A QUESTION OF VALUE
A discussion of property pricing and definitions of value

WORKING PAPER

(NOT FOR QUOTATION. COMMENTS WELCOME)

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Abstract

Valuation is often said to be "an art not a science" but this relates to the techniques employed to calculate value not to the underlying concept itself. Valuation practice has documented different bases of value or definitions of value both internationally and nationally. This paper discusses these definitions and suggests that there is a common thread that ties the definitions together.

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"In Life….. no new thing has ever arisen, or can arise" - D.H.Lawrence (1936)

INTRODUCTION

There is nothing new in valuation theory, we are simply finding new words to express concepts that have been expressed in many different ways by many different people. We are not redefining the language of valuation, we are drawing upon the experiences of others to help the profession understand that service that it offers.

In America in the 20th century, there were three principal proponents of the "New School of Appraisal Thought", Ely, Ratcliff and (latterly) Graaskamp from the University of Wisconsin. Whilst their work stemmed from the 1930s and resulted in seminal books such as Urban Land Economics (1949), much of their work on definitions was by article and was not published in a comprehensive form until the 1970s.

PRINCIPAL CONCEPTS OF VALUE

Ratcliff recognised that there were different, interrelated, definitions of value. The principal three capital value figures that he identified as impacting upon real estate decisions were;

V_S	**-**	**Subjective value to Owner**
V_p	**-**	**Market Value**
V_t	**-**	**Price at which property is sold**

These correspond directly to the definitions (or bases) of valuation adopted by the Royal Institution of Chartered Surveyors (RICS) in the RICS Manual of Valuation and Appraisal (1996) which contains definitions of *Valuation* and *Calculation of Worth.*

One of the enduring problems that in many definitions (Ratcliff included) the word "value" is often used to describe distinct, albeit related, concepts. In this Paper, the following convention is adopted:

Price ***(V_p)*** *is the actual observable exchange price in the open market*

Market Value (V_t) *is an estimation of the price that would be achieved if were the property to be sold in the market, and*

Worth (V_s) *is a specific investor's (or occupies) perception of the capital sum that he would be prepared to pay (or accept) for the*

> *stream of benefits that he expects to be produced by the property.*

In the language of economics Worth (V_s) can be considered as value in use, whereas Price (V_p) or Market Value (V_p) can be considered as value in exchange. The term value in use is also recognised in the International Valuation Standards (2000), which states it is "the value a specific property has for a specific use to specific user and is, therefore, non-market related". It is also a term that is adopted by the accounting profession.[1]

Confusingly, the International Valuation Standards then lists "Worth" as a separate definition as specifically relating to investment property; it also calls this "Investment Value". It states it is "the value of property to a particular investor, or a class of investors, for identified investment objectives …… it should not be confused with the Market Value of an investment property".

This distinction between the worth to an individual "user" and a "particular investor" is unhelpful and unnecessary; both are concepts of worth and could be included in one definition.

VALUATION AND CALCULATION OF WORTH

Although it is possible to illustrate the concept of market value, price and worth in relation to a potential owner-occupier or user, it is easier to restrict the analysis to investment property. A rational investor will make the decision to buy an asset if the price in the market is equal to or below his/her assessment of the present worth of the future cash flow (rent) that is likely (or predicted) to be produced by that asset. Conversely, all other things being equal, a decision to sell will be triggered at a point where the price in the market is equal to or greater than the owner's calculation of worth. Thus, in the property market, what is often called 'a valuation' is the best estimate of the trading price of the building and 'calculation of worth' is the individual assessment of worth to a potential purchaser.

