The Applicable Method for Valuation of Undeveloped Land for Which There Is No Current Market

Initiation, Chair responsibility,
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1. Introduction

The Opinion here presented deals with the valuation of wilderness land, mountain land, unused rural land, or, in more general terms, with that kind of land for which there is no demonstrable or determinable *current* market. The kind of land considered in this discussion is characterized by the fact that it is not put to any utilitarian use as of the valuation date. Two subclasses of this kind of unused land may be distinguished:

1. Land that has, in effect, no foreseeable future utilitarian use, that is to say, land the possible future use of which is so uncertain, remote, and speculative that no value can be ascribed to it.

2. Land that, while currently unused, does have a future utilitarian use that can be forecast with some degree of probability

It is the Opinion of the College of Fellows of the American Society of Appraisers (ASA) that land in the first category of unused, currently nonmarketable land has either *no* current value or an indeterminate current value, but that land in the second category can be valued by the method given hereinafter.

2. Appraisal Principles and Definitions

In the Opinion of the College, the following principles and definitions are applicable to the subject case:

2.1 Definition of Property

For the purpose of valuation, all of the legal rights to the future benefits derivable from something owned or possessed to the exclusion of other persons are defined as a *property*. The something owned may be tangible, intangible, or both.

2.2   *The Principle of Generation of Property Value*

The value of a property is generated by the expectancy of (future) benefits of ownership. The value, at a specified date, of the rights encompassed in an ownership is derived from the whole series of expected future net benefits. In any one year the net benefits may be positive, zero, or negative. Upon the termination of the ownership there may be a final benefit in the form of a net monetary return from the sale of the property. The series of expected net benefits, thus defined, begins with the valuation date and continues to the date the ownership terminates.

2.3   *Classification of Property for Purpose of Valuation*

Properties are classified for the purpose of valuation in accordance with the nature and character of the benefits derivable from the specified ownership under consideration. The classifications are:

2.31   Investment Property

Any property that is expected to produce owner benefits in the form of direct monetary returns.

2.311   Net Monetary Return

In the case of an investment property, the difference between the receipts and disbursements in any accounting period.

2.32   Marketable Noninvestment Property

Any property that does not possess the characteristic of generating monetary returns but that is of such a nature that the benefits of ownership are derived by use and/or consumption by the owner *and* that is of a type commonly bought and sold.

2.33   Service Property

Any property that does not possess the characteristic of generating direct monetary returns and that is *not* of a type commonly bought and sold but that is expected to produce benefits of ownership by use and/or consumption.

2.34   Hybrid Property

Any property for which the benefits of ownership are such that it cannot be exclusively classified as investment, marketable noninvestment, or service property.

2.4   *Earning Expectancy*

The series, beginning at a specified time, of the expected (future) net monetary returns from an investment property. In any year the net monetary return may be positive, zero, or negative.

2.5   *The Principle of Present Worth of an Earning Expectancy*

The present worth of the earning expectancy of an investment property is that specific capital amount of money which a purchaser is warranted in paying for the property, taking into account the investment risk involved.

The present worth of an expected *single* net monetary return is calculated by the equation,

$$w = r/(1+i)^n$$

where

    w = the present worth of the expected single net monetary return, in dollars;

    r = the dollar-amount of the expected single net monetary return;

    i = an annual yield rate, expressed as a decimal fraction (and more fully described below); and

    n = the number of years from the valuation date to the year in which the single net monetary return is expected to be received.

If the amount of the present worth, w, is invested and if it earns at the annual rate, i, compounded for n years, it will accumulate to the amount of the single net monetary returns, r. Therefore, the single net monetary return is *equivalent* to the amount of the present worth under the conditions stated. The accumulated amount, r, is comprised of the initial invested capital, w, and the accumulated yield. A purchaser of the right to receive the single net monetary return expects not only to receive a remunerative yield but to *conserve his capital* as well. This is the Principle of Present Worth of an Earning Expectancy.

The present worth of the entire series that comprises the earning expectancy of the property is the sum of the present worths of individual expected net monetary returns.

2.6   *Investment Analysis Method of Valuation*

The investment analysis method is the applicable method for the valuation of an investment property. It is not applicable in the case of marketable noninvestment or service properties.

The investment analysis method of valuation comprises four steps:

1. a forecast of the earning expectancy of the subject investment property;

2. an estimate of the accuracy of this forecast;

3. an appraisal of the yield rate applicable in the subject case; this appraisal of yield rate is based on the estimate of the accuracy of earning expectancy forecast that is the measure of the investment risk involved in purchasing the property; and

4. the calculation of the present worth of the earning expectancy.

2.61   The Role of Mathematics in the Investment Analysis Method of Valuation

The deductive mathematical treatment used in the investment analysis method of valuation does not produce the data or the estimates or the forecast—it merely derives the conclusions that must follow logically from the data and the forecast.

2.62   Investment Value

The application of the investment analysis method to the valuation of an investment property gives the investment value of that property. In circumstances where there is a current market for a subject investment property, the investment value and the market value are one and the same thing, the marketability factor having been introduced in the appraisal of the yield rate at which the present worth is calculated.

2.63   Owner-Investment Value

In the case of currently unused land that has a future utilitarian use that can be forecast with some degree of probability, it can also be forecast that when the land is put to use, it will have a then market value as a result of that use, that is, it could be sold or leased. The current owner, therefore, has the expectation of monetary return or returns when such conversion takes place. The present worth of this expectation is the current investment value of the property to the current owner or, in other words, the owner-investment value.

