

VALUATION VARIANCE AND NEGLIGENCE: THE IMPORTANCE OF REASONABLE CARE

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ABSTRACT

This paper considers the concepts of valuation accuracy and negligence. It reviews previous domestic and international studies on the subject of valuation accuracy and variation and examines contemporary valuation negligence case law in Australia. There is an examination of the current interpretation by the courts in Australia of what constitutes valuation negligence. The duty of reasonable care, which is the established standard required to be met by all valuers, is explained and measures of reasonable care are discussed. The paper stresses the need for valuers to demonstrate competency in every aspect of their professional work.

Keywords: Valuation accuracy, negligence, valuation methodology, reasonable care.

INTRODUCTION

There exists discord both amongst and within the valuation profession, academia, and the judiciary regarding the interpretation, application and, even, legitimacy of value ranges, variations, and related concepts. It is now well accepted that value ranges are a function of the uncertainty inherent in the valuation process. As a corollary, it is seen as both right and appropriate that valuers may hold divergent opinions as to value, and that these may differ from actual sale price. Such acknowledgements provide, in effect, a quasi-legitimation of valuation imprecision, under which the inexactness of value determinations is deemed a normal function of the uncertainty inherent in the valuation process. However, these acknowledgements, and their implications with respect to valuation accuracy and variation, present very real and significant challenges for the valuation profession. Whilst the market neither expects nor demands accurate single point determinations of value, the legitimate expectation of clients is that assessed market values provide a sound proxy for market price. Thus, in accepting the presence of value ranges as an inherent feature of the valuation landscape, it is necessary to recognise that such ranges must relate to the certainty achievable in valuation exercises

Historically in many common law jurisdictions, valuation ranges have been viewed as one of the key determinants of valuation negligence. However many studies on valuation accuracy and variation conclude that these measures do not provide an adequate or appropriate means by which to assess valuation negligence. Recent court cases are now placing increasing reliance on the evaluation of the duty of reasonable care as the key determinant of valuation negligence. The authors support the change in focus, but consider that the concept of reasonable care requires further clarification.

This paper examines the concepts and standards of valuation accuracy, variation and value ranges. It considers whether a direct relationship exists between accuracy standards and negligent practice. Initially a review of previous studies is presented in

which the current situation with respect to valuation accuracy and variation is examined. Thereafter, a recent Australian court judgement is used as a case study to describe how the court evaluated the duty of reasonable care required of valuers. Finally, commentary is furnished on the relevance of valuation ranges and the standards required in the assessment of valuation accuracy.

At this time, it is appropriate to firstly address definitional issues prior to proceeding. The terms accuracy, uncertainty, error, range and variation, as applied in this paper in relation to valuation practice, are defined below:

Valuation accuracy is a measure of the difference between a value determination, or group of value determinations, in relation to a subsequently realised sale price. (It should be noted that, in general terms, accuracy may be measured against proxies for a realised transaction price.)

Valuation variation is a measure of the difference between value determinations provided by different valuers.

Valuation uncertainty is the inability to determine a single point correct value because of the indefinite, and often subjective, assumptions, inferences and opinions inherent in, and integral to, the valuation process.

Valuation error is a mistake made in the course of arriving at an appraised value. It does not however relate to the value figure itself. The error may affect any of the components of a valuation, from the acceptance of instructions to reporting. Such errors may, for example, arise as a result of the use and/or application of erroneous data, inappropriate approaches, incorrect methodologies, or unsound judgement.

Value range is the difference between valuations and a specified correct value (either appraisal or transaction based), or the estimation of a probable range of resultant values by a valuer.

REVIEW OF PREVIOUS STUDIES

The objective of this section is to survey a sample of the core literature *a propos* the quantitative analysis of valuer performance within both an intra-group and transactional context. The literature is grouped by major research area: 1) valuation accuracy; and 2) valuation variation. The former is concerned with the assessment of valuations relative to subsequently realised sale prices¹, and the latter focuses on 'valuation versus valuation' analysis. These two fields, though separate and distinct, are nevertheless intimately associated, with the one serving to inform the other. The central studies addressing these themes are detailed below and their findings summarised. All material reviewed emanates from the United Kingdom (UK) unless otherwise indicated.

1. Whilst, a broader definition is at times applied in practice, the definition furnished above is the most appropriate to adopt within the context of this discussion.

Valuation accuracy

The literature on valuation accuracy considers the relationship between valuations (applied in this context to refer to opinions of value) and subsequently realised transaction prices. An appropriate starting point for reviewing the literature in this field is the Mallinson Report (1994a, 1994b) in which comment is offered on the issue of valuation uncertainty. The paper serves, *inter alia*, to both contribute to, and stimulate, the valuation accuracy debate and in doing provides much of the impetus for the subsequent attention accorded this matter by the academic community. The report maintains that all valuations are to one extent or another uncertain. Mallinson holds that valuations essentially represent an expression of expert opinion, and as such, valuers may, in considering the same property, rightly and appropriately differ in the value conclusions at which they arrive. It is in this way that uncertainty is held to manifest itself, for there exists no single “ideally correct value for a given piece of land”². The report continues on to note that whilst all value estimates carry with them some degree of uncertainty, this must be kept within reasonable bounds of reliability. Brown, Matysiak, and Shepherd (1998) maintain it is well accepted in the market that there will be a degree of uncertainty attached to individual valuations and that this has led to the widely held (though apparently arbitrarily established) perception that appraisers are capable of valuing to within 5% to 10% of market value or price.