PRICING MODELS - VALUATION

Valuation is the process of determining market value. An estimation of the price of exchange in the market place. There is one internationally accepted definition of Market Value (IVSC 2001, TEGoVA 2000 and RICS 1996)[2]

Market Value is the estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arm's length

[1] International Accounting Standard 36 "Value in Use is the present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life"

[2] TEGoVA (The European Group of Valuers' Associations) has published a comparative study of the EVS 2000 and IVS 2001 on their Web site, www.tegova.org

transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without 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 an asset* ~~should~~ *exchanges on the date of* ~~valuation~~ **sale** *between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties* ~~had~~ **have** *each acted knowledgeably, prudently and without compulsion.*

MARKET PRICE

The purpose of any method of valuation is therefore to estimate the price at which it is expected that a property asset might change hands in the free market. It should be remembered that transactions do not occur at the point where most players in the market would assess its worth; the transaction occurs at the highest point. A valuation is therefore endeavouring to determine the "highest" price at which the property will be sold.

This can be illustrated by reference to the market bids (by tender) for an asset. Assume that "The Asset" is placed on the market and that there are 52 players in the market. Each player assesses the "worth" of that item to himself or herself, some of them believe the asset to be exactly what they require and are willing to bid a high figure; others don't want the asset at all and will either bid zero or a low bid. If we look at their bids, then the following pattern occurs (see Table 1 over). A number of players bid low figures, most bid £10 but one person bids £20. Each of the bids represents that individual's "calculation of worth", but the sale occurs NOT where the majority of the bids are concentrated but at the highest point. In a free market the transaction will always occur at the highest figure. This represents the "calculation of worth" for the person who has the most bullish view of the asset/market. He or she is willing to pay £20 because they believe that the asset is worth that amount to them. The fact that other players don't share that view will not affect the sale price on that day. Their views however may influence our thinking on the valuation of the asset at a later date (in our example tomorrow).

	£0	£2	£4	£6	£8	£10	£12	£14	£16	£18	£20
Number of Bids	**1**	**2**	**4**	**6**	**8**	**10**	**8**	**6**	**4**	**2**	**1**

Table 1 – Market Pricing – Number of Bids

In Table 1, it can be seen that 1 person did not "like" the asset at all and bid £0. Most people assessed its worth at £10 and the highest frequency of bids happened at that point. However, the price is determined (i.e. the exchange will actually happen) at the highest figure of £20. Graphically, the market has performed as a normal or bell distribution and the sale is determined at the further point on the x-axis. See Figure 1.

The person who has bid £20 obviously has the most optimistic view of that performance of that asset in the future. Only with hindsight will we be able to determine if their "view of the world" is correct or not. If, over time, the asset provides returns (or utility) in excess of (a present value of) £20, then the purchaser will have bought a good investment. If, however, it produces returns below the (present value) figure of £20, then it will have been a poor investment (based upon the criteria that the purchaser has set himself or herself.

