do not have shelf life. Values, as prices, go up and down.

The distinction between “price”, “value” and “worth” is of paramount importance. But sadly not every valuation user understands the distinction. Likewise, many clients think that value and worth are the same thing. Or that value is an inherent number below which the property will never be sold. Valuation, and property valuation in particular, is beset with misunderstandings. It is therefore important that valuers are precise in the language that they use in valuation reports and that the valuation process is clear as is the choice of valuation approach, method and model.

Valuation standards

In undertaking the task of valuation, the valuer 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]; the International Valuation Standards (IVS, 2020) [2]. These are often reproduced with the contrary specific standards of member organisations across the globe. For example, in the UK, the Royal Institution of Chartered Surveyors (RICS) publishes the [RICS Valuation – Global Standards \(2020\)](#) [3], colloquially known as the Red Book, which incorporates the IVSC standards. The other main standards across Europe are the [European Valuation Standards \(2016\)](#) published by The European Group of Valuers’ Associations (TEGoVA) [4]. In effect, whilst each set of standards has their differences, there is a significant degree of commonality between all the standards and, indeed, depending upon location and the request of the client, it is possible that a valuer may use more than one set of standards during their professional work.

Valuation standards are the bedrock of all valuation reports and the quality assurance role of standards ensures that the valuer should convey to the client, the approach and method used to determine Market Value.

Market value

Valuation is, normally, the process of determining market value. This is an estimation of the price of exchange in the market place.

Market Value is defined in the [IVS \(2020\)](#) as:

Market value is the estimated amount for which the property should exchange on the date of valuation between a willing buyer and a willing seller in an arm’s length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without being under compulsion.

This is a “price” definition and can easily be modified to read as “price” [changes in bold]

Price is the estimated amount for which the property *did* exchange on the date of *sale* between a willing buyer and a willing seller in an arm’s length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without being under compulsion.

Thus market value is an estimation of the price that would be achieved if the property were to be sold in the market on the date of the valuation. The apposite word in the concept is not “value”, it is “market”. It is the estimate of price in the current market and to provide that valuation, the valuer needs to know and understand the market. The type of property and the nature of the market will determine the approach, method and model of valuation to be adopted. All valuation methods, and associated models, are attempting to estimate the price of exchange in the market. The market value.

Valuation approaches, methods and models

In a previous briefing, [French and Gabrielli \(2018b\)](#) discussed the hierarchy of valuation approaches and valuation methods as determined in the IVS. It also suggested a third layer that differentiates, as a subset of the methods, techniques or models. This is illustrated in [Table 1](#).

By distinguishing between methods (an overall structure for the valuation) and models (the detailed application of a mathematical technique) concentrates the valuer’s mind. This briefing will look at the reporting and use of methods and models.

The practice of property valuers

Previous research by [French and Gabrielli \(2018a\)](#) presented at the European Real Estate Society’s annual meeting in Reading undertook a survey of over 4,000 property professionals to gauge how valuers chose to report valuations to clients. This showed that the majority of valuers always report the reasons for adopting a particular approach or method within their valuation reports, albeit the percentage response rate was substantially higher for methods (90%) than approaches (54%). This is odd as the IVS clearly consider that the discussion of “approaches” is the starting point of the valuation process and not “methods”. Similarly, only half reported the reason for adopting the valuation model. Full details of all the relevant responses are included in [Appendix](#). The pertinent point for this briefing is that, for valuers it appears that the discussion of the method adopted is central to the reporting of market value.

Property valuation methods – a review

In a previous paper reviewing valuation methods ([Pagourtzi et al., 2003](#)), the authors looked at all valuation methods including the use of multiple regression, hedonic pricing and other mathematical-based techniques. Since the publication of that paper, terminology has changed and what may have been previously referred to as methods are now recognised as techniques or models. Thus the table that previously listed the methods of valuation should be amended.

The original wording is shown in [Table 1](#) and the corrected wording is in [Table 2](#).

Traditional valuation methods	Advanced valuation methods
Comparable method	Artificial Neural Networks (ANNs)
Investment /income method	Hedonic pricing method (HP)
Profit method	Spatial analysis methods
Development/residual method	Fuzzy logic
Contractor’s method/cost method	Autoregressive Integrated Moving Average (ARIMA)
Multiple regression method	
Stepwise regression method	

Table 1.
Wording from real
estate appraisal:
a review of valuation
methods ([Pagourtzi
et al., 2003](#))

Table 2.
Updated wording for
real estate appraisal:
a review of valuation
methods (Pagourtzi
et al., 2003)

