Valuation Accuracy – A Problematic Enquiry

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JEL Classification Codes: C10, C12, C78, D10, G12

Key Words: Valuation accuracy, valuation error, valuation bias, valuation variation, price, appraisal foundations.

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Abstract

Criticisms from within and without the appraisal fraternity have led to a quest for "accurate" valuations. Studies that hitherto have been done on the issue have given conflicting results. While some studies (e.g. Drivers Jonas/IPD, 1988, 1990, 1992 & 1997; Brown 1985 & 1992) have found valuations to be "accurate", others (e.g. Hager and Lord, 1985; Lizieri and Venmore-Roland, 1991) give contrary conclusions. Those who question the accuracy of valuations have used statistical methods to prove valuation error, bias, etc.

Using existing criteria for measuring valuation "accuracy", and data from Singapore, this paper replicates the finding of valuation error, bias, etc to some extent. However, it is argued both theoretically and empirically (with examples where possible) that the criteria for determining "accuracy" is highly questionable consequent on which the valuation error, bias, etc conclusion could be seriously flawed. The paper concludes that in view of the appraisal foundations, theory of value, and the nature of the property market, it may be more rewarding to concentrate on ways and means of reducing valuation variation. It is cautioned, however, that the resulting reduction may be very moderate.

Introduction

The need for accurate valuation(s) is premised on the fact that a valuation is a decision-making tool. It provides the basis for property performance measurement and other investment advice (MacAllister, 1995). Therefore, a well-researched and supported valuation could significantly contribute to the financial well being of the clientele. Conversely, a shoddy, inaccurate valuation could lead to incalculable financial loss to real estate investors and financial institutions (see Barnard Report 1986 and Renaud, 2000). Because appraiser ineptitude, negligence and misconduct are widespread, there have been criticisms (from both within and without the appraisal fraternity of several countries) of appraisals, and calls for measures to ensure the accuracy of appraisals (see Barnard Report, 1986; Howard, 1988; Rothwell, 1984; Greenwell and Co., 1976; Hager and Lord, 1985; Whipple, 1990; and Chew 1994a, 1994b, 1994c). It would appear, however, that studies that have been published thus far raise more fundamental questions than resolve the problem of appraisal accuracy. This paper therefore posits to highlight the problematic nature of the enquiry by discussing whether

(a) "valuation accuracy" has been satisfactorily defined;

(b) the yardstick that has been used for measuring appraisal accuracy accords to theory; and

(c) given the definition of market value and the appraisal foundation vis-à-vis the imperfection of the property market, it is justifiable to use price as the standard for measuring appraisal accuracy.

Valuation Accuracy

The literature on valuation accuracy is replete with phrases such as valuation bias, errors and variation. Brown (1992) relates valuation accuracy to valuations that are statistically consistent and efficient. He argues that as the number of appraisers/valuers valuing a single property increases, the mean of the distribution of values would more likely approach the "true value". This would indicate that valuations are consistent. Similarly, valuation efficiency relates to a situation where a large group of valuers, each furnished with the same information about a property, would each give the same interpretation to the information set. This would ensure that valuations have a small variance. Thus, a valid test of valuation accuracy would consist of obtaining a large sample of valuations of a particular property from different groups of valuers. The problem is that we are not told how large the sample should be and who would pay for such an exercise, which could be prohibitively expensive. More significantly, it may not be possible for a large group of valuers (or professionals) to give the same interpretation to a set of information to arrive at the same conclusion. Economists, given the same set of information, may give different interpretation and forecasts. Juries, lawyers and judges may give different interpretation to a case to give different verdicts. Medical practitioners may diagnose a patient and arrive at different conclusions. Examples of this nature can be cited ad infinitum.

History has proven time and again that collective agreement on interpretation and conclusion thereof of a set of information does not mean that the interpretation and conclusion are correct. We can be collectively wrong because we are *homo sabiens* with imperfect information and knowledge. The failure of the dockland developments in London and the Japanese investments in the US in the 1980s, the stock market crashes, and the failure of blue chip companies etc are eloquent vindication of the contention that we can be collectively wrong. This implies therefore that the mere fact that a large sample of valuers gives the same interpretation to a set of information and arrive at the same value estimate may not be conclusively probative of the accuracy of the valuation. As observed by Bonbright (1937:134),

The only safe generalization about appraisals is that, however they are reached, they are almost certainly wrong by whatever standards of rightness the appraiser himself would recognize.