One of the earliest studies to consider the relationship between valuations and sale prices was undertaken by Brown (1985). In assessing valuation accuracy, the report’s findings provided support for the proposition that valuations serve as a good proxy for market prices/values. Using a sample of 29 commercial properties, Brown regressed their appraised values against the actual sale prices subsequently achieved and found that there existed a high correspondence between valuation and price. The R-squared of 0.99 obtained indicated that 99% of the valuations were explained by the sale price, suggesting the attainment of a high level of valuation accuracy.

A succeeding valuation accuracy study undertaken by Drivers Jonas and Investment Property Databank (IPD) (1988) considered the issue employing a similar regression-based methodology to that utilised by Brown. The study comprised a sample of nearly 1,450 commercial properties for which a sale price in the period 1982 to 1988 was available and a minimum of two valuations in the 24 month period prior to the sale had been conducted. The analysis produced an R-squared of 0.93 signifying a high level of correspondence between valuations and sale price. The findings were very similar to that derived by Brown. This strong correspondence again indicates the presence of a high level of valuation accuracy. In addition, the Drivers Jonas/IPD research also found that the valuations assessed displayed a conservative bias.

The original Drivers Jonas/IPD study has subsequently been regularly updated and its focus broadened to consider such matters as sectoral accuracy. The fifth publication in the series was released in April 2000 in which the study period is extended to December 1998 and almost 10,000 transactions are analysed. The latest results, summarised in the Table 1 below, indicate that in 1998, 84% of valuations assessed lay within a range of plus or minus 20% of actual sale price, whilst 63% fall within 10%. The figures for the entire study period, 1983-1998, are somewhat lower with 77% of valuations within plus or minus 20% of sale price and 53% located 10% either side of price. The results indicate that a relatively high level of accuracy has been realised over the study period,

2. Fenton Nominees Pty Ltd v Valuer-General (1981) 47 LGRA 71 at 76.

particularly since 1991. Results for the eight year period from 1991 indicate an average of nearly 60% of all valuations have fallen within a range of plus or minus 10% of the sale price realised, and 83% have been made within 20%.

Table 1: Summary of Drivers Jonas/IPD (2000) findings

Percentage Variation from Sale Price (\pm)	Percentage of Valuations Falling Within Each Accuracy Range		
	1998	1991-1998	Full Study Period 1983-1998
< 10%	63%	60%	53%
< 20%	84%	83%	77%

The regression based methodologies employed by Brown (1985) and IPD/ Drivers Jonas (1988, and updates) were however subsequently challenged. Lizieri and Venmore-Rowland (1991) questioned the soundness of the statistical analysis conducted in these regression-based studies, and thus the integrity of the findings derived. They suggested that the use of sample groups containing extreme values may have led to heteroscedasticity, and thus introduced bias. In the absence of the inclusion of information on the statistical tests undertaken by Brown and IPD/Drivers Jonas in their studies, the statistical validity of their findings remains uncertain. Further, the statistical robustness of Brown's research may also be questioned given the small sample size employed in the study.

Matysiak and Wang (1995) levelled broader criticism at existing valuation accuracy research, arguing that studies considering the correspondence between valuations and prices could never be conclusive in nature. They suggested that consideration should instead be accorded, *inter alia*, the issue of valuer behaviour in response to market changes over time. Whilst their study sought primarily to consider valuer performance under different market conditions, it also served to provide information concerning the broader question of valuation accuracy. A sample of 317 commercial properties sold in the period 1973-1991, for which valuations had been conducted in the period 3-6 months prior to sale, was identified. Assessment of this data indicated that the probability of producing a valuation lying within a range of plus or minus 10% of the sale price was approximately 30%, within plus or minus 15% was 55% and within plus or minus 20% was 70%. Drivers Jonas/IPD (2000) provides more favourable estimates to Matysiak and Wang, suggesting that there exists a 53% probability of a valuer valuing to within a range of 10% either side of a subsequently agreed sale price.

Further, in considering valuation accuracy under different market conditions, the results reported by Matysiak and Wang anecdotally suggested that valuers tend to undervalue property in bull markets and overvalue property in bear markets leading to a smoothing effect. This pattern was recently confirmed in an Australian study undertaken by Newell and Kishore (1998). Of the 317 properties assessed in the Matysiak and Wang study, 177 were found to be undervalued in relation to sale price by an average of just over 21%, whilst 134 were found to be overvalued by an average of 11.5%.

Table 2: Summary of Matysiak and Wang (1995) findings

Percentage Variation from Sale Price (\pm)	Percentage of Valuations within each Accuracy Range
< 10%	30%
< 15%	55%
< 20%	70%
Average Absolute Difference	17%

A more recent study proceeding along similar lines was undertaken by Blundell and Ward (1997). The database employed by Matysiak and Wang was again utilised, but a larger sample group of 747 properties was identified, for which sale prices were available over the period 1974-1990 and for which valuations had been obtained in the period 3-6 months prior to sale. The findings indicated approximately 80% of the valuations lay within plus or minus 20% of the sale price, and only 35% were within plus or minus 10% of the sale price. The results are somewhat above those advanced by Matysiak and Wang, particularly at the 20% level. Additionally, Blundell and Ward's research again identified the presence of a conservative bias in the valuations assessed.