Market approach – valuation methods	
<i>Comparable method</i>	
Possible models	Heuristic direct capital comparison Multiple regression Stepwise regression Artificial neural networks (ANNs) Hedonic pricing model (HP) Spatial analysis model Fuzzy logic Autoregressive integrated moving average (ARIMA)
Income approach – valuation methods	
<i>Investment /income method</i>	
Possible models	Implicit or explicit capitalisation Multiple regression Stepwise regression Artificial neural networks (ANNs) Hedonic pricing model Spatial analysis model Fuzzy logic Autoregressive integrated moving average (ARIMA)
<i>Profits method</i>	
Possible models	Implicit or explicit analysis to profit Then capitalisation of rent
<i>Development/residual method</i>	
Possible models	Implicit or explicit residual
Cost approach – valuation methods	
<i>Contractor’s method</i>	
Possible models	Implicit or explicit costings

And, in fairness, it could easily be argued that the hedonic pricing model captures the regression techniques too. Whilst, such modelling has its place in automated valuation models (AVMs), these are not methods used by the majority of valuers (French, 2020). Thus this briefing is restricting itself to the five methods of valuation as referenced in the IVS and RICS Red book. These are:

- (1) Comparable method – MARKET APPROACH
- (2) Contractor’s method/cost method – COST APPROACH
- (3) Investment/income method – INCOME APPROACH
- (4) Profit method – INCOME APPROACH
- (5) Development/residual method – INCOME APPROACH

As noted above, internationally, there are THREE recognised APPROACHES to valuation and FIVE recognised METHODS of valuation. These are noted below under the respective headings. This briefing is not going into the detail of the valuation models that can be used. A note of further reading is made at the end of each section.

Approach 1 – market approach

The market approach, as the name suggests, is an analysis of market transactions and is one step removed from an analysis of the buyer’s intent. That is, the value for a subject property can be derived by comparison of recent sales of similar properties in the same or similar

location. It can be an efficient method where markets themselves are efficient but can become less reliable when markets are thin or where information is not available universally to the market. Comparison is the principal method underpinning the Market Approach to determine an estimate of price in the property market.

Property, unlike shares, is not a homogeneous asset. Each property is unique in a number of ways. For example, location, physical form, legal interest and permitted use. These parameters, in turn, will determine the potential cash flow of the property as an investment or its utility in owner-occupation. Price will then reflect the highest and best “bid” for that property under those unique circumstances. And the price of a recent sale of a comparable property is a signpost of the value of the subject property.

Comparables are the building blocks of all property valuations but it is the analysis and understanding of the market that is the mortar that allows the valuer to determine market value. This requires the valuer to gather information about the market and this isn’t just transactional evidence. In practice, valuers use a wide range of comparable evidence (including asking prices, bid information, market indices) to help them determine the market value of the subject property (see [Table 3](#)).

Method 1 – comparable method. Comparable evidence, as discussed can be a range of different sources and data categories. And within that range, the usefulness and reliability of the information has a hierarchy. That hierarchy, in a perfect world, may be one definitive list but it will differ from country to country and market to market depending upon the culture and availability of data. All comparable evidence acts as a signpost to direct the valuer to their assessment of market value but not all comparable evidence is equal and valuers recognise that some evidence is more useful than other information. In a normal transparent market, market transactional evidence is always preferred as the principal signpost but in more opaque markets, there will be a need to give greater emphasis to these other market signposts.

Similarly, there will be times when market conditions, in any market, dictate that there are fewer (or no) comparable transactions to act as the principal signposts to help determine the market value of the subject property. Instead, the valuer needs to rely upon, and look at, any other signposts in the market that may provide an indication of where market prices may be at that point in time. These could be other forms of market data such as asking price information of similar assets or enquiry details of potential purchasers or a host of other indicators within a hierarchy.

Judgements will have to be made about the relative merits of the subject property and the comparable property. If the property being valued is considered to be “better” than the comparable, a higher price will be paid, if it is less attractive, a lower price will result. At the residential level, it is possible to analyse a cross section of sales and thus allocate a market value to the component elements of the house. It is possible to determine the price difference between a house with a garage and one without; the price difference due to an additional bedroom; the market value of a larger garden and so on.

The skill of the valuer is therefore to take a representative cross section of recent comparable sales and other market indicators/comparable evidence and analyse them to determine the market value, the expected price of exchange, for the subject property. The greater the difference between the comparables and the subject property, the greater the skill required by the valuer in adjusting the market value to reflect these changes. For a full discussion on the use of comparable evidence and the appropriate models, see [French \(2020\)](#).