At any rate, it would appear that Brown's (1992) test is a test of valuation variation and bias rather than a test of accuracy. Valuation variation is similar to the concept of "efficiency" in statistical estimators (Hutchison et al 1996: RICS, 2000). MacAllister (1995) argues that an explicit distinction between valuation error and valuation bias is of key importance in discourses on valuation accuracy. Valuation bias describes the situation where valuations are systematically and consistently undervalued or overvalued (see RICS, 2000).

Valuation error, on the other hand, refers to the difference between a valuation estimate and the subsequent actual selling price. It must be noted that systematic valuation errors above or below actual selling prices give rise to valuation bias. If valuation errors randomly fluctuate around the true value (as indicated by price), the errors may cancel out leaving no evidence of valuation bias.

Lizieri and Venmore-Rowland (1991) suggest that a valuation should not be viewed as a single definitive figure, but rather as a point estimate within a range of values, which may widen in times of market uncertainty. It would appear, however, that besides death, the only certainty in life is uncertainty. This would imply therefore that no valuation should be definitive - It must be a wide range of values. In spite of its appeal, a range of values may not be of any use to the client who, invariably, has no expert knowledge of valuation to correctly interpret the range of values. Hence a range of values needs to be narrowed down to a single point estimate of value, as this is what the client is paying for (see Brown, 1992; Appraisal Institute, 1996).

Crosby *et al.* (1998) examined the margin of error used by the English courts for determining negligence in valuation. It was found that under normal circumstances, a ± 10% margin of error from the "*true value*" as given by the expert witness would be fairly readily accepted by the courts, rising to ± 15% if the type of property or the state of the market is such as to present the valuer with a particularly difficult challenge. However, with regard to residential property, both judges and expert witness are sometimes minded to allow a somewhat smaller margin of error of ± 5%. According to Crosby *et al* (1998), the whole concept of margin of error is meaningless because the courts may accept valuations falling within the appropriate margin of error, as well as those falling outside the margin 'to an acceptable extent'. It was further found that the courts have not attempted to use sale prices as evidence of valuation accuracy because of the problem of adjusting sale prices for the time lag between a valuation and the date of sale.

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It may be contended that relying on an expert witness to judge the accuracy of a valuation could be problematic as everything hinges on the expert, who being human, has no claim to be a paragon of virtue. Furthermore, an expert witness is normally called upon several months or years after the original valuation. Therefore the expert witness has the benefit of hindsight, which cannot be totally discounted in his expert valuation to reflect the market conditions and the changes thereof that could have been reasonably forseen as of the original valuation date. Thus, an expert witness valuation is not truly comparable to the valuation at issue. However, not withstanding the reliance on expert witnesses, studies that hitherto have been done on valuation accuracy have used subsequent sale price as a test of accuracy.

Hager and Lord (1985) asked ten valuers to value two properties, a Thames Valley refurbished office and a reversionary shop investment. The valuations ranged from $630,000 to $780,000 for the office and $450,000 to $655,000 for the shop. Thus the highest valuations are 24% and 45% higher than the lowest valuations for the office and the shop respectively. A control valuation by the property manager, which was the measure of 'true value', valued the office and the shop respectively at $725,000 and $605,000. About 40% and 90% of the office valuations were within ± 5% and ± 10% of the "*true value*" respectively. None of the office valuations was more or less than 20% of the *"true value"*. In relation to the shop valuations 50% and 80% respectively were within ± 5% and ± 10% of the "*true value*". Only one valuation (10%) was more than 20% of the "*true value*". The conclusion was that valuations are not reliable for the purpose of performance measurement. Hutchison *et al* (1996) replicates the above findings to conclude: "*For professional credibility, the range of valuations should be within a narrower range. Variations in excess of 10% must be viewed with some concern as this may prompt legal action from dissatisfied clients*".

Brown (1985) used the double log regression model to test the relationship between valuation and price for a sample of 29 properties over the 1975 to 1980 period to find a close relationship (R^2=0.99) between price and valuation. In addition, he found that there was no systematic bias in valuations to conclude that one firm's valuations are a good proxy for those of another. Brown's (1985) conclusions imply that valuations are as good a performance measurement as price.

