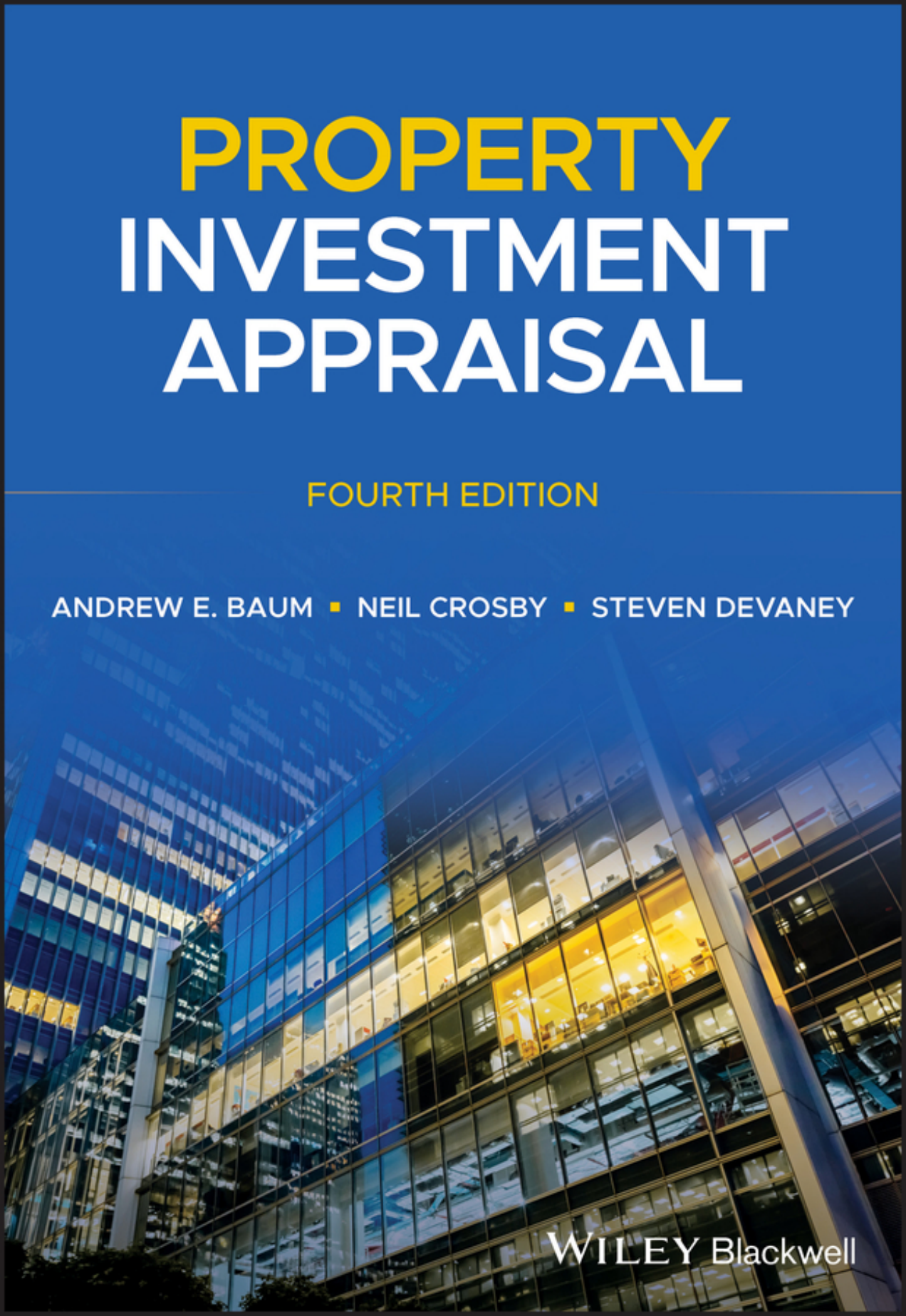
PROPERTY INVESTMENT APPRAISAL

FOURTH EDITION

ANDREW E. BAUM ▪ NEIL CROSBY ▪ STEVEN DEVANEY



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Property Investment Appraisal

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Fourth Edition

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Preface

This is the fourth edition of this text. It is over 10 years since we produced the third edition and over 30 years since the first edition was published in 1988. All of our editions seem to have coincided with peaks and troughs in the UK property market; this may be no accident, as we learn a lot through these market extremes. The first edition was in the late 1980s and a booming occupier market, and the third edition was written near the end of a booming capital market. The second edition benefitted enormously from the lessons learnt from the crash in the occupier markets and subsequent recovery in the 1990s. This time we are writing in the middle of the COVID-19 pandemic, and since the last edition we have observed the aftermath of the Global Financial Crisis (GFC) and Brexit.

We think the most significant of these events for the subject of this book is the GFC. It added to our understanding of markets, as it was a very different event to the crash of 1990. In 1990, rental markets collapsed following an economic boom that precipitated a development boom with new development coming on stream as economic growth declined. In 2007 rental markets were relatively stable and the boom in commercial real estate prices was precipitated by sustained demand for investment assets leading to capitalisation rates falling to historic low levels – with the GFC precipitated by the inevitable correction in prices. In 1990–1993, capitalisation rate corrections followed the rent corrections, adding to the falls in capital value. In 2007–2009, rent falls followed the asset price corrections. In both of these peaks and troughs, a common factor was the increased amount of lending secured on commercial real estate during the up-cycle and a significant brake on lending in the trough, with resulting, albeit different, pressures on property valuations.

