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The Australian Discounted Cash Flow Standard: Progress, Issues And Implications

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Abstract: The increasing complexity of investment properties has necessitated the application of more advanced valuation and analysis techniques. Following the property cycle of the 1980s/1990s and the recommendations of several reporters, the DCF method has been promoted in Australia for certain income-producing properties.

The Australian Property Institute disseminated an Information Paper in 1993 that discussed DCF and suggested a paternalistic approach to its application. Following this, a Practice Standard was produced in 1996 that was highly prescriptive but which contained a number of confusing passages. With the benefit of hindsight, its publication was premature and it was withdrawn from circulation. A rewrite was commissioned and an Exposure Draft circulated in early 1999. (Parker and Robinson (1999)).

The 1999 Exposure Draft has been subject to comment by the profession review by an academic and a further rewrite by others. This has resulted in the 2001 Exposure Draft that has been issued for comment. Following a critical analysis of the 2001 Exposure Draft, the key differences between it and the 1999 Exposure Draft are considered and the issues and implications for the profession explored.

This year marks the thirtieth anniversary of Michael Greaves' doctoral thesis (Greaves (1972)), widely held to have catalysed the gradual adoption of the discounted cash flow (DCF) method of valuation for investment property in the UK.

Last year was the silver jubilee of the statement by Jacobs J. in the High Court of Australia:

> " … I am not satisfied of the suitability in this case of a method of valuation based on discounted cash flow."
>
> *Albany & Ors v The Commonwealth of Australia (1976)*

which was widely cited, by both valuers and barristers, as sufficient reason not to use the DCF method of valuation for the following fifteen years with convenient disregard for the words "in this case".

A decade ago, following the collapse of both the property market and the unlisted trust industry together with the recommendations of the Report of the Property Economic Task Force (Norman (1992)), the use of the DCF method of valuation in Australia started to increase. Newell (1994) found a significant increase in the use of the DCF method, rising from inclusion in 36% of external valuation reports in 1989 to 68% in 1994, though McIntosh (1993) noted:

> "The lack of a standard approach may be creating some delay in the wider adoption of the (DCF) technique …" (page 407)

Reacting to critical calls from the property industry and the financial press during 1993, the Australian Institute of Valuers and Land Economists (AIVLE) published it's first position paper on the DCF method of valuation and so commenced the saga of the Australian Discounted Cash Flow Practice Standard.

1993 IP

IP E2 (Information Paper – Discounted Cash Flow) (AIVLE (1993)) was published by the AIVLE in September, 1993. At only 3.5 pages, the paper was short and reluctantly acknowledged DCF was a "useful" technique provided that it was used in conjunction with another technique.

The 1993 IP was carefully constructed to avoid being prescriptive and did not include a preferred model or template. In addition, it avoided detailed mathematics and did not attempt to supplant a textbook or notes for a correspondence course. Valuers could clearly not learn how to do DCF from the 1993 IP but were offered general guidance concerning industry practice in various aspects.

Reflecting this, the benchmark discussion of the discount rate was less than 8 lines (Sections 5.2, 5.3 and 5.4), providing a simple overview of the relevant issues with clarity.

Almost chatty and paternalistic in style, the 1993 IP lived up to its name. It was simply an information paper about DCF. However, by 1994, the impetus was already building for the introduction of more formalised guidance to AIVLE members concerning the DCF method (Parker and Robinson (1999)).

1996 PS

The emergence of a Practice Standard on DCF was a slow process, engendering heated debate around Australia centred on the contentious issue of the acceptable extent of prescription and codification.

A discussion paper was developed in 1994 (Ragan et al (1994) reported in Crean (1996)), the views of AIVLE members canvassed through a national seminar programme in mid 1995 followed by the refinement of the discussion paper by a committee of ten in Sydney (Boydell and Gronow (1997)). Finally, on 1st September, 1996, the AIVLE issued Practice Standard No 2 (1996 PS) entitled "Discounted Cash Flow" (AIVLE (1996)).

At 32 pages, the 1996 PS was almost ten times longer than the 1993 IP. Whilst it identified the need in the industry for more comprehensive guidance on DCF, it failed to distinguish between the role of a Practice Standard and that of a textbook. Rather than defer to one of the standard undergraduate textbooks, the 1996 PS included extensive (but not comprehensive) mathematical formulae and descriptions together with numerous sections on the same topic, which sometimes conflicted and generally confused. A summary of the 1996 PS by Murphy (1997) in the AIVLE journal served to further confuse rather than clarify.

