
**APPRAISAL STANDARDS
FOR
LAND-SECURED FINANCINGS**

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SUMMARY OF APPRAISAL STANDARDS

I. BACKGROUND

The relationship between the value of land and improvements in a Mello-Roos Community Facilities District (CFD) or an assessment district relative to the amount of public debt secured by liens on property in that district is known as the *value-to-lien* or *value-to-debt* ratio. Senate Bill 1464 (Chapter 772, Statutes of 1992) established a minimum 3:1 value-to-lien requirement for Mello-Roos special tax bond issues, effective January 1, 1994. SB 1464 further required any local agency initiating procedures to form a CFD on or after January 1, 1994 to adopt standards for appraisals undertaken to establish value-to-lien ratios. To assist local agencies in this regard, SB 1464 authorized the state treasurer to recommend standards for appraisals undertaken to establish value-to-lien ratios. Local agencies may adopt these *Appraisal Standards for Land-Secured Financings* to fulfill their obligations under SB 1464.

Limitations of the Value-to-Lien Ratio

Insofar as most land-secured debt is sold without a credit rating, investment analysts rely on the value-to-lien ratio as the key indicator of the creditworthiness of Mello-Roos special tax and special assessment bonds. A value-to-lien ratio of 3:1 or higher offers investors a “cushion” against future declines in land values—as well as some protection against the vagaries of the appraisal process itself. But a ratio of 3:1 or higher should not be viewed as a guarantee of creditworthiness, for the following reasons:

- o **Volatility of Land Values.** Land values can be volatile during the early stages of development, reflecting the sensitivity of real estate development to economic cycles. A downturn in economic activity may depress value-to-lien ratios by driving up the risk premium required by real estate investors and lenders and lengthening the absorption period of new development projects.
- o **Average vs. Parcel-by-Parcel Ratios.** The value-to-lien ratio cited for a bond issue is only an average: individual parcels in the district will fall below the average—possibly even below a 1:1 ratio.
- o **Lengthy Foreclosure Proceedings.** If property ownership is highly concentrated during the early stages of development, the delinquency of a major property owner can deplete the reserve fund and threaten the timely payment of debt service - even if the value-to-lien ratio is adequate. Though judicial foreclosure proceedings can be initiated rapidly, the entire process can take several years to complete, and the bankruptcy courts may impede foreclosure action.
- o **Overlapping Issuance.** Finally, local agencies may form overlapping financing districts, which typically do not coordinate their issuing practices. Though a CFD and assessment districts may wish to maintain value-to-lien ratios of at least 3:1, debt issuance by overlapping districts can dilute value-to-lien ratios.

Date of the Value Estimate

The date of the value estimate should clearly be identified in the appraisal report. The period between the date of the appraisal and the financing should be kept as short as possible, preferably no more than six months, to accurately represent land values to prospective investors (page 10).

IV. VALUATION METHODS

The first three valuation methods discussed in this section — the Sales Comparison Approach to Value, the Cost Approach to Value, and the Income Capitalization Approach to Value — form the core of modern real estate appraisal practices. These valuation methods are appropriate for conventional appraisal assignments involving improved real property, but are less well-suited to the valuation of unimproved land. Appraisals of unimproved CFDs and assessment districts typically employ a Discounted Cash Flow (DCF) analysis, the fourth valuation method discussed in this section. This section concludes with a brief discussion of Mass Appraisal techniques and a few ancillary issues.

Sales Comparison Approach to Value

The Sales Comparison Approach to Value offers the best indication of the market value of the subject property, because it is based on actual sales data. This methodology is appropriate for most improved properties, but the absence of comparable sales data usually constrains its application to appraisals of unimproved CFDs and assessment districts. The Sales Comparison approach, however, provides the analytical basis for estimating future retail value of presently unimproved properties which may be incorporated into a Discounted Cash Flow analysis. Values estimated under the Sales Comparison approach should be discounted to reflect the present value of future special tax and special assessment payments (page 11).