The first edition had the stated aim of changing UK professional practice, a necessary objective in our view given that strong rental growth and high inflation rates had fundamentally undermined the applicability of the conventional valuation model to reversions and leaseholds. There was added justification, as valuation was becoming more important, property having established its place as a major asset class for financial institutions. Valuations had become subject to greater scrutiny from investors and analysts from other asset classes, and property valuation methods appeared archaic and static. Most UK texts of the time were little more than a set of cookbook routines predicated on the passing on of perceived wisdom, and no text had focused wholly on a critical examination of the basis and validity of that approach. We attempted to put market valuation processes into their historical perspective and argued that as markets changed so should methods.

By the time of the second edition, the UK market was just beginning to recover from the most significant property market crash in recent recorded history. The emphasis had changed from reversions to 'over-rented' property and how valuation models coped with falling or fallen markets. Models suggested as alternatives to conventional approaches in our first edition began being assimilated into UK professional practice due to the now-obvious failure of traditional methods to cope with over-renting caused by long leases and upwards-only rent reviews. It was beginning to dawn on investors and valuers that a cash flow might be secured against a tenant rather than the property, and understanding the security of that cash flow could be just as important as understanding property fundamentals in producing rational valuations.

In the foreword to the third edition, which was written in 2006 and the early part of 2007 amidst a booming and (in our words at the time) '*dangerously strong*' investment market, we concentrated on our original aim of trying to wean the UK valuation industry (and any other market that relies on capitalisation rate modelling) off those models and to illustrate a more thoughtful and analytical approach. As far as that is concerned we do not believe much has changed. We had thought that the 1990s would see a fundamental change in approach but the low inflation environment of the 2000s appears to have taken the pressure off *market valuation* mathematics, with displacement talk about artificial intelligence and automated valuation methods becoming fashionable. However, contemporary analytical techniques such as those propounded in earlier editions have flourished in *investment appraisal*, and the original young and crusading authors can now look to retirement in the knowledge that things have moved slowly forward, as has the research environment, leading to a much better understanding of markets and techniques than when we started this endeavour.

Because conventional methods of market valuation are still reasonably dominant, we resisted the temptation to move the emphasis of the book away from valuation and into investment analysis. There are many excellent texts from various parts of the world that do that job very well. Because markets and economies are most affected by market valuations, the heart of the book remains the critical examination of market valuation models. It remains the case that no other book addresses this issue in such detail.

Since the third edition, there are two issues that we believe required more discussion.

First, in the UK, financial viability has been placed at the heart of the planning system and development appraisals are the vehicle by which the viability of development is assessed. This has led to increased scrutiny of the approach to assessing developments in the UK and some of the research has revealed some very simplistic technique, some basic misunderstandings of return and other measures, and little critical examination. Within texts, development and investment appraisals tend to be dealt with as separate subjects (with a few significant exceptions), yet they have numerous identical characteristics. Given these characteristics, we have long debated adding a chapter on development, and the significant role it plays in planning for development now demands it. Chapter 9 sets out some examples and critically discusses development valuations.

Second, the role of valuation in secured lending is the subject of a new Chapter 10. After each downturn in the UK, valuation for secured lending came under scrutiny from the lending community. Post 1973, pressure was put on valuers to undertake valuations consistently and this was the catalyst for valuation standards in the later 1970s. In the aftermath of 1990,

the market valuation basis was questioned and some very questionable new bases were proposed, adopted, and then quite quickly dropped when it became clear that they would have the perverse effect of increasing lending in a boom period. In the post-GFC era, the role of property valuations for secured lending was placed squarely in the forefront of the resulting financial stability debate by the chair of the Independent Commission on Banking, set up to review the causes of the GFC, understand subsequent bank failures and recommend changes. He identified commercial property lending – supported by market valuations – as a major contributor to the need for a major bail out of a number of lending institutions. Since then, there has been significant international interest and activity around the search for a counter-cyclical basis for secured lending valuations, and Chapter 10 outlines some of the alternatives.

Finally, it is time for us to add some new thinking and experience and we welcome some new blood to the author team in the person of Steven Devaney. In addition to the significant contribution he has made to freshening up the text, Steven is our insurance policy should the ageing original authors be less productive than will be necessary when the next boom or bust prompts the fifth edition of this text.

September 2020

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Property Investment Appraisal in its Context

1.1 What is Appraisal?

The subject of this book is the appraisal of property, or real estate, investments. In choosing the term 'appraisal', we have two distinct applications in mind.

The first of these is *market valuation*; this means *to fix a price for an asset, or to predict the most likely selling price of an asset*.

The second is *investment appraisal*. This means *to estimate the worth or value of an asset*.

The book is concerned with the difference between these two terms. While a *market valuation* will tell us what a property asset is likely to sell for, an *investment appraisal* will tell us what the asset is worth to us. In a scenario where we wish to acquire a property, comparison of these appraisals can help us answer the following question: should we pay the market price – or not?

There is now widespread acceptance of the international definition of Market Value set out in the valuation standards of the International Valuation Standards Council (IVSC), which is commonly known as 'the White Book'. This definition is

> the estimated amount for which an asset or liability should exchange on the valuation date between a willing buyer and a willing seller in an arm's length transaction after proper marketing and where the parties had each acted knowledgeably, prudently, and without compulsion.
>
> (IVSC 2019)

Many nations feel the need to have their own valuation standards, not least the UK, whose standards (maintained by the Royal Institution of Chartered Surveyors [RICS]) have been through a number of editions of what is commonly referred to as 'the Red Book'. The latest edition (RICS 2020a) adopts the aforementioned international definition of Market Value. There are also some regional standards such as the European '*Blue Book*' published by TEGOVA, The European Group of Valuers Associations. This has in the past created some tension and rivalry between international, regional, and national bodies, particularly in Europe. Yet there is now very little disagreement, if any, on the general wording of the Market Value definition, even if there are some differences in interpretation. Hopefully, these differences will continue to diminish as the property investment market becomes more and more international.