The Investment Property Databank (IPD), in conjunction with Drivers Jonas (Drivers Jonas/IPD, 1988) used a sample of 1,442 properties from the IPD database to test for valuation accuracy. These properties were sold between January 1952 and March 1988. The valuations for these properties were carried out on average of 9.7 months before the date of sale. It was found that there was a close relationship between the valuations and the subsequent sale price albeit the result indicating a conservative bias in valuations. Subsequent studies by Drivers Jonas/IPD (1990, 1992 and 1997) involving 2,384, 4,700 and 8,500 transactions respectively have replicated the findings of their first study in 1988. Drivers Jonas/IPD (1997) concludes:

> *Broadly the analysis indicates a continuing high level of valuation consistency, despite widespread differences on a minority of the transactions. Rapidly and violently changing market circumstances over the past four or five years appear to have done little to affect this valuation consistency.*

Thus, the four empirical studies of Drivers Jonas/IPD support the contention that valuations are a good proxy for prices not withstanding the anecdotal evidence to the contrary.

Lizieri and Venmore-Roland (1991), after examining the data and size effects, challenged the above findings to conclude that the statistical methodology adopted by Brown (1985) and Drivers Jonas IPD (1988, 1990) was flawed. Brown (1992) refuted Lizieri and Venmore-Roland's (1991) criticism on the pretext that it failed to account for the economic foundation of the appraisal models and the importance of the information set.

Cullen (1994) used a sample of 7000 commercial properties between 1981 and 1993 inclusive to test for valuation accuracy. Cullen (1994) used the total variance test, and a linear regression model to split the over-all measured difference between valuation and price into systematic and random errors per square foot. This study attests to the accuracy of valuation.

MacAllister (1995) acknowledges the importance of the econometric issues that arose from the debate on valuation accuracy since poor methodology could lead to misleading results and conclusions. However, he argues that other methodological difficulties in assessing discrepancies between prior valuations and subsequent sale prices have been largely ignored. Since valuations and sales do not take place contemporaneously, it is necessary to take account of the potential effect of the lag

period between the valuation date and the date of sale. It must be noted however, that every valuation explicitly or implicitly addresses the principle of anticipation and thus, takes account of futurity "a future that may belong to the 'specious present' or that may be far removed" (Macaulay, 1938:xii). A valuation estimate is therefore a quantification in present monetary worth, of the future benefits, tangible and/or intangible, derivable from the ownership of the property. This implies that a valuation as of a particular date may be correctly interpreted as meaning: in view of the value determining factors and any change(s) thereof that are reasonably foreseeable as of the particular date, the value of an interest in real property is so much. Thus, unless a change occurs after the valuation date, which could not have been reasonably foreseen by a valuer of "ordinary prudence", the valuation must stand. However, the occurrence of such a material change(s) invalidates the preceding valuation. Therefore it would not be justifiable to compare the valuation with the price that the property fetched after the "change" if price is accepted as a valid criterion for valuation accuracy.

Matysiak and Wang (1995) conclude that studies of the results correspondence between valuations and prices cannot be conclusive. Matysiak and Wang (1995) further investigate the accuracy of valuations under different market conditions to suggest that valuations are higher/lower than prices in falling/rising markets (see also Webb, 1994; Newell and Kishore, 1998). The fact that valuations are higher/lower than prices in falling/rising markets may not be surprising. I have discovered from discussions with real estate agents (brokers) in Singapore that buyers are usually of the opinion that a property should sell at valuation PLUS! This mentality, coupled with the fact that markets are driven by the psychological forces of fear and greed (Gough, 1998) would ensure that "greedy" sellers exploit the fear of buyers to lose the "deal" to obtain the highest possible price in excess of the valuation during a rising/boom market. Conversely, "greedy" buyers, in a falling/depressed markets, would exploit the fear of sellers (for not being able to sell their property) to buy the property at the lowest possible price below the valuation.

It would appear from the above discourse that most of the past studies use sale price as the criterion for valuation accuracy. Crosby et al (1998) argue that the correct test for the accuracy of valuation should therefore be a comparison of the valuation with the subsequent sale price. Although this will be reviewed later in the paper, it may not be premature to quote Clendenin (1955:30), "It is not to be expected that market prices, which reflect the current judgments of fallible men, will at all times show

accurate appraisals of investment assets. Markets prices are often slow and erratic in arriving at logical levels, but they are forever searching for them". Similarly, Friday (1922:216) has stated "that the market has not now, nor has it ever had a monopoly of pecuniary valuation".

