

PROPERTY TAX

Extracting Relevant Pricing Data from Market-Based Evidence

In order to develop credible valuation analyses, the analyst should extract pricing data from market evidence that is sufficiently comparable to the subject taxable property.

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Both property tax assessors and property owners often rely on market-based evidence ("market evidence") to estimate the value of an industrial or commercial taxpayer's taxable property for ad valorem property tax purposes. This market evidence may include (1) valuation pricing multiples extracted from either comparable property sales data or guideline publicly traded company transactional data, (2) yield capitalization rates or direct capitalization rates extracted from comparable property or capital market data, or (3) various indicators of the subject property economic obsolescence.

These market-derived data are often used to perform the three generally accepted approaches to industrial or commercial property valuation. However, such market evidence may not be appropriate for the property tax valuation assignment. This is because the market evidence may not be sufficiently comparable to the subject taxable property so as to provide credible valuation results. This article describes common uses of market evidence in each of the three generally accepted property valuation approaches. This article also examines relevant comparability factors for valuation analysts to consider when extracting pricing data from market-based evidence.

Introduction

Valuation analysts ("analysts") often rely on market evidence in order to estimate the value of an industrial or commercial taxpayer's taxable property for ad valorem property tax purposes. Depending on the type of the subject taxable property, the analyst may apply either the summation principle or the unit principle of property valuation. If the various categories of industrial or commercial operating assets can be appraised separately from each other, the analyst will often apply the summation principle of property valuation.

Alternatively, if the various categories of industrial or commercial operating assets are physically, functionally, and economically integrated, the analyst will often apply the unit principle of property valuation. In a unit principle valuation, the analyst values all of the taxpayer's total operating property collectively, as a single integrated "unit" of operating assets (the "total unit"). The total unit is often defined as the taxpayer's total bundle of operating assets (including tangible assets, intangible assets, and financial assets), working collectively as a single income-producing unit of property.

Analysts often value "utility type" taxpayer property based on the unit principle of valuation. Such "utility type" taxpayer properties may include railroads, airlines, electric generation and distribution properties, interstate pipelines, hospitals and other health care properties, sports and entertainment facilities, water and wastewater distribution properties, natural gas distribution properties, oil and gas refiners, chemical and other integrated processing plants, telecommunications properties, cable television properties, and many more.

This discussion focuses on the selection and application of market-based pricing (and other empirical) evidence in the generally accepted property valuation approaches as applied within a unit principle valuation. Accordingly, this discussion has broad application to unit principle property valuations performed for industrial and commercial property tax planning, compliance, and controversy purposes.

The Use of Market Evidence

The use of market evidence in unit principle valuations is not limited to the application of the market approach. Analysts typically rely on market evidence in all three generally accepted property valuation approaches—the income approach, the market (or sales comparison) approach, and the cost approach.

The use of market evidence in all three industrial and commercial property valuation approaches to value is recognized in *The Appraisal of Real Estate*. This property appraisal textbook refers to the market approach as the sales comparison approach. This naming convention is used in *The Appraisal of Real Estate* (and in other property appraisal textbooks) because "all three approaches to value are 'market' approaches in that they rely on market evidence."¹

The appeal of using market evidence in unit principle valuations is understandable—the use of market evidence can provide relevant indications of value based on actual transactional data. However, in order to provide a credible value indication, it is necessary for the market evidence to be relevant to the valuation subject. In the context of an industrial or commercial property tax valuation, it is necessary for the market evidence to be sufficiently comparable to the subject taxable property.

This discussion examines market evidence in the context of each of the three generally accepted property valuation approaches—the market approach, the income approach, and the cost approach. And, within the market approach, this discussion examines the use of market evidence in:

- the stock and debt valuation method (also sometimes referred to as the guideline publicly traded company or "GPTC" method), and
- the comparable sales method (also sometimes referred to as the guideline transaction method).

In each of these valuation approaches and methods, this discussion (1) describes the common uses of market evidence, and (2) examines the relevant comparability factors to consider when relying on market evidence.

The Market Approach and the Stock and Debt Method

In a unit principle valuation, analysts may use the market (or sales comparison) approach stock and debt method. In the stock and debt method, the sum of the taxpayer's long-term debt, preferred stock, and common stock results in a value indication of the total unit of taxpayer operating assets. In the stock and debt method, the total unit value is sometimes estimated through the use of valuation pricing multiples extracted from selected GPTCs. Therefore, for purposes of this discussion, the term "GPTC method" is intended to be synonymous with the term "stock and debt method."