Comparisons between the previous two studies reviewed and those of Drivers Jonas/IDP and Brown are problematic. The latter studies selected cases where valuations had been conducted within a period of three to six months prior to the sale date, providing a time lag significantly lower than that seen in the former studies. The negative relationship between the length of the time lag and the level of accuracy achieved hampers direct comparison between the studies. Similarly, the disparity seen in the study periods employed by the researchers, with intervals ranging from five to 19 years, introduces a further comparability problem given that one would anticipate reduced variation to be associated with longer time periods. Attempts to draw direct comparisons are also hampered by the recency, or lack thereof, seen in the data sets employed. Only the Drivers Jonas/IDP study considers records after the early 1990's, and this point assumes great significance, given that it is from this period to 1998 that their study finds accuracy to be at its highest levels. Additionally, questions as to the integrity of the valuation accuracy findings, in light of the many criticisms levelled at the research regarding methodological soundness, potential sample specificity, and related matters, still remain largely unanswered. Accordingly, a prudent degree of caution must be applied in interpreting the results deriving from these studies.

Blundell and Ward (1997) attempted to address one of the principal shortcomings identified in the valuation accuracy research, namely the inherent 'time lag' encountered, by adjusting the data to reflect subsequent movements in the market. They acknowledged the deficiencies in the relatively crude adjustment approach applied in the study, noting it failed to capture differential movements in the market on a geographical basis. However, the findings are worthy of consideration if viewed with an appropriate degree of caution. Analysis of the adjusted data still suggested sales prices lay on average above that of their corresponding valuations, and a figure in the region of 3% was advanced. It was further suggested that 85% of the valuations would lie within a range of plus or minus 20% of the sale price, and that only 55% would lie within a range of 10% of sale price. Thus, as anticipated, some improvement is seen in the overall level of accuracy attained relative to that suggested by the analysis conducted on the unadjusted data.

Parker (1998) provides some insight into the valuation accuracy issue in an Australian context. The sample group utilised in the study consisted of a small group of properties which were offered for open market sale by tender. The subject properties were independently valued as at the date on which the tender closed. Each valuer was furnished with identical instructions, together with a data set containing full information on the properties, and a normal market fee for undertaking the appraisals was charged. Further, the portfolio contained seven standard (i.e. not special or unusual) industrial, office and retail investment properties. The methodology adopted was notable in that it served to overcome many of the limitations and problems inherent in previous studies in this area. Not least amongst these was the absence of any time lag, with the concurrent performance of the sale transactions and valuation exercises. The results, as displayed in Table 3 below, indicated an overall average absolute variation of 7.7% was present whilst the overall average variation was -3.2% (indicating the valuations were above sale price). On a sectoral basis, lower variation, and hence higher accuracy, was exhibited by retail property (-2.6% average variance) followed by commercial property (4.1% average variance) and industrial (-8.5% average variance). On an individual property basis, the variation ranged between a low of 1.6% to a high of 14.3%. Additionally, 15% of the subject valuations were found to lie within a range of 5% either side of sale price, 85% within a range of 10%, and all valuations fell within plus or minus 15% of sale price. The results appear to compare favourably with those of the UK based studies reviewed above, with a significantly higher level of accuracy indicated in the Parker study than generally seen in the findings emanating from the UK. However, as noted previously, direct comparability is problematic, and as such a degree of caution is necessary in interpreting the results.

Table 3: Summary of Parker (1998) findings

Percentage Variation from Sale Price (\pm)	Percentage of Valuations within each Accuracy Range
< 5%	15%
< 10%	85%
< 15%	100%
Average Absolute Difference	7.7%

A further Australian based study undertaken by Newell and Kishore (1998) assessed sale prices relative to valuations for 101 office properties and 117 retail properties in the Sydney area over the period 1987 and 1996. The research employed a regression based methodology similar, though more sophisticated in nature, to that seen in Brown (1985) and Drivers Jonas/IPD (1988 and updates). Whether this study escapes the criticisms levelled at the aforementioned research by Lizieri and Venmore-Rowland (1991) is indeterminable. Again, as with both the Brown and Drivers Jonas/IPD analysis, the Newell and Kishore study fails to provide comprehensive details concerning the statistical tests employed in assessing the data. Thus, in the absence of such information, the issue of the soundness of the statistical analysis conducted remains unresolved. Nevertheless, the findings provide some evidence of the accuracy of valuations in an Australian context. The analysis, the results of which are provided in Table 4 below, indicated that 65% of the valuations assessed were within a range of plus or minus 10% of the sale price and 91% lay within plus or minus 20% of the sale price. The results again compare favourably against those generally seen in the UK based studies.

In considering the overall average absolute variation, a figure of approximately 9% was determined in the Newell and Kishore study. This is similar to the figures reported in a number of American studies. For example, Coles, Guilkey, and Miles (1986, cited in Parker, 1999) provided a variance estimate of 9.5%; Miles, Guilkey, Webb, and Hunter (1991) report the average absolute variation between valuation and sale price for properties in the NCREIF database to be 10.7%; and 11% was reported by Webb (1994, cited in Newell and Kishore, 1998). However, the results derived in the Newell and Kishore study again lie well below the level of average (absolute) variation reported in the UK studies. Newell and Kishore also calculated the average absolute percentage difference between sales price and valuation after adjusting for the time lag, a resultant figure of 5% was derived. The analysis further served to confirm the findings of Matysiak and Wang, with the statistics again providing evidence that valuers tend to undervalue property in bull markets and overvalue property in bear markets.

