

Chapter 5

The Appraisal Process

Section 5 - The Appraisal Process

Most people are familiar with the single-property [appraisal](#). It is a single-property appraisal that is used by banks for mortgaging and refinancing decisions. [Assessors](#) also use single-property appraisals for unique properties and for [abatement](#) appeals. Most [assessed values](#) are determined with the use of [mass appraisal](#). There are differences between the two types of appraisals, mostly in scale and in quality control. However, both types of appraisals follow the same basic process.

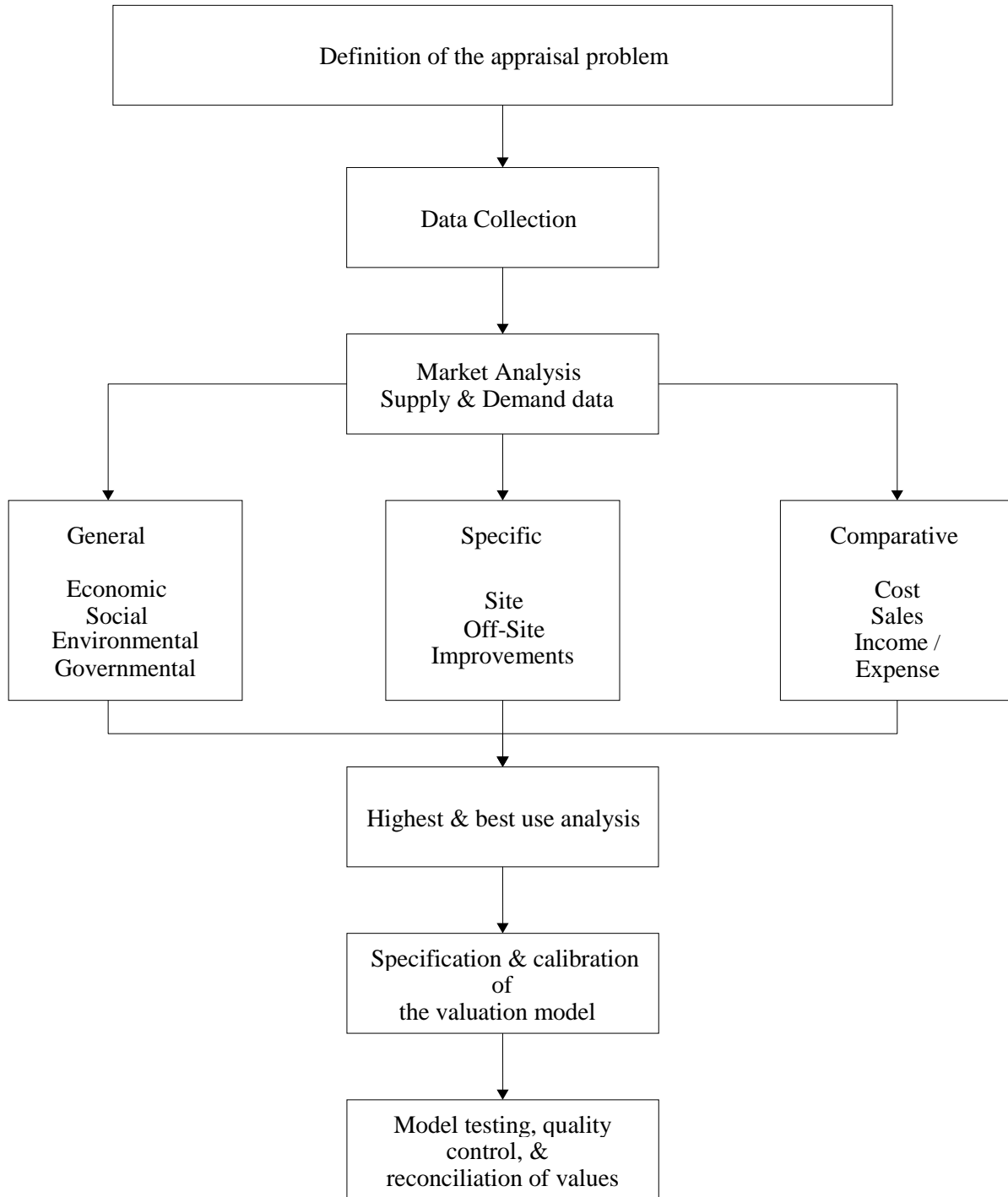
According to the Fundamentals of Real Estate Appraisal¹, there are eight steps in the appraisal process.