Valuation pricing multiples are developed by dividing the value of total GPTC stock and debt by the GPTC underlying financial fundamental metrics. Common financial fundamental metrics include the following:

- net sales
- earnings before interest and taxes ("EBIT")
- earnings before interest, taxes, depreciation, and amortization ("EBITDA")

In order to estimate the subject taxpayer total unit value, the valuation pricing multiples extracted from the GPTCs are applied to the respective underlying financial fundamentals of the subject total unit. The market evidence relied on in the stock and debt method includes the operations, financial data, and the value of debt and equity of the GPTCs. In order to develop a credible stock and debt method value indication, it is necessary for the selected GPTCs to be sufficiently comparable to the subject taxpayer total unit.

GPTC comparability factors

When selecting GPTCs, analysts should carefully analyze the financial statements and other available data for both:

- the subject taxpayer unit of operating assets, and
- the GPTCs.

This comparative financial analysis is intended to allow the analyst to identify any financial characteristics and factors that may indicate comparability (or a lack thereof) of the GPTCs to the subject taxpayer unit.

In two different judicial decisions, the U.S. Tax Court presented a list of factors to consider when determining comparability. These factors were presented in the context of determining comparability of GPTCs to operating companies in business valuations performed for gift and estate tax purposes. However, these factors may also be useful for determining comparability of GPTCs in the context of unit principle property valuations performed for ad valorem property tax purposes.

In *Talichet v. Commissioner*, the U.S. Tax Court described six "guideposts in determining comparability":²

1. capital structure
2. credit status
3. depth of management
4. personnel experience
5. nature of competition
6. maturity of the business

In the *Estate of Victor P. Clarke*, the U.S. Tax Court listed the following factors, which may also be relevant for determining the comparability of the GPTCs to the subject taxpayer total unit:³

1. products
2. markets
3. management
4. earnings
5. dividend-paying capacity
6. book value
7. position within the industry

It is clear from the Tax Court lists of comparability factors that the identification of relevant GPTCs requires more analysis than simply selecting companies that operate in the same industry as the subject taxpayer total unit. Analysts should also consider, and where appropriate adjust for, differences between the subject taxpayer total unit and the GPTCs with regard to the following factors:

- liquidity
- leverage
- operating performance
- financial performance and profitability
- regulatory environment
- power purchase agreements or other material contracts that affect operations

The factors discussed above may help analysts determine which publicly traded companies are sufficiently comparable to the subject taxpayer total unit to provide credible property valuation results. However, the total taxpayer unit may likely consist of tangible assets, intangible assets, and financial assets. Accordingly, the subject taxpayer unit of operating assets may include both taxable property and nontaxable property. Therefore, the analyst may need to further consider comparability of the subject taxable property to the GPTCs with regard to:

- the presence of intangible assets, and
- anticipated future growth.

Comparability with regard to intangible assets

GPTCs are going-concern business enterprises. The operating assets of the GPTCs include both tangible assets and intangible assets. The GAAP-based balance sheets of GPTCs may include the acquisition date value of acquired intangible assets such as customer relationships, patents, and goodwill.

In addition, the GPTCs may benefit from numerous internally developed intangible assets that are not recorded on the balance sheet prepared in accordance with U.S. GAAP. Such internally developed (and, therefore, unrecorded) intangible assets may include a trained and assembled workforce, computer software, customer databases, trademarks, contracts, and numerous other intangible assets.

However, for property tax purposes, the subject taxable property may be the taxpayer's tangible property only—and not the taxpayer's total assets operating as a going-concern business enterprise. The taxpayer's total unit of assets operating as a going-concern business enterprise may include nontaxable property, such as financial assets, identifiable intangible assets, goodwill, and the present value of growth opportunities.⁴

In order to mitigate the differences between the operating assets of GPTCs and the subject taxpayer taxable property with regard to intangible assets, the analyst may:

- rely on GPTC income only from assets that are comparable to the subject taxpayer taxable property, when possible, or
- remove the value of any nontaxable intangible assets from the stock and debt method total unit value indication.

Comparability with regard to expected future growth rates

A second key difference between the GPTCs and the subject taxpayer taxable property is the GPTC value attributed to expected future growth. Investors in GPTCs are compensated through both:

- a return of capital, in the form of current period dividends or other distributions, and
- a return on capital, in the form of expected future appreciation (or growth) in the investment value.