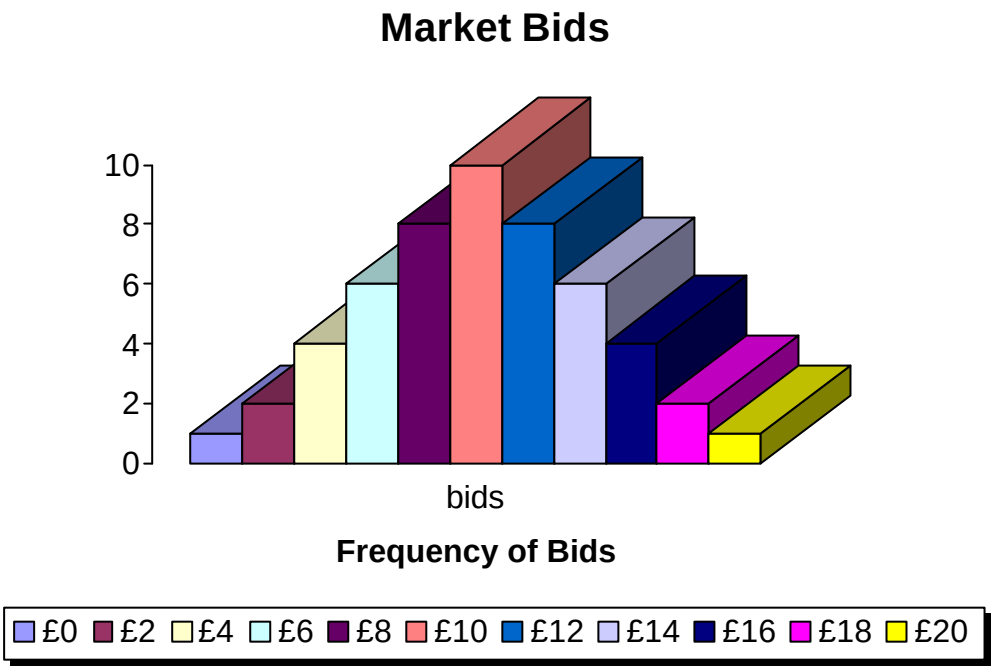

Figure 1 – Market Pricing

THE VALUATION PROCESS

A Valuation model should therefore attempt to reflect how the buyers in that market would assess the worth of the asset and identify what is likely to be the highest and best bid. It is that bid that will determine the market value of that property, not the consensus view.

Thus if we look at our previous example, lets assume that that sale occurred yesterday and that the same asset, which sold at £20, is now placed back on the market today. We are then asked to "value" or "appraise" the asset. In other words we are being asked to estimate the market value (price) of the asset.

Lets us also assume that we have no other information that that which was observed in the market yesterday. The best "comparable" would be the actual sale price in the market yesterday of £20. However, it could be argued that if ALL players in the market think in exactly the same way as they did yesterday, then the highest bid today would be at the £18 level. The purchaser yesterday is now the seller and thus their £20 bid must be discounted in today's market. It might

therefore be reasonable to think that one of the 2 bidders yesterday at £18 might bid that number today.

However, that assumes that everything has stayed the same. The problem with markets is that they rarely stay the same. The asset might be the same, the players might be the same, but the way in which those players think changes from day to day and with new market information. The big difference between yesterday and today is that the sale actually happened at £20. That is new information. Prior to that the individual bids were based on a view isolated form an actual sale. Now that sale has occurred, it is possible that some of the players in the market will re-assess their calculation of worth taking into account this new information. In other words, their bids might be influenced upwards now that they have seen that the "price" in the market was £20. They may now bid up to, or beyond that figure. In other words, markets are eco-systems. They feed on themselves.

The task of the valuer/appraiser is therefore were difficult, they are attempting to identify not only the best bidder in the market today, but the level of their bid. This cannot be an exact science and as a result, until the sale actually occurs, it must be remembered that the valuation is a "best estimate" of what that price might be when the sale is completed.

In deference to the difficulty of this task, many valuers might choose to be conservative and simply state the under bid of the previous day, but in doing so they are abdicating their responsibility. They are being employed to give a professional expert opinion and that includes an interpretation of the market at the point of the valuation. Just because it is difficult to assess the market, doesn't mean that the valuer should ignore it and give an historic view of the underbid yesterday instead. If, he or she honestly believes that the market conditions are such that the best bid today would be £18, then that is a valid and appropriate valuation. Similarly, if they believe that the sale yesterday would have influenced people in a positive manner and they believe that a £22 value is achievable today, then that is also a valid and appropriate valuation. Likewise, if they believe the figure would remain at £20. In other words, as the Market Value can only be an estimate, then a range of possible figures would occur. Indeed, it could be argued that a valuation cannot be a single figure but is a range at a single point of time. What is agreed is that the Valuation is a "snapshot in time", market value (and price) will change overtime. But at that pre-determined valuation date (today), then the valuation could be expressed as a range. In our example, we might say the upper limit of the range is £22 and the lower limit £18, but the most probable figure will be £20.