Property Investment Appraisal, Fourth Edition. Andrew E. Baum, Neil Crosby and Steven Devaney.

Investment appraisal, or the estimation of worth or value, is not necessarily market-based. Between the second and third editions of this book, this concept was both developed and institutionalised, having entered UK valuation standards in the 1990s as the 'calculation of worth'. It was subsequently defined in International Valuation Standards under the term 'Investment Value'. Up until 2013, this was defined as:

> the value of property to a particular investor or class of investors, for identified investment objectives. This subjective concept relates specific property to a specific investor, group of investors, or entity with identifiable investment objectives and/or criteria.
>
> (IVSC 2007)

This definition blurred a major issue, specifically whether worth or value is to an individual investor or to a group of investors. This question has significant implications about how value might be assessed in practice, as the value to an individual and the value to a group may not be the same. However, in the 2013 edition, the IVSC changed the definition and came down heavily on the side of Investment Value representing worth to the individual investor rather than to a group or the market. The latest definition is:

> the value of an asset to a particular owner or prospective owner for individual investment or operational objectives.
>
> (IVSC 2019)

Individual investors are influenced by a set of criteria through which the value of an asset might be assessed. For example, their tax situation, the rate at which they can borrow, how much equity capital they have, what adjoining assets they own, and the strengths and weaknesses of their existing investment portfolio are all factors that may lead them to perceive value in a particular property.

Hence, while all investors may agree upon such important variables as the size of the asset being appraised and the cash flow implications of the lease, individual investors will often be subject to different motivations (see Chapter 2). As will be shown later in this book, the distinction between the estimated price (Market Value) and worth (Investment Value) can be important.

Further, it is possible that a group of investors will share the same characteristics and use similar criteria, the result being that they attach a similar value to a particular property asset. Ascertaining the possible buyer group is very relevant to appraisal and the appraisal process includes identifying objectively measured market variables and the prospective owner's (or group of owners') subjective estimates of other relevant factors. Hence, we believe that there are three basic concepts of value attached to appraisal: first, Market Value or exchange price; second, worth to a group or the market place; and, third, worth to the individual. Investment Value was in previous definitions used to cover both the second and third concepts, but worth to the individual is now the sole basis of Investment Value. We believe that this leaves a definitional hole. Assets can be valued differently to exchange price not just because a specific investor has particular characteristics relating to tax, debt, or other reasons; there are plenty of examples of where the market as a whole did not recognise certain

characteristics concerning the asset causing them to under- or over-price properties as a consequence.

The term 'appraisal' covers all three processes. We use the term market valuation for the process of estimating Market Value (the prediction of the most likely selling price) and we continue to use Investment Value for both worth to the market and the individual, and will be specific about which is which in the text. We hope this will not cause confusion. It is a shame that the possibility of confusion exists, largely because the development of property terminology has been influenced by the isolation of the property world from other financial markets. There is no doubt regarding the meaning of valuation in the securities markets: it means the estimation of worth. Market valuation (or pricing) is a function that is carried out by buyers, sellers, and market makers. The price of a particular company in the stock market is publicly quoted, and large numbers of identical shares in that company can be bought and sold at that price. There is no need to employ a valuer to estimate the Market Value (or most likely selling) price of a publicly listed share – that price is available on a screen in real time.

In property, however, prices are not available, because each property is unique, the market is private, and there are no market makers. The price at which a transaction will take place will be influenced by an expert opinion – a 'valuation' – because there is insufficient market evidence and insufficient homogeneity of product for traders to be able to fix prices. While there may be some consensus regarding the most likely selling price or Market Value, it is to be expected that, at any one time, different views of worth will be held by different individuals and groups. These differences will fuel market turnover: those who believe that the Market Value is higher than the worth of the asset to them will sell; those who believe that the worth to them is higher than Market Value will buy.

Two other concepts of value need to be considered. First, International Financial Reporting Standards (IFRS) contain a definition of value for use in financial reporting that is termed Fair Value. The definition is

> The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date.
>
> (IASB, 2020)

This definition is expanded upon in IFRS 13. However, it can be seen that there are strong similarities with Market Value given the focus on exchange price in the context of an assumed transaction at the date of measurement. In fact, the RICS (2020a) suggests that the definitions of Fair Value and Market Value are consistent for most practical purposes. Given this, it was confusing that International Valuation Standards contained a definition of Fair Value that differed from both Market Value and the IFRS definition. The IVS definition also focused on exchange price, but dropped some of the requirements of Market Value by allowing specific circumstances affecting the parties involved to be taken into account. This concept has since been renamed Equitable Value and we do not consider it any further.

Another concept and definition of value that is not included in International Valuation Standards is Sustainable or Long Term Value. This cannot be ignored in the wake of the Global Financial Crisis (GFC) and the part that both residential and commercial

real estate played in that crisis. The term 'sustainable' is used in the sense that it can be sustained through time and it is the basis for Mortgage Lending Value, a concept used by some European banks as a risk-management tool for their commercial loan books. Mortgage Lending Value is part of the Basel accords, along with Market Value, and is used in the determination of bank capital ratios. We discuss this concept in detail in Chapter 10.

1.2 The Appraisal Process

Appraisals play an important role in the functioning of the property market. They are used in financial statements, for performance measurement purposes, in the bank lending process, and for guiding decisions in relation to acquisition, sale, and asset management.

In financial statements, performance measurement, and for buy/sell decisions, it is important to be able to identify the most likely selling price (Market Value). For instance, banks will wish to know the current Market Value when deciding how much to lend against a property, which might have to be sold to pay off the loan in the event of borrower default. These sources of instruction have been dominant, with the result that appraisals are usually assumed to be market valuations. For some appraisers or valuers, this is the only valuation basis they use and understand.