Cost Approach to Value

The Cost Approach to Value is not appropriate for appraisals undertaken to establish value-to-lien ratios in CFDs and assessment districts. Cost does not create value. The Cost Approach may be useful, however, for adjusting for physical differences between properties under the Sales Comparison Approach. The cost of publicly-financed infrastructure should not simply be tacked on to value estimates, however, if comparable sales data fully reflects infrastructure improvements (page 16).

Income Capitalization Approach to Value

The Income Capitalization Approach to Value is appropriate for retail valuations of income-producing properties. It also may be appropriate for estimating the future retail values of income-producing properties for use in a Discounted Cash Flow analysis (page 17).

I. BACKGROUND

Mello-Roos special tax bonds and special assessment bonds are payable from special taxes and assessments levied on real property. These taxes and assessments are not a personal debt of property owners: the land itself provides the ultimate security for bondholders (for this reason, Mello-Roos and special assessment bond issues are referred to as *land-secured financings*). The relationship between the value of land and improvements in a Mello-Roos Community Facilities District (CFD) or an assessment district relative to the amount of public debt secured by liens on property in that district is known as the *value-to-lien* or *value-to-debt* ratio. The value-to-lien ratio essentially measures the collateral of the lender (the bondholders) in a land-secured financing. The land is not collateral in the sense that a default results in the transfer of title to bondholders, but rather that adequate land values (in excess of liens) offer the best assurance that bondholders will receive all principal and interest payments due—if necessary, through the foreclosure and sale of delinquent properties. Special tax and special assessment liens have no intrinsic value independent of property values.

SB 1464 Requirements

Senate Bill 1464 (Mello- Chapter 772, Statutes of 1992) established a minimum 3:1 value-to-lien requirement for Mello-Roos special tax bond issues, effective January 1, 1994 [Gov. Code Sec. 53345.8 (a)]. The 3:1 value-to-lien requirement had served as an informal issuance standard for land-secured financings in California for many years. SB 1464 elevated this requirement to state law to address investor concerns arising from the collapse in real estate values in many CFDs during the early 1990s. Special assessment bonds, which share much in common with Mello-Roos special tax bonds from a financial and legal perspective, were not subjected to the 3:1 value-to-lien requirement of SB 1464. Local governments historically have relied on special assessment bonds more to finance improvements in established neighborhoods—where value-to-lien ratios usually far exceed the 3:1 requirement. Furthermore, Mello-Roos bonds played a larger role than special assessment bonds in financing public infrastructure in new development projects during the real estate boom of the 1980s.

The value-to-lien ratio, though widely accepted as an analytical tool, conveys meaningful information only if it is derived from a reasonably accurate appraisal. Yet the appraisal techniques underlying this ratio have remained something of a mystery to most market participants. Indeed, the appraisal profession itself is not of one mind when it comes to valuing tracts of land in the early stages of development—which typically is the assignment for CFD and assessment district appraisals. Conventional appraisal methodologies are not well suited to such assignments, which usually call for the preparation of a *Discounted Cash Flow analysis*. If the margin for error in an appraisal corresponds to its complexity, appraisals employing Discounted Cash Flow analysis are among the most complex, incorporating assumptions about interest rates, employment growth, housing demand, and other variables which are impossible to predict with certainty. An appraisal of value reflects the appraiser's

assessments and issuing bonds; the Municipal Improvement Act of 1913, which specifies procedures for establishing assessment districts and levying assessments, but not for issuing bonds; and the Improvement Bond Act of 1915, which authorizes the issuance of bonds only (most assessment bonds are issued under the authority of the 1915 Act). Charter cities and counties may enact their own procedural ordinances for assessment district financings.

