Why, How and Who of Direct - Fractional Interest Valuation

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SUMMARY

Interests in real property are often held directly by multiple owners. The market values of these fractional interests are generally discounted from their pro rata share of the whole, due to their reduced control over the property, and their impaired liquidity. Methods for such “discount” valuations are not settled, unfortunately, and value opinions can be contentious. The required valuation process is inextricably tied to both real property and business valuation, but is directly confronted by neither, creating a “gray zone” of uncertainty between the two disciplines.

This paper is a road map to understanding valuation of direct fractional interest ownership in real property, and a plea for true cross-disciplinary training and cooperation between valuers in each specialty. It begins with **Why**—the uses of fractional interest valuations. It then describes **How**—the various methods for valuing discounts and their applications. This section provides an overview of ownership forms and the concept of “levels of value.” Approaches to value are reviewed, and their application to multiple levels of value clarified. Real property rights and circumstances are examined in some detail. This is followed by a discussion of how specific valuation methods interpret the value influences of these rights and circumstances; an example shows how an income method can be applied to develop the discount. An outline of the valuation process shows practitioners in all related disciplines how their specific roles work together.

The paper closes with a discussion of the qualifications of **Who**—since the valuer needs to understand both the attributes of the real property *and* the ownership structure that affect value. It recommends education and training in interdisciplinary practice to overcome the “gray zone” between disciplines, and continue our mission to promote and preserve public trust in the valuation profession.

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1. THE WHY OF FRACTIONAL INTEREST VALUATION

Real estate valuers are accustomed by practice and training to appraising entire properties, or property interests that are *divided* by leases, easements and many other methods of apportioning rights of use. Fractional interests in real property are, by contrast, *undivided* interests in the underlying property (whose rights may, in turn, be divided), and are identified as "Financial Interests" [IVS §5.0]. This paper concerns the specific characteristics of these interests and their valuation process.

Undivided, fractional interests are created whenever a property is owned by two or more persons or entities. They may have no agreement whatever concerning the property or their relationship, or they may create all manner of joint ventures, partnerships, syndications, corporations and other legal entities to perfect the rights and obligations of the parties, and provide for orderly operation of the property. Although fractional interest valuation receives almost no attention in the real property valuation curriculum (and only slightly more in business valuation), fractional interest ownership is common, and reaching agreement on value can be a contentions process.

Knowing the value of the whole property is sufficient for many business and other purposes: Lending, financial reporting, regulatory compliance, insurance and others. There are also many reasons that the value of an undivided portion might be needed: Regulatory compliance (taxation and financial reporting), disputes involving owners/partners/shareholders, buyouts/buybacks, marital dissolution, and any instance where a fractional interest may change hands or be subject to reporting under specific bases of value.

The interest may be valued under the *market value* basis [IVS 1, Market Value Basis of Valuation 2005] but *fair value* [IVS 1 §3.5, Definitions] and other *special value* [IVS 2, Valuation Bases Other Than Market Value] bases are often applicable. In disputes, value bases are often defined by statute or case law, as in matrimonial or shareholder actions. At issue is generally whether the interest is to be valued at its fractional share of the whole (net asset value of the holding entity), or whether it is to be discounted for its inability to control the property, and/or the inability of the holder to offer it for sale in an organized market. Both conditions represent a reduction in real property rights attributable to the *interest*, as distinct from the property itself, and result in a reduction in its *market value*. Such reductions may or may not be applied, depending on the required value basis.

Reliable opinions of value are not always available for those who need them, because this is an *interdisciplinary* practice area. This paper demonstrates the valuation process and issues that must be addressed when valuing fractional interests, and then concludes with an discussion of practitioner qualifications. Greater cross-disciplinary understanding will foster more coherence in the overall process—the result will be more agreeable and defensible opinions of value.