However, a market valuation is of limited use. It identifies the most likely selling price of a property at a particular time and has no real shelf life (though some court decisions have suggested a three- or six-month lifespan). It cannot be used to identify mispricing, for example in the run-up to the global financial crisis when US homes were clearly over-valued. As a result, market valuation is not a useful tool in the *analysis* of markets.

Market Value relies specifically on the best evidence of trading prices of other similar assets. This doctrine is underpinned by the courts and by the perceived best practice of competent practitioners. 'Other similar assets' is invariably interpreted as other similar *property* assets. The use of transactions in similar properties raises issues regarding similarities in physical structure, location quality, and lease arrangements. Some of this text relates to how appraisers or valuers can make better use of comparable material in market valuations.

However, more sophisticated investors and increasing regulatory requirements have led to major changes in the level of advice required from valuers and valuations. Over the last 40 years, this need for more detailed advice within both valuation calculations and reports has required valuers to extend their skills. The need to consider Investment Values and, more recently, sustainable values, reflects this change.

The price paid in the market might not represent Investment Value, the value of a property to any individual investor. This value usually needs to be identified. For example, what is a prospective purchaser's subjective perception of what they should receive in return from ownership of a property asset? The investment appraisal requires an assessment of the likely income produced by the property into the future over a likely holding period (which could be different for different purchasers), set against the cost of acquiring, maintaining, and enhancing the asset. The most widely used approach to this is a discounted cash flow; the information requirements and other technical issues concerning cash flow valuation are discussed in Chapter 3.

1.3 What Makes a Good Appraisal?

The property selection policies of both major and minor property investors often include an examination of the mismatch between estimates of Market Value and Investment Value to spot pricing anomalies. Given this, any investor or advisor will benefit from a clear understanding of the difference between the Market Value of an asset and its worth to an investor or group of investors. If there is a difference, is this evidence of a poor-quality market valuation?

It is widely believed that market valuations should primarily be *accurate*; that is, they should closely predict selling price. Therefore, accuracy may be a relevant and useful test of the quality of a market valuation. Investment valuations, on the other hand, should primarily be *rational*; they should be professional and expert reflections of a combination of objectively measured market variables and the prospective owner's subjective estimates. We will argue in this book that *all* appraisals, including market valuations, should be rational. If they are, then although accuracy can never be guaranteed, greater confidence will be generated in what will be perceived as professional and expert results. The three earlier editions of this book had the stated aim of encouraging better, more rational practice in the appraisal of property investments. We have little doubt that valuation practice has improved significantly in many ways. Appraisal methods have continued to be debated and, in the last 20–30 years, more research has been undertaken on the process of valuation, so that the context in which estimates of value are produced is better understood.

Given improvements in valuation techniques, we have been able to remove some of the older theoretical material regarding methods from this edition. Nonetheless, there are calls to improve valuation techniques further, especially in the context of lending, and these have been given momentum by the Global Financial Crisis. The use of Market Value as a reference point for lending has been identified as one of the pro-cyclical pressures leading to over-lending, which in turn feeds higher prices, enabling higher lending volumes based on static loan-to-value ratios. Therefore, alternatives are being sought, as discussed in Chapter 10.

The continuing globalisation of markets and the improvement of data sources has led to more attention regarding the convergence of international processes and practices. This has raised questions concerning different levels of lagging and smoothing of valuations in different countries. Such terms refer to the extent to which market valuations keep pace with changing prices and whether they capture the full extent of any movements in such prices. The performance of some valuation-based indices of national property prices raises questions about whether appraisers in some countries even noticed there was a *global* financial crisis at all! However, the increasingly sophisticated educational environment and continuing development of the property industry is increasing the ability of appraisers in practice to address the complexities of valuation, and the digitalisation driven by the fourth industrial revolution will push their capabilities even further.

International and national valuation standards have become more demanding in regulating communication between clients and appraisers. This communication involves the selection and appointment of an appraiser as well as the reporting of the valuation itself. There has been concern over the relationship between valuers and their clients, and academic research discussed below has suggested reasons why valuations might not be totally

accurate and objective. The data now exists in some mature property markets to undertake long-term analyses of valuation accuracy and bias (measuring how close Market Value estimates were to subsequent sale prices). This includes variation between different valuers, the extent to which valuers anchor on past evidence and smooth peaks and troughs within cyclical markets, and whether valuers succumb to pressure from clients and other stakeholders in the process, and alter valuations as a result.

1.3.1 Accuracy, Bias, Smoothing, and Lagging of Valuations

Since valuations are estimates of what the exchange price or investment worth might be, it follows that such estimates are subject to a degree of uncertainty. The principle of uncertainty around valuations is now firmly embedded in valuation standards and both the IVSC and the RICS have addressed this with guidance on reporting uncertainty around the valuation and its causes (IVSC 2019; RICS 2014). These discussions around the reporting of uncertainty have been given added momentum by the GFC and COVID-19 globally and Brexit within the UK. For example the "RICS Material Valuation Uncertainty Leaders Forum" meets weekly during any "unusual" events that may cause valuations to be subject to abnormal uncertainty and both RICS and IVSC have produced additional advice in 2020 in response to the COVID-19 pandemic (IVSC, 2020; RICS 2020b). Nonetheless, there is an expectation that appraisers will produce a solution that lies within certain parameters. In some countries, these parameters have been discussed by courts during valuation negligence cases.