Reflecting this, the benchmark discussion of the discount rate was provided in 8 lines in Section 4.3 with a further 17 lines in Section 4.3 of the accompanying Guidance Note and another 2 whole pages in the Glossary of Terms. This compares to less than 8 lines in total in the 1993 IP.

In style, the 1996 PS focussed on the constituent variables without regard to the wider issues surrounding the inter-relationship between the variables, permitted only exceptional variation by practitioners from its wide ranging contents and remained steadfast to the valuation / investment worth dichotomy. It may be contended to be characterised as being:

- prescriptive without being precise;
- somewhere between the detail of a textbook and the breadth of a Practice Standard;
- seeking to distinguish valuation from investment analysis but flawed;
- seeking to distinguish between the use of DCF as the primary method and otherwise, without justification;
- being very confused about the source of the discount rate – such ambiguity spawning numerous seminars on this topic alone;
- containing definitional inconsistencies; and
- containing the now infamous mathematical error.

The 1996 PS was widely criticised in seminars, conferences and published papers (see, for example, Boydell and Gronow (1997)) and calls for its replacement arose with its publication (Parker and Robinson (1999)).

Significantly, in early 1997 the AIVLE published a new textbook, "Valuation Principles and Practice" (Westwood (1997)), which contained an excellent chapter by Robert Webster (Webster (1997)) on the mathematics and practice of DCF. The chapter included a worked example and provided a clear opportunity to practitioners to learn how to undertake the DCF method of valuation. With the basic requirements now so clearly enunciated, it may be contended that the need for a Practice Standard no longer existed.

1999 ED

Responding to the widespread criticism of the 1996 PS, the AIVLE circulated a revised version of the 1996 PS, prepared by an anonymous committee, for comment in March 1998. The comments on the revised version of the 1996 PS were extensive and fundamental, including that it:

- contained previously identified fundamental errors that had not been corrected;
- was incorrect in theory in places, whereas it should be a definitive statement of theory;
- did not reflect current professional practice, whereas it should be the definitive guide to professional practice;
- was unnecessarily prescriptive and did not allow adequate flexibility for the practitioner;
- that the list of references did not indicate a thorough literature review; and that it
- did not meet the needs of AIVLE members.

It was determined that the 1996 PS did not need to be reviewed, it needed to be rewritten. In the August 1998 edition of the Australian Property Journal, the journal of the Australian Property Institute (API – the successor body to the AIVLE), it was noted "From the Presidents Desk" that:

> "Whilst the mathematical formula used in the Discounted Cash Flow Practice Standard is being validated, the National Council has withdrawn the Standard. A new Practice Standard and Guidance Note will be issued as soon as possible."

Following significant contributions by six professors versed in the theory of DCF and several highly regarded practitioners, experienced in the practice of DCF, a rewritten draft Practice Standard and Guidance Note were issued for comment in September, 1998. Following the incorporation of comments received, the draft Practice Standard and Guidance Note were referred to the API's National Professional Board in January, 1999 and released as an Exposure Draft for a period of public comment expiring on 9th April, 1999 (1999 ED).

At 7 pages, the 1999 ED was longer than the 1993 IP (3.5 pages) but shorter than the 1996 PS (32 pages) being structured as a Practice Standard (containing the mandatory elements) and a Guidance Note (containing statements of guidance for the profession) with three attachments (glossary of terms, readings and a set of basic after tax and finance cash flow lines for a DCF spreadsheet).

The 1999 ED of the Practice Standard sought to empower the practitioner. Rather than being prescriptive ("shall"), the 1999 ED allowed judgement ("should') generally qualified by a right to adopt a different approach provided the reasoning was disclosed in the report.

The 1999 ED sought to further empower the practitioner by creating a performance standard in which the practitioner is required to disclose the input variables and explain how and why certain values are adopted for these variables. The requirement for the practitioner to actively consider the inter-relationship between the variables was a fundamental feature of the 1999 ED.

Embracing both valuation and investment analysis, together with the concept of worth, the 1999 ED specifically addressed the role of proprietary models which were becoming prevalent in the institutional market. The 1999 ED required that only valuers with appropriate experience be involved in the preparation of DCFs and noted that the use of a proprietary model did not obviate the need for the practitioner to exercise professional judgment. Furthermore, the practitioner was held responsible for ensuring that the data used in the DCF model was properly researched and that the forecasts, projections and assumptions adopted by the practitioner have a reasonable basis (Parker and Robinson (1999)).