- 1) State the problem
- 2) List the data needed and the sources
- 3) Gather, record and verify the necessary data
 - a) General data
 - i) Nation
 - ii) Region
 - iii) City
 - iv) Neighborhood
 - b) Specific data
 - i) Subject site
 - ii) Improvements
 - c) Data for each approach
 - i) Sales data
 - ii) Cost data
 - iii) Income and expense data
- 4) Determine the highest and best use
- 5) Estimate the land value
- 6) Estimate value by each of the three approaches
- 7) Reconcile the estimated values for the final value estimate
- 8) Report the final value estimate

The International Association of Assessing Officers portrays the Appraisal Process in a similar fashion. The chart on the next page is the IAAO's illustration of the process.

¹ Fundamentals of Real Estate Appraisal, Dearborn Real Estate Education, Chicago, Ill, 2001, pages 59-62

Mass Appraisal Process



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² International Association of Assessing Officers, Mass Appraisal of Real Property, 1990, (Chicago; IAAO), p. 13.

Section 5.1 - State the Problem

In stating the problem, the [assessor](#) must:

- 1) Identify the properties to be appraised.
- 2) Identify the property rights to be appraised.
- 3) Provide a definition of the value to be estimated.
- 4) Define the purpose and intended use of the [appraisal](#).
- 5) Identify the effective date of the appraisal and identify any limiting conditions.

For assessing purposes, the [fee simple](#) rights of all [real property](#) located in the Town must be appraised.

RSA 75:1 provides a definition of the value to be appraised. It states in part, "...*The selectmen shall appraise...all other taxable property at its market value. Market value means the property's full and true value as the same would be appraised in payment of a just debt due from a solvent debtor. The selectmen shall receive and consider all evidence that may be submitted to them relative to the value of property, the value of which cannot be determined by personal examination.*" For assessing, the purpose and function of the appraisal is to be used by the governing body to determine [assessed values](#) for property taxation.

In the State of New Hampshire, the date of the appraisal is April 1 of the tax year.

Section 5.2 - Data Collection and Market Value Influences

The data needed for a municipality will depend on the types of properties located in that Town. The more varied and complex the types of properties, the more data will be needed. Assessors are also limited by lack of access to proprietary information, such as income and [expense](#) information for commercial or industrial properties. For assessors, the [property record card](#) is used to gather the physical data needed to assess [property](#). The county registry of deeds provides [sales data](#). [Cost manuals](#) and local contractors can be used to provide cost data. Realtors and local [appraisers](#) can be used for sales data and income and expense data. Property owners are an important source of data.

Section 5.3 - Gather, Record and Verify the Necessary Data

The data collection phase is one of the most important phases of the process. For assessing, this is where the assessors visit each home and gather the information for the property record card. This phase also includes gathering sales, [cost](#) and income data, determining which sales are qualified and to be used in the sales analysis, which cost data is most relevant to the municipality, if and which data can be used for an [income approach](#) to value.

The most often repeated quote about real estate relates the three most important factors, "location, location, and location." While humorous, it underlines a significant truth about the nature of property value: it is often [factors](#) outside of the property boundaries that establish value.

Most real estate consumers understand the importance of location. A house that is located steps from the ocean likely has more value than a similar one miles away from the water's edge. A retail building on a busy street likely has more value than one located on a quiet, dead end street. An apartment building close to schools or commuting routes likely has more value than one located far away from these amenities. The stately home located in an area of other similar properties likely has more value than a comparable one located next to the municipal landfill.