Approach 2 – the cost approach

The second way in which it is possible to estimate the market value of land and property is the replacement cost approach. If the property being valued is so specialised that properties of that nature are rarely sold on the open market, it will be effectively impossible to assess its value by reference to comparable sales or asking prices of similar properties. Similarly, if there is no

HIERARCHY LEVEL	TITLE	COMMENT
1. APPROACH	INCOME APPROACH	The income approach provides an indication of value by converting future cash flows to a single current capital value
2. 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).
3. 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.
3. 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.
2. 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"
3. MODEL	Implicit Capitalisation	Rent is determined by analysing the trading activity and then the capitalisation model is used.
3. MODEL	Explicit DCF	Rent is determined by analysing the trading activity and then the DCF model is used.
2. 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
3. MODEL	Implicit	All assumptions of development timing are ignored and completion and cost are calculated in current day terms
3. MODEL	Cash flow or DCF	The timing of costs and income are made explicit to determine value based on an explicit cash flow
1. 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
2. METHOD	Depreciated Replacement Cost	Replacement cost is calculated. The replacement cost <i>must</i> reflect all incidental costs including the value of the land, to build a modern equivalent. The cost of the modern equivalent <i>must</i> then, be depreciated for physical, functional, technological and economic obsolescence
1. 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, or other comparable evidence, is available
2. 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, either with transactional information or other comparable evidence, can be an indication of the estimated price of another either as a total price or price per unit area.

Table 3.
Valuation process
hierarchy

rental produced, the investment method (see below) will also be inappropriate. Thus, once again, the valuer must revert to understanding the thought process of the user of the building.

It is interesting that in countries where property investment is less prevalent and where owner-occupation is the favoured method of property utilisation, then it is not only specialised properties which are valued by the cost approach. If there is no investment market (i.e. properties will only exchange between owner-occupiers in the market) then the price of exchange will reflect the “bottom line” cost to the purchaser. This bottom line will be the cost that will need to be incurred for a new build relative to the existing property that is on the market. There will be a strong correlation between price and cost. However, if the occupation market is dominated by companies renting, and there is a degree of scarcity in the market, then price will be determined, not by cost, but by the supply and demand characteristics of the occupational market. In such a case, regardless of the nature of the property, the investment method will dominate as the favoured valuation approach.

Method 2 – depreciated replacement cost/ contractors’ method. This can be illustrated by reference to a property such as an oil refinery. Here the nature of the business is so specialised that there are no comparisons, the property would be owner-occupied so there is no rental and the plant and the machinery will be the important elements contributing to the value of the business. Thus, the owner of the building will simply assess the market value of the building by reference to its replacement cost. How much would it cost to replace the property, if the business were deprived of its use? In simple terms, market value will equate to reconstruction costs. The valuer will assess the market value of the raw land (by reference to comparable land values in an appropriate alternative use), add to this value the cost of rebuilding a new building which could perform the function of the existing structure and from this then make subjective adjustments to allow for the obsolescence and depreciation of the existing building relative to the new hypothetical unit. It is reasonable to assume that this mirrors the thought process of the owner-occupier and thus should be viewed as a valid and rational method of valuation. For a full discussion on the use of the contractors’ method or depreciated replacement cost method, including the appropriate modelling, see [French and Gabrielli \(2007\)](#).

Approach 3 – the income approach

At its simplest level, the comparable approach can be used to determine capital value directly. However, moving from sub-markets where there is a high degree of similarity (for example, residential markets), the way in which comparison can be utilised needs to be modified. In the investment market, for example, direct capital comparison is rarely appropriate because the degree of heterogeneity is much higher. As such, the comparison needs to be broken down further to look at rental (on a pro-rata basis) and the initial yield achieved on sale.

Method 3 – the investment method. This distinction between the rental and the yield reflects an interesting interaction between two sub markets, the occupational market and the investment market. At its simplest level, property can either be owned and occupied by the same party (owner-occupied), or the owner can choose to pass the right of occupation to a third party by letting the property. The tenant will then pay the owner (the landlord) a rent to represent the (normal) annual value of the property to the tenant. The level of rent is determined by the supply of, and demand for, that type of property in the market. This returns to Ricardian rent theory, where the interaction of supply and demand in the occupational sub-market produces an economic rent for the property. The level of the rent is in turn determined by the demand for the goods and services produced by the occupying tenant. The rent also represents the return or interest on the money invested in the property by the owner. It is the remuneration for the giving up of the use of the property. This rental income is simply a cash flow and as such the value of the rented property may be determined by the present value of the predicted cash flow.