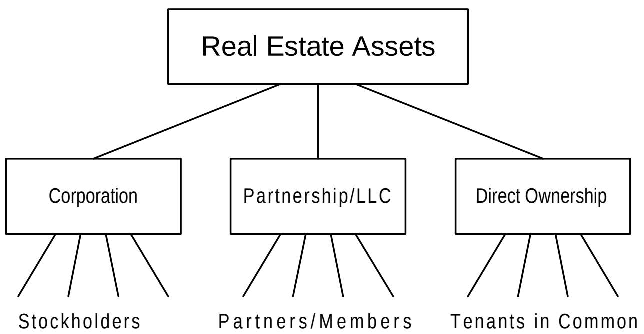
2. THE HOW OF FRACTIONAL INTEREST VALUATION

The HOW portion of this paper largely concerns the appraisal process, and how selection of approaches and methods is tied to the rights attributable to the interest, and the facts and circumstances of the case. Once this is understood, established valuation methods can be applied to develop yields, discounts, and other elements that contribute to the value conclusion.

2.1 Ownership Forms

When real property is in the hands of more than one owner, all kinds of interesting problems can occur. The various organizational forms exhibit strong similarities but also striking differences that continue to create misunderstanding and confusion. The basic ownership structures are shown in Figure 1.

Figure 1 – Forms of Organization

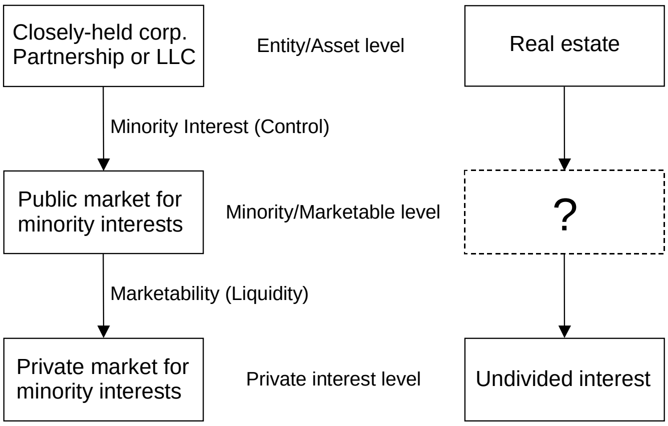


Ownership entities can assume many structural forms: Corporate, Limited Partnerships and Limited Liability Companies and others can be asset holding companies. This matters little for the overall valuation concept, since control and marketability characteristics can be isolated, and data for these characteristics can be applied from one form to another.
Direct ownership is similar in that ownership is divided, and is often referenced as tenancy-in-common or cotenancy (deriving from English Common Law). It generally affords the interest holder substantial rights that are uncommon for the more complex structures. Direct ownership issues also apply for joint ventures and general partnerships and other structures where the interest holder retains substantial control over the activities of the enterprise.

2.2 Property Rights and Levels of Value

Value is traditionally analyzed by tracking rights associated with the interest held, beginning with the full set of rights attributable to the property, then subtracting rights as ownership flows from this base to the more restricted fractional interest. Figure 2 "Levels of Value," shows the flow associated with the levels-of-value concept. The beginning level, at the top, is the value of the whole. For a limited partnership or any asset holding company, it is usually the net asset value (NAV) of the enterprise. For common tenancy, this would be the real property itself.

Figure 2 – Levels of Value



The left side of Figure 2 applies for structured holding companies. The "minority/ marketable" level is a point where the bundle of rights is reduced with respect to control, and the yield required by the investor is increased. This level is needed to accommodate market data (typically trades of interests in public limited partnerships and corporations). Value at this "level" is *hypothetical*, because it assumes the interest being valued is publicly traded.
The initial bundle of rights is again reduced at the "private interest" level, this time with respect to liquidity or marketability, and the yield required by the holder is increased further. Market data demonstrating such a discount is found in market trades of private interests of public entities (restricted stock). Analytical models can be used to analyze the restrictions and conclude value at this level.

The right side of Figure 2 is used for direct ownership, cotenancy, general partnerships and other modified-control entities. With no actual minority position, market data cannot be applied in the same way, and a two-step process does not apply. (The discount can be identified as a control or marketability discount, but using both in sequence has little meaning.) Control and marketability impairments are present and can be analyzed using available market data, but its application requires a highly detailed understanding of the specific rights attached to the interest, as well as the facts and circumstances of the entity and ownership position.