The valuation pricing multiples derived from GPTCs reflect investor expectations regarding both (1) the risk of the investment and (2) the growth of the investment.⁵ However, significant differences in growth expectations often exist between GPTCs and the subject taxable property in unit principle valuations. The growth expectations of GPTCs may be influenced by differences with regard to the following:

- customer/supplier relationships
- physical location
- recently closed or anticipated acquisitions
- regulatory environment
- supply and demand
- other factors

For unit principle valuations of taxable property operating in a rate-regulated environment, GPTCs and the subject total unit may have further growth expectation differences. Revenue in a rate-regulated utility environment is generally limited based on a return on the utility's "rate base." The utility's "rate base" is typically comprised primarily of the subject taxable property. In order to attain this expected growth, a regulated utility taxpayer would have to increase its asset base and/or file an appeal with the regulatory authorities. These limitations also have a significant effect on the growth expectations of the total taxpayer property unit and the valuation of taxable property in place as of the valuation date.

By relying on valuation pricing multiples that have not been adjusted for differences in growth expectations, analysts may significantly overstate the value of the subject property. In order to reconcile the difference in growth expectations of the GPTCs and the subject taxable property in place as of the valuation date, the analyst may find it necessary to adjust the GPTC valuation pricing multiples to remove any expectations of future growth.

In summary, to extract credible market evidence for use in the stock and debt valuation method, analysts may:

- analyze relevant comparability factors to mitigate differences between the GPTCs and the subject total unit, and
- adjust for any differences between the GPTCs and the subject taxable property of the subject total unit.

Typically, these differences include dissimilarities with regard to intangible assets, growth rate expectations, operating and financial performance, regulatory environment, and other factors.

The Market Approach and the Comparable Sales (or the Guideline Transaction) Method

The comparable sales method of the market approach relies on recent sale transactions of similar units of property to estimate the value of the subject property. If the sales relate to properties that are directly comparable to the subject property, then the transactions are referred to as comparable sale transactions. If the sales relate to properties that are sufficiently comparable to provide pricing guidance to the analyst (but the sales are not directly comparable to the subject property), then the transactions are referred to as guideline sale transactions.

According to *Property Taxation*: "In the sales comparison approach methods, recent sales of comparative units of assets are gathered. Adjustments are applied to this transactional data to account for differences in

location, time of sale, physical characteristics, and so on, between the taxpayer unit of assets and the comparable units of operating assets. The adjusted transactional data are analyzed to extract market-derived pricing indicators."⁶

These market-derived pricing indicators, or valuation pricing multiples, are then applied to the relevant subject property financial fundamentals in order to estimate the value of the subject property.

Common subject property financial fundamental metrics include the following:

- net sales
- EBIT
- EBITDA

The market evidence relied on in the comparable sales method consists primarily of comparable sale transactional data. The comparable sales method is reliable only when:

- the analyst can identify either comparable or guideline sale transactions that are sufficiently similar to the subject property, and
- any differences between the comparable or guideline sale transactions and the subject property can be reconciled in the valuation analysis.

Sales transaction comparability factors

In order to identify comparable or guideline sale transactions, analysts generally consider transactions in the same industry or a similar industry over several years prior to the valuation date. In general, the criteria used for the selection of comparable or guideline sale transactions are similar to those for selecting GPTCs.

Comparable or guideline sale transactions may, however, be dissimilar to the subject taxable property for a number of reasons as summarized in the accompanying Exhibit 1. These comparability issues often render the use of the comparable sales method unreliable for estimating the value of taxable property for ad valorem property tax purposes.

When the comparable sales method is relied on to estimate the value of taxable property, analysts may further consider the comparability of the comparable or the guideline sales with regard to (1) synergies and (2) intangible assets. These two comparability factors are discussed next.

Synergies. The standard of value in property tax valuations is often fair market value, or a standard of value that is equivalent to fair market value. The American Society of Appraisers defines fair market value as "the

price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm's length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts."⁷

The contemplated buyer and seller in the fair market value standard of value are hypothetical, and not specific, willing buyers and willing sellers. This fair market value definition is different from the investment value definition, which is presented in *The Appraisal of Real Estate* as, "[t]he specific value of a property to a particular investor or class of investors based on individual investments requirements; distinguished from market value, which is impersonal and detached."⁸

Investment value is often greater than fair market value. This is because a particular buyer may expect to extract synergistic benefits from an acquisition that are not available to the market participants in general. These synergistic benefits may include the following:

- economies of scale
- financial economies such as better credit ratings
- increased market power
- income tax attributes such as net operating loss carryforwards⁹

As a result of these anticipated benefits, the purchase price for synergistic transactions may be higher than the fair market value for a transferred bundle of operating assets. Synergistic value may be evidenced through a comparison of price-to-earnings ("P/E") pricing multiples paid by:

- strategic buyers in all transactions, and
- financial buyers in going-private transactions.

