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# THE MYTH OF THREE INDEPENDENT APPROACHES TO VALUE

*by D. Richard Wincott, CRE*

**D**espite the fact that the Appraisal Institute now teaches that the three traditional approaches to value—the Cost Approach, the Income Capitalization Approach, and the Sales Comparison Approach—are interrelated, there are still a large number of appraisers who adhere to the premise that they are completely independent methods of estimating value.<sup>1</sup> This is evident in numerous appraisals that the author has reviewed, and in actual court testimony witnessed by the author. The focus of this article is to further the notion that the three approaches are not only interrelated, but the results of each approach are an integral part of achieving a reliable estimate of value. In other words, the three traditional approaches, when dealing with income producing real estate, are components of an overall Market Approach, and in fact should be renamed the Cost Analysis, the Income Capitalization Analysis, and the Sales Comparison Analysis.

## ABOUT THE AUTHOR

**D. Richard Wincott, CRE, MAI,** is the partner in the Real Estate Advisory Services unit of PricewaterhouseCoopers LLP in Houston. He specializes in valuation and consulting to pension funds, institutional investors, and life companies.

Income producing properties are purchased based on their future income generating capabilities. Each of the three traditional approaches to value may come at the issue of value from a different direction, but in the end it all boils down to the economics of the property. The Appraisal Institute teaches that the appraiser is supposed to “model and mirror” the market. As a result, the analysis must attempt to reflect the normal buyer calculus used in the purchase decision. This does not imply that the appraiser should not use sophisticated techniques to analyze that process, but it does mean that the appraiser should not be using outdated appraisal techniques that do not remotely resemble the thought process of the market. The most notable of those out-dated techniques

is the adjustment grid in the Sales Comparison Approach for improved properties based on physical units of comparison.

Investors have a consistent thought pattern when addressing what price they are willing to pay for a property. First, and foremost, it is the income producing potential of the property that drives the decision. As a result, they have an optimum operating scenario in mind; they have an opinion as to how long it will take to achieve that level of operation, as well as how much it is going to cost to get there; they will make a comparison of the price they are paying with the cost to reproduce the property; and without exception, this author has never talked to investors who didn't think they could operate a property better than the owner they bought it from. Considering these factors, all of the information generated from the three approaches to value have relevant input into the value decision, but no matter what the methodology, the final answer is a function of the income estimate.