2.3 The Valuation Process: Only Three Approaches to Value?

The appraisal process is based on three *approaches* to value. Each approach is implemented by using specific appraisal or valuation *methods*.

2.3.1 Asset accumulation (cost) approach

– *Net asset value method*; partnership's assets and liabilities are adjusted to current market values in order to determine the value of the partnership's equity (as the sum of its assets, less the sum of its liabilities). This method is the most commonly used for valuing asset holding companies.
– *Liquidation method*; the gross amount of proceeds from liquidation of the partnership's assets is first concluded. Gross proceeds are then reduced by direct and indirect selling expenses, and net profit or loss during the period. The liquidation value of its liabilities is also deducted, and the amounts are discounted to present value. This method is most appropriate if the interest has the degree of control necessary to force such a sale.

2.3.2 Comparative company (sales comparison) approach

– *Guideline company (or partnership) method*; a sales comparison approach, where value is developed by analyzing market transactions involving companies or partnerships that are similar to the subject. Data for application of this method is normally taken from trades of minority shares in public companies or partnerships, and the value is a minority-marketable value. This method is not typically used directly for developing value of a real estate partnership as a whole, but can be appropriate for developing the minority interest (control) discount.
– *Direct sales comparison (private interests)*; would be ideal if they could be reasonably compared to the subject interest. Direct sales would allow the valuer to skip the two-step discounting altogether. Unfortunately, such data are difficult to find and even more challenging to adjust their discount indications to the subject.

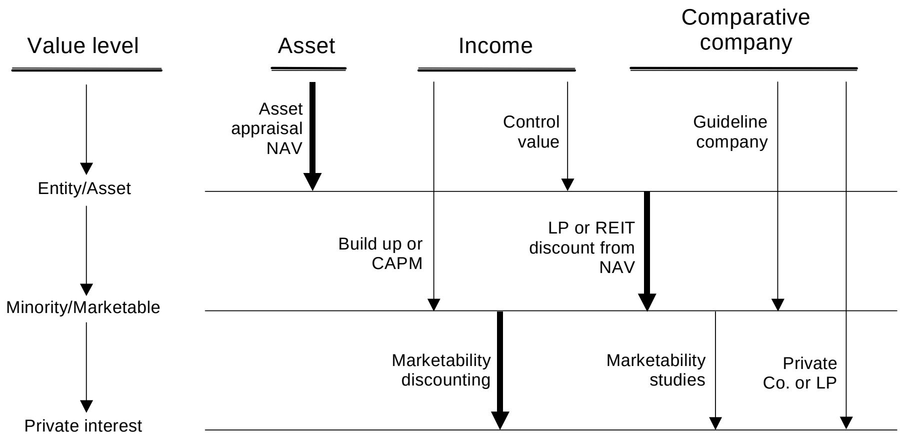
2.3.3 Income approach

– *Capitalized returns (direct capitalization)*; next year's expected returns, typically net cash flow, may be capitalized using a single-period (overall) capitalization rate developed from the market. A single rate is appropriate if operations are expected to remain reasonably stable for the expected holding period.
– *Discounted future returns (yield capitalization)*; uses discounted cash flow model, and is needed when irregular or unstabilized returns are expected. Generally required when a declining balance loan is involved.
– Capitalization rates are developed from real property sources and public real estate company market trading data, for use in built-up methods. Specific risk adjustments are extracted from risk premia observed for real estate investment trusts (REITs), public real estate companies, and public limited partnerships. Income methods may be used directly to develop a minority-marketable value, and/or to develop the discount for lack of marketability. The income approach is especially useful for dealing with tiered entities.

2.3.4 Multiple valuation methods

– Three approaches can be applied at three value levels = nine possible combinations, as shown in Figure 3. Heavy lines are shown for typical use of the asset accumulation approach overall.