At its very heart, the property tax is a tax on value. Revaluations use [mass appraisal](#) that must recognize all [factors](#) that influence the value of [property](#), both in a negative and positive direction. These factors may be different in different locations. For this reason, the mass appraisal is indexed to local conditions and uses locally obtained and adjusted information to determine values.

Some value influences can affect an entire municipality or region. Entire municipalities may be “close to skiing.” Whole counties may be “fantastic commuting locations.” Significant areas of our state are quiet country locations. For these reasons, a revaluation may not identify each and every separate factor that influences the value of property. Many of these common elements are assumed to exist for all similar properties in a municipality.

There are value influences that affect entire [neighborhoods](#). These may be as obvious as a location on or near a body of water, ski area, or golf course. They also may be as subtle as a location near a certain park or school, or in a particularly desirable area of the municipality. Whether subtle or obvious, the mass appraisal must account for all of these value influences.

There are also value influences that affect individual properties. These can include such things as water [frontage](#), water access, panoramic views, highway views, proximity to industrial or commercial uses, and heavy traffic counts. These property specific influences may be difficult to isolate, but are critical in the development of accurate values.



Mass Appraisal:
Is the process of valuing a group of properties as of a given date. (April 1 in New Hampshire.)

The mass appraisal must recognize all value influences: regional, local, neighborhood, and, property. By understanding these [factors](#), accurate [market value](#) estimates can be made. Ignoring any of these factors could lead to inaccurate values, and establish a disproportionate system of taxation. Fairness requires that all factors be considered in [valuation](#).

View Assessments

There has been a lot of coverage and talk about the view assessment in New Hampshire and the following will help illustrate how the value of views are determined and how that value contributes to a property's overall assessed value rather than existing as a separate tax.

New Hampshire funds local government and public education, in large part, through a property tax system that is based on fair market value which is defined as “the price in which a willing

buyer and willing seller, both knowledgeable about real estate and under no duress, agree to transfer real estate from one to another.” In the not too distant past, market values were simply listed as land value and building value, but just as buyers and sellers have become more sophisticated and seek more detail about what they buy, taxpayers have also come to demand more detailed information about how assessed values are developed and what features make up the total value.

In an effort to provide transparency, assessors began to look at market sales and extract the value of different contributory components or features of a property. Land that had simply been listed as land and location became more detailed to include such characteristics as neighborhood, topography, waterfront, river frontage, road frontage, privacy and views. Buildings went from square feet of living space to include characteristics such as the number of rooms, number of bathrooms and bedrooms, style of house, story height, kitchen quality, heat type, and roof style and material. Despite all those added details, the consideration of market value has not changed.

The law requires assessments to be based upon market value, a requirement that has not changed; it remains the opinion of total market value based on local sales data. The change to provide more details has come as a direct result of the public’s desire to better understand how property values are developed. Property values are made up of individual components that equal one whole value; however, the perception is that each component of value is in addition to the market value. A view is a feature unique to each individual site. It is one component, one part of what makes up the total market value and has never been in addition to the total market value.

Fair market value is the staple of New Hampshire’s property tax system and the only way to equitably value property. An opinion of market value is subjective and that will not change unless buyers and sellers of property start buying and selling property based on objective measures and stop considering factors such as quality, condition, location and depth of waterfront or views and other characteristics, positive or negative. Buying and selling is emotional, it contemplates likes and dislikes and personal feelings which are subjective and very different from person to person. For example, a house with a swimming pool may have one buyer that might be willing to pay more for a home with a pool but another buyer would not contribute a value to a pool because it is simply not important to them.