When preparing a valuation, the valuer is seeking to estimate market price; the price at which the property might be expected to transact on the basis of the

given assumptions. In reaching his or her judgement, uncertainty will arise in the valuer's mind, either due to the difficulty of assessing the market itself or in assessing how the market would price the particularities of the subject property. The valuation is actually a range based on probability.

The valuer is instructed to view the transaction through the eyes of a hypothetical buyer. The valuer must consider all possible buyers in the market in order to identify the 'best' price likely to be forthcoming. In performing this task the valuer will be uncertain about the current availability of buyers, their current attitude to price, and what they would make of the particular property.

In order to produce the valuation, the valuer must weigh all the variables, using his or her skill and experience, and decide upon the most probable conclusion.

The valuer may or may not prove to have been 'accurate' if a transaction actually occurs or if an observer attempts to measure accuracy. There are great difficulties in identifying accuracy in property valuation. From the perspective of the Courts, judges commonly refer to the 'correct figure'. However this is misleading. They actually are referring to a figure somewhere within a range that a number of competent valuers would have reached. They will have no idea whether such a figure would, if tested by an actual sale at that point in time, would have proved 'correct' or 'accurate'.

For the purposes of this paper we are seeking to identify the substance and the characteristics of the uncertainty which lies in the valuer's mind as he or she attempts to assess the hypothetical purchaser's view of the variables involved. This is of interest because the valuer is expert in the field and we are talking of his or her view of the variables that are driving, or will drive, price. In many circumstances this would be an insight of great value to clients.

In this paper, therefore, we are trying to identify uncertainty in the valuer's mind when he or she is attempting to determine their estimate of market price. Indeed, Ratcliff refers to Market Value as the probable selling price of the property.

Figure 2 is an illustration of a 'normal' distribution of the market. The horizontal axis represents the possible spread of "bids" in the market based the valuer's knowledge of current market players and conditions. The vertical axis is an estimate of the frequency of any individual figure.

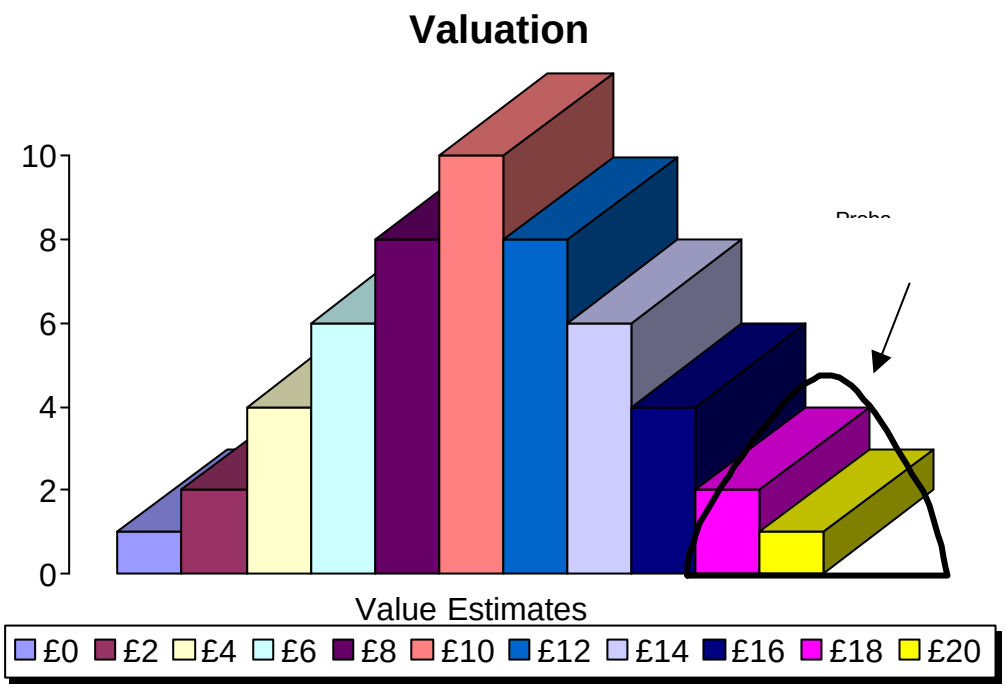

Figure 2 – Market Valuation in relation to previous bids

However, the valuer is concerned with assessing the "best" price. As with Figure 1 (on page 4), the transaction will happen at the high end of the graph. However, the valuer will not know exactly where. There is therefore a second normal distribution at the top end of the graph that represents the valuer's range of possible values.