#### OVERALL PREMISE OF VALUE

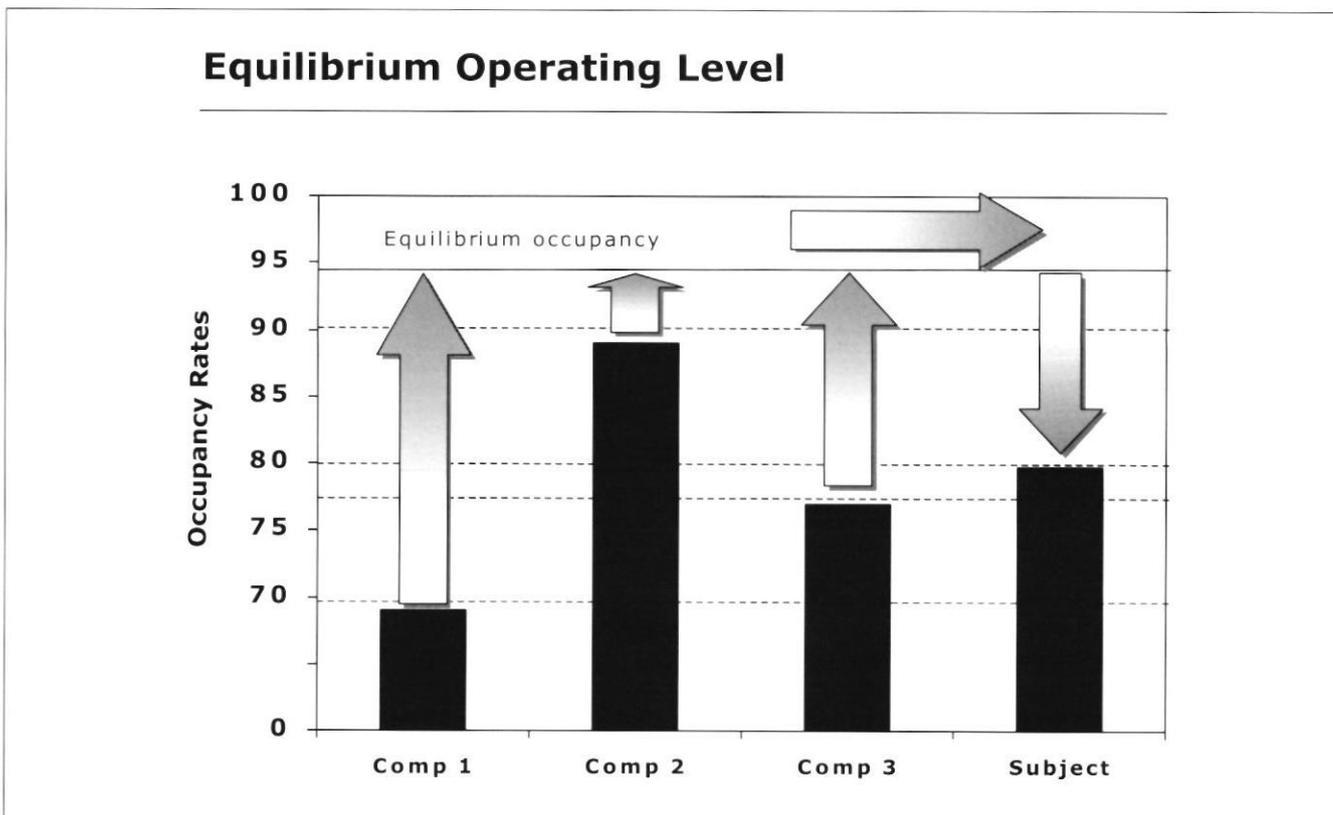
With the underlying theory that an investor's goal is to maximize investment, the most important first step is to establish a common point of reference. Traditional appraisal theory states that comparables

are to be adjusted to the property being appraised. This premise is correct, but achieving that result has quite often been reached by using flawed analysis, especially in the Sales Comparison Approach. An example would be where the subject property has an 80 percent occupancy rate, and the comparable sales range in occupancy from 70 percent to 90 percent. While one could quantify the adjustments to the sales having lower occupancy rates by adjusting for the time and economic loss associated with achieving the 80 percent occupancy level, adjusting the sales with occupancies in excess of 80 percent down to that level presents a myriad of analytic problems. The appropriate method is to model the process used by the potential buyers. That is to establish the equilibrium, or stabilized, operating level as the common point of reference.

Simplistically, this involves adjusting the comparable data to a stabilized value level, appraising the subject property based on that stabilized operating scenario, then adjusting the stabilized subject value either up or down to reflect the current operating condition of the property. Graphically, this process is demonstrated in *Exhibit 1*.

This process is consistent with how most purchasers view the investment process. The various issues

Exhibit 1



to be considered relative to achieving stabilized operating status include:

- the time that will be required to lease excess vacant space to achieve a stabilized occupancy level;
- the present value of the loss in rental revenue during that time period;
- the dollar magnitude of leasing costs, such as commissions, tenant improvements, legal fees, etc., that accompany the leasing activity;
- the dollar magnitude of capital expenditures that are immediately required to maintain competitive market position;
- the present value of remaining lease contracts that are significantly above or below current market rent levels.

Of course, where the properties are at a stabilized operating level at the time of sale, consideration of some of these items may not be required.

#### *Income Capitalization Approach*

For investment grade real estate, the Income Capitalization approach has evolved into two separate forms of analysis, the direct capitalization analysis and the discounted cash flow analysis (DCF). While they represent two distinct approaches, assumptions that are explicit in the DCF are implicit in the direct capitalization analysis. If completed appropriately, the resulting value estimates should approximate each other. In the direct capitalization analysis, a stabilized net operating income (NOI) is estimated, and this income estimate is capitalized into a value indication through the use of a stabilized overall capitalization rate derived from market data obtained from the Sales Comparison Approach. This process indicates a stabilized property value that is then adjusted for any of the factors that exist within the subject property that cause it to vary from that stabilized operating assumption to arrive at an "as is" estimate of value.