Table 4: Summary of Newell and Kishore (1998) findings

Percentage Variation from Sale Price (\pm)	Percentage of Valuations within each Accuracy Range
< 10%	65%
< 20%	91%
< 15%	100%
Average Absolute Difference	9%
Average Absolute Difference after adjustment for time lag	5%

In summary, an almost alarming level of variation is seen in the current research, with the indications being that anywhere between 30% (Matysiak and Wang, 1995) and 63% (Drivers Jonas/IPD, 2000) of UK valuations may fall within a range of 10% either side of the subsequently agreed sale price. In an Australian context, the range would appear more acceptable at 65% (Newell and Kishore, 1998) to 85% (Parker, 1998). Whilst this may be seen to suggest the attainment of higher levels of accuracy in Australia, any such conclusion would appear premature given the presence of only two Australian studies (one of which considered a mere seven valuations). In general, the range of results reported in the studies clearly fails to support the widespread belief that valuers are capable of valuing to within 5-10% of market value/price (Brown, et al., 1998). The research would appear to raise more questions than it resolves. Answers regarding the generally prevailing level of valuation accuracy attained in practice remain illusive.

However, whilst considerable disparity is seen in the results reported in the valuation accuracy studies, they unanimously indicate the presence of a large proportion of valuations beyond a range of 10% either side of sale price. In each case, the number of valuations falling within the range rises as the band is extended, but even at the 20% bracket, many of the studies still indicate the presence of valuations outside this range. The literature bears testament to the inherently imprecise nature of valuations, but, for the survival of the profession, this imprecision must know some bounds.

Valuation variation

Whilst the majority of existing research considers the issue of valuation accuracy, the 1985 paper by Hager and Lord, which provided the impetus for much of the later accuracy related work, considered valuation variation (valuation versus valuation). The report, although principally concerned with providing an overview of the property

investment market, contained a small section focusing on the range of values realised when the value of the same property is assessed by a group of valuers. For the purpose of the study, all valuers were given identical instructions, and two subject properties were selected, a rack rented office property, and a reversionary retail shop. The spread of resultant valuation figures was expected to lie approximately 5% plus or minus the control value figures determined by an expert valuer. The value figures derived for the office property, a summary of which is provided in Table 5 below, saw 40% of the sample group furnish assessments which lay within 5% of the control value, and 90% of the valuers provide figures within 10% of the control. The valuations submitted on the retail premises saw 50% of the valuers value within 5% of the control value, with 80% valuing to within 10% of the control value. Of the ten valuations undertaken on each of the two properties, all but one lay within a range of 20% from the control value. The limited sample of both properties and valuers utilised has, however, seen the study criticised (Brown, 1985). Acknowledging the limitations of the study, no solid conclusions may be drawn, but the valuation variation reported undoubtedly serves to raise questions with a large number of the valuations falling outside the target 5% range. Clearly it infers valuers may be failing in their duty to accurately determine market value, with higher levels of variation by implication suggesting the presence of higher levels of inaccuracy.

Table 5: Summary of Hager and Lord (1985) findings

Percentage Variation from the Mean	Percentage of Valuations within each Variation Range	
	Rack Rented Office Property	Reversionary Interest Retail Premises
< 5%	40%	50%
< 10%	90%	80%
< 20%	100%	90%

A subsequent study examining this issue was undertaken by Adair, Hutchison, MacGregor, McGreal, and Nanthakumaran in 1996. They too considered the question of valuation variation in the UK commercial property market. The perceived shortcomings in the 1985 Hager and Lord study were addressed by utilising a considerably larger sample of properties and valuers in their study. The sample included hypothetical retail, office, and industrial property in 14 main centres throughout the UK. For each of the 14 centres, five valuers from local firms, and five from national firms, were to provide valuations on hypothetical subject properties in actual locations. However, whilst prior agreement to participate in the study had been given by all valuers contacted, a response rate of only 56% was achieved, yielding 446 valuations. This resulted in uneven sample sizes and, as such, the findings concerning variation differences seen between local and national firms and by urban area must be viewed with some caution. Further, the valuations were conducted on hypothetical properties (though real locations were used) and the study participants were not paid for completing their valuations which has led some to question the quality of the valuations submitted (Brown, 1998). The resultant variations reported in the study may, *inter alia*, be a product of these factors. Nevertheless, the results are worthy of consideration.

The overall findings reported by Adair et al. indicate the presence of a wide variation, with only 61% of all valuations conducted on the rack rented properties lying within a range of 10% of the mean of the valuations, and 85% within a range of 20% of the mean. A lower level of variation was seen in the reversionary valuations, with 69% of

the valuations lying within a range of 10% of the mean, and over 90% of the valuations falling within a range of 20% of the mean. The overall absolute average variation seen in the sample was 9.53%, with a figure of 8.48% for the reversionary properties and a higher 10.5% associated with the rack rented properties. A summary of the findings is shown in Table 6 below.

On a sectoral basis, rack rented retail showed the lowest overall variation followed by office and then industrial property. For the reversionary valuations, lower levels of variation were seen, with only a nominal difference present in the results between the three sectors. The findings tend to support those of the earlier Hager and Lord study. The range of values present in the study clearly fails to support the widespread belief that valuers are capable of valuing to within 5-10% of the mean value (Brown, et al., 1998).

Table 6: Summary of Adair et al. (1996) findings

Percentage Variation from the Mean	Percentage of Valuations within each Variation Range	
	Rack Rented Properties	Reversionary Interest Properties
< 10%	61%	69%
< 20%	85%	90%
Average Absolute Variation	10.5%	8.48%

A further study in this field was undertaken by Brown et al. (1998) aimed at addressing many of the perceived shortcomings seen in the above detailed studies. The research approached the issue of variation from a different perspective moving from the *ex ante* studies previously conducted to an *ex post* examination of the uncertainty, as manifest in value ranges, in mean valuations. Again, the study considered three sectors (retail, office, and industrial). Property records covering the period 1980–1995 were used, to which a bootstrapping procedure was applied. Thus, unlike previous studies, the results were not sample specific, nor were they tied to a specific valuation date. Further, the approach inherently considered the influence of market movements over time.