The investment valuation method should therefore reflect the thought process of determining the worth of the cash flow. It is interesting to note that prior to the time when the “reverse yield gap” phenomenon arose, when the yields on non-growth, low risk investments (such as government stock) started to exceed the initial returns on the riskier growth investments (such as property), the investment method of valuation was truly that. It calculated the worth of the rental flow accurately and rationally by reference to the levels of returns of other investment media. The yield was fixed by reference to the government stock rate (say 1–2%) and increased to reflect the additional risk in property (3–4%). The cash flow also tended to be a fixed rent on a long lease (say 99 years). Thus the valuation was the present worth of that annual net rental at the then current investment rate. It was a full discounted cash flow model (DCF). This technique was corrupted in the 1960s and 1970s with the advent of rental growth. No longer were rents expected to remain fixed. The combination of inflationary pressure in the economy and real growth on individual property types as demand outpaced supply led property owners (investors) to introduce rent reviews to claw back this increased value. Valuers therefore needed to adapt to a “growth” environment without having access to sufficient computing power or understanding of methodology to allow for growth assumptions explicitly. The implicit model became a short cut to the full DCF model. The capitalisation of the initial income at a lower yield meant a higher multiplier (YP or Years Purchase) and a corresponding higher market value to reflect the greater attractiveness of the growth investment. In reality, valuers were decapitalising recent comparable sales and applying the same multiplier (low yield) to the subject property. The implicit investment model ceased to be a rational analytical technique and was now one of simple comparison.

This scenario is perfectly acceptable in a market where there are frequent transactions. It is then possible to observe the level of prices without the need to interpret the underlying fundamentals. Price is determined by comparison. However, the implicit investment model no longer looks at the underlying investment criteria and is now a crude form of benchmarking. It provides a reference point against which to base the subject valuation. The implicit investment model is a coarse, but robust, model of comparison. It does not attempt to analyse the worth of the property investment from first principles. The model is very capable, in normal markets, of estimating the most likely price of exchange but, given the imperfections of the property market, this is not necessarily the same as the property’s inherent worth. For a full discussion on the use of the Investment Method and the available models, see [French and Sloane \(2018\)](#).

Method 4 – the accounts or profits method. As previously noted, the price of a property asset should reflect the worth of that asset to the purchaser. It is therefore likely that the process of assessing worth will be a reflection of the use of the property to the business. If it is possible to observe the purchase of similar properties, the comparables will be used to determine market value. However, if there are insufficient sales to determine a comparable value and if there is no rent produced because the property is in owner-occupation, then the valuer must determine the value by returning to a detailed market analysis. For instance, the market value of a hotel in owner-occupation will be dependent on the potential cash flow to be derived from ownership. That cash flow will be determined by the number of bedrooms in the hotel, the room rate and the average occupancy rate for the year. In other words, property is simply viewed as a unit of production and it is the valuer’s role to assess the economic rent for the property from first principles. This is calculated by assessing the potential revenue to be expected each year from the hotel, and deducting all other costs of a prudent hotelier in realising that cash flow. These costs will include direct costs such as catering, laundry and service. In addition, allowances will need to be made for the remuneration of the hotelier, interest on money borrowed to run the hotel and a return on capital for any equity tied up in the business. Having calculated the liabilities these are deducted from the revenue figure and