Strategic acquisitions generally include a price premium for (1) ownership control and (2) expected post-deal economic synergies. However, financial acquisitions in going-private transactions are commonly believed to include a price premium for ownership control only—and no price premium associated with expected post-deal economic synergies.

A study of data from *Mergerstat Review* from 1990 to 2010 found that the median P/E pricing multiples paid by strategic buyers were 12.9% higher than the median P/E pricing multiples paid by financial buyers.¹⁰ This comparison of transactional data suggests empirical support for a synergistic price premium. Accordingly, an analyst may significantly overvalue the subject taxpayer property by relying on comparable sales that include a synergistic premium.

The presence of synergies in a transaction does not necessarily preclude the use of valuation pricing multiples for unit principle valuations. However, when valuation pricing multiples from synergistic transactions are used, the resulting value will be a synergistic value (i.e., investment value). If the valuation objective is to estimate fair market value (or an equivalent standard of value), then the valuation pricing multiples should be adjusted to remove the effect of synergies. If this procedure is not possible, then the analyst should exclude synergistic transactions from the group of comparable or guideline sale transactions.

Intangible assets. For property tax purposes, the subject taxable property is generally not the taxpayer corporation's going-concern business enterprise. However, comparable sales often represent the sale of going-concern companies (including all tangible assets and all intangible assets, operating collectively as a business enterprise)—and not just the sale of tangible property.

In order to maintain comparability between the transactional data of going-concern companies and the subject taxable property, adjustments should be made to remove nontaxable financial assets and intangible assets (including intangible assets not recorded on the target company's balance sheet). Such financial (working capital) assets and intangible assets may be removed from one of the following:

- the price of the comparable sales
- the valuation pricing multiples
- the comparable sales method value indications

In summary, the transaction data relied on in the comparable sales method are often not comparable to the subject taxable property with regard to:

- synergies,
- intangible assets, and
- other factors.

The comparable sales method is only reliable to the extent that the analyst can:

- identify comparable or guideline sales that are sufficiently similar to the subject taxable property, and
- reconcile any meaningful differences between the subject taxable property and the comparable or guideline sales.

Income Approach

The generally accepted income approach unit valuation methods include the following:

- the direct capitalization method
- the yield capitalization method

In the income approach, the indicated total unit value is the present value of the expected income to be earned from the operation of the total unit. This expectation of prospective income is converted to present value—that is, the indicated value of the taxpayer's total unit of operating assets.

In the direct capitalization method, the selected measure of income is projected for a single future period—that is, for a typical "next period" after the valuation date. The projected income is capitalized by (i.e., divided by) a direct capitalization rate.

In the yield capitalization method, the selected measure of income is projected for several years in a discrete projection period. The yield capitalization rate is applied to the discrete income projection in order to conclude the present value of the projected income stream.

In both the direct capitalization method and the yield capitalization method, income can be measured in several different ways. For unit valuation purposes, common measures of the subject total unit income include net operating income, operating cash flow, before- or after-tax net income, and before- or after-tax net cash flow.

In all income approach unit valuation analyses, there should be consistency between (1) the income measure subject to analysis, and (2) the estimation of the direct capitalization rate or yield capitalization rate. For example, an after-tax capitalization rate should be applied to an after-tax income measure.

Market evidence is often relied on in the income approach for the estimation of market capitalization rates.

The yield capitalization rate is often estimated based on the band of investment (also called a "weighted average cost of capital") procedure. When estimating the weighted average cost of capital, a variety of pricing data may be extracted from market evidence, including the following:

- required rates of return
- capital structures
- betas
- historical and prospective growth rates

A direct capitalization rate can then be estimated by subtracting the expected long-term growth rate from the yield capitalization rate.

Comparability with regard to income taxes

In both the yield capitalization method and the direct capitalization method, analysts should be consistent in:

- the development of the income measure to be capitalized, and
- the estimation of the capitalization rate.

That is, if the analyst decides to capitalize after-tax net income in the direct capitalization method, the appropriate direct capitalization rate would be derived from a comparison of after-tax income data.