Brown et al. found that valuers have approximately a 10% chance of producing valuations that lie within 5% of the mean of the valuations and approximately a 20% chance if the range is increased to 10% of the mean. The results point to the uncertainty inherent in valuation being considerably higher than previously accepted. Brown et al. further concluded that uncertainty, giving rise to valuation variation, is an inherent component of valuations, and a normal function of an active market in which valuers will adopt different views regarding the factors that contribute to value, and, consequently, different views regarding value itself. The report concluded that concern should not rest with valuation uncertainty, but rather that attention should focus on valuation errors.

The issue of valuation variation was further considered by Crosby, Lavers, & Murdoch (1998a) in which further analysis was conducted on data collected by Morgan (1993, cited in Crosby et al., 1998a). The data set contained 129 retail, office, and industrial investment properties, for which two professional valuations had been undertaken. The analysis considered the paired valuations, one provided by one firm, and the second furnished by one of four firms. The difference between the valuations was then determined (not the difference between the valuations and their mean as seen in

previous research). The average overall variation was determined to be in the order of 8.6%. Over 40% of the valuations lay within a range of 5% either side of each other, over 65% were within 10%, and 90% were within 20%. The average absolute variation was found to be the lowest for retail property, followed closely by office property.

Several recent American studies have also considered, though not always as a primary focus, the issue of valuation variation. A study undertaken by Diaz and Wolverton (1998) focused on assessing the degree to which valuers are influenced by valuations they have previously conducted; the hypothesis being that valuers would anchor onto their prior value estimates and thus be inappropriately influenced by this figure when conducting a subsequent re-valuation. Whilst the research was designed to consider the issue of anchoring leading to appraisal smoothing, it serves by default to also address valuation variation. The authors' arranged for three sets of valuations to be conducted on the same hypothetical Atlanta apartment property, within the space of 12 months from April 1995. The sample group of valuers appraised the property and, eight months later, were requested to revalue the property in light of specified property and market changes. Diaz and Wolverton also obtained control valuations from an independent sample of valuers. The 46 valuations gathered were then examined to assess the variation seen in the results. They found a very low level of variation, with an absolute average variation of between 3.74% and 5.31% present in the three sets of valuations. Almost 70% of the valuations obtained lay within a range of 5% of the mean of each set of valuations, and only 6.5% of the valuations were further than 10% from the mean. On the issue of appraisal smoothing, the primary research focus, the evidence derived clearly indicated the presence of anchoring, with valuers failing to apply sufficient adjustments to their previous value determinations when performing subsequent revaluations on the same property.

Valuation variation was examined in an Australian context by Daniels (1983, cited in Rossini, 1999). A small scale study conducted in South Australia assessed the matter in relation to residential properties. Two freehold detached residential houses, one a 'typical' mid-value property located in a 'typical' suburb, and the other a more challenging property to value, being a large home in a superior suburb, were valued by 18 valuers on the same date. The mean absolute error determined was 5.3% for the 'simple' property and 8.9% for the more 'complex' property. Additionally, for the 'simple' property, the findings, as displayed below, indicated that 50% of the valuations lay within a range of plus or minus 5% from the mean of the valuations, 95% fell within the 10% bracket, and 100% lay within the 15% range. The results determined for the 'complex' property were somewhat higher, with 39% of the valuations lying within a range of 5% either side of the mean, 50% found to be within 10%, and 95% within 15% of the mean. Whilst no solid conclusion can be drawn from such a limited study, and it must be noted that a lower level of variance would be expected for straightforward residential valuations, the findings are favourable when viewed against those generally seen in the research, particularly that emanating from the UK.

Table 7: Summary of Daniels (1983) findings

Percentage Variation from the Mean	Percentage of Valuations within each Variation Range	
	'Simple' Property	'Complex' Property
< 5%	50%	39%
< 10%	95%	50%
< 15%	100%	95%
Average Absolute Variation	5.3%	8.9%

In summary, the anecdotal evidence provided by Hager and Lord (1985) indicates that 85% of the valuations considered fell within a range of 10% of the control valuation and only 5% of the valuations fell outside the 20% range. The study undertaken by Adair et al. (1996) provides more conservative figures, with 65% of the valuations analysed found to lie within a range of 10% of the mean of the valuations and only 10% falling outside the 20% bracket. The findings reported by Adair et al. were subsequently confirmed by Crosby et al. (1998a, 1998b). In contrast, Brown et al. (1998) furnishes estimates well below those provided in the above detailed studies, suggesting that valuers have only a 20% chance of producing valuations that lie within 10% of the mean. The small scale Australian study conducted in this field reported more favourable results, with 95% of the valuations assessed found to lie within a range of plus or minus 10% of the mean. The results must, however, be interpreted with some degree of caution given the small sample size employed. Nevertheless, the Australian findings do appear to compare favourably with those generally reported in the studies emanating from the UK, and are more closely aligned to the findings generated in the American based studies reviewed. However, again, as with the valuation accuracy research, the disparity present in the valuation variation studies precludes the establishment of firm conclusions.

Whilst the valuation accuracy research is of little direct relevance in the context of assessments of reasonable care, Crosby et al (1998a) notes that the studies in this field have been utilised by some analysts to comment on the extent of valuation variation. Of more direct significance is the valuation variation research which serves to provide some relevant insight into the margin of error concept (as formalised in valuation negligence cases). The present application of the margin of error concept involves an allegedly negligent valuation being considered against the testimony supplied by an expert witness (or witnesses) who advise the court on both the 'correct' value and the margin of error (size of the bracket within which value may acceptably lie).