Types of property – non specialised

Single residential owner-occupied	Domestic houses are normally valued by direct capital comparison. In some markets, this will be based on the whole value of the property (e.g. a 3-bedroom property sells for £x), whereas other markets may value on a pro-rata basis (e.g. £y price per sq metre × area). Residential properties are valued by the <i>Comparable</i> method. [<i>Market Approach</i>]
Single residential rented	Where individual residential properties are let, they are, obviously, income producing and would normally be valued using the <i>Investment</i> method. [<i>Income Approach</i>]. However, as the rented market is often competing for the same properties as owner-occupiers, it may be that the domination of that market means that the valuation method used reflects that and rented properties are valued by the <i>Comparable</i> method. [<i>Market Approach</i>]
Residential blocks rented	Once residential assets are bought and sold as a collection of let units, they become income producing assets and would normally be valued using the <i>Investment</i> method. [<i>Income Approach</i>]
Offices	In most markets, offices are let and thus are income producing and would normally be valued using the <i>Investment</i> method. [<i>Income Approach</i>]. However, in markets where there is not an investment market and offices are generally bought and sold for owner occupation, then it is likely that the valuer will value using the <i>contractors'</i> method [<i>Cost Approach</i>]
Single retail	In most markets, shops are let and thus are income producing and would normally be valued using the <i>Investment</i> method. [<i>Income Approach</i>]
Shopping centres	In the case of shopping centres, historically, they have been viewed as a collection of individual shops and would normally be valued using the <i>Investment</i> method. [<i>Income Approach</i>]. However, there is a very strong suggestion that as retail develops and aspects such as branding, customer loyalty schemes and data collection become part of the cash flow generation of these assets, there is an argument that they should be valued as businesses and thus the <i>Profits</i> method can be used. [<i>Income Approach</i>]
Outlets destination retail	Outlets have developed into partnerships between the property provider and the retailers. As such, branding, customer loyalty schemes, and data collection become part of the cash flow generation and this is reflected in the valuation of such assets by the <i>Profits</i> method can be used. [<i>Income Approach</i>]
Single industrial	In most markets, industrial properties are let and thus are income producing and would normally be valued using the <i>Investment</i> method. [<i>Income Approach</i>]. However, in markets where there is not an investment market and industrial units are generally bought and sold for owner occupation, then it is likely that the valuer will value using the <i>contractors'</i> method [<i>Cost Approach</i>]
Logistics	In most markets, logistical properties are let and thus are income producing and would normally be valued using the <i>Investment</i> method. [<i>Income Approach</i>]. However, in markets where there is not an investment market and logistical units are generally bought and sold for owner occupation, then it is likely that the valuer will value using the <i>contractors'</i> method [<i>Cost Approach</i>]
Industrial estates	Industrial Estates properties bought and sold as investment assets and would normally be valued using the <i>Investment</i> method [<i>Income Approach</i>]
Hotels	Hotels are property assets where the building is integral to the business. The room charge is only one component to the revenue producing potential of a hotel. Generally, the larger the hotel, the more variation in the ways in which they generate income. They can offer food, drink and entertainment. But many of them also offer conference facilities, health clubs and swimming pools. All of which generate additional, and often substantial, income. Once again the appropriate valuation method will be the <i>Accounts</i> or <i>Profits</i> method [<i>Income Approach</i>]

(continued)

Table 4.
Appropriate approach
and method according
to property type

Types of property – non specialised	
Development land	Development property is on the cusp between specialised and non-specialised property. Obviously, the end use of the completed development may be either a specialised or non-specialised use and as such the calculation of the completed development value might, in the case of specialised property, rely upon a <i>Profits</i> or <i>Contractor's</i> method. <i>[Income or Cost Approach]</i> . However, the overall method adopted to determine the land/property value in its existing state will be the <i>Residual</i> method <i>[Income Approach]</i> . But, it is strongly suggested that any residual method is cross-checked with any comparable evidence and can be valued by the <i>Comparable</i> method <i>[Market Approach]</i>
Agricultural land	Although, in its purest form, agricultural land can be valued by the <i>Comparable</i> method <i>[Market Approach]</i> often the market is distorted by governmental policy and the value of the land may relate to the payments that are made in the form of grants and set-asides or quota allocations. As such, the value is determined on an <i>Accounts</i> or <i>Profits</i> method <i>[Income Approach]</i>
Types of property – specialised	
Student housing	As with Private Rented Sector assets, student housing is bought and sold as a collection of let units (often with incomes guaranteed by the University/college). They are income producing assets and would normally be valued using the <i>Investment</i> method <i>[Income Approach]</i>
Telecom	This may incorporate a whole host of facilities. Aerial masts are now so common that the <i>Comparable</i> method is now the norm <i>[Market Approach]</i> . Whist, cabling, overhead wiring and relay or booster sites may, in the absence of comparison, be valued by reference to their contribution to the business. As such, their value is determined on an <i>Accounts</i> or <i>Profits</i> method
Mineral extraction	This is a classic case of land as a factor of production. The land is the core element of the business and as such the value of the land is based on the likely profits arising from the extraction of the mineral(s) in the ground relative to the costs of extraction. As such, the land value is determined on an <i>Accounts</i> or <i>Profits</i> method. Alternatively, it is possible that a <i>Residual</i> approach could be adopted, which is a simple variation on the <i>Accounts</i> basis <i>[Income Approach]</i>
Land fill	As this is the reverse of the above, Mineral Extraction, then it follows that the same thought process will apply. Except in this case, profits are generated by what you can put into the ground not take out. Once again, the land is core to the business and the appropriate method will be the <i>Accounts</i> or <i>Profits</i> method <i>[Income Approach]</i>
Bars and restaurants	In many countries, the sale of bars and restaurants has become commonplace and as such there can be sufficient comparable information available for it to be valued by either the <i>Comparable</i> or <i>Investment</i> methods <i>[Market and Income Approach]</i> . However, in areas where there is a paucity of comparables, then the valuer needs to resort to an analysis the likely profits arising from the use of the building as a leisure business from the sale of food and drink. As such, the property value is determined on an <i>Accounts</i> or <i>Profits</i> method <i>[Income Approach]</i>
Casinos and clubs	Although both these concerns rely heavily on the sales of food and drink as with restaurants, they also have other ways in which to generate income. In the case of clubs, there will be an entry fee in addition to the services provided in the club. In the case of casino, the income is generated through gambling receipts. This is just a variation on a theme and the correct valuation method will be the <i>Accounts</i> or <i>Profits</i> method <i>[Income Approach]</i>
Cinemas and theatres	The facility charges an entry fee but in addition derives a substantial amount of its revenue from the concessions stands through the sale of snack, sweets and drinks. Again, the correct valuation method will be the <i>Accounts</i> or <i>Profits</i> method <i>[Income Approach]</i>