Furthermore, whereas most of the studies attest to valuation accuracy, others are skeptical about it. Therefore, using data from Singapore, the paper proceeds to test the accuracy of residential valuations in Singapore. In consonance with past studies, it is hypothesized that a valuation estimate accurately reflects selling price. Operationalised, the degree of accuracy will be measured by comparing the average difference between a valuation estimate and the selling price to an appropriate index of accuracy - ±5%, ±10%, ±15% and ±20% of the selling price. The degree of accuracy will be statistically tested.

Methodology

The accuracy test is based on 2441 valuations of private apartments, detached, semi-detached and terraced houses, which were selected through stratified and random sampling. The stratified sampling was employed to ensure even distribution of properties over Singapore. All the valuations were open market valuations for sale and purchase only. The time lag between each valuation and subsequent sale is at most nine months. The data, which cover a period of 13 years from 1987 to 1999 inclusive, were obtained from an international property consultancy firm in Singapore, which cannot be named for confidentiality. Since the firm could not supply all the corresponding sales data for the valuations, the deficiency was remedied by extracting the relevant sale price data from the Singapore Institute of Surveyors and Valuers (SISV) Realink database, which captures all property transactions in Singapore. The valuations for the different residential properties for each of the 13-year period are given in Exhibit 1.

Exhibit 1 here

The data are transformed into valuation/price per square metre to overcome the differences in the sizes of the sampled properties. To overcome the likelihood of positive skewness of the resulting data distribution if the sample contains properties with high unit values, the data are logarithmically transformed to normalize the

frequency distribution of valuation/price per square meter. These transformations are required so that the statistics of the regression analysis can be correctly interpreted (Brown, 1992).

Research Design

The analyses are based on total variance test, degree of valuation bias, degree of valuation error, partitioned variance test, and significance testing of the relationship between valuation estimate and price.

<u>**Total Variance Test**</u>

This is the percentage difference between each valuation and the subsequent sale price.

$$\textbf{\textit{Percentage Difference}} = \frac{P\,?\,V}{P} \textbf{\textit{ x 100\%}} \qquad\qquad (1)$$

Where　P = Sale price in $/m^2
　　　　　V = Valuation estimate in $/m^2

<u>**Degree of Valuation Bias**</u>

This involves calculating the average error (AVE) for each year, taking account of the sign of the difference between valuation and price per square metre.

$$\text{AVE} = \frac{1}{n}\;?\;(P_i - V_i) \qquad\qquad (2)$$

Where　n = number of valuations in each year
　　　　　P_i = sale price of each property in $/m^2
　　　　　V_i = Valuation estimate of each property in $/m^2

This reveals any bias towards over/undervaluation.

<u>**Degree of Valuation Error**</u>

This relates to calculating the mean absolute error (MABE)

$$\text{MABE} = \frac{1}{n}\;?\;|(P_i - V_i)| \qquad\qquad (3)$$

Partitioned Variance Test

The test uses the simple linear regression method to split the overall measured difference between valuation estimate and price into systematic and random errors. The methodology involves regressing the valuation estimate for each of the properties on its price.

$$V = a_0 + b_0 P + e_0 \tag{4}$$

where V = valuation estimate in $
P = price in $
a_0 = intercept
b_0 = slope coefficient
e_0 = error term

To overcome the problem of heteroscedacity, and to normalize the data,
the double log regression model is employed so that equation (4) becomes

$$Log(V/F) = a_0 + b_0 \, Log(P/F) + e_0 \tag{5}$$

where V = valuation estimate in $
P = price in $
F = floor area in sqm
a_0 = intercept
b_0 = slope coefficient
e_0 = error term

Hypothesis Testing

The null hypothesis that will be performed at 5% level of significance to minimise Type II error (Levine, er al, 1999) is that there is no difference between valuation estimate and price.

$H_0: U_1 - U_2 = 0$
$H_a: U_1 - U_2 \, ? \, 0$

EXTENT OF VALUATION ACCURACY FOR ALL PROPERTY TYPES

Exhibit 2 shows that 57% of all valuations during the period were within a margin of ? 5% of the subsequent sale prices while approximately 83% fell within a margin of ? 10%. About 96% of all valuations fell within a margin of ? 20% of subsequent prices to imply a high degree of valuation accuracy. It must be noted, however, that the distribution is positively skewed (Exhibit 2)

Exhibit 2 here

It is possible for the aggregation of valuations for all types of properties over a 13-year period to mask the extent of accuracy. Therefore Exhibits 3 and 4 provide analysis by type of residential property and by year. Exhibit 4 covers the period 1990-1999 inclusive because of the relative paucity of information for the1987-89 period.