The 1999 ED, like the 1993 IP, sought to avoid being prescriptive and did not include a preferred model or template. In addition, it also avoided detailed mathematics and did not attempt to supplant a textbook or notes for a correspondence course. Practitioners similarly could clearly not learn how to do DCF from the 1999 ED but were offered a clear set of flexible, practical rules and a significant volume of non-binding guidance.

Given the profile of its authors, the 1999 ED may be contended to be a definitive statement of both theory and practice, with a carefully considered balance between both. Significantly, the authors of the 1999 ED asserted implied copyright for their contribution with consent required for use elsewhere. To date, such consent has not been sought.

The period of public comment for the 1999 ED expired on 9th April, 1999. In May, 2000 the API advised the author that:

> "The final draft of the PS & GN are being made by the Chairmen of the Nataional (sic) Professional Board, the Australian Valuation & Practice Standard Board and Professor Terry Boyd."

and in September, 2000 that:

> "The AV&PSB view was to reduce the substantial draft of PS18 (DCF) to a more concise document detailing the fundamental principles of Discounted Cash Flows. It is likely that a more substantial Guidance Note will be developed in the future."

Then, dated 20th November, 2000, the API released an Exposure Draft of Practice Standard 18 entitled "Financial Modelling: Discounted Cash Flow" for comment by 22nd June, 2001 (2000 ED).

Despite the "National Professional Board Report" in the May, 2001 edition of the Australian Property Journal stating:

> "A committee comprising the Chairman of the Australian Valuation and Property Standards Board, Bob Connolly, Professor Terry Boyd of Queensland University of Technology and myself (John McNamara) as Chairman of the NPB continued a review of PS18, 'Discounted Cash Flows'. That Standard is currently being circulated as an Exposure Draft."

the actual authors of the 2000 ED appear to be unknown.

2000 ED

Compared to the 7 page 1999 ED, the 2000 ED is shorter at only 5 pages and comprises 39 paragraphs of which:

- 33 appear substantially similar to paragraphs subject to copyright found in either the Practice Standard (28) or Guidance Note (5) components of the 1999 ED, some with elements omitted or added and some combining paragraphs (which reduces the amount of white space and the apparent length of the document); and
- 6 are new paragraphs, of which 3 are administrative (Principal Message, Investment Analysis and Departure Provisions) and 3 are statements of practice, each of which are contended to include inappropriate ambiguity (as detailed below).

It is contended to be notable that the API chose to issue a further Practice Standard as an Exposure Draft for comment and not to combine the 1999 ED Practice Standard and Guidance Note into a single Guidance Note for issue.

It is also notable that the 2000 ED, like the 1999 ED, is entitled "Financial Modelling: Discounted Cash Flows".

The 2000 ED states "This Practice Standard relates to Guidance Note 18 [GN18] in particular" and PS18:5.3 refers to "the examples in GN18:3.0". However, at the time of writing, it is understood that the API has not issued a GN18 as an Exposure Draft for comment, which renders a full appreciation of the 2000 ED challenging.

The "Principal Message" of the 1999 ED was that "members developing discounting models … or undertaking valuations or investment analyses using DCF techniques must do so in accordance with this Practice Standard …". In most cases, the 1999 ED then went on to recommend ("should") rather than prescribe ("shall") and often, in matters where the industry position is far from settled, provided practitioners with the opportunity to act differently provided that this was noted and explained in the accompanying report. As such, the 1999 ED provided the practitioner with significant flexibility in practice.

The "Principal Message of the 2000 ED is that "The object of this standard is to outline the requirements for members in the application and construction of Discounted Cash Flow [DCF] models for property valuation and investment analysis." In most cases, the 2000 ED goes on to prescribe ("shall") rather than recommend ("should") and provides few opportunities for members to act differently. Given the prescriptive style of the 2000 ED and the mandatory status of Practice Standards, it is, therefore, essential that the 2000 ED be absolutely correct in both theory and practice or it will place API members in everyday practice in breach of the API's conduct requirements.