This can be shown in Figure 3, which is a representation of the value distribution at the top end of the graph illustrated in Figure 2. As before, the horizontal axis represents the possible spread of "bids" in the market at the transaction end of the market. This again will be based the valuer's knowledge of current market players and conditions. The vertical axis is the probability of any individual figure with the total line amounting to 100%.

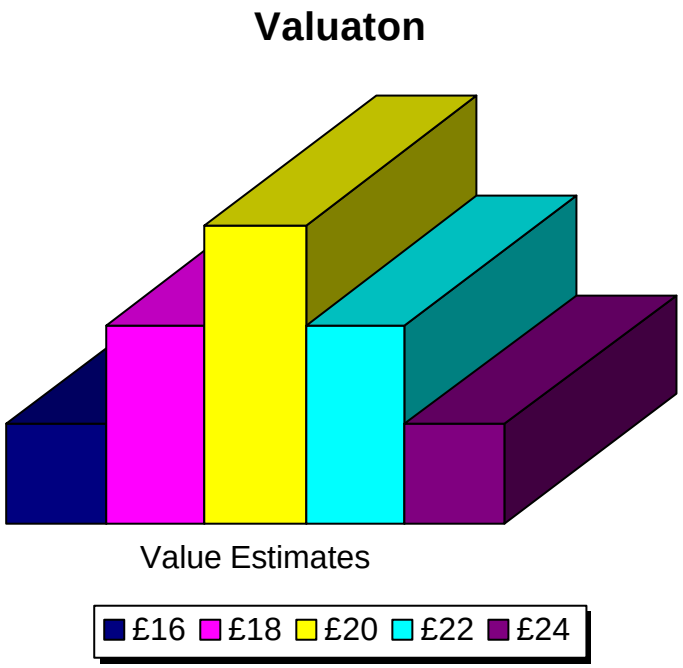

Figure 3 – The distribution of Value

Thus the curve represents a 100% probability of the value lying between £16 and £24, with the highest probability of an individual figure of £20. As drawn, the curve also shows that the probability of the value lying above or' below £20 is equally distributed either side. However, this relationship may be skewed in certain market conditions. The graph is a representation of the "uncertainty" in the valuation. However, convention dictates that we must provide a single figure and in this example, most valuers would probably opt for £20.

Ratcliff (1979) stated, "This recognition of the uncertainties in market value is to demonstrate the need for an explicit expression of this dimension of price prediction", yet 25 years later, across the Atlantic, the RICS was still seeking a method by which to address the subject. The Mallinson Report (1994) made 43

recommendations on how to improve the service that valuers provide to their clients. One of those recommendations (no 34) was "Common professional standards and methods should be developed for measuring and expressing valuation uncertainty." This is the only recommendation that has yet to be adopted by the RICS.

CONCLUSION

In determining market price, the model adopted should mirror the thought process of the investors/players in the market. The information available should be used and analysed in the same way as it would be by other players in the market. The market value (or price) being determined by the thought process of the player in the market with the most bullish (optimistic) view of the future.

In this paper we have discussed 'normal uncertainty' in valuation. The production of most valuations, and all property valuations, is a process which involves managing probabilities; the valuer's task is to produce the most probable answer. In the way that the results of this process are currently presented, a single figure valuation with little explanation. If the valuer is truly an expert, then understanding the full aura of his or her considerations may be very important to a client who intends to act on the valuation.

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