Exhibit 3 here

It could be seen from Exhibit 3 that 53.72%, 67.15%, 62.62% and 62.62% of valuations of apartments, detached, semi-detached and terraced houses respectively fell within a margin of ? 10% of the relative subsequent sale prices. These figures are lower than the overall average of 83% of valuations falling within the same margin of accuracy (see Exhibits 2 and 3). Similarly the percentage of valuations for apartments (91.8%) and detached houses (92.06) falling within ? 20% margin of the relative subsequent sale prices is relatively lower than the overall average of 96.3%. Exhibits 2 and 3 depict a general tendency of valuations being lower than the relative subsequent sale prices.

Exhibit 4 confirms the inconsistency of valuation accuracy depicted by Exhibit 3. The greatest inconsistency in accuracy occurred in the ? 5% margin of price where valuation accuracy ranged from 62.70% (1993) to 89.57% (1997). It would appear from Exhibit 4 that apart from the ? 20% margin, valuation accuracy differed annually for each of the three remaining margins.

Exhibit 4 here

Generally, the degree of inconsistency in valuation accuracy over the years is masked by higher indices of accuracy. In other words, the higher the index of accuracy, the lower the level of inconsistency of valuation accuracy from year to year. Furthermore, Exhibit 4 reveals that the degree of inconsistency in valuation accuracy was worse during the "rising" market period of 1990 to 1996 than during 1996 to 1999 when the market declined into a depression. This may portend that valuers were able to analyse and interpret the market relatively more accurately during depression than boom. This may accord with perceived knowledge as the market could be relatively more stable in a depressed market than in a boom. However, conditions in a declining market could be as equally uncertain and volatile as in a "rising" market. In addition, there were a series of factors from May 1996 to 1998 that should have exacerbated the inconsistency of valuation accuracy during

the period. For example, there was the anti-speculation legislation of 15th May 1996, the Asian Financial crisis of 1997 and 1998 and the "Off-Budget Measures" of 29th June 1998. Valuations which were done prior to these changes, which could not have been reasonably foreseen by any compenent valuer on the earlier dates of valuation, have been regressed against the relative subsequent sale prices to obtain paradoxically, a relatively higher consistency of valuation accuracy! Perhaps, the margin of error could have been anybody's guess if these unforeseen changes had not occurred.

Valuation Bias/Error – All Properties

Exhibit 5 shows the average error and its corresponding standard deviation for the 2441 valuations of private residential properties. The largest average error of $32 psm occurred in 1991 while the largest mean absolute error occurred in 1995 ($47psm). Thus, for a 2000 sqm apartment, there is an undervaluation of $64,000 or $94,000. This is about 6.4%/9.4% of the average price of apartments. However, in view of the standard deviation of $93.82/$193.81, the valuation variation could be wide indeed. Exhibits 5 and 6 seem to portray undervaluation/overvaluation during market boom/decline.

Exhibit 5&6 here

Exhibit 6 reveals an element of synchronicity between valuation error and valuation bias for every year except 1987-1989, 1992 and 1997 where valuation bias and valuation error were negatively correlated. Analysis based on property type (see Exhibits 7 and 8) confirms the above findings – An examination of Exhibits 7 and 8 reveals that detached/terraced housing valuations had the largest/lowest bias and error. This may be attributable to the large variety and few sales of detached houses, which make the choice of comparables and adjustment relatively difficult. Terraced housing, on the other hand, are quite similar in every respect, and transactions are more frequent than detached houses.

Exhibit 7&8 here

Partitioned Variance Test

The results of the partitioned variance test are presented in Exhibit 9. The relatively high R^2 of more than 85% attests to the accuracy of valuations in Singapore. This is confirmed by the relatively low standard error of the Y estimate, which is an indicator

of the magnitude of the "typical" valuation error (Lizieri and Venmore Rowland, 1991), and the random error. Not withstanding the attestation of valuation accuracy by the various test employed, the hypothesis test (see Exhibit 9, column 9) reveals that there were significant differences, at the 5% level of significance, between valuations and prices for eight of the thirteen years. Furthermore, the study evidences valuation bias, with valuations generally being lower than the relative subsequent prices.