Figure 3 – Comparing Valuation Methods



2.4 Valuing Minority Interests

Structured entities have rights and obligations specified by agreement and statute. They can be taxable, or pass tax liability through to the partners. The most important, for valuation purposes, are established voting rights, formulas for distributing cash flow and proceeds of asset sales, and limitations on liability and transferability of interests. If privately held, the interests cannot typically be traded on any organized market. Minority shareholder or partner interests that are noncontrolling—do not typically have any ability to force sale of assets and distribution of the proceeds—fit the two-step valuation model.

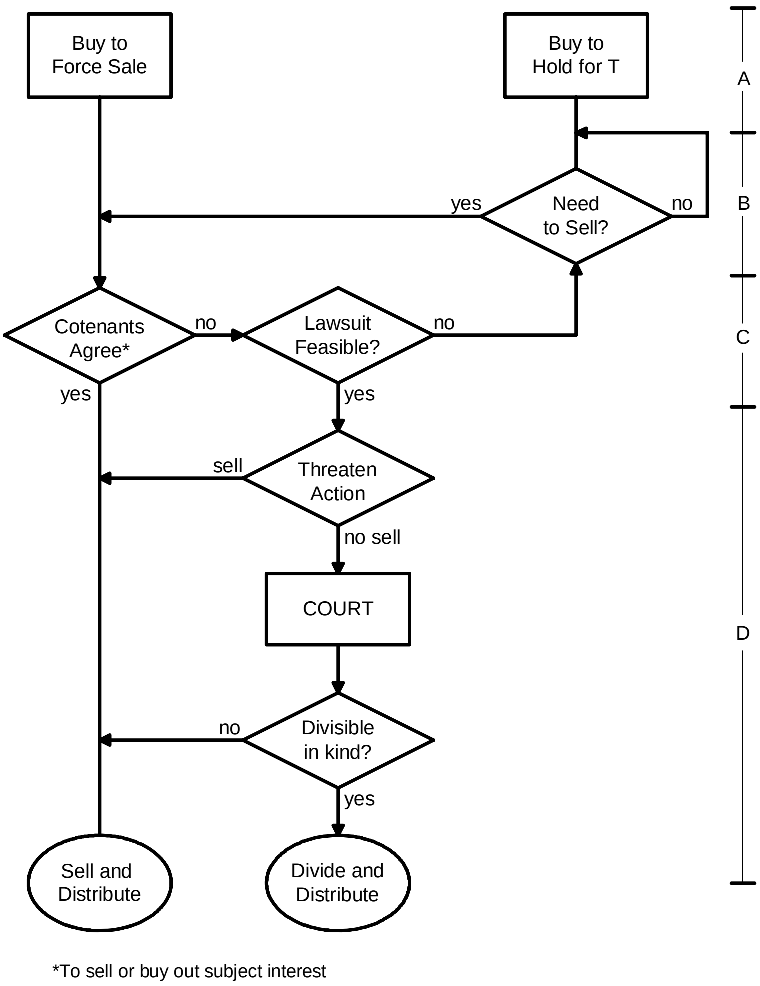
2.5 Direct Ownership—Problem Child or also a Conventional Valuation?

A cotenancy, a general partner or general partnership interest, or any other interest that has some amount of direct control over the assets of the enterprise, *even if a minority*, cannot be treated the same as a structured entity, since a "modified" control is difficult to model using the foregoing process. The hypothetical minority-marketable level of value has no more conceptual meaning. The interest is still privately-held, though, and generally has similar problems of impaired marketability.

What does control, or lack thereof, really mean? What if all the owners must agree on management actions involving leases, financing and capital improvements? What if any one owner or partner can either force sale of assets, or "put" its interest to the others at the interest's pro rata share of net asset value? What if the owner or partner has a legal right to force sale or equitable division of the assets? Or transfer its interest without restriction? What if it had unlimited liability? These conditions do not normally exist in structured entities (many for obvious reasons), but they are present for cotenancy, and variations are also present in general partnerships and many types of joint ventures.