All assessment bond financings must follow basically the same procedural framework, regardless of where an agency derives its authority for the financing. The governing board of a local agency must first pass a resolution stating its intention to create an assessment district for a specified purpose and to levy assessments on the property within the district. Engineering staff then prepares a report describing the project and the amount of the assessment to be levied on each parcel within the district. A notice of public hearing must then be published. Special assessments do not require voter approval, but are subject to the majority protest provisions contained in the Special Assessment Investigation, Limitation and Majority Protest Act of 1931. If owners of a majority of the property in the proposed district protest its formation, the governing board must drop the proposal for at least one year, unless it overrides the protest by a four-fifths vote. If majority protest is not registered, or is registered but overridden, a notice of assessment is recorded by the county recorder, and the assessment lien becomes effective.

Property Value as Security for Bondholders

Mello-Roos special taxes and most special assessments are collected on the same tax bill as general property taxes (1911 Act special assessments are billed separately). If not paid in full, the entire tax bill becomes delinquent, as the tax collector will not accept partial payment on a tax bill due. If the tax bill is delinquent for five years, the property may be sold at a public auction. The Mello-Roos Act and the assessment acts also provide for an expedited judicial foreclosure process at the option of the local agency (discussed below). Mello-Roos special tax liens are coequal to and independent of general property tax liens and superior to all private liens. Subsequent special tax liens, unless subordinated by the resolution authorizing the special tax, also enjoy first lien position. Special assessment liens also are coequal to and independent of general property tax liens and superior to all private liens. Additional bond issues of the same assessment district, however, must be issued as junior liens and prioritized in chronological order.

Judicial Foreclosure. Bond resolutions authorizing Mello-Roos special tax or special assessment bond issues typically include a covenant requiring the agency to initiate judicial foreclosure proceedings after special tax or assessment payments have been delinquent for 150 days. To pursue this remedy, an agency must first file a lawsuit in Superior Court to request a judgement to foreclose on the delinquent lien. Even in an uncomplicated case, the judgment action may take one or two years. If the property owner files for bankruptcy, the judgment action may take longer, as a court-ordered stay preventing the disposition of the property owner's assets may impede the CFDs efforts to foreclose on the delinquent lien. Upon receiving a judgment action, the property may be sold at a foreclosure sale. The foreclosure sale itself must conform to detailed procedural requirements and may take another six months to execute. The minimum bid at the foreclosure sale must be equal to the amount of the delinquency plus penalties, court costs and attorney's fees. Bondholders are due only the amount of delinquent principal and interest payments from the foreclosure and sale of property—the lien may not be accelerated. Any other proceeds from the sale are used to replenish reserve funds and extinguish any other liens on the property.

- o **Volatility of Land Values.** Land values can be volatile during the early stages of development, reflecting the sensitivity of real estate development to economic cycles. A downturn in economic activity can cause real estate investors to seek higher risk-adjusted rates of return, which will depress value-to-lien ratios (by increasing the discount rate used to discount future cash flows to present value). For the same reason, the rate of absorption incorporated into the Discounted Cash Flow analysis may prove to be overly optimistic, which also will depress value-to-lien ratios, and possibly cause a cash flow crisis for the developer/owner. The “excess coverage” embedded in the 3:1 minimum value-to-lien requirement offers investors some protection from declining land values.
- o **Average vs. Parcel-by-Parcel Ratios.** The value-to-lien ratio cited for a bond issue is only an average: individual parcels in the district will fall below the average—possibly even below a 1:1 ratio. For bonds issued during the early stages of development, analysts should review value-to-lien ratios on a parcel-by-parcel basis, if possible, or at least by parcels grouped together under common ownership. As property ownership in the district becomes diversified, such an analysis of course becomes infeasible—but also unnecessary, as timely debt service payments become less dependent on individual property owners.
- o **Lengthy Foreclosure Proceedings.** Even if the value-to-lien ratio is adequate, the delinquency of a major property owner can deplete the reserve fund and threaten the timely payment of debt service, if property ownership is highly concentrated during the initial stages of development. Though judicial foreclosure proceedings can be initiated rapidly, the entire process can take several years to complete, and the bankruptcy courts may impede foreclosure action. Adequate value-to-lien ratios do not guarantee uninterrupted debt service payments.
- o **Overlapping Issuance.** Finally, local agencies may form overlapping financing districts, which typically do not coordinate their debt issuance practices. Though a CFD or assessment district may wish to maintain value-to-lien ratios of at least 3:1, debt issuance by overlapping districts can dilute value-to-lien ratios.

