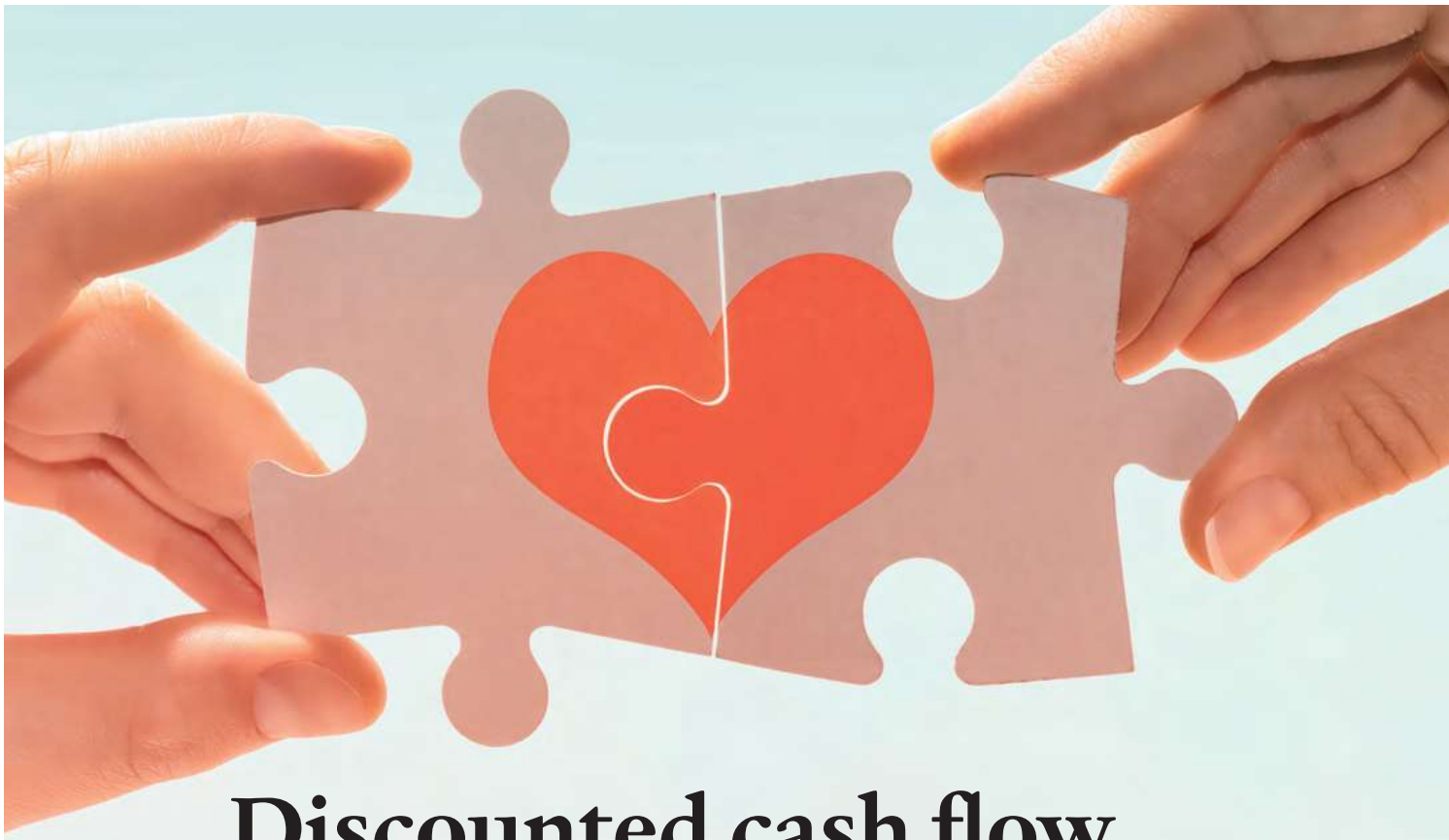

Discounted cash flow models for market valuations: a match made in heaven

David Hourihan puts the case for wider acceptance of DCF modelling in valuation, and addresses some of the key challenges in the way

Traditionally, the "hardcore" (or "layer") and the "term & reversion" methods have been commonly used in the UK and Ireland to carry out valuations under the Royal Institution of Chartered Surveyors' Red Book. More sophisticated investors now expect a level of transparency in the valuations they instruct to have carried out on commercial property, which these traditional methods struggle to meet. This has led to a push for a greater acceptance of the use of discounted cash flow modelling alongside the traditional methods of valuation.

The current challenges to British and Irish valuers adopting DCF modelling for valuations, which are carried out on the basis of market value, include fear of change, the lack of a consistent approach in the use of DCF models (eg annual in arrears versus quarterly in advance) and a number of other factors, as outlined here.

Lack of transparency on risk

The traditional methods apply risk-implicit adjustments, which are problematic for non-real estate investors who are used to more transparent adjustments for risk.

Risk in the context of property can be defined as either specific or systematic. The drive towards net-zero carbon is highlighting specific risk in the form of obsolescence in buildings while systematic risk is currently very evident in the form of volatility in local markets and global economies. Geopolitical risk also impacts on the valuation as a form of systematic risk. A DCF model can more explicitly address these various forms of risk.

Future rental growth not explicitly factored in

A DCF model differs from the traditional methods of valuation as it adopts the market's assessment of future growth in an explicit way. This future income stream is then discounted back at a discount rate (hurdle rate) to establish market value or "investment worth". The traditional methods only use today's rental values and discount the income at a rate based on the analysis of comparable transactions.

Analytic tools are too basic

Anecdotally, I would suggest the "stress testing" currently undertaken by many valuers is heuristic in nature. "Scenarios" are used, but other forms of risk analysis (eg sensitivity, probability) should be more widely adopted.

