

Real estate appraisal

A **real estate appraisal** is a service performed, by an appraiser, that develops an **opinion** of value based upon the **highest and best use** of **real property**. The highest and best use is that use which produces the highest possible value for the property. This use must be profitable and probable. Also of importance is the definition of the type of value being developed and this must be included in the appraisal, ie market value, condemnation value, quick sale value, etc.

In the USA appraisal standards are the province of the Appraisal Foundation which is chartered by Congress and periodically publishes the **Uniform Standard of Professional Appraisal Practice** (USPAP). The USPAP state the minimum standards an appraiser/appraisal report must meet. State licensing was established in the early 1990s in the wake of the Savings and Loan "crisis". Licensure and enforcement are state functions. In addition, there are appraisal organizations, private not-for-profits, some of which date back to the Great Depression of the 1930s, such as the American Society of Farm Managers and Rural Appraisers, founded in 1929. Others were founded as needed and opportunity arose in specialized fields, such as the Appraisal Institute and the American Society of Appraisers (founded in the 1930s) and the International Right of Way Association and the National Association of Realtors (after World War II). These organizations all existed to establish and enforce standards, but their influence has waned as the government increases appraisal regulation.

Types of value

There are several types and definitions of value sought by a real estate appraisal. Some of the most common are:

- **Market Value** – The price at which an asset would trade in a competitive **Walrasian** auction setting. *Market value* is usually interchangeable with *fair market value* or *fair value*. However, the word "fair" is no in longer use when describing market value. The legal definition of market value is usually given by some variant of the following: "The most probable price at which a property would trade in an arms-length transaction in a competitive and open market, in which the buyer and seller each act prudently and knowledgeably and in which the price is not affected by any special relationship between them".
- **Value-in-use** – The net present value (NPV) of a cash flow that an asset generates for a specific owner under a specific use. Value-in-use is the value to one particular user, which may be above or below the fair market value of a property.
- **Investment value** - is the value to one particular investor, which may be above or below the fair market value of a property.
- **Insurable value** - is the value of real property covered by an **insurance policy**. Generally it does not include the site value.

It is important to distinguish between **market value** and **price**. A price obtained for a specific property under a specific transaction may or may not represent that property's market value: special considerations may have been present, such as a family relationship between the buyer and seller, or else the transaction may have been part of a larger set of transactions in which the parties had engaged. Another possibility is that a specific buyer would be willing to pay a price higher than the market value. Such situations often arise in corporate finance, as per example when a merger or acquisition is concluded at a price which is higher than the value represented by the price of the underlying stock. The usual rationale for these valuations is that the 'sum is greater than its parts', since full ownership of a company entails special privileges for the buyer for which he is willing to pay. Such situations arise in real estate/property markets as well (see **value-in-use**). It is the task of the real estate

appraiser/property valuer to judge whether a certain price obtained under a certain transaction is indicative of market value.

Market value definitions in the US

In the US, "Fair Market Value" and "Fair Value" are commonly used as accounting terms. The equivalent appraisal term is "Market Value." (USPAP Advisory Opinion 8.) USPAP defines Market Value as "a type of value, stated as an opinion, that presumes the transfer of a property (i.e., a right of ownership or a bundle of such rights), as of a certain date, under specific conditions set forth in the definition of the term identified by the appraiser as applicable in an appraisal".

Forming an opinion of market value is the purpose of many real property appraisal assignments, particularly when the client's intended use includes more than one intended user. The conditions included in market value definitions establish market perspectives for development of the opinion. These conditions may vary from definition to definition but generally fall into three categories:

- 1) The relationship, knowledge, and motivation of the parties (i.e., seller and buyer);
 - 2) The terms of sale (e.g., cash, cash equivalent, or other terms); and
 - 3) The conditions of sale (e.g., exposure in a competitive market for a reasonable time prior to sale).
- (Definitions: USPAP 2005.)

