



Valuation of real estate with non-identical properties of heterogeneous nature: An overview

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Abstract

Real estate appraisal and valuation is a key process required for a variety of purposes like financing, sales listing, investment analysis, property insurance, and taxation. Several factors influence the valuation of real estate properties. These factors can be broadly categorized into two groups: macroeconomic factors and property-specific factors. Macroeconomic factors are general economic factors which account for systemic risk in the valuation process whereas property-specific factors cover the unsystematic risks (risks that affect a specific property).

India's real estate market is experiencing significant growth, expected to reach a US\$ 1 trillion market size by 2030, contributing 13% to the GDP by 2025. The sector is driven by high demand for residential, commercial, and luxury properties, with rapid urbanization and strong investor confidence. Property prices are anticipated to grow by 5-10% in the short term, with 2025 seeing high demand in premium residential sectors.

Keywords: Discounted cash flow valuation, market value, relative valuation, value-in-use, valuer

Introduction

Real estate appraisal or property valuation is the practice of developing an opinion of the value of real property, usually its Market Value. The need for appraisals arises from the heterogeneous nature of property as an investment class: no two properties are identical, and all properties differ from each other in their location - which is the most important determinant of their value. The absence of a market-based pricing mechanism determines the need for an expert appraisal/valuation of real estate/property. A real estate valuation is performed by a licensed or certified appraiser or valuer, known as a property valuer, land valuer or surveyor. Real estate and financial assets share several common characteristics: Their value is determined by the cash flows they generate, the uncertainty associated with these cash flows, and the expected growth in cash flows. Other things remaining equal, the higher the level and growth in the cash flows, and lower the risk associated with the cash flows, the greater is the value of the asset.

There are also differences in the cash flows generated by the two groups: In particular, real estate investments often have finite lives, and have to be valued accordingly. Many financial assets such as stocks have infinite lives. The differences in asset lives manifest themselves in the value assigned to these assets at the end of the estimation period. While the terminal value of a stock is generally much higher than the current value on account of the expected growth in the cash flows and because they are expected to continue forever, the terminal value of a building may be lower on account of usage which might depreciate its usage. However, the land component will have an infinite life and, in many cases, may be the overwhelming component of the terminal value. This comes with a caveat. There may be instances where the land value may get depreciated on account of soil degradation and environmental pollution.

Types of Value

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

- 1. Market Value:** Market Value is usually interchangeable with Open Market Value or Fair Value. International Valuation Standards (IVS) define Market Value as: "Market Value is the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arms-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion".
- 2. 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, and is usually below the market value of a property.
- 3. Investment Value:** It is the value to one particular investor, and is usually higher than the market value of a property.
- 4. Insurable Value:** It is the value of real property covered by an insurance policy. Generally it does not include the site value.
- 5. Liquidation Value:** It may be analysed as either a forced liquidation or an orderly liquidation and is a commonly sought standard of value in bankruptcy proceedings. It assumes a seller who is compelled to sell after an exposure period which is less than the market-normal timeframe.

Market Value and Price are Distinct

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 special relationship between the buyer and the 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 special buyer may have been willing to pay a premium over and above the market value, if his subjective valuation of the property (its investment value for him) was higher than the Market Value. An example of this would be the owner of a neighbouring property who, by combining his own property with the subject property, could thereby obtain economies-of-scale. Such situations often arise in corporate finance, as for 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 would be that the 'sum is greater than its parts', since full ownership of a company entails special privileges for which a potential purchaser would be willing to pay. Such situations arise in real estate/property markets as well. It is the task of the real estate appraiser/property valuer to judge whether a specific price obtained under a specific transaction is indicative of Market Value.

Factors Affecting Real Estate Valuation

Macroeconomic Factors

- **Supply and Demand:** The balance between the supply of and demand for properties in a specific market area affects their value. High demand and limited supply can lead to increased property values.
- **Economic Conditions:** General economic conditions, such as GDP growth, employment rates, inflation, and interest rates, have a significant impact on real estate valuation.
- **Location:** The location of a property, including proximity to amenities, transportation, schools, and employment opportunities, plays a vital role in determining its value.
- **Market Sentiment:** Market sentiment and investor confidence can influence property valuations. Positive sentiment often leads to increased property values.

Property-Specific Factors:

- **Size and Features:** The size, layout, and features of a property, including the number of rooms, bathrooms, parking spaces, and additional amenities, affect its value.
- **Condition:** The overall condition of a property, including its age, maintenance, renovations, and structural integrity, impacts its valuation.
- **Comparable Sales:** Recent sales prices of similar properties in the vicinity provide valuable information for determining a property's value.
- **Income Potential:** For commercial properties or rental properties, the potential income generated by the property can significantly influence its valuation.

Three Approaches to Value

The three approaches to value are:

1. The Cost Approach,
2. Comparable or Relative Valuation, and
3. Discounted Cash Flow (DCF) Valuation.

The valuer will determine which one or more of these approaches may be applicable, based on the scope of work determination, and from that develop an appraisal analysis. Costs, income, and sales vary widely from one situation to the next, and particular importance is given to the specific characteristics of the subject.