2000 ED v 1999 ED - Substantially Similar Paragraphs And Key Differences

Whilst 85% of the paragraphs in the 2000 ED are substantially similar to those in the 1999 ED, it is contended that the following differences are of particular significance:

- the definition of "Investment Analysis" is narrower in the 2000 ED, excluding the assessment of worth and the analysis of corporate/owner occupied property;
- the warning in the 1999 ED concerning the conversion of IRR's into annual effective equivalents and the encouragement to calculate both the IRR and the PV and to reconcile both results do not appear in the 2000 ED;
- the requirement to make allowances for market reversions in the calculation of terminal value in the 1999 ED does not appear in the 2000 ED;
- the 2000 ED requires members to analyse sales of comparable properties to determine market discount rates, but then qualifies this by stating "provided sufficient information is available";
- the 2000 ED requires ("shall") the member to use a single discount rate applicable to the term of the projection. The 1999 ED recommended ("should") a single discount rate, requiring the member to give reasons in the report if more than one discount rate was used. The requirement to use a single discount rate is contended to be a potentially significant issue for practitioners in complying with the 2000 ED;
- where cash flows change sign more than once during the term, the 2000 ED requires ("shall") members to consider MIRR and FMRR. The 1999 ED suggested "consideration should be given" to such measures. It is contended that the 2000 ED therefore provides significant professional education opportunities for the academic sector;
- PS18:4.2 of the 2000 ED notes that "the commencement of the cash flow term shall be referred to as period zero and the first term (sic) in which the cash flows are discounted shall be referred to as period one" followed by "Income and/or expenditure may be included in period zero according to the practical timing of the cash flows.". Accordingly, any "income and/or expenditure" included in period zero is excluded from the discounting calculation and so will have a nominal dollar impact on the NPV calculation in period one. Great care will, therefore, be required by practitioners due to the potentially significantly greater value impact of period zero entries than period one entries. It would also be helpful if the ED for GN18, when released, identifies the nature of "income" items likely to be incurred in period zero;
- the 1999 ED allowed members to adjust the cash flow period to reflect the majority of cash inflows and outflows. The 2000 ED requires that any part period be treated as the last period;
- the 1999 ED stated "Projections, forecasts and estimates of future growth or decline must be supported by evidence from sales analysis or other sources available at the date on which the DCF is undertaken.". The 2000 ED requires support "by appropriate market and/or economic analyses or other worked data" which, while ambiguous, is contended to be potentially narrower from the practitioners viewpoint. The 1999 ED allowed the practitioner to be instructed otherwise, provided this was specified in the report. The 2000 ED does not explicitly allow such instruction but later requires a table of assumptions which clearly specify "projections and forecasts on estimates required to be utilised in the model by the instructing party" (PS18:4.9);
- the 2000 ED requires the practitioner to "carry out sufficient research and inquiry to establish that any forecasts, cash flow projections and assumptions that are used in the DCF have been prepared on a reasonable basis.". This is contended to be an onerous obligation on the practitioner

as, in the event that the forecasts, cash flow projections and assumptions are later found to have been prepared on an unreasonable basis, proving sufficiency of research and inquiry to establish reasonableness may be challenging. The 1999 ED required only "sufficient enquiries or examinations to establish reasonable grounds for believing that any forecasts, cash flow projections and assumptions that are used in the DCF have been prepared on a reasonable basis.". Such a significant increase in responsibility for the practitioner is contended to be likely to be an unwelcome aspect of the 2000 ED.

It is, therefore, contended that the:

- exclusion of investment worth and the analysis of corporate/owner occupied property;
- absence of a requirement to make allowances for market reversions in terminal value;
- requirement for the use of a single discount rate; and
- the ambiguity of the requirements of evidence supporting projections, forecasts and estimates, particularly in light of the onerous obligations to establish reasonableness,

are not examples of current best professional practice worthy of inclusion in a mandatory Practice Standard.

2000 ED v 1999 ED - Omissions In The 2000 ED

The 2000 ED omitted 27 paragraphs from the 1999 ED, with the following of particular significance:

- definition of "Valuation" for the purposes of the Standard;
- classification of investments to determine the appropriateness of the financial measures to be used (though the term "non-conventional investment" defined in the 1999 ED is used undefined in the 2000 ED);
- detailed requirements for the layout of inflows in cashflow reports, which required lease by lease cashflows, separate rates of change for inherently different cashflows and allowance for vacancies/credit losses;
- detailed requirements for the layout of outflows in cashflow reports, which required detailed consideration of capital expenditure, consequential allowance for the impact of capital expenditure on future cash inflows/outflows, the option to include as a lump sum, periodic contingency allowance or combination of each and separate rates of change for inherently different cashflows;
- present value by period from which the NPV can be reconciled;
- use of the relevant prevailing tax rate of the liable entity where the cashflow includes taxation;
- for cashflows including financing, explicit statement of the gearing ratio, treatment of drawdowns/repayments as cash inflows/outflows and use of the relevant prevailing market interest rate or other rate if explained in the report;
- support of all cashflows by primary evidence such as tenancy schedules or budgets of outgoings;
- impact on imputed market rentals of changes in variable outgoings resulting from changes in occupancy levels;
- the reflection of changes over the term of the projection, including forecasts of inflation and the growth or decline in values, rents or costs;