In the US, a typical definition of market value can be found on the FNMA residential appraisal forms, as the FNMA 1025, which states the following:

DEFINITION OF MARKET VALUE: *The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller, each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby: (1) buyer and seller are typically motivated; (2) both parties are well informed or well advised, and each acting in what he or she considers his or her own best interest; (3) a reasonable time is allowed for exposure in the open market; (4) payment is made in terms of cash in U. S. dollars or in terms of financial arrangements comparable thereto; and (5) the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions* granted by anyone associated with the sale.*

*Adjustments to the comparables must be made for special or creative financing or sales concessions. No adjustments are necessary for those costs which are normally paid by sellers as a result of tradition or law in a market area; these costs are readily identifiable since the seller pays these costs in virtually all sales transactions. Special or creative financing adjustments can be made to the comparable property by comparisons to financing terms offered by a third party institutional lender that is not already involved in the property or transaction. Any adjustment should not be calculated on a mechanical dollar for dollar cost of the financing or concession but the dollar amount of any adjustment should approximate the market's reaction to the financing or concessions based on the appraiser's judgment. (FNMA form 1025, March 2005.)

Types of ownership interest

- **Fee simple value** - the most common type of value sought. It is the [fair market value](#) of the [fee simple](#) interest in a property unencumbered by any external factors such as existing leases.
- **Leased fee value** - is probably the second most common value opinion sought. It is the property owner's interest in a property that is encumbered by existing long term leases which may be at, below, or above prevailing market trends.

- **Leasehold value** - is the lessee's interest in a leased property

Note that in the US, the above value nomenclature does not apply. In the US, the type of value needs to be examined separately from the ownership interest. Examples of US use would be a market value of a fee simple ownership interest, or an investment value of a leased fee interest, or a liquidation value of a leasehold interest.

Highest and best use

The [highest and best use](#) in real estate appraisal is the use that will render the maximum fair market value of a particular property. That use must be legally allowable, physically possible, financially feasible, and result in the maximum value for the property. The test of highest and best use is given to a property both as if vacant and as improved.

For example, "House A" in a residentially [zoned](#) area may have a *highest and best use as vacant* and a *highest and best use as improved* that are both the same. A similar "House B" in a commercially zoned area may have a *highest and best use as vacant* as a commercial lot and *highest and best use as improved* as a residence. If the value of the commercial lot *as vacant* in "House B" exceeds the value of house as a residence *as improved* plus demolition costs, the overall highest and best use of this property would be the *as vacant* value of a commercial lot.

Since vacant lots are not improved, such properties are generally given only the *as vacant* test.

The highest and best use is critical to real property valuation since in order to value a property at its fair market value, comparable properties with similar highest and best uses must be examined. In the "House B" scenario, comparing that house to other houses that do not have a similar highest and best use would result in an inaccurate value opinion.

In the US, the legally permissible aspect of highest and best use is very important. In some locations, the governing jurisdiction can use the "police power" concept to destroy illegally built improvements. This would obviously affect the market value of a property. This overall concept is logical, ie. a governing agency would be remiss to allow a toxic chemical plant to be built in the middle of a suburban area.

Three approaches to value

There are three usual approaches to determining the fair market value of a property: [cost approach](#), [sales comparison approach](#), and [income approach](#). The appraiser will determine which of the approaches is applicable and develop an appraisal based upon information from each individual market area. Costs, income, and sales vary widely from area to area and particular importance is given to the specific location of the property.

Consideration is also given to the market for the property appraised. Properties that are typically purchased by investors (ie. skyscrapers) will give greater weighting to the Income Approach, while small retail or office properties (purchased by owner-users) will give greater weighting to the Sales Comparison Approach. Single Family Residences are most commonly valued with greatest weighting to the Sales Comparison Approach.

Cost approach

The **Cost approach** is sometimes called the summation approach. The theory is that the value of a property can be estimated by summing the land value and the depreciated value of any improvements. It is the land value, plus the cost to reconstruct any improvements, less the depreciation on those improvements. The value of the improvements is sometimes abbreviated to RCNLD—reproduction cost new less depreciation, or replacement cost new less depreciation. Reproduction refers to reproducing an exact replica. Replacement cost refers to the cost of building a house or other improvement which has the same utility, but using modern design, workmanship and materials.

In most instances, when the cost approach is involved, the overall methodology used is a hybrid of the cost and market data approaches. For instance, while the cost to construct a building can be determined by adding the labor and materials costs together, land values and depreciation must be derived from an analysis of the market data. This approach is typically most reliable when used on newer structures, but the method tends to become less reliable as properties grow older.

Observe that as the Cost Approach has non-market based components (costs), the approach may not be a good indicator of market value, even when new. This is most noticeable on properties where the market demand is limited. Say for example a military base. The cost to produce the base is not indicative of its market value, even when new. In the US, the government is the only party that would be willing to "buy" this product. This immediate "loss" is a form of obsolescence.