For all of these reasons, credit analysts should not focus exclusively on value-to-lien ratios, but also review the adequacy of reserve funds, capitalized interest accounts, special tax coverage and other security features of the bonds.

II. THE APPRAISER - GENERAL REQUIREMENTS

Appraisals undertaken to establish value-to-lien ratios for land-secured financings can be quite complex, requiring the appraiser to interpret the significance of various financial and demographic data. Because an appraisal essentially is an appraiser's *opinion* of value, it is imperative that the appraiser be qualified to render this opinion. The experience of the appraiser is as important to the successful completion of an assignment as the appraisal standards adopted by a local agency.

Credentials

The Appraiser should be credentialed by the State of California Office of Real Estate Appraisers and be a Member of the Appraisal Institute (MAI) or have similar training, experience and qualifications.

The appraiser undertaking the assignment should be credentialed by the State of California Office of Real Estate Appraisers as a Certified General Appraiser and be a Member of the Appraisal Institute (MAI) or have similar training, experience and qualifications. The appraiser should certify that he/she is thoroughly familiar with the recognized and acceptable appraisal methods, techniques and Standards of Professional Practice and Code of Ethics as set forth by the Appraisal Institute and Uniform Standards of Professional Appraisal Practice of the Appraisal Foundation.

The appraiser should follow professional appraisal practices for determining value as are appropriate for the specific property being appraised. Should certain approaches to value, or requirements covered in these *Appraisal Standards* not be applicable to the assignment at hand, the appraiser can fulfill the obligation herein with a brief explanation of its omission. In reports relating to the formation of a CFD or assessment district, the appraiser should support all assumptions relating to the existence of infrastructure, utilities, improvements, grading, access, soil conditions, topography, etc., and/or Highest and Best Use.

Independence

The appraiser should be an independent contractor retained by the public agency, rather than a landowner/developer.

Even though a public agency usually bears no contingent liability to pay debt service on land-secured debt, these bonds carry the public agency's name, and a default could damage the agency's reputation in the bond market, making future borrowing more difficult and expensive. The appraisal is central to the credit analysis of land-secured financings. It therefore is imperative for the appraisal to be objective, and for the appraiser's compensation not to be tied to the value estimate. To ensure that the public interest is served, the appraiser should be an independent contractor retained by the public agency, rather than the landowner/developer. The public agency should, however, require the landowner/developer to pay for the appraisal and any other studies incidental to the financing.

III. THE APPRAISAL PROBLEM

Given the variety of reasons for which appraisals are undertaken, and the different analytical techniques which may be employed, appraisers typically begin each assignment by defining the *appraisal problem*—that is, succinctly stating the objective of the appraisal. The statement of the appraisal problem should, most importantly, identify (1) the property rights to be valued, (2) the operative definition of value, and (3) the date of the value estimate. Addressing these issues at the outset of the appraisal gives the appraiser the necessary direction to complete the assignment.

Property Rights to Be Valued

Appraisals undertaken to establish value-to-lien ratios in CFDs and assessment districts should value the fee simple estate, subject to special tax and special assessment liens.

An appraisal is always a valuation of specified rights in the subject property, not of the physical real estate itself. According to the “bundle of rights” theory derived from English common law which underlies modern real estate appraisal practices, real property ownership consists of a group of distinct rights in the subject property, each of which can be separated from the others and conveyed to another party. The transfer of legal and financial rights to another party—through a mortgage or a lease, for example—creates a partial or fractional interest in the property. The property rights to be valued, therefore, must be clearly identified at the outset of any appraisal assignment.