Inherent in this analysis is the estimation of the market rental rate and the normalized expense level for the property. The process of estimating market rent and expense levels for the subject property effectively makes most of the adjustments necessary to reflect differentials between the subject property and competing properties—for quality, location, age, condition, and functionality. Traditionally, appraisers have attempted to quantify each item through the use of an adjustment grid, applying a relative percentage or dollar amount to each factor. Reality is that tenants in the various

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properties have already voted on the cumulative impact of these items with their check books. If a particular property has an advantage over other properties with respect to location, quality, etc., it is reflected in the contract leases that that building has obtained. The same type of comparison can be made with respect to functionality through NOI estimates. For example, if a particular property has an inefficient HVAC system, the extent of the inefficiency would manifest itself in a higher than typical utility expense. This would cause the property to have a lower net operating income relative to competing properties. If these factors are correctly addressed in the NOI estimates, the use of stabilized overall capitalization rates becomes a much more consistent process, requiring only consideration of the relative risk involved in achieving those estimates.

In the DCF analysis, a cash flow model is constructed to reflect the specific timing of economic events. In essence, the DCF is a cash-based financial model, while the direct capitalization analysis is an accrual-based financial model. If the subject property is currently not operating at a stabilized level, the initial years of the cash flow model reflect the market's perception of the events that will occur between the valuation date and the estimated date of achieving stabilized operation. Following that point, cash flow models generally reflect continued operations at a stabilized level, subject to contract lease expirations. An additional element of the DCF analysis is to estimate the value of the property at the end of the investment holding period. This is generally based on the use of a direct capitalization analysis assuming stabilized operations at that point

in time. Since both the DCF and the direct capitalization analyses have the same underlying investment assumptions, the results should approximate each other, and there are methods of testing the compatibility of the various assumptions used in each approach.<sup>2</sup>

Considering this view of the investment process, the value of a particular property is theoretically equal to the present value of the current lease portfolio, and the right to get the building back empty. The issue of getting the building back is not literally gaining possession of an empty structure, but having the ability to roll all leases to a stabilized occupancy rate at market rent levels. Therefore, the issue of an estimated holding period should be a function of remaining contract lease terms and the current market position in the real estate cycle, not strictly a given 10-year holding period.

### *Sales Comparison Approach*

The primary purpose of the Sales Comparison Approach is to derive units of comparison from market data that give inference to current pricing levels. This factor results in numerous conclusions coming out of this analysis in addition to the traditional estimate of value. While it is typical to find references in appraisals to various sources of capitalization rate and discount rate data in the Income Capitalization Approach, reconciliation of those data sources is ultimately dependent upon the capitalization and discount rates derived from comparable sales data. This factor alone underscores the interdependency of these two approaches.

The traditional sales comparison approach methodology involves establishing a common unit of comparison, such as price per square foot, price per unit, price per room, etc., and adjusting that unit of comparison for the comparable properties to arrive at an indication of value for the subject property. What needs to be understood is that these "price per" units of comparison are market artifacts, and not the sole basis for the comparison. These units of comparison are useless without accompanying economic points of reference. Market participants anecdotally talk about the price per square foot, but the ultimate question is "compared to what?"

To simplify the remainder of this discussion, the author will focus on the analysis of an office building. Research has indicated that on a stabilized basis the most influential factor affecting the sales price per square foot is the net operating income (NOI). After adjusting comparable sales data to a stabilized

price equivalent, linear regression analysis indicates a strong positive correlation between the sales price per square foot and the NOI per square foot. As the NOI increases, the price per square foot will tend to increase. In fact, our experience has been that in the large majority of cases, the  $R^2$  resulting from this analysis is in excess of .90. That means that generally 90 percent, or more, of the variations in the sales price per square foot between properties can be explained by the corresponding NOI per square foot.