Brief Commentary

The question of valuation bias should not be unexpected, as the bias is a function of the standard of measurement-price. According to asset pricing and bargaining theories the market clearing price should not be higher/lower than the buyer's/seller's maximum/minimum acceptable price (see Lucas, 1978; Wheaton, 1990; DiPasquale and Wheaton, 1996). In addition, allusion has been made to markets being driven by the psychological forces of fear and greed (Gough, 1998). The synergistic effect of "investor psychology" and bargaining is that buyers and sellers would maximally exploit each party's fear to its advantage. Thus, in a place like Singapore, where the market participants wrongly or rightly believe that property should normally sell at valuation PLUS, sellers would (and do) capitalize on buyers' fears to lose the property to another in a booming market to make valuations the baseline for bargaining. Conversely, buyers would (and do) consider valuations as the maximum price they should pay to bargain the price down in falling markets. If all markets operate on the above principles, it is obvious that there will always be valuation bias, given the test, not because valuations are erroneous but simply because of the operation of the market. Similarly, valuation accuracy may be viewed in the same context.

Another problematic issue is the "criterion" for judging valuation accuracy-price. An excursion into value theory provides ample evidence that value does not equal to price (see Wendt, 1956; Weimer, 1960; Bennett, 2000). Bonbright (1937) has discussed the problem of proving market value as a fact to be found. In discussing market value, he states,

> *For the importation of vague ideas of reasonableness or of normality prevents the appraiser from taking market phenomena as mere cold facts and requires him to pass judgment upon them by reference to standards of fairness or of stability that are not amenable to scientific definition, and on which no person can qualify as an 'expert'* (Bonbright 1937:116).

Boubright (1937:131) goes on to state,

But even when market value in the strictest sense of realization price is the accepted 'fact to be found', it is only with respect to a few, highly marketable and standardized commodities that the question may be settled conclusively by reference to actual market sales.

Kinnard, Jr.(1971:11) states that as a result of the imperfection of the real estate market, "price and value are not synonymous and are infrequently equal". Similarly, Albritton (1982:17) states: "Sale price reflects the value relationship established between a buyer and a seller for a property on a specific date. It can hardly be argued that price conclusively establishes value if the market reflects sales of other, similar properties at different prices at approximately the same date". According to the Barnard Report (1986:76), **"studies made regarding residential appraisal reports reveal that in as many as 98 percent of the cases revealed, the appraisal value of the property was identical to the sales price."** This occurred because many leading institution executives testified that **"it is not difficult to find an accommodating appraiser who can be counted on to come up with whatever results are required."** (Barnard Report, 1986:75). The response to this high level of "fraudulent accuracy" was: **" 'if sales price is market value, the lender does not need the appraiser.' "** (Barnard Report, 1986:76; also Arnold, 1985:54). This sentiment resonated in Singapore when Chew (1994c) petulantly asked: **"If valuers only report prices, do we need them?"**

It is obvious therefore that the mere synchronicity of valuations with sales prices is not probative of accuracy – it may be rather syndromic of collusion. Valuations are necessitated by the fact that "the market, with its scale of prices, does not always give the information which is needed as a basis for rational economic conduct…Prices are merely the problem phenomenon which these other phases of pecuniary valuation attempt to resolve." (Friday, 1922:203). Moreover, Friday (1922:217) asserts, "the valuations of the market are no more absolute and have no greater validity than those which result from the workings of any other institution of pecuniary valuation." This appears to have the full blessing of Justice Holmes when he stated in the case of Ithaca Trust Co. v U.S., 279 US.151 (1929) that "The value of property of a certain date, like all values, as the word is used in law... depends largely on more or less certain prophecies of the future, and the value is no less real at that time if later the prophecy turns out to be false than when it comes out true" (as quoted by Bonbright, 1937:133). Similarly, Sir Thomas Bingham MR noted in the case of Bruxelles Lambert SA v Eagle Star Insurance Co Ltd, (as quoted in Singapore Academy of Law Journal, Vol.10, 1998:218) that "In the ordinary way, (the

valuer) does not warrant that the land would fetch on the open market the value he puts on it, any more than a medical practitioner warrants that he will cure a patient of illness." Thus, a valuation is not necessarily erroneous simply because it is not identical to the sale price.