AUSTRALIAN CASE STUDY: MYER CENTRE

Having reviewed the previous studies in the area of valuation accuracy and variation, attention now turns to consider the current interpretation of valuation negligence by the Australian Courts. There have been several recent cases in Australia dealing with valuation accuracy and negligence, *inter alia*: Interchase Corporation Ltd v ACN 010087573 Pty Ltd and Others (2000) QSC 013, Oz Finance Pty Ltd v JLW (Queensland) Pty Ltd No. 1180/95, I & L Securities Pty Ltd v Lamberts Australia Pty Ltd No. 4846/97, Hann Nominees v National Australia Bank Ltd, FCA, 2000, 454.

The Interchase case (usually referred to as the Myer Centre case) is used as a case study, both because of the breadth of the valuation issues it covers and the detailed nature of

the judgement handed down. It must, however, be stressed that this case is not unique nor should the selection thereof presume any opinion of the authors as to the correctness or otherwise of the judgement.

Interchase Corporation Ltd v ACN 010087573 Pty Ltd and Others (2000) QSC 013

This is a Queensland Supreme Court judgement and relates to the valuation of the Myer Centre, Brisbane, on completion of the development in May 1988. The decision of the Supreme Court was challenged in the Appeal Court and the Appeal Court decision on 25 May Valuation 2001 confirmed the ruling of the Supreme Court.

The Myer Centre is a seven storey retail complex in the CBD of Brisbane, Queensland and it incorporates four levels of shopping as well as a cinema complex, food halls, taverns, an entertainment area and substantial parking. Two valuers (who shall be referred to as Valuer A and B) valued the property in 1988 at \$500m and \$490m respectively, (*the valuers mentioned in this judgement will be referred to in alphabetic letters as their names are irrelevant*). Subsequently (in the late nineties), three other valuers (C, D & E) valued the property, as at the same 1988 date. The subsequent valuations had the benefit of hindsight and the advancements in valuation techniques during the previous decade.

The findings of Judge White in this case are of profound significance to the valuation profession. Prior to the hearing, Valuer A admitted liability and settled with the plaintiff. Valuer B's report and valuation process were extensively examined and the judge found errors in the methodology, data, and analysis employed. A brief summary of the comments of White J on each of these issues is provided as follows:

(1) Valuation Methodology

White J commented:

It is not clear from (Valuer B)'s valuation report which methods or method was used by him in his approach to the task. At page 49 of his report, he states:

“From our experience in both the sale and valuation of properties in today's real estate market, we believe that the ceiling price for ‘Retail Investment Properties’ is reflected by the capitalisation of the relevant net income.”

On p.46, he gives the yields for five comparable sales. On p.48, having concluded that there were no comparable sales, he stated:

“In the absence of good comparable market evidence, we prefer our future income IRR analysis as the bases [sic] for the valuation herein.” (p.87)

Further comments on methodology by White J are:

The expert valuers who had prepared reports and gave detailed evidence as to the practice of valuers in 1988 were (Valuers C, D & E) ... The differences between the valuers lay in matters of detail and although significant for the final valuation figure, nonetheless make it possible for

a common approach to be recognised. Their methodology differed significantly from that of (Valuer B).

The valuers agreed that the principal valuation method to be used in valuing an income-earning investment property such as The Myer Centre in 1988 was the capitalisation of sustainable income. In 1988, there were alternative methods which tended to be used to check the capitalisation of earnings method. These included ascertaining a rate per square metre value for the net lettable floor area which could then be easily compared to that of comparable properties; an analysis of future cash flow to determine at the adopted value that a satisfactory internal rate of return (IRR) is demonstrated, and the summation method of valuation. (p.84)

(2) Valuation Data

In the judgement, White J states:

I have little difficulty in concluding that as a consequence of (Valuer B)'s approach to aspects of the valuation he negligently accepted rentals which were not sustainable and was inappropriately influenced by "the client" and this ultimately led to too high a valuation figure. (p.108)

The judgement also refers to the numerous allegations that the valuation report of (Valuer B) did not reflect the correct valuation data, including an unrealistic vacancy allowance, incorrect interpretation of lease conditions and inaccurate rent predictions.

(3) Value Analysis

The judge at page 92 makes the following remarks:

Calculation and other mechanical errors had an impact on (Valuer B)'s calculation of the value of The Myer Centre.

Later the judge adds:

It does not seem unfair to state that the impression gained from looking at the various drafts of the computer model ... was that (Valuer B) was experimenting with figures rather than considering the issues that a valuer would consider when assessing the risks which would directly relate to the sustainability of the rents being sought. (pp.107 & 108)

COMMENTARY ON THE MYER CASE

The detailed judgement in this case dealt at length with many valuation issues. On several occasions, the Judge referred to the valuation difficulties in an exercise of this nature where the size of the development was unique and there was, as yet, no trading history. The authors' commentary on this case study deals with the issue of the valuation range, methodology, data and analysis.

Valuation range and variation

In the judgement, White J determined the value at \$410M. The actual valuations presented to the court were:

Valuer A:	\$500 million
Valuer B:	\$490 million
Valuer C:	\$380 million
Valuer D:	\$441.5 million (amended to 438.8 million)
Valuer E:	\$450 million

The assessed value ranges and variations are set out in Table 8 below.