The property rights to be valued largely depend upon how the client intends to use the information contained in the appraisal report. Appraisals are commissioned in conjunction with land-secured financings for the purpose of establishing value-to-lien ratios. The value-to-lien ratio essentially measures the collateral of bondholders, much like the *loan-to-value* ratio measures a lending institution’s collateral in a commercial loan. Property is not collateral in the sense that bondholders assume title to delinquent properties to remedy a default. But the value-to-lien ratio implies the contingency that property may have to be sold to satisfy the claims of bondholders—whether through foreclosure action or, more likely, private sale. Because special taxes and (in most cases) assessments enjoy first lien position, delinquencies jeopardize all legal and financial interests in the subject property. The appraisal should therefore value the entire “bundle of rights” in the subject property, all which would be transferred upon sale.

Fee Simple Estate. In legal terms, appraisals undertaken to establish value-to-lien ratios should value the *fee simple estate, subject to special tax and special assessment liens*. The fee simple estate represents absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat. Owners in fee simple retain the entire bundle of rights in the subject property permitted under law. They may choose to improve or sell their property, and the property becomes part of their estate to be passed on to their heirs.

Market value is defined as follows:

The most probable price in cash or in terms equivalent to cash for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.

This definition of *market value*, though helpful, does not adequately reflect the dynamics of the real estate development industry which affect value. The market for detached single family houses is very different from the market for large tracts of undeveloped land. At any point in time, one or both of these markets will be at work in a CFD or assessment district. The appraiser's estimate of *market value*, therefore, needs to be further refined into *retail value* and *bulk sale value*. The development status of the subject property at the time of the appraisal will determine which definition applies.

Retail Value. Retail value should be estimated for all fully improved and occupied properties. Retail value is an estimate of what an end user would pay for a finished property under the conditions requisite to a fair sale. Appraisers estimate retail value through the conventional appraisal methods discussed in the following section (principally the Sales Comparison Approach to Value). Investment bankers or other parties to the financing may request from the appraiser the *aggregate retail value*, which simply is the sum total of the retail values estimated for each parcel.

Bulk Sale Value. Bulk sale value should be estimated for all vacant properties—both unimproved properties and improved or partially improved but unoccupied properties. Bulk sale value is derived by discounting retail values to present value by an appropriate discount rate, through a procedure called *Discounted Cash Flow Analysis*, which is discussed in the following section. Bulk sale value is defined as follows:

The most probable price, in a sale of *all* parcels within a tract or development project, to a single purchaser or sales to multiple buyers, over a reasonable absorption period discounted to present value, as of a specified date, in cash, or in terms equivalent to cash, for which the property rights should sell after reasonable exposure, in a competitive market under all conditions requisite to a fair sale, with buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue stress.

The credit risks of land-secured financings are greatest during the initial stages of development, when property ownership is highly concentrated, and the delinquency of a major property owner could deplete the reserve fund and threaten the timely payment of debt service. Conceivably, *all* properties in a district may need to be sold at once, if ownership is concentrated in the hands of a single delinquent owner or, alternatively, in the hands of a few owners, each of whom is delinquent. The *bulk sale value*, therefore, assumes the sale of *all* properties in the district. It really is a hypothetical conception of value, as the *bulk sale* most likely will never occur. Nonetheless, the assumptions embedded in bulk sale value can and should be market-driven.

IV. VALUATION METHODS

The first three valuation methods discussed in this section — the Sales Comparison Approach to Value, the Cost Approach to Value, and the Income Capitalization Approach to Value — form the core of modern real estate appraisal practices. These valuation methods are appropriate for conventional appraisal assignments involving improved real property, but are less well-suited to the valuation of unimproved land. There is a wealth of information available on these appraisal methods, and CDAC has little to contribute to this body of knowledge. This section merely provides a broad overview of these approaches to value, and addresses the issues which arise when applying these methods to CFD and assessment district appraisals.