Table 4.

(continued)

Types of property – non specialised

Leisure properties (Private)	An all-encompassing heading to cover health clubs, tennis courts, swimming pools, football pitches, golf clubs, athletic clubs and the like. Some of these are now sold sufficiently often to generate comparables allowing them to be valued by either the <i>Comparable</i> or <i>Investment</i> methods [<i>Market and Income Approach</i>]. But, as with hotels, it is more normal to view the property associated with the business as an asset to generate income by changing a market price (which may be high to reflect exclusivity) for its use and as such the most common valuation method will be the <i>Accounts</i> or <i>Profits</i> method [<i>Income Approach</i>]
Leisure properties (Public)	Most local or municipal authorities have a brief to provide leisure facilities to the general public and generally at a subsidised price. As such, they are non-profit making organisations and thus the use of an <i>Accounts</i> or <i>Profits</i> method would be inappropriate. In these cases, the only way in which value can be assessed is by reference to the replacement cost of the building. And thus the <i>Contractors'</i> method should be used [<i>Cost Approach</i>]
Care/nursing homes	As with leisure properties there is a distinct split in the market between private and public nursing homes. The former are valued as income generating properties by the <i>Accounts</i> or <i>Profits</i> method [<i>Income Approach</i>]. The latter, the public nursing/care homes, are non-profit organisations and will be valued by the <i>Contractors' or Cost</i> method [<i>Cost Approach</i>]
Hospitals	Again we have a split between private and public hospitals. The former are valued as income generating properties by the <i>Accounts</i> or <i>Profits</i> method [<i>Income Approach</i>]. The latter, the public hospitals, are non-profit organisations and will be valued by the <i>Contractors'</i> method [<i>Cost Approach</i>]
Petrol stations	Petrol stations are income-generating business and as such they are valued by the <i>Accounts</i> or <i>Profits</i> method [<i>Income Approach</i>]
Woodlands	As with Agricultural property, it is possible for woodland to be valued by the <i>Comparable</i> method [<i>Market Approach</i>]. However, most woodland is an income-generating business which benefits from grants and tax incentives and as such they tend to be valued by the <i>Accounts</i> or <i>Profits</i> method [<i>Income Approach</i>]
Churches	The majority of churches are non-profit organisations and in most countries are recognised as charitable institutions. As such, they will be valued by the <i>Contractors'</i> method [<i>Cost Approach</i>]

Table 4.

the residue will be an estimation of the economic rent for the property. The capital value can then be derived by multiplying the annual rent by an appropriate multiplier.

This process reverts to a fundamental analysis of the worth of the property to the business. The economic rent is a derivative of the supply and demand for the final product, in this example, the hotel rooms. The same principle will apply to any type of property where the market value of the property is intrinsically linked to the business carried out within that property. Other examples will therefore include restaurants, leisure centres, cinemas, theatres, etc. For a full discussion on the use of the Profit's method, including the appropriate modelling, see [Colborne and Hall \(1993\)](#).

Method 5 – the residual method. This analysis of understanding the market value of the land and property to the business can be extended to include the valuation of development property. If one views the process of (re)development as a business, it is possible to assess the market value of land and buildings in their existing form as part of that process. Development occurs where the current use of land and buildings is not the highest and best. By spending money redeveloping the site, it is possible to release latent value, as the market value of the land is increased due to the demand for the new use commanding a higher price than the previous use. By viewing development in this way, it can be seen that the residual method of valuation is very similar to the profits method.