These conditions must be interpreted in light of the facts and circumstances of the case, much like a buyer's due-diligence process. What are my objectives and expectations getting into this investment? Who are the other parties? What rights to I have? What will it take to perfect these rights? What actions might I wish to take if the investment does not go as expected, and my interest is no longer being served by the actions of the others. Is there a basis for opposing my wishes? Would I be risking a lawsuit? Might I have to bring a lawsuit to get out? These and many other questions should be answered in the due-diligence process, and therefore *must be considered by the valuer when appraising the interest.*

Figure 4 – Buyer's Decision Tree



Ownership can be viewed as a process, with conditional decisions shown as choice points. Figure 4 shows a decision tree that might be apply for cotenancy. The figure summarizes the buyer’s decision process, before and after purchase, until its pro rata share of the property is realized:

– (A) Motivation; whether to go into the deal to hold for a particular period (T), or maximize profit by exercising partition right.

– (B) Investment period holding loop; no change unless buyer’s circumstances change and buyer now wishes to sell.

– (C) What will it take to cause realization of the pro rata share? If the others agree, then sell. If not, is the buyer’s share worth enough to make a court action feasible? If not, then loop back to (B).

– (D) The activities are directly related to the partition lawsuit process, which is complex; the figure shows only the most basic decisions.

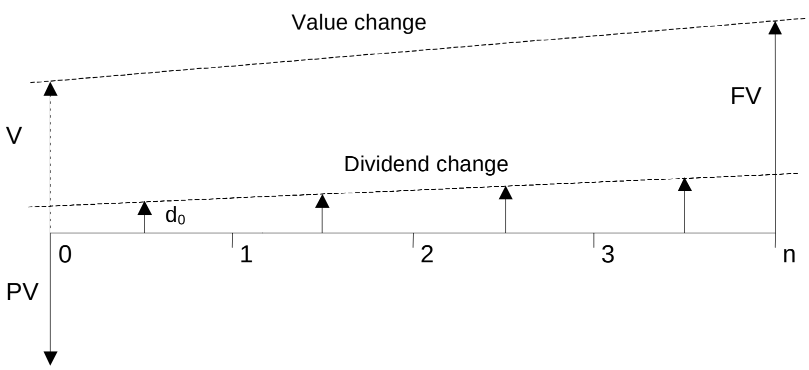
Taking into account the entire process helps the analyst to understand factors that might affect the holding period for the interest. If the interest is worth $millions, then it may be economically feasible for the interest holder to enforce its rights through a lawsuit (if necessary), and a relatively short holding period can be anticipated. On the other hand, a low-value interest could not likely afford to take legal action, and its wish to cause sale of the assets could easily be blocked if the others did not wish to go along. The facts could support a much longer holding period under these circumstances.

Figure 4 suggests a slightly different method of viewing the right side of Figure 2, the one-step levels-of-value diagram: The interest will receive its pro rata share of net asset value after some expected holding period, during which it has limited control of the asset, and faces barriers to an exit. These impairments can, then, be analyzed on the basis of the estimated holding period, and risk exposure during the period.

2.6 Income Model

There are several methods for calculating value as a function of holding period and risk, the simplest being a present value model, as shown in Figure 5. This model is often used for analyzing marketability discounts [Mercer 1997], but can also be used for the single-step discount required for cotenancy valuation [Webb 2004].

Figure 5 – Simple Present Value Model



– The initial *pro rata value of the interest* (V) grows at annual rate (Ä$_V$a). The present value of the reversion (FV), discounted at (R_I), is:

$$PV_V = FV / (1+R_I)^n \tag{4-1}$$

– The first years' *annual dividend* (d_0) increases at whatever pattern is expected for the real property, in this case shown as a compound annual rate (☚$_D$a). The present value of the dividend stream is:

PV$_D$ = d$_o$ × ☒ [(1+☚$_D$a)$^{(1-x)}$ / $(1+R_I)^1$ + (1+☚$_D$a)$^{(2-x)}$ / $(1+R_I)^2$ + . . . + (1+☚$_D$a)$^{(n-x)}$ / $(1+R_I)^n$] (4-2)

(For payments at year-end, x = 0. For midyear convention, x = 0.5.)