It would appear therefore that the very basis for evaluating valuation accuracy is theoretically and empirically flawed and unsound. The problematic nature of the enquiry is exacerbated by the definition of market value. The Royal Institution of Chartered Surveyors (RICS) Red Book defines open market value as:

> *an opinion of the best price at which a sale of an interest in property would have been completed unconditionally for cash consideration on the date of valuation assuming:*
>
> *(a) a willing seller;*
> *(b) that prior to the date of valuation, there had been a reasonable period (having regard to the nature of the property and state of the market) for the proper marketing of the interest, for the agreement of the price and terms and for the completion of the sale prior to the valuation;*
> *(c) that the state of the market, level of values and other circumstances were, on any earlier assumed date of exchange of contracts, the same as on the date of valuation;*
> *(d) that no account is taken of any additional bid by a prospective purchaser with a special interest; and*
> *(e) that both parties to the transaction had acted knowledgeably, prudently and without compulsion.*

Similarly the agencies that regulate the federal financial institutions in the US define market value as

> *The most probable selling price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:*
>
> *1. buyer and seller are typically motivated;*
> *2. both parties are well informed or well advised, and acting in what they consider their best interest;*
> *3. a reasonable time is allowed for exposure in the open market;*
> *4. payment is made in terms of cash in the United States dollars or in terms of financial arrangements comparable thereto; and*
> *5. the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions associated with the sale.*
> (Appraisal Institute 1993:222)

In view of the above definition, the Appraisal Institute (1993) defines market value as:

> *The most probable price which a specified interest in real property is likely to bring under all of the following condition:*

1. *Consummation of a sale occurs as of a specified date.*
2. *An open and competitive market exists for the property interest appraised.*
3. *The buyer and seller are each acting prudently and knowledgeably.*
4. *The price is not affected by undue stimulus.*
5. *The buyer and seller are typically motivated.*
6. *Both parties are acting in what they consider their best interest.*
7. *Marketing efforts were adequate and a reasonable time was allowed for exposure in the open market.*
8. *Payment was made in cash in U.S. dollars or in terms of financial arrangements comparable thereto.*
9. *The price represents the normal consideration for the property sold, unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.*

Note the qualification/modification of price in the above definitions.

These definitions either contradict the theory of value or create an inexplicable paradox. Since existing literature makes a distinction between market value and price, and market value and most probable selling price, the above definitions add to the confusion about value and price.

In addition, the behaviour of several market participants does not fit into the financial rationality postulated by the definitions. Several purchasers of property do not care about the economic rationalism of the transaction while several others operate under undue stimulus. The assumptions on which valuations are based vis-a-vis the nature of the "real" market would almost always cause a difference between market value and price. However, modifying the above definitions to take account of the peculiarities of the "real" market may cause even more divergence between market value and price as, in spite of all our econometric and hedonic models, it is impossible precisely to forecast the idiosyncrasies of individual market participant which affect price.

It may be noted also, that by addressing the appraisal foundations, market value is a long-term phenomenon. It is the discounted value of anticipated benefits derivable from owning a property. Unfortunately, however, price, being a product of "investors psychology" swayed by short-term market conditions, is a short-term phenomenon especially during market booms and depression [Clendenin, 1955; also see Mr. Justice Gibson in Croisand Investments Ltd. v. Druce Co. (1978) 248 E.G.315]

CONCLUSION

It would appear from the above discourse, that market value and price are destined to be theoretically and empirically different. This may imply that a mismatch between

a valuation and subsequent sale price is not conclusively probative of a wrong valuation. On the contrary, valuations, which were identical to sales prices, have been found to be fraudulent. Given the theory of value, the appraisal foundations, the definition of market value and the nature of the real estate market, it is almost axiomatic that valuations would not be the same as sales prices. These are the inevitable paradoxes that make any enquiry about valuation accuracy problematic. Therefore, it may be more profitable trying to find ways and means to reduce variation variance. However, this may be a Herculean task as the people who "cry" about valuations are the same people who influence valuations. This implies that valuation variance/error may not be a sole function of valuer ineptitude! It could be partly a function of the corrupt socio-economic system to which we are all a part. However, healing the malaise of corruption and ineptitude may reduce the frequency, but not, paradoxically, valuation variance as valuers are human beings with different personalities and perception. As long as there exist optimists and pessimists among valuers, it may not be easy to reduce valuation below the ? 20%.

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