Meanwhile, the degree of variation from prices or from other valuations has been examined in a number of studies. These have taken place for the large property investment markets of the UK and US, as well as for parts of mainland Europe, Australasia, Asia, and Africa. Crosby (2000) reviews studies for the UK, US, and Australia conducted during the 1990s. Since then, Cannon and Cole (2011) analysed 7,214 sales of apartment, retail, office, and industrial properties in the US over the period 1984–2010 for which performance measurement appraisals had been previously undertaken. Cannon and Cole found an average difference of +3.9%, with prices higher than valuations. This hid larger positive differences for times when market prices had appreciated, while during a declining market in 2008 and 2009 average differences were negative, with valuations higher than prices. The findings suggest that market valuations could be biased estimates of sale prices, but that the direction of bias changes between rising and falling markets. This is consistent with the hypothesis that appraisals are lagged indicators of value.

Measurements of the average difference allow positive and negative differences to at least partly cancel out. The absolute average is, therefore, another common metric in such studies, capturing the typical difference between valuations and prices regardless of which was higher or lower in any given instance. In Cannon and Cole (2011), the average absolute difference across the 25 years studied was 12.5%.

Another source of evidence is a series of regular studies carried out by MSCI. The last 30 years of the MSCI UK database has been examined by these studies to make similar comparisons of prices and valuations. Some of the results from these exercises are illustrated in Figure 1.1.

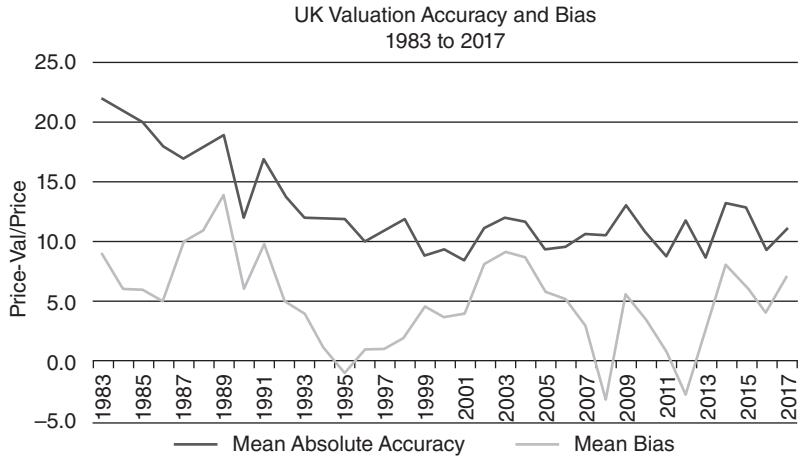

Figure 1.1 UK valuation accuracy and bias (value weighted figures): 1983 to 2017. Source: RICS/IPD (2005), RICS (2019), and Reid (2016).

Over the whole period, the average mean difference between valuations and subsequent sale prices has been around 5%, with prices higher than valuations. This suggests a bias to under-valuation. The average mean absolute difference has been around 13%. Both of these figures mask substantial changes during the period. The absolute difference fell during the 1980s and 1990s before stabilising at around 8–10%.

If appraisals keep pace with how prices are changing, there should be no pattern to how the mean difference changes over time. However, the same pattern emerges in the UK results as in the US results discussed above. In the boom years of the late 1980s, valuations appear to have lagged further and further behind prices, suggesting that they rose at a lower rate than that at which prices were rising. Then, in the recession of the early 1990s, they seem to have followed prices down at a slower rate than prices were falling. After five years of falling and then static prices, valuations caught up in 1995, only to be left behind as property markets started to rise again post-1995. The pattern repeated itself in the years 2001–2009, but the catching up process in the downturn was much faster in this case, with valuations higher than prices in 2008. Since then, a positive mean difference, with prices higher than valuations on average, has re-emerged.

This type of analysis has been extended by MSCI to 12 nations where a long time series of valuation-based performance figures exists: Australia, Canada, France, Germany, Italy, Japan, Netherlands, South Africa, Sweden, Switzerland, the UK, and the US. Tables 1.1 and 1.2 set out the mean absolute difference and the mean difference (or bias) for those countries over the period from 2000 to 2018. The results shown in Table 1.2 are particularly worthy of comment. Many markets recorded their largest positive mean difference (with prices higher than valuations) in 2006 or 2007, during which the peak of the last global property cycle was reached. The UK, the US, and Sweden then had valuations higher than prices in 2008, while Germany, Japan, the Netherlands, Canada, and Australia had reversed by the end of 2009, with valuations higher than prices.

These analyses assume that sale prices are independent of valuations. However, Baum et al. (2000) found that valuations were not independent of prices and prior valuations