Appraisals of unimproved CFDs and assessment districts typically employ a Discounted Cash Flow (DCF) analysis, the fourth valuation method discussed in this section, in somewhat more detail. DCF analysis really is a financial analysis technique for evaluating any number of investments, not just real estate. Discounting the present value of future cash flows just happens to provide a convenient method of estimating land values. In theory, the amount that a developer would be willing to pay for an unimproved property should be equivalent to the present value of the net cash flows that would be generated by the development of that property to its highest and best use. This section concludes with a brief discussion of Mass Appraisal techniques and a few ancillary issues.

Sales Comparison Approach to Value

The Sales Comparison Approach to Value offers the best indication of the market value of the subject property, because it is based on actual sales data. This method is appropriate for estimating the retail value of improved properties, but the absence of comparable sales data usually constrains its application to unimproved properties. Value estimates under the Sales Comparison approach should be discounted to reflect special tax and special assessment liens encumbering the subject property.

Many people gain their first exposure to professional appraisal practices when originating or refinancing a home mortgage, since financial institutions typically require a Sales Comparison appraisal as part of the application process, to ensure that the amount of the loan does not exceed a specified portion of value. The Sales Comparison approach derives an estimate of value by comparing the subject property to recent sales data for identical or similar properties. Since this approach relies on actual sales data, it offers the best indication of what property in a CFD or assessment district is worth. This method is appropriate for estimating the retail value of improved properties.

Data Constraints Limit Application. Application of the Sales Comparison approach to appraisals of unimproved CFDs and assessment districts typically is constrained by a lack of comparable sales data. An appraiser attempting to estimate the bulk sale value of a 500 acre tract of unimproved land, for example, is not likely to find recent comparable sales data, for two reasons. First, properties of this scale are not likely to be comparable in terms of topography, proximity to highways, zoning, and other factors which affect value. Second, transactions of this magnitude simply occur too infrequently to establish pricing patterns. Comparable sales data is much more

Table 1 on the following page illustrates how the estimated retail values of finished units scheduled for completion in a new development project are discounted to reflect future special tax payments (for use in a Discounted Cash Flow Analysis to estimate bulk sale value). To establish comparable prices for each year of the absorption period, the appraiser relies on recent sales data for units in a nearby development project that is virtually identical, save for the fact that the infrastructure in the new development project is to be financed through Mello-Roos special tax bonds. Because the special tax represents the only discernible difference between the two development projects, the appraiser decides to adjust the retail values of units in the new development to reflect the full amount of their special tax liabilities.

In this example, the special tax will be levied at an annual rate of \$10,000/acre on undeveloped land and \$2,000/unit on developed land to support a bond issue that will be paid off over 25 years. (The undeveloped land tax is not relevant for purposes of this discounting exercise, however, since the entire development project will be sold as a finished product to end users). The bond issue will be structured to include a capitalized interest account (to pay debt service in Year 1) and a reserve fund (which, along with its interest earnings, will pay debt service in Years 23-25). As a result, no special taxes will be collected in Year 1, during which grading and other preliminary construction work will take place, or Years 23 - 25. The units in the new development project will be constructed and absorbed over a five-year period (Year 2 through Year 6).

Presently, the comparable units (without the special tax) are selling for an average price \$238,095, and have been increasing in value at an annual rate of 5 percent in recent years (assuming the appropriate deductions for accrued depreciation). The appraiser therefore increases the value estimates of these units by 5 percent annually over the absorption period for comparison purposes (Column B). To estimate the retail values of the units scheduled for completion in the new development project, the appraiser subtracts the present value of the remaining special tax payments from the comparable sales prices for each year of the absorption period. For the initial units absorbed in Year 2, for example, the present value of the \$2,000 special tax payment due that year is \$2,000; for each remaining year, this amount is discounted at an annual rate of 7 percent (the expected True Interest Cost of the bond issue). The present value total of the remaining special tax payments, \$23,188, is then deducted from the comparable sales price of \$250,000 to arrive at an estimated retail value of \$226,812 for each new unit absorbed in Year 2. The same discounting procedure is applied for the units absorbed in each of the remaining years in the absorption schedule, Years 3 through 6.