Confusion between IW and MV

Typically, DCF modelling is used for IW appraisals rather than MV valuations in many markets. Third parties who rely on reports involving IW or MV do not always appreciate the difference between these two bases and the authors of such

SVETAZI/ISTOCK

reports are not always explicit enough regarding the difference between the expression's "appraisal" and "valuation". This results in an assumption that a DCF report is a market valuation instead of an IW appraisal.

A property appraisal is an informal, no-obligation (often free) price estimate. It is not a valuation.

A valuation is a formal report of market value produced by a chartered surveyor in accordance with the RICS Red Book. The chartered surveyor will charge the client a professional fee for the production of this valuation report.

Lack of supporting data

Market data for key sensitive variables such as rental growth and yield growth data can be difficult to source.

Confronting these issues

In April 2024, Bayfield Training arranged three webinars to discuss these challenges and the use of DCF modelling in market valuations in the UK and Ireland. These webinars were prompted by the release in November 2023 of new RICS global practice information on the use of DCF models in the valuation of commercial property: www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/valuation-standards/discounted-cash-flow-valuation.

I was the moderator for these webinars and my guest speakers were Charles Golding, a senior specialist at the RICS, Matthew Dichler, partner at Knight Frank, and Colin Lizieri, professor emeritus at the University of Cambridge.

In the first webinar, Golding and I considered some of the key outcomes of the new RICS global practice information:

- The heterogeneity of property can make the adoption of DCFs in the market challenging.
- DCF models can be used alongside traditional methods and do not always have to be a replacement for them.
- Your choice of alternative approaches and models will depend on the asset type and the market you are involved in.
- There is a need for the development of data and that will come with the wider adoption of different and more analytical approaches suitable for the markets.
- There is evidence of wider adoption of DCF modelling but so far mainly for IW appraisals. The challenge has been to encourage DCF modelling for MV across more mainstream markets.
- The adoption of DCF modelling for MV is more challenging because, while the valuer can partly use the investor's data for an IW appraisal, they have to test any evidence they rely on for an MV against the market and be more objective.
- It can be difficult to transition from growth-implicit to growth-explicit models with software tools currently available in the UK.
- There are geographic variations in usage of DCF modelling. Some markets such as the US are already comfortable with using DCF to calculate MV and there is a maturity in terms of data availability in these markets.

In the second webinar, Using DCF for Red Book valuations – a discussion with a professional valuer, Dichler and I both recognised that DCF models have, until recent times, been used primarily by investors rather than valuers. We therefore discussed the steps that valuers are taking to adapt their skills to the more widespread use of DCFs. Our observations were as follows:

- All market valuations are forward-looking at the date of valuation, as they consider what price you will pay today in order to receive future incomes.
- The DCF method can be used for both IW appraisals and MVs.
- The traditional methods are rarely used to calculate an IW appraisal.
- Investors, particularly non-real estate investors, crucially want the explicitness of DCF so that at the end of a holding period (say 10 years) they can sense-check the original rationale of the investment decision made to acquire or hold an investment. Whereas the rationale of a market valuation carried out 10 years ago using traditional implicit-based methods and perhaps the use of a single equivalent yield can be more difficult to interpret.
- Global funds active in the UK and Ireland are trying to compare these local markets to other international markets and they generally do not understand the traditional methods of valuation used in these markets.
- DCF models are already being widely used to value operational assets such as hotels, data centres and self-storage, where there are net annual operating income streams, etc.
- The increased number of input variables within DCF are its greatest strength – and its greatest weakness: calculating the five key variables of rental value, rental growth, exit yield, hurdle rate and purchase price in an IW appraisal can achieve a level of explicitness and transparency for the investor, but trying to calculate some of these variables can be extremely difficult in certain markets.

Hurdle rates

In the final webinar, How to construct a hurdle rate for DCF appraisals, Lizieri and I discussed the hurdle rate, a key variable in the DCF model, and how it is constructed.

Research has suggested that market practices vary significantly on how hurdle rates are calculated. In 2017, the Investment Property Forum produced a paper entitled *An investigation of Hurdle Rates in the Real Estate Investment Process* and the extent to which hurdle rates are used in the marketplace. In our webinar we considered the key findings in that paper in the context of today's markets. Here we observed:

- It is still common practice among many real estate investors in the UK to use non-cash flow decision-making tools (eg payback, profit-on-cost) in the investment process.
- There is also a reluctance to adopt more sophisticated quantitative modelling applications.
- There is significant evidence of discretionary behaviour being exhibited by real estate investors in the measurement process which has resulted in inconsistencies in the use of key metrics in the decision-making process. This behavioural aspect is significant.
- Real estate is a people industry; as such, individuals have a strong say in the way the analysis is undertaken and the ways decisions are carried out. One striking outcome from the 2017 paper was how often an investment committee would make a decision only to be overruled by a senior committee member because they simply did not like the numbers the committee had come up with. Often, this was turning a "no" decision into a "yes" decision on acquisitions.
- The expression "hurdle rate" in a DCF model for MV valuation is a synonym for "discount rate". This discount rate will be based on market price, eg the winning bid by a marginal investor for a comparable investment. On the other hand, when the valuer is undertaking an IW appraisal, they set a hurdle rate that is based on a particular investor's required rate of return, ie what return is needed for the stakeholders.

It is clear from these observations that there is a need for greater levels of analytical sophistication in MV reports in order to meet the levels of transparency now required by many investors in the UK and Irish markets. This in turn suggests that further education, training and upskilling is needed by those involved.

David Hourihan FRICS FSCSI is a geographical seat holder for the UK and Ireland on the RICS governing council and the programme leader for the MSc real estate at the University College of Estate Management