- reflection of option exercise, lease renewal and costs associated with vacancy and reletting under projected market conditions;
- for a portfolio of properties, each property is to be first considered separately and then aggregated, with consideration given to the use of a discount or premium;
- the use of capitalised interest in financing, with a statement of the implications in the report;
- a comment in the report on the quantum of the result and comment on its relevance; and
- a requirement to make clear and unequivocal disclosures when required.

It is contended that the omitted paragraphs include a combination of matters that are fundamental to the proper construction of a cashflow and matters which contribute to transparency (with a reduction in the probability of error and hence liability for negligence).

The 1999 ED sought to draw attention to a range of sub-optimal practices and to identify a best practice alternative for consideration, such as:

- lease by lease cashflows rather than whole property cashflows;
- separate rates of change for inherently different cashflows rather than one rate of change for all cashflows regardless of source;
- allowance for vacancy rather than implicitly assumed full occupancy; and
- impact of capital expenditure on future cash flows rather than no adjustment to cashflows for the beneficial effects of such capital expenditure in the periods immediately following.

It is contended to be regrettable that the 2000 ED does not draw practitioners attention to such issues and to a best practice alternative. The ability of the practitioner:

- to avoid lease by lease cashflows and to group the rental or outgoings recovery income of an entire multi-tenanted property in one line;
- to superficially address capital expenditure;
- to lack a clear basis for the rate of taxation or debt interest adopted;
- to avoid the need for primary evidence such as tenancy schedules or outgoings budgets; and
- to avoid addressing such details as the impact of occupancy on outgoings, option exercise or lease renewal,

is contended to be a sub-optimal statement of practice inappropriate for a Practice Standard.

The wisdom of omitting such matters in the interests of brevity and the consequent liability placed on the practitioner must be questioned.

New Statements Of Practice In The 2000 ED

The 2000 ED contains three statements of practice which do not appear in the 1999 ED and which may be detailed as follows:

PS 18:3.9 Where periods other than annual rests have been adopted, the annual effective interest rate shall be converted to the equivalent periodic effective interest rate for the purposes of calculating interest, but in accordance with the above provisions, shall be quoted as an annual effective interest rate.

Within the 2000 ED, PS18:3.9 is included as a stand alone paragraph in section PS18:3.0 Model Structure. The first two limbs of the paragraph bear a resemblance to PS18:3.8.6 of the 1999 ED which addressed interest rates for debt within PS18:3.8 Finance.

Thus PS18:3.9 is confusing on two levels. Primarily, it lacks context within the 2000 ED and the use of the term "interest rate" is alien to its section of residence headed "Model Structure". Secondarily, it appears circuitous with a qualifying requirement ("but in accordance with the above provisions, shall") to convert an annual effective interest rate to the equivalent periodic effective interest rate for the purposes of calculating interest but then quoting same as an annual effective interest rate.

The "above provisions" cited for the requirement to quote an annual effective interest rate is considered likely to be one provision, probably PS 18:3.2 of the 2000 ED, as there does not appear to be other provisions above addressing "an annual effective interest rate". Provision PS18:3.2 deals with alternative cash flow rest periods and the impact of advance and arrears occurrence of cashflows and is an amended version of a paragraph from the 1999 ED. The provision states:

> "Where cash flow frequencies are other than annual periods the financial rate used in the cash flows shall be expressed as the periodic equivalent of the annual effective rate."

"Financial rate" is undefined and it is unclear whether it is a discount rate, growth rate, debt rate or other rate. It is, however, required ("shall") to be expressed as the periodic equivalent of the annual effective rate.

Thus, PS18:3.9 would appear contrary to the provision with which it is seeking to harmonise. This, coupled with the confusion referred to above, would appear inappropriate for a Practice Standard.

PS 18:4.7 Where equity and finance funding is insufficient to meet capital requirements, the cash flow report shall explicitly set out the shortfall and timing, with comments on the implications.

This is a highly curious statement of practice. The requirement to set out the shortfall and the timing in the report without an obligation to address it in a cashflow calculation which includes both equity and debt funding is contended to be impractical.