To maintain fair and equitable assessments, assessors follow the subjective behaviors of buyers and sellers that create market trends and sales data. Using established analytic tools, the contributory value of each individual property feature of a sale is identified, extracted and valued. When the individual property features are added together, the total is the market value (sale price). Equipped with market-based feature values, a valuation model is developed to systematically calculate the value of similar properties in the community based upon the presence or absence of specific property features. This process creates consistent, equitable values, is required under the law and causes everyone to be treated the same way.

**What we can measure we should measure with precision;
What we cannot measure precisely, we should estimate reasonably.**

This is not an easy task and is why assessors must meet certain qualification requirements to be certified by the NH Department of Revenue Administration. This certification includes specialized training, continuing education and a minimum of four years of experience to become an assessor.

As with other professions, this one is not error free and mistakes do happen. New Hampshire has procedures in place to correct these mistakes when they occur. The first is the local abatement process. If the local decision is not satisfactory to a taxpayer, they may appeal the local decision to either the Board of Tax and Land Appeals or Superior Court.

How Views Are Assessed

One method is a paired sales analysis that can be used to determine the contributory value of different views. This means the sale of a parcel of land with no view (or other positive contributing factor) is compared to the sale of a similarly sized and located lot that does have a view assuming all other characteristics are similar. After several of these comparisons are done, a range of view is determined, a view can be more accurately described and the values can be applied similarly to non-sale properties to ensure all values are fairly and equitably assessed. The following illustrates this method:

Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
1.	4.10 acres \$25,000	4.09 acres \$120,000	\$95,000



Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
2.	12.09 acres \$47,000	11.83 acres \$240,000	\$193,000



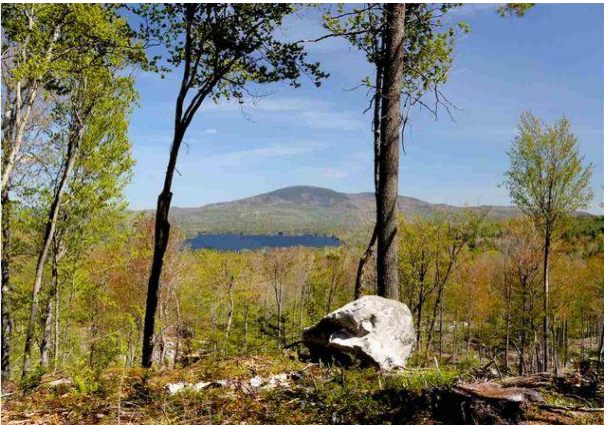
Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
3.	5.71 acres \$63,000	5.21 acres \$205,000	\$142,000



Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
4.	2.10 acres \$57,000	2.00 acres \$201,000	\$144,000



Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
5.	5.83 acres \$85,000 (min.vu)	5.14 acres \$235,000	\$150,000



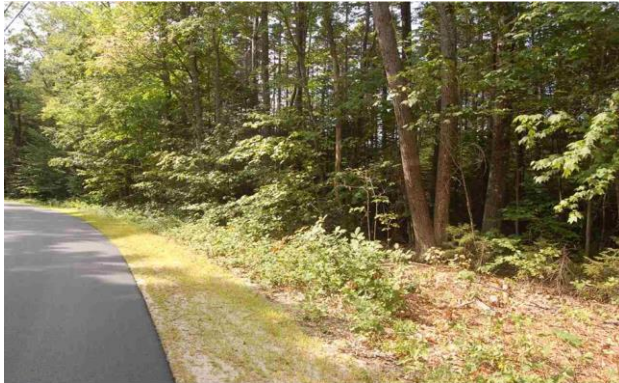
Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
6.	2.98 acres \$39,000	3.44 acres \$113,000	\$74,000



Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
7.	12.09 acres \$47,000	12.42 acres \$215,000	\$168,000



Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
8.	5.05 acres \$48,000	4.53 acres \$132,000	\$84,000



Coldwellbankerhomes.com - Sales 1, 4, 5, 6 & 8 no view & 2, 3 with view
Estate.ly.com – Sales 2 & 7 no view, sale 5 with view

Pelletiergroup.com – Sale 3 no view
redfin.com sale 1 view
lindemac.com sale 4 with view
lakefarm.com sale 6 with view
snyderdonegan.com sales 7 & 8 with view

The analysis of these 8 paired sales produces a view value range of \$74,000 to \$193,000. Each view can be described in detail and then when the town-wide field review is completed, all view properties are compared to the sale properties and applicable view values applied to reflect the actions of the market and ensure consistent application.