A data source that assessors commonly use to estimate yield capitalization rates is the Duff & Phelps *Valuation Handbook: Guide to Cost of Capital* series (the "Duff & Phelps handbooks"), which was published through Morningstar as the *Ibbotson SBBI Valuation Yearbook* (the "SBBI yearbooks") series prior to 2014. The cost of capital data reported in the Duff & Phelps handbooks and SBBI yearbooks are after-tax data. Without proper adjustments, these cost of capital data are only appropriate to estimate after-tax yield capitalization rates.

The Duff & Phelps *2017 Valuation Handbook: U.S. Guide to Cost of Capital* states: "Just as net cash flow is an after-tax concept (i.e., measured after entity-level income taxes), the discount and capitalization rates as developed in this book are also after-tax (specifically, after entity level or corporate income taxes, but before individual investor taxes)."¹¹ The SBBI yearbooks similarly estimate cost of equity on an after-tax basis.

Both the Duff & Phelps handbooks and the SBBI yearbooks provide valuable information for estimating the cost of capital. However, unless proper adjustments are made, the capitalization rates derived from these data sources are only applicable to after-tax income measures.

Comparability with regard to the bundle of assets

To develop credible valuation results, both the capitalization rate and the income measure should be derived from assets that are similar to the subject taxable property. That is, a credible total unit income approach analysis should rely on an income measure and a capitalization rate that are derived from a similar bundle of operating assets.

One distinction between unit principle valuation methods and summation principle valuation methods is that these two types of valuations often rely on different measures of income to estimate value. Unit valuation methods typically rely on operating business income (such as net operating income or EBITDA), and summation valuation methods generally rely on tangible property only rental income (actual or hypothetical).

If an analyst capitalizes operating business income, the resulting value will be the value of an operating business. This operating business value may include assets (i.e., intangible assets and financial assets) that may not be subject to property taxation in the subject taxing jurisdiction. An analyst may then have to adjust this operating business value in order to remove nontaxable assets so as to estimate the value of the subject taxable assets.

In addition to considering the comparability of the income measure to the subject property, analysts should consider the comparability of the capitalization rate to the selected income measure. The direct capitalization rate that best matches the tangible property income is a direct capitalization rate based on a tangible property weighted average cost of capital less an expected rental income growth rate. However, the direct capitalization rate in a unit valuation may be based on market-derived data including returns from publicly traded (going-concern business) stocks.

The market-derived data relied on to estimate a total unit direct capitalization rate may have a different risk profile compared to the subject property. This total unit direct capitalization rate may be materially different from a tangible property-only direct capitalization rate.

Therefore, if an analyst relies on a tangible property direct capitalization rate to capitalize total unit operating income, the resulting value indication may not be credible. That is, if an analyst relies on a direct capitalization rate derived from a different bundle of assets than the subject property, the value indication may be unreliable due to underlying differences between:

- the subject taxpayer assets, and
- the assets used to estimate the direct capitalization rate.

In summary, when using the income approach, both the capitalization rate and the income measure to be capitalized should be:

- derived from sufficiently comparable property, and
- applied on a consistent income tax basis.

Cost Approach

The generally accepted unit valuation cost approach methods include the following:

- the reproduction cost new less depreciation ("RPCNLD") method
- the replacement cost new less depreciation ("RCNLD") method
- the historical cost less depreciation ("HCLD") method

All cost approach methods require the recognition of value decrements associated with all forms of depreciation, including the following:

- physical deterioration
- functional obsolescence
- external obsolescence (including economic obsolescence and locational obsolescence)

Property tax assessors and taxpayer property owners often have differing opinions with regard to the identification and estimation of economic obsolescence.

Economic obsolescence (or the economic component of external obsolescence) is a reduction in the value of property due to the effects, events, or conditions that are external to—and not controlled by—the current use or condition of the property. Economic obsolescence occurs when the property owner can no longer earn a fair return on the investment in the property. Economic obsolescence is often identified and estimated through a comparison of the subject total unit actual performance to an appropriate benchmark.

According to *Property Taxation*: "When the taxpayer property is suffering negative excess earnings (compared to an appropriate benchmark measurement), the indicated income shortfall is capitalized. The result of these capitalization procedures is one way to quantify entrepreneurial profit or economic obsolescence."¹²

Economic obsolescence may be identified and/or quantified by a comparison of current results of the subject property operations compared to the following benchmark measurements:

- the subject property historical results
- the subject property budgeted results
- the subject property capacity results
- benchmark property current results
- taxpayer industry current results
- guideline company current results
- market expectations for the subject property (e.g., cost of capital)¹³

Examples of market evidence commonly used in the estimation of economic obsolescence include (1) taxpayer industry results, (2) guideline company results, and (3) subject property cost of capital market evidence.