The appearance of negative cashflow periods is not unusual and a significant number of such periods would be worthy of comment in an equity only cash flow (being a cashflow that does not include debt). Generally, in a debt and equity cashflow, further debt would be included to mitigate such negative cashflow periods with consequent effect on the cashflow, NPV and IRR. The 2000 ED does not appear to contemplate such a scenario.

Conventionally, finance theory requires that capital be some form of either equity or debt, with insufficient of either usually comprising insolvency. It is unclear how the valuer will be aware, when preparing the cashflow under the 2000 ED, that the client will have insufficient equity or debt to meet capital requirements at some point in the future. It would appear unlikely that a client would instruct the valuer to assume a state of insolvency at that point, though this would effectively make that cashflow period the last for consideration.

Accordingly, PS18:4.7 would appear inappropriate for a Practice Standard.

PS 18:4.7.1 Where there is a funding shortfall it shall be deemed that the shortfall will be met by finance and the cash flows shall be adjusted accordingly. Unless there is a disclosed reason for departure from this approach.

Initially, this would appear to accord with finance theory and with the current practice of mitigating negative cashflows by further debt in a debt and equity cashflow. However, this does not complement PS18:4.7 which merely requires disclosure and comment

The second sentence is not connected to either the first sentence or to PS18.4.7. It would also appear to conflict with the use of "shall" in the first sentence, except perhaps where further equity is to be adopted. The ambiguity of the second sentence renders a conclusion challenging.

The discord between PS18:4.7 and PS18:4.7.1 and the ambiguity of the second sentence of the latter are contended to be inappropriate for a Practice Standard

The three additional statements of practice in the 2000 ED therefore appear to detract from, rather than add to, the integrity of the document and may be contended to be unlikely to be representative statements of practice. The additional statements do not appear to have been drafted with a level of clinical accuracy and attention to detail that is appropriate for a mandatory Practice Standard.

The use of prescription and codification, rather than recommendation, necessitates that a Practice Standard be a wholly correct statement of theory and practice. Whilst the goal of brevity is commendable, the consequential provision of the opportunity for the practitioner to adopt other than best practice is not.

The level of ambiguity and departure from best practice standards are contended to significantly diminish the integrity of the 2000 ED and confidence in reliance upon it.

Conclusion

The property profession in Australia has now operated in an environment without a Practice Standard or Guidance Note for DCF for 3.5 years and has survived. At one end of the spectrum, the infrequent user of DCF has Webster (1997) to provide guidance whilst, at the other end of the spectrum, those practitioners regularly using DCF for the valuation of major multi-tenanted properties are likely to be using a proprietorial system where the practice standard is whatever has been programmed into the software.

Given such a scenario, who is the target audience of a Practice Standard for DCF? Whilst the need for a Guidance Note, to deepen practitioners appreciation of the issues involved in undertaking DCF and to contribute towards greater standardisation in the treatment of key variables, is clear, the need for codification and prescription through a Practice Standard is far less so. The appetite of practitioners for prescription and codification in the complex and controversial area of DCF would be worthy of determination through further research.

To date, each of the various Practice Standards and Guidance Notes have been premised on the conventional wisdom in Australia of applying the DCF methodology to the net operating income stream. To fully embrace finance theory into property valuation, there is an argument that true cash flows (after interest, tax, etc) and the concepts of most probable selling price and most probable buyer should be adopted (Parker and Robinson (1999)).

Similarly, such documents have not fully addressed the increasing use of global software products such as DYNA, Cougar, Circle and Argus. The need for the practitioner to fully understand the operation of such software and the implications on the assessment of value of each piece of data entered is paramount. Furthermore, the emergence of one such software product as dominant will effectively signal the disappearance of the need for a debate on the prescription and codification of many of the mechanical aspects of DCF.

Meanwhile, as the API remains mired in the DCF Practice Standard saga, the international property valuation world has moved on. There is now relatively little interest in DCF amongst academic researchers with the emphasis in valuation methodology having shifted to areas such as the application of options theory.

The IVSC has, however, recently closed the public comment period for its Exposure Draft of a Guidance Note on DCF. It is contended to be significant that the IVSC chose to issue a Guidance Note and not a Practice Standard and a document which, at only seven pages, is both brief and succinct. Comment on the document by overseas professional bodies is understood to have been considerable, suggesting that controversy around DCF has become, like so many other aspects of the property industry today, globalised.

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