Views are not always positive contributors. There are many instances where an unsavory view has a negative impact on market value. The illustrations are more difficult to find as your local realtor does not generally highlight these types of features but the following is an example.

Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
9.	4.5 acres \$46,000	4.3 acres \$30,000	-\$16,000



Sale #	Sale 1 No View	Sale 2 View	Contributory Value of View
10.	1.5 acres \$39,000	1.7 acres \$25,000	-\$14,000



Another valuation method would be to develop base land and building values in a community based on all of the qualified sales transactions. Once that is complete, you can extract the contributory value of the view so long as there are no other factors affecting the value of the property such as waterfront, etc.

For example:

Sale Price	Less Already Established Land & Building Value	Contributory Value of View
\$525,000	\$400,000	\$125,000
\$600,000	\$325,000	\$275,000
\$379,900	\$289,500	\$90,400
\$475,500	\$389,900	\$85,600

Sale Price	Less Already Established Land & Building Value	Contributory Value of View
\$667,500	\$549,500	\$118,000
\$725,000	\$550,000	\$175,000
\$275,000	\$225,000	\$50,000

In this analysis, a range of view value is determined. As mentioned earlier, the views at each value range should be accurately described for what exists so similar non-view properties can have a similar view value applied. Once various views are analyzed and the market contributory value extracted, the assessor can then apply that value whenever the same view occurs, similar to land and building values. The difficulty occurs when more or less substantial views or completely different views are found in the town than were found in the sales data. When this occurs, the assessor, like all other real estate professionals, uses all the sales data available and then must provide an opinion of the contributory value of the view. To omit the contributory value of a view or any other feature (i.e. waterfront, finished basement, etc.) can lead to inequity within the community.

Section 5.4 - Highest and Best Use Analysis

Highest and Best Use: [Highest and best use](#) is defined, in part, as “...the reasonable and probable use that supports the highest present value as of the date of the appraisal. ...must be physically possible, legal, financially feasible, and productive to the maximum, that is, highest and best use.”³

³International Association of Assessing Officers, Property Appraisal and Assessment Administration, 1990, (Chicago: IAAO), p. 102.

Highest and Best Use of a site is determined based on the following:

Legally Permitted Uses: It must be determined which uses are legally permissible. [Private restrictions](#), [zoning](#), building codes, historic district controls, and environmental regulations must be investigated because they may preclude many potential uses.

Highest & Best Use:
 Legal Use
 Physical Use
 Economic Use
 Maximum Productive Use

Physically Possible Uses: All physical attributes must be considered and analyzed. The size, shape, area, terrain, and accessibility of a [parcel of land](#) and the risk of natural disasters such as floods or earthquakes affect the uses under which a parcel can be developed.

Economically Feasible Uses: After eliminating the uses that are not legally or physically feasible, the remaining uses are analyzed to determine which uses are economically feasible. This process determines which uses are likely to produce an income, or return, equal to or

greater than the amount needed to satisfy [operating expenses](#), financial obligations, and capital amortization. All uses that are expected to produce a positive return are considered economically feasible.

Maximum Productivity: Of the economically feasible uses, the use that produces the highest residual land value consistent with the rate of return warranted by the market for that use is considered the maximum productive use and also the [highest and best use](#) of the [property](#).

For the purposes of a [mass appraisal](#), unless specifically noted, the present use is typically assumed to be the highest and best use.