Comparability of indicators of economic obsolescence

In order to develop accurate indicators of economic obsolescence, the analyst should rely on market evidence of benchmark measures that are sufficiently comparable to the subject property. Economic obsolescence indicators are based on both internal benchmark measures and competitive (or industry) benchmark measures. A common indication of economic obsolescence includes comparing the subject property actual rate of return to the subject property required rate of return. Economic obsolescence is indicated if the actual rate of return is less than the required rate of return.

If the market evidence used to estimate the subject property required rate of return is not sufficiently comparable to the subject property, then the indicated measure of economic obsolescence may not be credible. The relevant comparability factors would include those factors discussed above, such as, the level and type of intangible assets, growth expectations, operating and financial performance, and regulatory environment.

Common benchmark measures of economic obsolescence include comparing the subject property operating performance to industry or GPTC operating performance. Economic obsolescence is indicated if the subject property operating performance is below the level of industry or GPTC operating performance.

If the market evidence used to estimate the industry or GPTC operating performance is not sufficiently comparable to the subject property, then the indicated competitive benchmark measure of economic obsolescence may not be credible. In other words, if there are significant differences between guideline companies or the industry and the subject taxable property, and those difference cannot be reconciled in the valuation analysis, then the valuation result may not be credible.

Conclusion

Analysts often rely on market evidence in order to estimate the value of a taxpayer's industrial or commercial property for ad valorem property tax purposes.

Market evidence is often relied on in each of the three generally accepted property valuation approaches (the market approach, the income approach, and the cost approach). Market evidence may include the following:

- valuation pricing multiples derived from comparable or guideline sales or from guideline publicly traded companies
- capital market evidence used to estimate the cost of capital
- yield capitalization rates or direct capitalization rates extracted from comparable property or capital market income data
- indicators of economic obsolescence

Market evidence may (or may not) be appropriate for a particular valuation analysis. As presented in this discussion, the analyst's misuse of market data may result in value indications that are unreliable. In order to develop credible valuation analyses, the analyst should extract pricing data from market evidence that is sufficiently comparable to the subject taxable property.

Exhibit 1. Sales Transaction Comparability Issues

1. Transaction prices may, and likely do, include payment for operating assets that are not included in the subject taxable property.
2. Transaction details are often confidential; public disclosure may not provide sufficient data to establish general comparability or the magnitude of any adjustment necessary to create sufficient comparability for property tax valuation purposes.
3. The transaction purchase price may reflect buyer-specific synergies, so the transaction purchase price may represent investment value—and not fair market value.
4. The transaction purchase price may have occurred under a different regulatory environment where allowed returns were either higher or lower than those earned by the subject taxpayer.
5. The transaction purchase price may reflect a different level of and types of intangible assets.
6. The selected transactions may have occurred under different industry or economic conditions.
7. There may be insufficient data regarding either the transaction purchase price or the subject acquired company so as to properly perform the comparable sales method.

¹ *The Appraisal of Real Estate*, 14th ed. (Chicago: The Appraisal Institute, 2013), at p. 36.

² *Talichet v. Commissioner*, 33 TCM 1133 (1974).

³ *Estate of Victor P. Clarke*, 35 TCM 1482 (1976).

⁴ The present value of growth opportunities refers to expected future income from assets that are not yet in place on the valuation date. These future assets may be related to new product or service lines, expansion into new markets, major capital expenditures, or mergers or acquisitions.

⁵ *The Market Approach to Valuing Businesses*, 2d ed. (New York: John Wiley & Sons, 2005), at p. 243.

⁶ *Property Taxation*, 4th ed. (Atlanta: Institute for Professionals in Taxation, 2015), at p. 545.

⁷ *ASA Business Valuation Standards* (Washington: American Society of Appraisers, 2009), at p. 27.

⁸ *The Appraisal of Real Estate*, at p. 63.

⁹ Travis R. Lance, "Do M&A Transaction Prices Reflect Fair Market Value for Ad Valorem Property Tax Purposes?" 22 JMT 24 (May 2012), at p. 26.

¹⁰ *Id.* at 48.

¹¹ *2017 Valuation Handbook: U.S. Guide to Cost of Capital* (Chicago: Duff & Phelps, LLC, 2017), at pp. 1-7.

¹² *Property Taxation*, at p. 539.

¹³ Robert F. Reilly and Robert P. Schweihs, *Guide to Property Tax Valuation* (Chicago: Willamette Management Associates Partners, 2008), at p. 267.