Consideration is also given to the market for the property appraised. Appraisals of properties that are typically purchased by investors (eg. skyscrapers) may give greater weight to the income approach, while small retail or office properties, often purchased by owner-users, may give greater weighting to the sales comparison approach. While this may seem simple, it is not always obvious. For example, apartment complexes of a given quality tend to sell at a price per apartment, and as such the sales comparison approach may be more applicable. Single family residences are most commonly valued with greatest weighting to the sales comparison approach, but if a single family dwelling is in a neighbourhood where all or most of the dwellings are rental units, then some variant of the income approach may be more useful.

The Cost Approach

The cost approach was formerly 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. The value of the improvements is often referred to by the abbreviation RCNLD (reproduction cost new less depreciation or replacement cost new less deprecation). 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 practice, appraisers use replacement cost and then deduct a factor for any functional disutility associated with the age of the subject property.

In most instances when the cost approach is involved, the overall methodology is a hybrid of the cost and sales comparison approaches. For example, while the replacement cost to construct a building can be determined by adding the labour, material, and other costs, land values and depreciation must be derived from an analysis of comparable data.

The cost approach is considered reliable when used on newer structures, but the method tends to become less reliable for older properties. The cost approach is often the only reliable approach when dealing with special use properties.

Comparable or Relative Valuation

The Comparable or Relative Valuation approach examines 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 analysed and the sale prices adjusted to account for differences in the comparable to the subject to determine the value of the subject. This approach is generally considered the most reliable if adequate comparable sales exist. In any event, it is the only independent check on the reasonability of an appraisal opinion.

The method has the following advantages:

- They provide a mechanism for valuing non-cash-flow producing assets, such one's own residential property.
- It takes into account market trends.
- It is simpler as compared to the DCF method as it does not require estimation of discount rates and cash flows.

The key limitation of all approached based on comparability is in the definition of what is comparable. In the case of stocks, differences in growth, risk, and pay-out ratios

between stocks have to be adjusted for before price-earnings ratios are compared. Many analysts choose to restrict their comparisons of stocks to those within the same industry group, to keep it relatively homogenous.

In the case of real estate, differences in income production, size, scale, location, age, and quality of construction have to be accounted for before comparisons are made. While some of these adjustments such as differences in size are simple, others such as differences in location are subjective.

Use of standardized Value Estimates

When valuing assets based on comparable assets, the value has to be standardized for the comparison. In stocks, this standardization is often done by dividing the price per share by the earnings per share (PE) or the book value per share (PBV). In the case of real estate, this adjustment is made by:

- a. **Size:** The simplest standardized measure is the price per unit area such as square metre or square foot, which standardizes value using the size of the building.
- b. **Income:** The value of an asset can be standardized using its income. For instance, the gross income multiplier (price of property / gross annual income) is an income-standardized value measure. The advantage of this approach is that the income incorporates differences in scale, construction quality, and location.

The Discounted Cash Flow (DCF) Valuation

The Discounted Cash Flow (DCF) Valuation approach is used to value commercial and investment properties. In a commercial income-producing property this approach, also known as income 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.

The value of any cash-flow-producing asset is the present value of the expected cash flows on it. Just as DCF valuation models, such as the dividend discount model, can be used to value financial assets, they can also be used to value cash-flow-producing real estate investments.

In order to use DCF valuation to value real estate investments, it is necessary to:

- Measure the riskiness of real estate investments, and estimate a discount rate based on the riskiness.
- Estimate expected cash flows on the real estate investment for the life of the asset.

The risk and return models used for financial assets can be used for real estate as well, with attendant care and caution to account for the differences in the two classes of assets. There are problems associated with the assumptions of the traditional risk and return model and difficulties with the measurement of risk for non-traded real assets in these models. The survey approach is an alternative method, wherein the cost of equity and capital are obtained by surveying potential investors in real estate on what rates of return they would demand for investing in different types of property investments.

The cash inflows from a real estate investment generally take the form of rents and lease payments. Consideration has to give to past trends in rents, demand and supply conditions for space provided by the property, vacancy rate and general economic conditions. Cash outflows are expenses on real estate investments which include property taxes, insurance, repairs and maintenance, security, and advertising - which are fixed expenses, unrelated to occupancy - as well as expenses such as utility (power, water, air-conditioning, etc.) which are a function of occupancy and are variable.

To estimate future cash flows, we need estimates of the expected growth rate in both rents/leases and expenses. A key factor in estimating the growth rate is the expected inflation rate. Finally, in all DCF valuation models, a key input is the estimate of Terminal value, that is, the value of the asset being valued at the end of the investment time horizon.

Summing-up

Real estate valuation is a multifaceted process that requires expertise, market knowledge, and a thorough understanding of various valuation methodologies. By considering factors such as location, property characteristics, market conditions, and employing the appropriate valuation methods, we help our bankers to estimate the fair market value of a property. A comprehensive understanding of real estate valuation is essential for buyers, sellers, investors, lenders, and other stakeholders involved in real estate transactions, empowering them to make informed decisions in this dynamic industry.

Property valuation is a cornerstone of the real estate industry, providing crucial insights into the financial worth of a property. It is a guide for making informed decisions, whether for buying, selling, taxation, or investment purposes. It involves assessing various attributes of a real estate property to estimate its worth in a specific context, such as market conditions, geographic location, and economic trends. Certified professionals often conduct a valuation using standardized methods to ensure accuracy and reliability.

Thus, we may opine that property valuation is an indispensable aspect of real estate, empowering individuals and businesses to make informed, strategic decisions. By understanding the factors influencing value, choosing appropriate valuation methods, and leveraging emerging technologies, stakeholders can navigate the complexities of valuation with confidence.

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