– The present value is the sum of the present values of dividends and reversion:

$$PV = PV_V + PV_D \tag{4-3}$$

– The marketability discount can be calculated for comparison with study data and expressed as a percentage:

$$\text{Discount} = [\ 1 - (\ PV / V\ )\ ] \times 100 \tag{4-4}$$

– Alternatively, the discount can be developed directly, by setting V = $1. The discount is then calculated as:

$$\text{Discount} = (1 - PV) \tag{4-5}$$

This is, of course, used in the conventional income approach to value. The *investor's required rate* (R_I) is a built up yield rate for risk at the private interest level. It begins with an asset-level yield rate (obtained from asset appraisals), and adds premia for risks exacerbated by control and liquidity impairments (or reduces rate when there are special benefits).

2.7 Other Methods

There are several methods available for developing the discount in addition to present value analysis. These models are suited to specific applications, and require familiarity with multiple valuation disciplines. Some of the more useful are:

– *Partition analysis*; when the interest has the ability to force division or sale of the property.

This is a discounted cash flow model of a lawsuit.

– *Comparable sale transactions*; involving similar cotenancy interests. Difficult to find and apply, because of lack of equity transfer reporting and difficulty making adjustments to the subject interest. Highly regarded data *in concept*. Studies of comparable sale transactions can be useful [Humphrey 1997].

– *Options trading models*; technically difficult, but can be a good market representation for short-hold situations.

– *Short-term liquidating partnerships*; uses data published by Partnership Profiles that provides evidence for discounts applicable for short-term hold situations [Partnership Profiles 2000].

– *Income (present value) model*; shown above, can also be set up as a discounted cash flow model. This is an *investment* model, not applicable for short-term holds.

Regardless of the model selected, the discount depends on *risk*, and the expected *holding period*. Models represent different fact patterns and market behaviors, but are based on the same fundamentals. The valuer addresses this in light facts and circumstances *first*, then applies one or more models that interpret (or are proxies for) the behavior of market participants. In these respects, the process for analysis of direct fractional interest holdings is no different from any valuation process.

2.8 A Valuation Process Checklist

The fact patterns ALWAYS lead the valuation, and the position of the hypothetical buyer of a partnership or cotenancy interest is mirrored in the valuation. What due diligence would such a buyer require? How would information be obtained and analyzed? How would risk be evaluated? What are the buyer's expectations that would drive the hypothetical purchase? How would pricing decisions be made? The valuer's job is to gather facts, ask questions, and only *then* apply the valuation arts. It is only after a thorough understanding of what, why and when is developed, can the how of the valuation be determined.

The following checklist is conventional, but will serve to sharpen the valuer's focus on issues often overlooked in fractional interest cases:

The assignment

1. Purpose and use of the valuation
2. Required reliability of the value conclusion
3. Basis (definition) of value
4. Scope of the assignment (may have to be revised based on review of remaining facts and circumstances)

The facts & circumstances of the case

5. History, distribution of ownership
6. Agreements
7. Assets, history and their related agreements (leases, loans, other)
8. Operations and forecasts

The buyer's expectations

9. Who is the hypothetical buyer?
10. What holding period scenarios are supported by the assets, by ownership facts & circumstances, and by the agreement? What are the intentions of the controlling parties?
11. What is the buyer's expected holding period?

The buyer's risk

12. What is the (weighted) risk presented by the underlying assets?
13. How is that risk affected by the capital structure?
14. Does the interest have any influence/control that would reduce risk?
15. Can the interest holder get out? When? What are its options?

The valuation process

Review approaches to value, select approaches *based on everything above*: Facts and circumstances of the case, purpose and use of the valuation, required reliability of the value conclusion, entity structure, control and liquidity impairments, the buyer's expectations, and available methods for analyzing risk. May use one or more approaches to value.