In the case of some unused land parcels, it may be possible to find a buyer who will pay a price equal to the owner-investment value, while in other cases it may not be possible to find such a buyer and an owner who is not forced to sell will not accept whatever price he can get in the *current* market, he will hold the property for future disposal or until he himself can put it to use. In such a situation, the property is described as "currently nonmarketable" and its value is *not* established by the "highest price the property will bring when exposed for sale in the *open* market."

3.   Method for Valuation for Unused, Currently Non-Marketable Land for Which a Creditable Future Economic Use Can be Forecast

In the Opinion of the College, the applicable method for the valuation of unused, currently nonmarketable land for which a credible future utilitarian use can be forecast is the investment analysis method (Sec. 2.6).

3.1   Hypothetical forecast

Judicial rulings that deny to the appraiser the use of forecasts of future use of land and of the expected monetary results involved in such forecasts usually state that such forecasts are hypothetical, speculative, and remote and are not a proper basis for the determination of market value—that the proper basis for the appraisal of market value is the sale prices of comparable properties. The courts also reserve to themselves the right to decide which of the comparable properties used by the appraiser are admissible in evidence. From the foregoing outline of the investment analysis method and the explanation of the necessity for its use in the valuation of land in the herein described category, it is clear that the only proper land-conversion forecast is one which *actually can be expected to occur*. Such a forecast is not hypothetical or speculative in the sense that the forecasted events could happen or might happen. It is incumbent upon the appraiser to establish the de-

gree of probability that the forecasted conversion actually will occur. The higher the degree of such probability, the lower the yield rate used in making the valuation.

4.   "Value in Use" versus "Value in Exchange"

The legal dictum that "comparable sales are the best evidence of value" apparently derives from the establishment of market prices of commodities, common stocks, and other fungible properties by continuous trading in an open market. If attention is confined solely to this class of property, one is tempted to conclude that marketability generates the value. But it is our opinion that the reverse is the case: the "value in use" generates the marketability.

It is our opinion that the value-in-exchange concept, namely market value, derived solely from prices paid for identical or equivalent properties without any consideration of the future benefits of ownership, is inapplicable in the case of undeveloped land for which there is no current market.

The assumption that marketability generates the value of a property has led to difficulties in the field of valuation. Not the least of these difficulties stem from the judicial ruling that "comparable sales are the best evidence" of value or, more precisely, "the prices at which comparable properties have sold are the best evidence of the value of a subject property."

When this dictum is applied to properties traded in units on an exchange and for which there is not only a current market but a more or less continuous market as well, the results are satisfactory. However, in the case of properties for which market quotations do not exist (real estate, business enterprises, patents, antiques original manuscripts, etc.) and for which the market is sporadic, deferred or nonexistent, the situation is different. Here the distinction between investment properties and marketable noninvestment properties is crucial, and yet, in practice, attempts are made by some to apply the principle without making a distinction between the two kinds of property.

In the case of the marketable noninvestment property, the rule is directly applicable only if sales of comparable property have taken place and, also, if it is reasonable to assume that a market exists for the subject property. Its strict application requires, first, a discovery, in each case, of what individual value elements are involved; second, the determination of the numerical magnitude of each such element; and third, a mathematical analysis of these magnitudes to relate them to the prices paid. This is the Sales Analysis Method. (In the case of some properties, however—for example, objects d'art—the value elements cannot be expressed numerically and the analysis used is a technique called Value Ranking.)

It is when attempts are made to apply the rule to investment properties that major difficulties appear. In the first place, the rule that "comparable sales are the best evidence of value" is by no means universally applicable, as pointed out above. Many investment properties are of a type not commonly bought and sold, and for some there is no market. A stone quarry, a refuse disposal pit, wasteland that some day may be converted to urban use, a manufacturing business making sewer pipe, and a railroad (considered as a single whole property) are investment properties that it would be quite impractical, if not actually impossible, to value on the basis

of comparable sales without giving consideration to the future benefits of owner-ship in each case. In the second place, even if sales of like properties were available in these cases, the problem of comparison remains. Comparison on the basis of physical characteristics—quantity of stone in the quarries, capacity of the refuse disposal pits, area of the wastelands, age and condition of the improvements of the sewer pipe companies, miles of track and number of cars of the railroad com-panies—would leave out many factors such as marketability of the products, man-agement, location, costs of operation, etc. In our opinion, the only practicable basis of comparison in these cases is the single value element possessed by all invest-ment properties, namely, *earning expectancy*. However, using earning expectancy as a basis for comparison involves forecasting of the series of net monetary returns and estimating the accuracy of this forecast, and this is nothing other than the investment analysis method of valuation, which could have been used at the out-set. In the third place, the comparable-sale technique is based on the existence of value elements that are *common* to both the subject property and the comparable properties but fails to take into account the *unique* value elements of a subject in-vestment property. In the investment analysis method, on the other hand, the ef-fects of such unique value elements are included in the earning expectancy fore-cast.

Addendum

In the foregoing Opinion, the discussion is limited (Sec. 3) to currently *unused* land for which there is no fair *current* market value. However, the conclusions of the College are equally applicable to land that is currently in use but that can rea-sonably be expected to be converted to a *higher* use, that is, a use that will develop a higher land value at some future time.