A second common unit of comparison for office buildings is the effective gross revenue multiplier (EGRM). This is the relationship between the stabilized effective gross revenue and the sale price. Here again, any differences between properties with respect to location, quality, condition, etc., have been resolved by the market through the actual rent achieved by that property. Considering this factor, the primary remaining point of comparison becomes the operating efficiency of the various properties as exhibited by the differentials in expense levels. This analysis can be accomplished by plotting the relationship of the EGRMs relative to the expense ratios for the various comparable sales. It generally reflects an indirect relationship between these two factors. As the expense ratio increases, the profitability of the property decreases, thereby causing the EGRM to decrease.

In both of these instances, once the comparable sale price has been adjusted to the corresponding stabilized price level based on information obtained by the deal participants, the requirement of a subjective adjustment process is basically eliminated. The use of this methodology is a direct reflection of market thought and behavior. All too often appraisers will attempt to go through an adjustment process using dollar amount, or percentage adjustments for location, condition, quality, etc., largely based on subjective assumptions. First, the author has never talked to a buyer or seller who prices property on that basis. Secondly, the use of that methodology is primarily a result of the appraiser not completing sufficient research to obtain the required income data on the comparable sale. The notion that the Sales Comparison Approach is an independent approach actually stems from this second issue. It seems to be an excuse for not completing the analysis adequately, rather than a theoretical reality.

### *Cost Approach*

The Cost Approach is the most misunderstood

and maligned points of analysis in the appraisal process. Over the past decade, because of downward pressure on appraisal fees and a disconnect in real estate development economics during the latter part of the 1980s, it has often become the practice to delete the Cost Approach from most appraisals. The reasoning typically stated for this departure from standard appraisal practices has been that it is not a relevant indicator of value, or it was omitted at the client's request (primarily to keep the fee down). Keep in mind that there are situations where the Cost Approach is a primary consideration, such as special purpose properties.

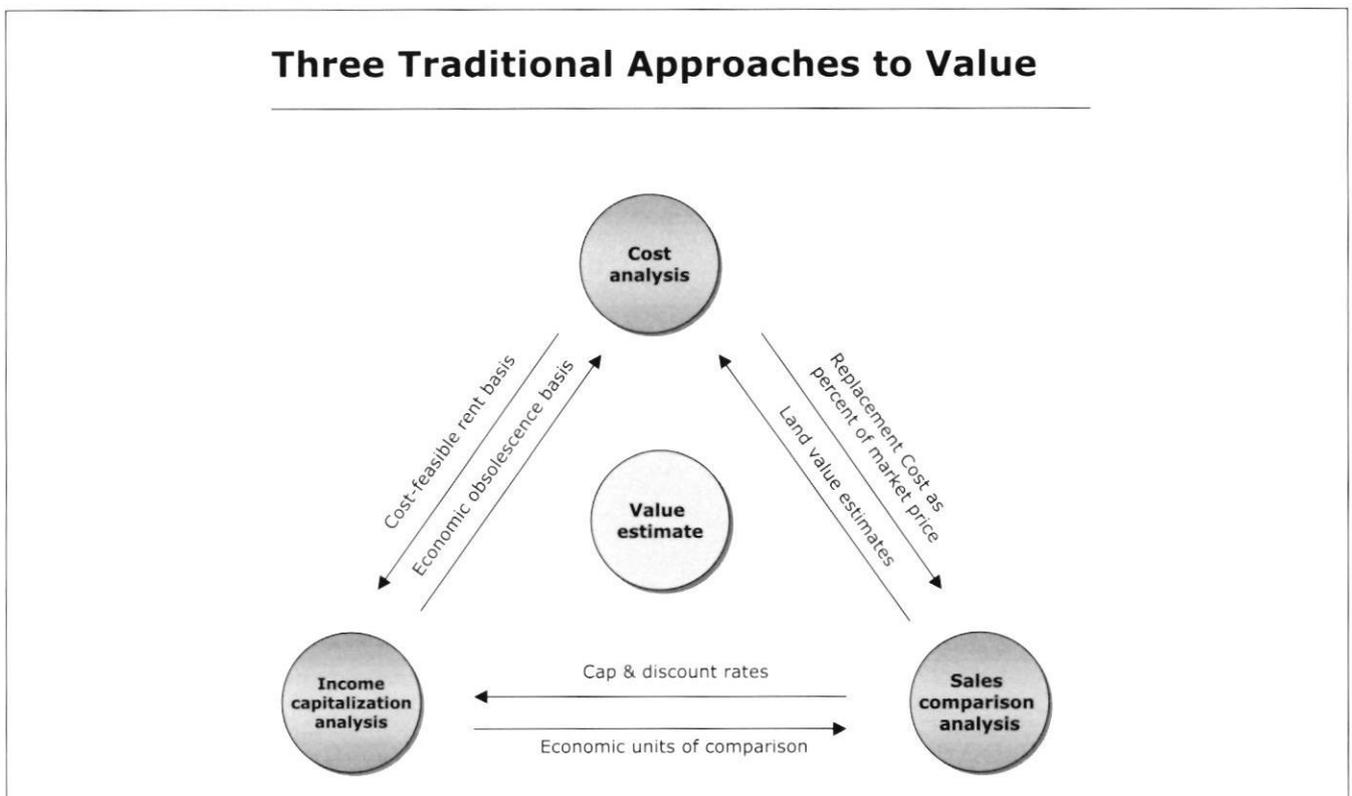
The issue of whether or not the Cost Approach is a relevant indicator of value provides further evidence of the interrelationship of the three approaches. The basic concept of the Cost Approach is that the replacement cost of the improvements, less accrued depreciation, plus land value "assumed vacant" equals an estimate of the property value. The accrued depreciation estimate is where the relationship between the Cost Approach and the Income Capitalization Approach is inescapable. While one can estimate physical deterioration on an independent basis, the estimates of functional and economic obsolescence are based on the current economics of the property relative to the market. As a result, the calculation of the obsolescence