Section 5.5 - Estimate the Land Value

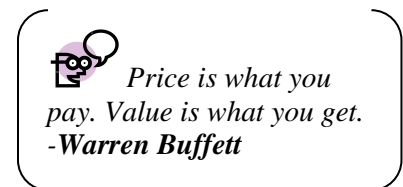
As discussed previously, location is one of the most important [factors](#) influencing [market value](#). The land value is a component of the cost approach and it is an important consideration in the [income approach](#) and the [sales comparison approach](#).

Section 5.6 - The Three Approaches to Value

There are three recognized approaches to value. They are the [cost approach](#), the income approach, and the sales comparison approach.

The Cost Approach

“The cost approach is based on the [principle of substitution](#), that a rational, informed purchaser would pay no more for a property than the cost of building an acceptable substitute with like utility.”³



In the [cost approach](#), the potential buyer is assumed to consider purchasing a substitute property with the same utility as the property being [appraised](#). The informed, rational buyer will pay no more for a property than the [cost](#) of producing a substitute property with the same utility as the subject property. Cost of production to the buyer includes all direct and indirect [construction costs](#), including builder's profit and overhead.

The necessary steps in the Cost Approach are as follows:

- A. Estimate the value of the [site](#) as if vacant and available to be put to its [highest and best use](#). The importance of this step is highlighted by Step 4 of the Fundamentals of Real Estate Appraisal, Estimate the Land Value. The [land](#) value is used directly in the cost approach, and it is also used as a basis for some adjustments in the [income approach](#) and the [sales comparison approach](#).
- B. Estimate the reproduction or [replacement cost new](#) of the [improvements](#).

³ International Association of Assessing Officers, [Property Appraisal and Assessment Administration](#), 1990, (Chicago; IAAO), p. 638.

- C. Estimate all of the elements of [accrued depreciation](#), which may include curable or [incurable](#) physical deterioration, curable or incurable [functional obsolescence](#), or [economic obsolescence](#).
- D. Subtract the total accrued depreciation from the cost new of the improvements. This results in an estimate of the depreciated cost new of the improvements.
- E. Add the total [present worth](#) of all improvements to the estimated site value.

The cost approach is most appropriate for new or fairly new buildings where the improvements represent the highest and best use of the site. A significant use of the cost approach is in the [valuation](#) of public buildings or certain types of special-use properties for which rental or [sales data](#) is limited. The principal difficulties in this approach arise in estimating viable construction cost figures, and also in estimating accrued physical, functional, and [economic depreciation](#) or [obsolescence](#), particularly in older properties. When developing the cost approach, the [appraiser](#) considers both the [direct cost](#) and [indirect cost](#) of a building. Below are examples of both direct and indirect costs.

Direct Cost Example:
Building materials & labor

Indirect Cost Example:
Financing, Insurance & Engineering fees

The Income Approach

“The income approach uses [capitalization](#) to convert the anticipated benefits of the [ownership](#) of property into an estimate of value.”⁴

Like the [cost approach](#) the [income approach](#) utilizes the [principle of substitution](#). It also uses the theory of anticipation. It is assumed that an investor is interested in an income flow of a certain size, certainty and timing and that the investor has little preference as to the source of this income flow. The investment in [real estate](#) can easily be substituted for investments in other alternative income producing vehicles.

Residential Property

For residential property the income approach consists of extracting a Gross Rent Multiplier (GRM) from the [market](#). This is achieved by dividing the [sale price](#) of a home that was rented by its monthly gross rent. Subsequently this [economic rent](#) for the subject property is derived from the market and this is multiplied by the GRM to estimate the [market value](#).

Commercial Property

For commercial property the income approach consists of dividing [Net Operating Income](#) (NOI) by a [capitalization rate](#). NOI is the Gross Potential Income (GPI) of a property less normal [operating expenses](#) and adjustments for anticipated vacancy and bad debt. A capitalization rate can be obtained by dividing the actual NOI by the sales price of comparable properties. An alternative

⁴ International Association of Assessing Officers, [Property Appraisal and Assessment Administration](#), 1990, (Chicago; IAAO), p. 647.

method of estimating a capitalization rate is a [mortgage](#) equity technique, which uses mortgage rates and expected rates of return on investor's [equity](#).