Table 1.1 Weighted average absolute differences between valuations and prices 2000 to 2018, by country.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australia	3.8	3.9	4.4	4.8	4.8	5.5	9.5	13.7	10.1	8.2	5.6	6.6	3.6	5.8	9.2	13.1	8.8	11.9	10.5
Canada	7.4	6.4	9.7	8.1	9.3	11.6	15.7	13.4	8.8	9.9	8.2	10.7	16.7	7.4	9.5	15.6	12.0	9.2	13.1
France	6.6	7.9	6.6	5.4	11.5	10.2	14.5	12.9	9.9	7.8	11.1	12.6	9.7	9.2	9.3	12.7	12.8	9.8	11.1
Germany	12.2	9.2	7.1	11.6	5.0	6.0	14.3	14.3	14.8	6.1	11.2	9.6	10.0	7.9	8.4	9.9	13.4	18.1	9.7
Italy		20.5	12.7	7.9	19.1	4.7	9.3	14.0	17.5	12.5	12.2	7.6	10.0	6.9	9.2	8.6	8.6	10.8	17.7
Japan				4.2	14.3	22.3	8.1	12.9	7.3	10.2	8.6	8.2	12.0	11.6	10.9	14.0	13.0	9.5	11.7
Netherlands	10.2	8.4	9.0	8.1	8.2	8.6	11.6	12.4	5.6	9.3	4.8	5.1	7.5	9.5	5.8	7.1	10.2	10.1	10.2
South Africa	10.9	9.2	9.2	8.1	6.9	11.4	9.2	21.7	9.5	9.4	6.9	10.6	10.1	9.3	9.2	3.7	5.2	3.6	4.8
Sweden	18.5	9.6	10.1	8.0	10.0	10.4	21.6	15.8	13.7	16.7	9.0	16.1	7.9	10.8	10.8	13.0	12.4	8.6	9.2
Switzerland			23.9	10.3	9.1	8.5	8.2	9.4	9.1	13.5	11.3	10.7	12.3	7.5	7.2	19.2	23.9	19.5	10.3
UK	7.8	7.1	7.6	7.5	7.9	7.8	8.9	9.9	9.4	11.2	9.7	9.7	8.7	10.3	10.9	10.1	8.6	9.0	8.5
USA	5.1	8.6	7.7	6.3	9.6	11.6	10.8	10.3	8.6	14.9	10.1	9.9	9.0	10.4	8.5	8.1	6.2	7.0	6.7
Other	10.7	16.3	8.1	9.2	14.4	15.5	17.6	13.6	10.4	12.6	10.5	9.0	8.3	10.1	9.5	10.9	13.6	12.6	12.4
Global	8.6	7.3	7.6	7.3	8.4	9.2	11.5	11.9	10.1	11.1	9.4	9.9	9.2	9.4	9.4	10.3	9.2	9.3	9.0

Source: MSCI (2019).

Table 1.2 Weighted average differences between valuations and prices 2000 to 2018, by country.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australia	0.4	−0.1	0.0	1.8	1.3	0.4	6.0	11.8	3.5	−4.6	1.4	3.6	−0.3	3.2	7.4	12.2	4.2	8.0	5.9
Canada	−1.3	0.7	2.0	2.5	6.5	5.5	15.4	10.4	5.8	−0.4	1.5	6.8	14.4	3.6	−0.4	11.8	7.7	6.1	8.1
France	2.5	−0.2	1.2	2.5	8.8	8.6	12.9	10.4	3.5	0.9	5.6	10.6	5.9	5.1	3.7	9.2	5.3	7.5	9.5
Germany	3.6	1.2	−3.3	−4.8	−1.1	0.8	0.0	11.5	9.7	−3.0	5.2	7.3	4.2	2.8	4.0	6.5	6.1	13.8	6.5
Italy		−5.5	12.7	7.9	19.1	1.0	6.1	13.9	16.2	3.9	0.9	3.1	1.9	−4.4	0.1	2.4	0.3	7.1	1.0
Japan				4.2	11.8	21.0	7.1	11.5	4.8	−8.5	−3.6	−2.1	−3.4	2.3	9.1	10.1	4.9	8.0	9.5
Netherlands	7.6	2.2	6.2	2.6	4.7	5.2	4.6	10.5	2.8	−5.3	2.1	1.9	−0.2	−6.0	−1.4	−1.5	3.5	3.8	4.4
South Africa	0.5	−3.0	0.5	1.4	−0.4	6.7	0.4	18.1	1.4	6.6	0.8	5.4	6.4	7.7	−0.3	1.3	1.1	0.7	−0.6
Sweden	−8.7	4.8	5.9	4.5	7.3	7.5	21.3	10.8	−7.7	12.9	0.9	15.0	4.7	5.9	1.2	7.3	4.0	2.5	1.1
Switzerland			19.8	6.2	4.4	0.7	5.9	6.6	7.3	13.0	9.7	9.0	9.9	5.8	5.3	15.4	20.6	18.5	8.2
UK	3.8	3.4	5.1	5.5	6.0	5.8	6.6	2.9	−2.9	3.8	5.2	6.2	2.7	7.3	8.6	6.2	3.0	6.2	4.5
USA	−1.5	1.0	4.2	4.4	5.5	7.4	7.5	4.8	−4.3	−10.3	4.8	5.2	4.5	2.2	5.2	5.6	0.6	3.1	2.3
Other	3.8	6.2	5.8	6.2	11.2	12.5	13.3	9.4	5.6	−0.7	1.3	5.8	2.6	−0.1	0.4	6.8	11.1	5.8	10.7
Global	0.9	2.2	3.6	3.9	5.4	6.4	7.4	7.6	0.1	0.0	2.4	6.1	4.2	3.4	4.7	6.7	3.6	5.5	4.7

Source: MSCI (2019).

played an important part in deciding which properties were bought and sold – and at what minimum price. On this basis, it would be expected that prices would exceed valuations generally, as funds are less likely to sell or buy at prices that do not meet the last valuation or the next prospective valuation. Some funds struggled to get trustee approval for selling at less than prior valuation and some buying funds checked formally that their portfolio valuer would at least confirm the purchase price at the next valuation before proceeding to purchase. Another example is that of German open-ended funds where the rules governing these funds prohibit sales of assets at amounts that are more than a few percentage points below the valuation. Prospective sale prices at less than valuation would not be completed, so the samples of sales would be biased towards cases where prices exceeded the prior or prospective market valuation. Therefore, a positive bias in any accuracy study should be expected.

The expectation that valuers will lag and smooth the peaks and troughs in prices has been discussed by Geltner et al. (2003) and in Geltner et al. (2007). These authors are not alone in suggesting that one of the reasons for valuations lagging market movements is *anchoring* by valuers on the information contained in past comparable transactions and valuations. Anchoring refers to a psychological tendency to rely on an initial known figure (such as a prior valuation) by more than would be justified from its relevance to the appraisal at hand. This is arguably quite rational behaviour given the nature of the valuation process and the need to minimise errors that arise from noisy contemporaneous market signals (Quan and Quigley 1991), as well as the possible requirement to justify the valuation in court. In less liquid markets (where liquidity is defined as the depth of transaction activity), the anchoring on past valuations is likely to be stronger.