Also observe that this includes "home improvements" that do not recover their costs in the market. A common example in California is the cost of a pool. In most houses, the cost to build a pool is far greater than the increase in market value to the house. This immediate "loss" is again, a form of obsolescence. Accurately determining obsolescence and depreciation (as the property ages) are usually the main problems within the Cost Approach to open market value.

The underlying premise of the cost approach in appraising market value is that building a substitute property is an alternative to someone who wishes to own such a property. While age is a fairly obvious constraint on that premise, developed urban areas present their own challenges. For instance, if there is little or no vacant land available in a neighborhood, the premise breaks down. For that matter, with that problem come practical problems. Appraising land value becomes pretty subjective with a scarcity of relevant land sales. But also, estimating construction cost becomes problematic because of an absence of similar construction from which to derive costs. Not only are building codes frequently different in central, developed, urban areas, but the small number of houses built do not admit of the economies of scale available in the suburbs.

Notwithstanding, the latter challenge must be accepted for insurance purposes. Insurers are interested in insuring structures, not the value of the whole property. After a major disaster, for instance the Oakland Hills Fire of 1991, some perspective is gained on the actual cost of urban construction. The perspective may be through a distorted lens, however. While builders uniformly maintained that costs exceeded those published in cost manuals, the replacement houses, almost as uniformly are larger than those they replaced.

One of the interesting issues in the cost approach is the influence of classical economics. In the example of the swimming pool, above, or many other "home improvements" the relevant question to the homeowner is microeconomic. It is not what the modification in question costs, but rather whether he can modify his existing home more easily and cheaply than buying another house which already has those features. Even in a static market transaction costs related to selling and buying favor home improvements. In an inflationary market, adding the cost of the "improvements" to a decade old cost basis in the property compounds the effect. In a wildly inflationary market it is even dangerous to give up your present home in the hope of replacing it. The

price of the replacement home becomes a moving target. This, of course, tends to exacerbate inflation by limiting, at least in the short run, supply.

Sales comparison approach

The **sales comparison approach** looks at the price or price per unit area of similar properties being sold in the marketplace. Simply put, the sales of properties similar to the subject are analyzed and the sale prices adjusted to account for differences in the comparables to the subject to determine the fair market value of the subject. This approach is generally considered the most reliable, IF good comparable sales exist. In any event, it is the only independent check on the reasonability of an appraisal opinion.

Because this approach applies market derived numeric factors to relate the sold properties to the one being appraised, it is related to Automated Valuation Modeling, below. An interesting perspective on the relationship between relatively subjective human estimation as compared with that obtained by purely mathematic modeling is contained in "Simple Heuristics That Make Us Smart" by Gerd Gigerenzer. Dr. Gigerenzer, a psychologist, asked people to estimate some real world facts based simply on their knowledge, experience and impressions. Common knowledge and some simple rules created models which were close to those produced by multiple regression analysis (MRA) and neural networks. The predictive value of the human models applied to a new sample was a bit better than the mathematical models, suggesting that the mathematical models may have described the data better but missed the predictive relationships. Similarly automated valuation models frequently find building size (square feet or meters) predictive of value, even when that information is not explicitly advertised. This is similar to the example in "The Wisdom of Crowds", Surowiecki, in which the scientist Francis Galton observed a crowd at a fair to, on average, accurately estimate the size of an ox.

Income capitalization approach

The **income capitalization approach**, often simply called the **income approach**, is used to value commercial and investment properties. This approach capitalizes an income stream into a [present value](#). This can be done using revenue multipliers or single-year [capitalization rates](#) of the [net operating income](#). The Net operating income (NOI) is gross potential income (GPI), less vacancy (= Effective Gross Income) less operating expenses (but excluding debt service or depreciation charges applied by accountants).

Alternatively, multiple years of net operating income can be valued by a [discounted cash flow](#) analysis (DCF) model. The DCF model is widely used to value larger and more expensive income-producing properties, such as large office towers.