With the residual method, the valuer assesses the market value of the land in a redeveloped form (either by comparison or by the investment method) and deducts from this Gross Development Value all costs that will be incurred in putting the property into the form that will command that price. These costs will include demolition of the existing building (if not already a cleared site), infrastructure works, construction costs, professional fees, finance costs and remuneration for undertaking the risk of development (developer's profit). By deducting these liabilities from the final market value, a residue is produced. This residual represents the maximum capital expenditure for buying the land. It will therefore include all costs of purchase (taxation, legal fees, professional fees and finance). The net residual land value is determined by allowing for these additional land costs. It can be seen therefore that the residual land value is, as with any economic rent, dependent upon the supply and demand of the finished product, the developed property. The greater the demand for the finished property, the higher the gross development value, and if costs remain relatively static, the higher the market value of the land in its original state. For a full discussion on the use of the residual method, including the appropriate modelling, see [Atherton *et al.* \(2008\)](#).

Thus the role of the valuer is to identify the appropriate approach to undertake the valuation of the subject property. They then determine the appropriate method of valuation and, in turn, they need to apply the correct valuation model for the valuation task in hand. The next section, whilst not definite, discusses this requirement based on property type. This is an extrapolation and update of the table that appeared in a previous article ([French, 2004](#)) that restricted itself to looking at specialised property. The section below looks at all property types.

Property valuation methods for different property types

In the Professional Standards of the RICS ([RICS Valuation – Global Standards, 2020](#)), in Valuation Practice Statement (VPS) 5, it stresses the importance of Valuation approaches and methods. It says:

Valuers are responsible for adopting, and as necessary justifying, the valuation approach(es) and the valuation methods used to fulfil individual valuation assignments.

These must always have regard to:

- (1) The nature of the asset (or liability)
- (2) The purpose, intended use and context of the particular assignment and
- (3) Any statutory or other mandatory requirements applicable in the jurisdiction concerned.

Valuers should also have regard to recognised best practice within the valuation discipline or specialist area in which they practise, although this should not constrain the proper exercise of their judgment in individual valuation assignments in order to arrive at an opinion of value that is professionally adequate for its purpose.

Unless expressly required by statute or by other mandatory requirements, no one valuation approach or single valuation method necessarily takes precedence over another. In some jurisdictions and/or for certain purposes more than one approach may be expected or required in order to arrive at a balanced judgment. In this regard, the valuer must always be prepared to explain the approach(es) and method(s) adopted.

So, one of the primary roles of the valuer is to understand the nature of the subject property, the context of the market and choice of approach and method according to property type. [Table 4](#) suggests the approach and method for various types of property.

Conclusions

The briefing paper has looked at the importance of identifying and choosing the appropriate valuation approach and method when undertaking a valuation. This requires the valuer to understand the specific market where the subject property is located and understand the cultural of the jurisdiction where the valuation is being undertaken.

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 International Valuation Standards apply to all assets and not just property. However, in this briefing, the commentary is restricted to property assets only.
3. The RICS publishes National Supplements that are to be used in tandem with the Global Standards depending upon the location of the valuation.
4. The European Group of Valuers' Associations (TEGoVA) is a pan-European association of professional bodies working for standards, ethics and quality in the real estate valuation market.

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Further reading

- French, N. (2013), "UK freehold reversionary properties: valuation practice revisited", *Journal of European Real Estate Research*, Vol. 6 No. 2, pp. 218-135.

Pricing to market – Property valuation revisited, paper presented at the European Real Estate Society (ERES) meeting, Reading, UK, 2018

This survey aimed to identify the use and the general knowledge of approaches, methods and models across the UK. The main aim of the questionnaire was to understand the level of understanding of the International Valuation Standards by the respondents.

The survey examined the importance of identifying the appropriate approach to market valuation and the methods, techniques/models to apply to determine market value.

The survey was undertaken in summer 2015, and it was sent to 4,445 people on the 15th December 2015. The questionnaire closed on the 31st January 2016, with 461 responses (10.37%). 80% of all respondents were RICS members, about 63% were valuers and 46% users of valuations.

The qualification of respondents is quite wide ranging, although there was a concentration of Chartered Surveyors (MRICS – 241 respondents and FRICS – 96).

Many of them are aware of the three approaches: although, interestingly, although most respondents know all three approaches (88.6%) most respondents did not make reference them in the valuation report (73% said no)

The questionnaire identifies that valuers refer only to methods (90%) with half of those who share details of the (mathematical) models or techniques used.

Implicit models dominate in the valuation of commercial properties, while direct capital comparison is more commonly used in the residential sector, especially from owner/occupied properties. The discounted cash flow (DCF) model was not widely used, whatever the intended use, with a small exception for shopping centres, although the ARY is preferred.

Q1: ABOUT YOU – please indicate if you are a valuer or user of valuations and your qualifications (if you do both, please tick both)

Answer Choices	Responses	
RICS Registered Valuer	62.39%	282
User of Valuations	46.24%	209
Total Respondents: 452		

Q2: FOR VALUERS – APPROACHES. Were you aware of the three approaches?