However, the accuracy studies show that the gap between prices and valuations increases in booms, which is where transaction activity is at its greatest. This suggests that the speed or extent of value change has a major impact. New information may be available, but it might not be fed into valuations quickly enough to keep them abreast of rapidly rising prices. This raises questions for the organisation of valuation services. In some jurisdictions, valuers are separate from the marketplace and are housed within specialist firms. Yet, in many mature markets, valuations are undertaken by the same firms that carry out agency functions, thereby improving access to market intelligence or "soft" information that can feed into a valuation. This is in addition to past valuations and evidence from completed transactions.

S*moothing* relates to the extent to which valuations reduce the volatility of actual prices by missing the cyclical peaks and troughs of price movements. The impact of smoothing has been studied using individual valuations and valuation-based property performance indices. This includes attempts to quantify its extent, as summarised in Geltner et al. (2003). More recent analysis of a transaction index based on sales from the MSCI UK dataset (Devaney and Martinez Diaz (2011)) indicates that the current level of smoothing might be less than that found in previous studies, with the index being 1.4 times more volatile than an appraisal-based counterpart. Yet perhaps the most interesting finding was that, unlike other studies, particularly for the US (e.g. Fisher et al. 2007), the turning points appeared to be the same in both appraisal and transaction-based indices, suggesting that valuers might have smoothed the peaks and troughs, but not lagged turning points in the most recent cycle.

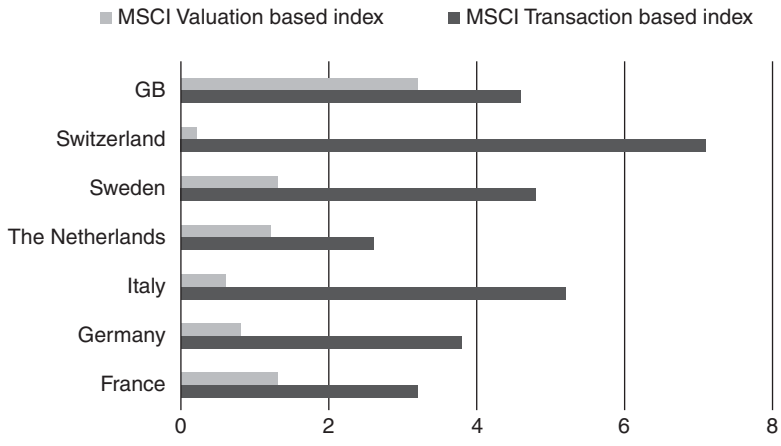

Figure 1.2 Volatility of valuation and transaction-based series (SD % pq): Q1 2002 to Q3 2019. Source: Constructed by the authors from MSCI Global Intel 2020.

MSCI has, for several years, compiled transaction-based indices for some national markets (MSCI 2013), and comparisons with valuation-based indices for the same markets provide some varied results. The last set of comparisons that are available for a wide range of markets covers the period 2002–2019 (MSCI 2013). The results are set out in Figure 1.2. Some countries over this period had volatile property markets, like Switzerland, Italy, and Sweden, with standard deviations of 7.1%, 5.2%, and 4.8% per quarter, respectively. Others, such as the Netherlands, France, and Germany, were much more stable with standard deviations of 2.6%, 3.2%, and 3.8% per quarter, respectively. The more interesting differences are between the valuation and transaction-based series for each country. In the UK, the standard deviation for changes in the transaction index is only a bit above that for the valuation index, at 4.6% and 3.2% per quarter, respectively. At the other extreme, the valuation-based indices in Switzerland, Italy, and Germany have very low standard deviations at 0.2%, 0.6%, and 0.8% despite, in the case of Switzerland and Italy, having the highest volatility of transaction-based returns.

These results raise issues and concerns. Despite the basis of market valuation across the globe within international, regional, and national valuation standards being broadly agreed, valuations in some European markets may not follow prices as closely as others.

1.3.2 Client Influence on Valuations

Research has shown that valuers and valuations can consciously or sub-consciously be affected by a variety of factors ranging from previous valuations and new information to the influence of clients and other stakeholders in the valuation outcome. The major focus for research on client and stakeholder influence has been in two areas, specifically bank lending valuations and performance measurement valuations. Individual loans are secured on property valuations and investor benchmarking is mainly valuation-based.

Performance measurement valuations are undertaken for a wide variety of property owners including pension funds, insurance companies, property companies, REITS (real estate investment trusts), open-ended funds, and closed-end funds. Although in most countries

these valuations will be undertaken by third-party service providers, asset managers are often involved in the process. Major bank loans are often brokered, and the valuer may be known to the broker, borrower, and lender. In the UK, the client is the lender, but in some countries the client can be the borrower. The literature discusses numerous different motivations for clients or other stakeholders to try and encourage the valuer to either increase or decrease valuations in these situations. Articles on client influence are numerous (see Crosby et al. 2010, 2018a, for reviews) and this literature has raised the following issues related to individual clients, borrowers, lenders, and asset managers.

In the case of performance measurement, valuations can have a dual purpose. For example, Property Company and REIT valuations are used for financial statements and the company's Net Asset Value will have an impact on the share price, in which case the directors may have an interest in keeping the valuations as high as possible. Managers may also be remunerated on the basis of the performance of the fund, a practice that has come under scrutiny in the wake of the Global Financial Crisis, but remains widespread. Carried interest payments will usually kick in when assets are sold, but might be valuation based. In such cases, persuading valuers to adjust valuations by small amounts could tip the balance over the payment of bonuses.