Table 8: Valuation ranges and variations – Myer case

RANGE ABOUT THE DETERMINED VALUE:					
Determined Value \$410M		Value of A: +22%			
		Value of B: +20%			
		Value of C: -7%			
		Value of D: +7%			
		Value of E: +10%			
TABLE OF VARIATIONS: (PERCENTAGE DIFFERENCE)					
Valuer	A	B	C	D	E
A					
B	2.0				
C	31.6	28.9			
D	13.3	11.0	16.2		
E	11.1	8.9	18.4	1.9	

The ranges around the determined value indicate that C and D were considered as representing the best guides to market value, being 7% above and below the determined value. The Court selected a value that is the mid point between the values determined by valuers C and D; it is therefore assumed that the Judge considered that these values represented the most accurate estimates.

The overall range of values is reasonably high, with Valuers A and B being between 20% and 22% from the determined figure. However there is no evidence in the judgement that this difference was a factor in deciding whether these valuers used reasonable care. In fact, it could be argued that a range of 20% may be acceptable for a complex, development property of this nature.

From the value variation table, it can be seen that there exists little difference between the appraised values provided by Valuers A and B (2.0%) and that there is a substantial difference between the figures assessed by Valuer C and D (16.2%). There is also a large difference between the values of Valuer C and Valuers A and B. Despite the difference between Valuers C and D, it was their valuations that were given greater weighting by the court.

The conclusion from the analysis of valuation range and variation is that the Court's decision did not specifically take into account the value range or variation in determining whether the valuers had acted with reasonable care. Clearly the Judge

evaluated the valuers' performances based on their reports and evidence in Court rather than the range of figures.

Valuation methodology

The valuation of the Brisbane Myer property was complex and unique at the time. This was by far the largest retail development to take place in Brisbane and its mixed usage was unique. Further, while many of the leases in the Centre were agreed and signed at the time of valuation, there was no proven income stream.

In Australia, there was limited use made of cash flow studies and targeted rates of return in 1988. While DCF exercises were used for major properties, the comments by the valuers on targeted returns appeared to confuse rather than assist the judge in understanding this approach. White J refers to separate exercises to capitalise earnings and to capitalise net income. Essentially the valuers showed greater reliance on the direct capitalisation approach than on the DCF approach.

The judge favoured the segmented capitalisation rate approach because it permitted the allocation of differing risk/return ratios for the various use components of the Centre. This is logical, but there appears to be little evidence on how the specific capitalisation rates attached to individual anchor tenants (e.g. Myer), the taverns, the entertainment area and the parking were assessed. It is not surprising that there was no evidence of quantifying the risk of the various components.

Valuation data

This case demonstrates the importance of using accurate data. It is not unusual to find that information provided to the valuer is incomplete and occasionally misleading. However the judgement stressed the valuer's responsibility to exercise reasonable care in the acceptance and use of valuation data.

It is not reasonable to infer that a valuer is negligent because the information they utilise is subsequently found to be inaccurate, but the valuer must demonstrate expertise in questioning unsupported data and using the most accurate information available at the time. The standard should be whether the valuer has exercised 'reasonable care' when evaluating all data provided by outside sources.

It is possible that, in the future, the valuer's responsibility may extend to the use of risk analysis to evaluate the accuracy of the data and the requirement to quantify the degree of uncertainty of the valuation figure taking account of the quality of the data.

Value analysis

The judge refers to several cases of wrong interpretation of lease conditions and unrealistic cash flow expectations and concludes that the valuer did not exercise reasonable care as an expert. In particular, the comments by White J on 'experimenting with figures' are highly pertinent today. The ease of manipulation of figures in a spreadsheet format allows the adjustment of input variables to arrive at a desired result. Extreme caution should be exercised in adjusting figures to ensure that the most appropriate inputs are used at all times.

Further concerns of the Judge in the Interchase case referred to the analysis of sales and market demand. Emphasis was placed on the need to analyse and draw logical

conclusions from market evidence and to take account of actual market demand. The judge was critical of the judgement of certain valuers on market demand and their ability to apply hindsight in a competent manner. White J commented:

No witness said that in mid-1988 there was any hint of the severe downturn in property values which occurred a year later. The mood was one of buoyancy and optimism and aspects of (Valuer C's) valuation failed to reflect this ... He of all the valuers seemed to have difficulty in confining himself to the discipline of a retrospective valuation (pp. 115 – 116).

Another important point brought out in the judgement concerned the number of inaccuracies present in the final valuation report. The use of word processors allows greater speed in presentation with frequent use of copying from earlier valuation reports. This often leads to typographic errors and valuers must take great care to read and edit valuation reports for erroneous or inappropriate statements as these errors may be used to suggest negligence.

THE CONCEPT OF REASONABLE CARE

The Courts in Australia are placing a strong emphasis on the requirement of experts to 'exercise a reasonable standard of professional care' and are using this phrase as the basis for assessing negligence. The most frequently quoted passage on this matter comes from Bingham M R in *Banque Bruxelles Lambert SA v Eagle Star Insurance Co Ltd* (1995) QB375 at 403-404:

(The valuer's) duty to (the lender) is to take reasonable care to give a reliable and informed opinion of the open market value of the land in question at the date of valuation. 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. In each case the duty is to exercise a reasonable standard of professional care in the circumstances, no more and no less.

The evaluation of the duty of reasonable care is not straight-forward. There are no guidelines available to valuers to identify reasonable care. The test for this standard has, at times, been reduced to a simple assessment of whether a value lies within acceptable parameters of a figure which is regarded as the correct value.