Valuation methods (Used overseas)

- (1) *Comparable method*. Used for most types of property where there is good evidence of previous sales. This is analogous to the sales comparison approach outlined above.
- (2) *Investment/income method*. Used for most commercial (and residential) property that is producing future cash flows through the letting of the property. If the current **rental value** and the **passing income** are known, as well as the market-determined **equivalent yield**, then the property value can be determined by means of a simple model. Note that this method is really a comparison method, since the main variables are determined in the market. In standard US practise, however, the closely related capitalising of NOI is confounded with the DCF method under the general classification of the income capitalization approach (see above).
- (3) *Accounts/profits method*. Used for trading properties where evidence of rates is slight, such as hotels, restaurants and old-age homes. A three-year average of operating income (derived from the profit and loss or [income statement](#)) is capitalised using an appropriate yield. Since any income stream can be simulated by an appropriate choice of yield, this method is comparable to DCF (see above). Note that

since the variables used are inherent to the property and are not market-derived, the resulting value is **value-in-use** and not **market value**.

(4) *Development/residual method*. Used for properties ripe for development or redevelopment or for bare land only.

(5) *Contractor's/cost method*. Used for only those properties not bought and sold on the market. Both the development/residual method and the contractor's/cost method would be grouped in the US under the cost approach (see above).

Automated valuation models

Automated valuation models (AVMs) are growing in acceptance. These rely on statistical models such as multiple regression analysis and geographic information systems (GIS). While AVMs can be quite accurate, particularly when used in a very homogeneous area, there is also evidence that AVMs are not accurate in other instances such as when they are used in rural areas, or when the appraised property does not conform well to the neighborhood.

This is most evident where there is a renewal or "revitalization" of a particular area or neighborhood. There can exist within a single city block homes that are in poor condition to homes that have been completely rehabilitated and are in good to excellent condition. The differential of sales prices can be demonstrated to be from 50% to 125%. This can lead to an inaccurate model. In San Francisco, California, something like half of price can be predicted using readily quantified measures and a multiple regression (MRA) AVM. In suburban Redwood City, California, by contrast, over 90% of price can normally be captured. Extreme caution should be exercised when relying on AVMs, especially if the user is unfamiliar with modeling and the math.

Because of the limitations, AVMs have begun to fall out of favor with many lenders but are widely used in other appraisal problems such as mass appraisals for [ad valorem](#) real estate tax purposes. One of the problems of using AVMs for lending purposes is control of inputs and results. Everyone in the loan origination process is interested in some way in making the loan. Modifying the inputs (boundary of comparable search, even size of building) to create a favorable answer is a mighty temptation. Even foreclosure is unlikely to result in regret if the mortgage has been securitized and the originator gets paid to service the loans in the package. In property tax assessment, by contrast, there are contesting interests and a quasi-legal dispute resolution process. The assessor, arguably, wants assessments as high as defensibly possible. The taxpayers, clearly, want their assessments low. Disputes are normally adjudicated in assessment appeal. The county assessor is frequently an elected office. The contest of interests tends to refine the accuracy of the valuation results.

USPAP

In the United States, the rules of real estate appraisal are codified in the **Uniform Standards of Professional Appraisal Practice** (USPAP) developed by the Appraisal Standards Board which is authorized by Congress as the source of appraisal standards. USPAP guidelines set standards for real estate appraisal practice in the United States. USPAP was developed after the **Savings and Loan scandal** of the late **1980s** when real estate appraisal in almost all states was an unregulated industry. Government regulations such as the **Financial Institutions Reform, Recovery and Enforcement Act of 1989** (FIRREA) called for stricter guidelines on the appraisal industry. USPAP was developed to protect lenders against unethical and incompetent appraisers. Ironically, the core framework of USPAP is the code of practice of the Society of Real Estate Appraisers. Founded along with others in the 1930's, primarily to serve the banking industry, it lost membership following banking deregulation in the 1980's and merged with the Appraisal Institute (AI). The AI designation "SRA", or "Senior Residential Appraiser" is a vestige.

In the US, the appraisal licensing of individuals is left to the states. However all appraisals for a "Federally Related Transaction" must be performed by an appraiser with the appropriate type of license, and conform to USPAP. The individual states decide if licensing is required for other types of appraisals.

The largest and most influential professional organization of real estate appraisers in America is The Appraisal Institute, but other organizations, such as the American Society of Appraisers and the National Association of Master Appraisers were also founding sponsor-members of the Appraisal Foundation.

Further reading

- *The Appraisal of Real Estate, 12th Edition*, by the Appraisal Institute is an industry-recognized textbook.
- *Real Estate Investment; A Capital Market Approach*, by Gerald R. Brown and George A. Matysiak (London, 1999)
- *The Uniform Standards of Professional Appraisal Practice*, by The Appraisal Foundation, updated and published annually through the 2006 edition; henceforth, updated editions are to appear biannually.