The income approach is not normally applicable to the [valuation](#) of vacant [land](#).

The Sales Approach

The sales approach is defined as “one of the three approaches to value that estimates a property’s value by comparing the subject property to other similar properties that have sold.”⁵

The sales approach is also based upon the principle of substitution that an informed purchaser would pay no more for a [property](#) than the [cost](#) to him/her of acquiring an existing property with the same utility.

The essential process of the sales approach is to convert actual, verified sale prices of competitive properties to a defined value estimate. The objective is to discover what competitive properties have sold for recently in the local market. Through an adjustment process, an indication of what the comparable properties would have sold for had they possessed all of the basic and pertinent physical and economic characteristics of the subject property. Indications of such adjusted sales prices are developed for several [comparable sales](#). These indications should fall into a pattern clustering around, or trending toward, a figure, which provides an indication of the most probable selling price for the subject property under specified market conditions, as of the date of the [appraisal](#).

Section 5.7 – Reconciliation

The final step in the appraisal process is to consider and analyze the relevance of the approaches to value in relation to the subject property and the reliability, quality and quantity of the data used in the approaches to value. The final value estimate is then based on the approach that is the most relevant and uses the most reliable and highest quality and quantity of data.

Section 5.8 – Report the Final Value Estimate

In response to concerns of transparency in assessing, the legislature created RSA 21-J:14-b, I(c), which charged the Assessing Standards Board with “the establishment of standards for revaluations based on the most recent edition of the Uniform Standards for Professional Appraisal Practice (USPAP). The Department of Revenue Administration shall, in its assessment review process, incorporate these standards and report its findings to the Assessing Standards Board and the municipality, in accordance with RSA 21-J:11-a, II. These guidelines standards shall be reported to the Assessing Standards Board for all reviews conducted on or after the April 1, 2006 [assessment year](#). These standards shall be incorporated in the assessment review process for all reviews conducted on or after the April 1, 2007 assessment year.”

Section 5.9 – Mass Appraisal Valuation

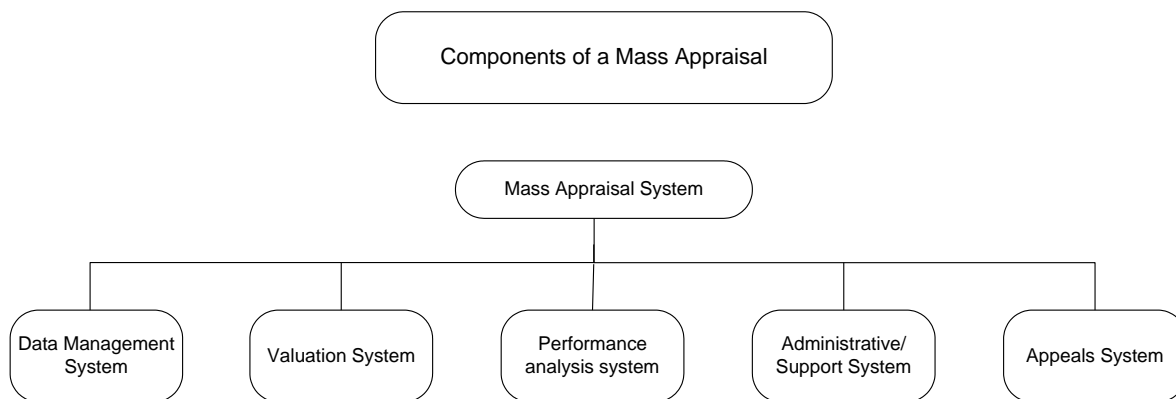
As defined by the International Association of Assessing Officers (IAAO), mass appraisal is “the process of valuing a group of properties as of a given date, using standard methods, employing