The extent of the acceptable range of values is highly contentious. The subjective and often arbitrary nature of determining the correct value renders the concept open to well founded censure. The simplistic statement that valuers should be capable of valuing within a range of 10%, 15%, or even 20% is not logical, as the accuracy achievable depends largely on the availability of information, the quality of comparable data and the competency of the valuer. Fortunately there appears to be growing support that the size of the range or variation is not *prima facie* evidence of a lack of reasonable care.

EVALUATION OF REASONABLE CARE

Recent legal cases provide specific situations where valuation procedures have been regarded as failing to comply with the requirement of reasonable care. The most

common failure of valuers, as identified by the courts, is the inappropriate use of market evidence. Many judgements state that relevant sales have been ignored, incorrect conclusions drawn from sales evidence or inadequate investigation undertaken of the relevant market. Examples from Australian legal cases are numerous; for example:

“the defendant was remiss in overlooking the evidence of value provided by the sale of the land at 108 Lutwyche Road and that it failed properly to analyse the sales on which it did rely for its expression of opinion” (Chesterman J in *I and L Securities Pty Ltd v Lamberts Australia Pty Ltd*, 1997).

“not only did the defendant base his valuation on so called comparable sales which were clearly distinguishable, but he failed to give appropriate weight to a sale of land in the immediate vicinity” (Williams J in *Oz Finance v JLW (Queensland) Pty Ltd*, 1995).

Valuers would benefit from greater clarity on what constitutes the duty of reasonable care. The authors believe that further guidance should be provided to valuers and propose that consideration be given to identifying the basic requirements of reasonable care. As a first step in identifying what constitutes reasonable care, they propose three characteristics of reasonable care. They are:

1. Reasonable care requires a valuation exercise to be free of major errors.
2. Reasonable care cannot rightly be measured in terms of a valuation range or valuation variation.
3. Reasonable care requires the identification and quantification of the uncertainty of the input data in a valuation exercise.

The first statement places the emphasis on the absence of major errors in the valuation process. Clearly, it is necessary to identify what constitutes major error(s). Several examples have been shown in the Myer case study, with the classification of errors in methodology, data and analysis. Methodology is not straight-forward and relates directly to the purpose for which the valuation is required. The difficulty associated with identifying appropriate data cannot be overcome, but expertise is required to locate and interpret the data that is available and assess its quality.

The second statement clarifies that ranges and variations should not be used as *prima facie* evidence of lack of reasonable care. The authors strongly endorse the proposal by Brown et al.(1998) in relation to the Mallinson Committee recommendations:

Recommendation 34 of the Mallinson Report should not, therefore, be so concerned with valuation uncertainty. This is not the important issue. The focus should shift to identifying errors in valuations that might arise through the use of poor information or poor valuation practice (1998, p. 12).

The third statement places the onus on the valuer to specify the quality of the input data because of the differing degree of certainty applicable to the variables. It is acknowledged that this proposal is a contentious issue. It will require a major shift in professional practice to incorporate an assessment of the degree of uncertainty of the input variables and, consequently, the degree of accuracy of the resultant figure. Property investors and developers are well aware that risk is an integral part of property assets. They often request an assessment of the degree of uncertainty present when

calling for a valuation. Valuers should provide a measure of the certainty that can be attached to their valuation figure or range of figures.

‘Correctly applied competency’ is an essential quality of the professional who has a duty of reasonable care. A high level of competency requires sound and current knowledge and experience in that field. The body of knowledge in the valuation field is expanding rapidly and consequently the valuer must continuously upgrade their knowledge to retain their ability to achieve the required standard of reasonable care.

The professional associations representing valuers have a duty to provide the valuer with the opportunity to upgrade their knowledge. The associations should be the initiators of continuing professional development programs which offer the valuer access to short courses, practical programs and literature on relevant topics. The role of the professional associations is therefore to actively support the valuer in their duty of care.

CONCLUSIONS

The literature on valuation accuracy and variation highlights the shortcomings inherent in the use of value ranges as a tool by which to assess valuation negligence. Studies have yielded far from conclusive results with an almost alarming level of variation reported in both the valuation accuracy and valuation variation research. In general, the range of results reported in the accuracy studies clearly fails to support the widespread belief that valuers are capable of valuing to within 5-10% of market value/price (Brown, et al., 1998). Similarly, the disparity present in the valuation variation studies precludes the establishment of firm conclusions. The research appears to raise more questions than it resolves, with answers regarding the generally prevailing level of valuation accuracy and variation attained in practice remaining illusive. The findings highlight a number of issues which are of particular relevance within the context of this discussion, particularly with respect to the appropriateness and reliability of accuracy and variation measures.

While, traditionally, value ranges has been used in determining valuation negligence, there is growing evidence that negligence is now viewed by the courts as a failure to fulfil a professional duty of reasonable care. Recent legal case studies in Australia show that the valuer is clearly required to demonstrate an ongoing duty of reasonable care. This means that all aspects of a valuation exercise, the methodology, the utilisation of data and the analysis process, must be undertaken in a competent manner. There is reference in many cases to the failure of valuers to identify relevant comparable sales or to professionally analyse sales data.

In order to ensure compliance with the duty of reasonable care, it is essential that valuers are continuously upgrading their knowledge and competency. The professional associations can greatly assist this process by ensuring that concise standards of professional practice are regularly communicated to their members and that associated continuing professional development activities are available to all members.

It is probable that the level of reasonable care expected of valuers will become more demanding in the future. Accordingly, there exists a very real and urgent need to identify and correct the errors occurring in valuation practice. The focus should be on

improved levels of competency and the overall quality of the valuation product and this will result, *inter alia*, in improvements in valuation accuracy and variation.

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