In contrast, other owners or managers might want valuations to be low. For example, a new fund manager might want the lowest possible start point from which their future performance is to be assessed, while a fund manager wanting to sell an asset might want a valuation to be low to make any subsequent offer look good to the investment committee. Open-ended funds may want valuations to fall as much as possible in a downturn in order to prevent large volumes of units being sold at excessive prices. (Units in such funds are priced by reference to the level of valuations and a run might occur where unit holders think that valuations overstate the actual value of the underlying assets.) Crosby et al. (2018a) use data measuring MSCI UK capital value changes through the GFC period, and found differences between the performance of open-ended funds and that of property companies/REITs which are consistent with the ideas noted above.

In the case of bank lending, a borrower may need a valuation of a minimum amount so that the loan to value ratio will not prevent them from borrowing the amount that they desire. The broker will not want the valuation to kill the deal and the employee of the bank may be rewarded by a bonus that is only paid when a loan is made. Motivation for client influence is not, therefore, in doubt. A number of experimental studies and surveys have shown that the valuation process allows clients and stakeholders access to the valuer. They have also identified a number of ways in which a valuer can be pressured, but there is no evidence of systematic bias in the process caused by client influence. Nonetheless, the RICS now includes protocols for behaviour at draft valuation meetings within the Red Book (RICS 2020a, PS 2).

1.4 Conventional and Discounted-Cash-Flow Approaches to Appraisal

The aftermath of the real estate downturn in the early 1990s sparked a huge interest in valuation techniques. Despite continuing interest in the valuation process, the GFC does

not appear to have had the same effect. This is partly because the 2007 crash was a global asset/financial market crash and not an occupier-driven crash, as was the case in the 1990s. As we will demonstrate, conventional valuation methods become very troublesome when the current rental income is no longer to be relied upon as a good indicator of future cash flows. Nonetheless, the GFC did lead to a search for a more appropriate valuation basis and method for assessing property values for bank lending purposes, as reflected in Chapter 10, which has been added to this edition. After the GFC, more interest also developed around issues such as bank lending covenants (e.g. loan to value ratios), comparative valuations in markets where transactions were sparse, and the valuation of open-ended funds.

In contrast, the early 1990s occupier market crash led directly to an increased interest in valuation techniques from UK clients and valuers, and from those whose role it is to comment on valuation practice. This process had started at the time of writing the second edition of this text in 1994/1995, but, despite the criticism of conventional valuation techniques contained in that edition and in other works that followed over the next 10 years, conventional approaches still dominated the UK market valuation practice in the pre-GFC period in which the third edition was produced. This was in increasing contrast to some other mature real estate markets in which discounted-cash-flow (DCF) valuations dominated (for example, Sweden). Despite the GFC, nothing seems to have changed in this regard and UK market valuation by conventional techniques, set out and critiqued from Chapter 4 onwards, still dominates practice, albeit often checked by DCF-based Investment Valuations.

Why is the UK more wedded to comparative conventional techniques than some other markets? Despite some high-rise development and the increasing importance of multi-let large-scale shopping centres, the UK still has much – albeit a decreasing amount of - prime property investment stock let on long leases to single occupiers. The typical institutional UK lease was traditionally the longest in the world and, despite major changes since 1990 (see Crosby et al. 2005 and the annual UK lease review produced by MSCI), has had the added benefit of upward-only rent reviews and 'triple net' rents. This has produced simple, low-risk investments with limited variability of cash flow. In these circumstances, the initial rent can explain a large proportion of the value of the asset and so the development of a comparative valuation method based on capitalising the initial rent can be understood. Given these physical and leasing characteristics, it is no great surprise that UK valuations persist in adopting simple comparison-based valuation methods rather than DCF-based approaches to appraisal. This is increasingly dangerous; the unsustainability of retail rents is a clear example, set in sharp focus by the COVID-19 crisis. To repeat ourselves: conventional valuation methods become very troublesome when the current rental income is no longer to be relied upon as a good indicator of future cash flows.

As in previous editions, we set out in this edition to show that the cash flow approach, described in detail in Chapter 3, has significant advantages and no disadvantages compared with simple conventional models. Cash flow models can perform the Market Value role just as efficiently and accurately as conventional models, and they can be adjusted to meet the requirements of definitions of Investment Value and sustainable value. We believe that they are the basis for identifying market under- and over-pricing and that they have a significant role to play in the regulatory processes underpinning lending secured on commercial property.

Therefore, despite the relative lack of change over the years since the first edition, time has not dimmed our enthusiasm for this argument. We do not believe that having a relatively transparent, high-turnover market, as in the UK, gives valuers an excuse to develop simplistic rules of thumb to make up for the heterogeneous nature of the asset, and the basic cash flow model can be adapted for the numerous roles demanded by the various definitions of value and the requirement of different clients. As a result, we will continue to argue for a rational valuation model; the rest of this book is our attempt to further develop this argument. In doing so, while we focus on the UK market in detail (and many of the examples relate to this market), the issues around processes, inputs and judgements are similar the world over and many of our examples are generic with plenty of relevance to global real estate.

To sum up, our proposed rational valuation model will have two distinct applications. The first of these is *market valuation*; this means *to fix a price for an asset, or to predict the most likely selling price of an asset*. The second is *investment appraisal*. This means *to estimate the worth or value of (an asset)*.

The book is concerned with the difference between these two terms. In simple terms, a *market valuation* will tell us what a property asset is likely to sell for. An *investment appraisal* will tell us what the asset is worth to us. Should we pay the market price – or not?