⁵ International Association of Assessing Officers, [Property Appraisal and Assessment Administration](#), 1990, (Chicago; IAAO), p. 82.

common data, and allowing for statistical testing.” Mass appraisal utilizes many of the same concepts as single [appraisal](#) property appraising, such as supply and demand, [highest and best use](#), and the principles of substitution and anticipation. In addition, in light of the necessity to estimate values for multiple properties, mass appraisal also emphasizes data management, statistical [valuation models](#), and statistical quality control.

A mass appraisal system generally relies on five primary sub-systems that include:

Components of a Mass Appraisal System⁶



Each sub-system is briefly described below:

Mass Appraisal Sub-Systems

Data Management: The data management system is the core of the mass appraisal system and should be carefully designed and implemented. Fundamentally, the data management system is responsible for the data entry and subsequent editing, as well as the organization, storage and security oversight of the data. Essential to the data management system is quality control, as the reliability of the data will have a direct and profound impact on the quality of the resulting output and values.

Valuation System: The valuation system comprises the statistical application of the [three approaches to value](#) (identified in the preceding section). For instance, utilization of the [sales comparison approach](#) would include statistical techniques such as a multiple regression analysis. The [cost approach](#) would utilize computerized cost and depreciation tables, and [reconciliation](#) of these computerized cost-generated values with [market](#)-derived sales information. The [income approach](#) can utilize computer-generated income multipliers and overall [capitalization rates](#). The valuation system is also utilized to extract adjustments and/or [factors](#) that are utilized in the development of values.

Performance Analysis System: The performance analysis system measures the effectiveness of the [mass appraisal](#). The following statistical techniques are used to analyze the reliability of the valuation system:

“**Ratio:**” Refers to the relationship between the [appraised](#) or [assessed values](#) and [market values](#) as determined by a review of sales. The ratio studies, which are the primary product

⁶ International Association of Assessing Officers, [Mass Appraisal of Real Property](#), 1999, (Chicago; IAAO), p. 31.

of this function, typically provide the most meaningful measures of [appraisal](#) performance and provide the basis for establishing corrective actions (re-appraisals), adjusting [valuations](#) to the market, and in administrative planning and scheduling. The requirement, as established by the New Hampshire Assessing Standards Board (ASB), is to maintain a [median](#) ratio between 90% and 110% of market value. (A ratio of 100% is preferred, indicating the assessed value is identical to the market value.)

“[COD](#),” or “Coefficient of Dispersion,” is another important tool utilized in mass appraisal, and refers to the average percentage deviation from the median ratio. As a measure of central tendency, the COD represents the degree to which the data being analyzed clusters around a central data point, such as the median ratio. The requirement, as established by the ASB, is a COD no greater than 20% (a lower COD is preferable to a higher COD).

“[PRD](#)” or “Price Related Differential:” This statistic measures the [equity](#) between [taxpayers](#) owning high-value properties versus taxpayers owning low-value properties. The PRD is calculated by simply dividing the [mean](#) ratio by the weighted mean ratio. A result of a number greater than 1.0, suggests higher value properties may be assessed at lower ratios than lower value properties. If the result is less than 1.0, the opposite is true.

Administrative/Support System: The administrative system includes core (often automated) functions as development of the [property record cards](#) and [assessment roll](#) or [property tax base](#), the preparation of the tax notices, and retention of the [appeals](#) and other miscellaneous property files.

Appeals System: A mass appraisal system must provide for the tracking and handling of appeals and reflect statutory requirements and local policies and strategies for reviewing and defending values. The system should have the ability to retrieve property documents, generate [comparable sales](#), schedule and track appeals, and notify property owners of results. The [assessor](#) should be able to track the number of appeals filed and resolved, the amount of value in dispute and changed and maintain appeal decisions for use in evaluation and defending future appeals.