resulting from functional and economic abnormalities is circular, and therefore the value estimate by the Cost Approach would always approximate the Income Approach value estimate unless the market was perfectly in balance.

Despite this fact, a Cost Analysis is an integral part of the valuation process, particularly as it relates to office buildings, industrial properties, apartments, hotels, and some retail properties. The term "Cost Analysis" was used because the relevant point of reference is the replacement cost of the property. Particularly in recent years, the replacement cost of a property relative to the price is a decision point in a majority of the purchaser's analysis. From an analytical perspective, it is one of the critical inputs when estimating future movement in rental rates. Analysis of future rent estimates revolves around market equilibrium, and therefore the issue of cost-feasible rent levels.

In markets where current rent levels are depressed because of over-supply situations, the extent of upward movement in rental rates will be a function of cost-feasible rent levels. The current market recovery has demonstrated that "rent spikes" are a market reality. The extent of those increases will be affected by that cost-feasible rent number, since once cost feasible rent levels are achieved in

Exhibit 2



the marketplace new construction will typically become a reality. The point is that understanding the dynamics of that market process is contingent upon having an estimate of the replacement cost of the property as a basis.

## CONCLUSION

While there are innumerable theoretical nuances to the various issues raised in this discussion, the fact remains that the ultimate estimate of value is based upon an inseparable interrelation of the three traditional approaches to value. *Exhibit 2* illustrates some of the primary connection points.

These interrelationships are critical in arriving at a reliable estimate of value. Assumptions derived from one approach form the basis for the analysis in another. In fact, since assumptions that are explicit in one approach are implicit in another approach, wide variations in value estimates from the three approaches for a particular property would tend to indicate that the analysis in one of the approaches is flawed. The use of various tests of reasonableness in an appraisal can be a very powerful tool to demonstrate the reliability of the value estimate. Therefore, a thorough Market Approach encompassing the Cost Analysis, Income Capitalization Analysis, and Sales Comparison Analysis is critical to the appraisal process.<sup>REI</sup>

## NOTE

*This is an adaptation of an article that first appeared in the September/October 1997 issue of Valuation Strategies (RIA); it has been reprinted with permission. This rendition is the first in a series of three articles by this author; two additional articles, written specifically for of Real Estate Issues, will follow in upcoming editions of this journal.*

## REFERENCES

1. *The Appraisal of Real Estate* (Appraisal Institute, 11th ed., 1996), p. 81.
2. See Wincott, Hoover, and Grissom, "Capitalization Rates, Discount Rates, and Reasonableness," in *Real Estate Issues*, The Counselors of Real Estate (Chicago, August 1996).