Answer Choices	Responses	
Yes	88.65%	203
No	11.35%	26
Total		229

Q3: FOR VALUERS – APPROACHES. In your Valuation Reports for MARKET VALUE, do you refer to the three APPROACHES?

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Answer Choices	Responses	
Yes	26.99%	61
No	73.01%	165
Total		226

Q4: FOR VALUERS – APPROACHES. In your Valuation Reports for MARKET VALUE, do you inform the reader why you have chosen to use a particular APPROACH?

	Yes	No	Total
Lay Client	54.72% 116	45.28% 96	212
Professional Client	59.90% 124	40.10% 83	207
Internal Colleague	46.48% 99	53.52% 114	213

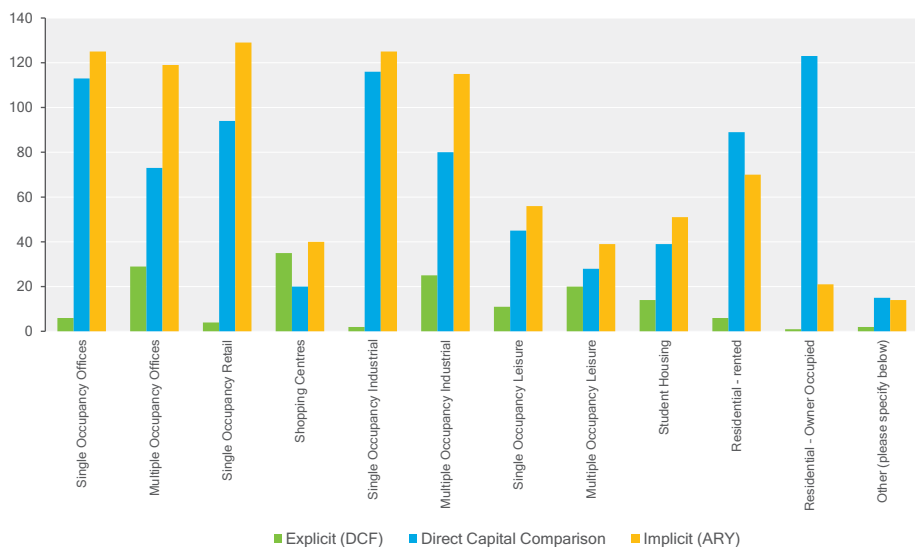
Q5: FOR VALUERS – METHODS. In your Valuation Reports for MARKET VALUE, do you inform the reader of the METHOD that you have chosen for the valuation?

Answer Choices	Responses	
Yes	90.18%	202
No	9.82%	22
Total		224

Q6: FOR VALUERS – MODELS. In your Valuation Reports for MARKET VALUE, do you show the reader the MATHEMATICAL MODEL or TECHNIQUE that you have chosen for the valuation?

Answer Choices	Responses	
Yes	50.81%	94
No	49.19%	91
Total		185

Q7: FOR VALUERS – MODELS. In your Valuation Reports for MARKET VALUE, when valuing the following asset classes, do you use implicit or explicit models?



	Implicit (ARY)	Direct Capital Comparison	Explicit (DCF)	Total Respondents
Single Occupancy Offices	80.13% 125	72.44% 113	3.85% 6	156
Multiple Occupancy Offices	82.64% 119	50.69% 73	20.14% 29	144
Single Occupancy Retail	82.17% 129	59.87% 94	2.55% 4	157
Shopping Centres	59.70% 40	29.85% 20	52.24% 35	67
Single Occupancy Industrial	80.13% 125	74.36% 116	1.28% 2	156
Multiple Occupancy Industrial	82.73% 115	57.55% 80	17.99% 25	139
Single Occupancy Leisure	73.68% 56	59.21% 45	14.47% 11	76
Multiple Occupancy Leisure	66.10% 39	47.46% 28	33.90% 20	59
Student Housing	72.86% 51	55.71% 39	20.00% 14	70
Residential - rented	62.50% 70	79.46% 89	5.36% 6	112
Residential – Owner Occupied	16.28% 21	95.35% 123	0.78% 1	129
Other (please specify below)	70.00% 14	75.00% 15	10.00% 2	20

The following table includes the “other answers” to Q7.

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Implicit (ARY)	Owner occupied office, industrial Public sector assets - some are straight comparables, some are ARY Schools Car Dealerships Mixed uses (eg residential and shops) Vehicle dealerships PFS Educational and medical Restaurants Healthcare Development sites
Direct Capital Comparison	Owner occupied office, industrial Car Dealerships mixed user e.g shop with residential Vehicle dealerships Educational and medical Restaurants Development sites

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