16. Asset accumulation

– Value balance sheet items.
– Develop discounts for control and marketability impairment (both together for direct holdings of fractional interests).
– Apply discounts to NAV and conclude value.
17. Income approach
– Prepare a forecast at the asset level.
– Adjust the forecast for entity influences and changed holding period expectations.
– Quantify risk at the asset level.
– Quantify risk associated with control and liquidity impairment.
– Apply risk-adjusted yield (discount) rate to future cash flows.
– Conclude value as the present value of future cash flows to the subject interest.
18. Other valuation methods
– Partition analysis (ability to force division or sale of the property).
– Comparable sale transactions (similar cotenancy interests).
– Options trading models (good market representation for short-hold situations).
– Short-term liquidating partnerships (discounts applicable for short-term holds).

3. WHO—PRACTITIONERS AND THEIR QUALIFICATIONS

Holding real property is a business, and all fractional interests valuation falls within the scope of the business valuation discipline. However, the real property attributes that affect the value of the interest are not part of the business valuation body of knowledge, and the needed business valuation elements are not part of the real property body of knowledge. Thus, valuing fractional interests in real property falls between two disciplines. This does not necessarily imply that the valuer should be fully qualified in both fields, but it does mean that the real property valuer should understand the process applicable for asset holding companies, and the business valuer should understand how the real property facts and circumstances influence the business of holding it.

In addition to business and real property valuation, legal and accounting skills are also required for fractional interest valuation. Practitioner contributions break down (in part) as follows:
– Real property valuer: Values the whole real estate asset, prepares an operating forecast for the property, and develops an expression of risk at the asset level. May need to provide highest and best use scenarios, growth forecasts and other analysis not generally needed for a market value appraisal [Webb 2005].
– Business valuer: Prepares forecasts for the entity based on the real property forecasts, values and adjusts other balance sheet items, applies market data to develop minority and marketability discounts. May need to build up rates of return on real property rates, consider the effects of lease and real property market conditions on the business and its current owners. Must understand and normalize line items from the real property cash flow forecasts [Webb 2004].
– Lawyer: Interprets document language if needed; helps to mirror the due-diligence process of the hypothetical buyer. Assists valuers in addressing the *value-influencing* elements of agreements, costs and risks associated with partition actions and potential legal conflicts.

– Accountant: Provides historic and current property and entity data and analysis. May share the forecasting, normalizing and other business valuation functions. Provides forensic analysis for litigation.

The work of each practitioner influences the work of the others, and their responsibilities may overlap, as this is a true interdisciplinary practice area. Unfortunately, their relationship is often seen as arms' length ("you do your part and I'll do mine") rather than as a true partnership, with each having a reasonable understanding of the other's process and requirements. In partnership, their contributions can be understood, and needed information can be readily provided.

It is the purpose of this writer to encourage an increased level of valuer cross-training for multidisciplinary applications—particularly for valuing direct fractional interests in real property—that will improve communication and understanding. Long-term, this will foster competency, and help to promote and preserve public trust in the valuation profession.

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BIOGRAPHICAL NOTES

Dennis A. Webb, ASA, MAI, MRICS is the owner of Primus Valuations, a Los Angeles regional valuation firm. Primus is a member of the American Business Appraisers® National Network, a consortium of independently owned and managed business appraisal practices, which includes many nationally known valuation experts.

Mr. Webb's practice is concentrated on real estate holding entities. He has authored "Undivided Interests in Real Property: Partnerships and Cotenancies," published by the Appraisal Institute, as well as numerous articles on discount-related topics, and the Appraisal Institute's two-day seminar "Case Studies in Limited Partnership and Common Tenancy Valuation." He teaches extensively on partnership and common tenancy interest valuation.

Prior to specializing in valuation, Mr. Webb was co-owner of an NASD broker/dealer firm which provided real estate investment syndication, analysis and consulting services. He held licenses as a Registered Representative and General Securities Principal, and was also responsible for due diligence investigations. Mr. Webb received his Bachelor of Science degree in Engineering from the University of California at Los Angeles with a Minor in Economics, and worked as a systems and design engineer.

He is a past President of the Los Angeles Chapter of the American Society of Appraisers, and a member of the Appraisal Institute's task force on valuation for financial reporting. He is also a California State Certified General Real Estate Appraiser, and a member of the Appraisal Institute, the American Society of Appraisers, the Royal Institution of Chartered Surveyors, and the Institute of Electrical and Electronics Engineers.

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