In discounting the retail values of finished units to reflect their future special tax payments, the appraiser merely is attempting to establish the retail values of those units in each year of the absorption period. At this juncture, the appraiser is not interested in determining the *present* value of those units (unless they are being absorbed in the current year). For each year of the absorption period, consequently, the appraiser discounts the remaining special tax payments to determine the *present* value of those payments *for that year*. For units absorbed in Year 3, for example, the present value of the \$2,000 special tax payment in Year 3 is \$2,000 — even though the present value of the Year 3 special tax payment is only \$1,869 for units absorbed in Year 2. Estimating the retail values of units during the absorption period in this manner allows the appraiser to project the cash flow generated by the project, which then can be discounted to present value to estimate bulk sale value.

Before leaving this example, a few concluding comments are in order. First, the appraisal should maintain the linkage between the *level* of the special tax and the *value* of the infrastructure financed through the tax. In the example above, the special tax is levied at a flat rate to finance infrastructure improvements comparable to those in the nearby development project. Because the

infrastructure improvements are comparable, the estimated retail values of the newly completed units do not need to be adjusted to reflect discrepancies in the quality of public facilities. Most special tax formulas, however, allow for an increase of 2% annually. Whether or not the appraiser should increase the special tax payment at this rate prior to discounting again depends on the disposition of these proceeds. If the escalating special tax is needed to finance comparable infrastructure improvements, the appraiser would increase the special tax payment by 2 percent annually prior to discounting—which would of course result in a larger retail value discount in each year of the absorption period than in Table 1. If, instead, the annually increasing special tax will finance infrastructure superior to that in the comparable development, the appraiser would again escalate the special tax at this rate prior to discounting, but also adjust the retail values in the new development upward to reflect its superior amenities. Finally, if the escalating special tax will finance a series of bond issues scheduled for some time in the future, the appraiser may choose either to ignore that portion of the tax to be dedicated to future bond issues (and the value of the future improvements), or discount the full amount of the tax (as long as the value of the future improvements is incorporated into retail values). This decision will depend upon how firm the plans for future bond issuance are, and whether the special tax actually will be levied at the higher rate initially. In any event, the appraiser should maintain the linkage between the special tax and value of improvements financed through the tax.

Technical Requirements. The appraiser's opinion of the value of the property should be confirmed by sales prices of comparable, or nearly comparable, properties having similar highest and best uses. The appraisal report should support all adjustments, including other-than-market financing, and set forth the analysis that resulted in the value of the land being appraised. Detailed data sheets should be included either in the body or the addenda of the report.

- a) **Attached and detached residential:** When valuing residential complexes with completed and sold units, standing inventory or newly completed units, the appraiser must identify the source of the data (in-tract or outside projects), base selling price for dwelling units, premiums, concessions or incentives, unit sizes, costs to complete (carpets, appliances, etc.) and support adjustments to the data.
- b) **Income properties:** The appraiser must identify the sources of data, sales prices, terms, etc., comparability to subject property, and support adjustments to the data.

- (b) **Source of Estimates:** The name of the source of all cost estimates should be clearly stated (i.e., engineering firm, contractor, cost estimating service, etc.).
- (c) **Unit Costs:** Unit costs and the number of units should be provided so that the reader can determine how the costs were calculated. The dollar amounts of physical depreciation and functional and economic obsolescence, or its omission, should be explained in narrative form. This procedure may be omitted on improvements for which only a salvage or scrap value is estimated.

Income Capitalization Approach to Value

The Income Capitalization Approach to Value is appropriate for retail valuations of income-producing properties. It also may be appropriate for estimating the future retail values of income-producing properties for use in a Discounted Cash Flow analysis.

The Income Capitalization Approach to Value is used for appraisals involving income-producing properties (i.e., rentals). Like the DCF approach, the Income Capitalization approach translates a stream of future benefits into an estimate of present value. The difference between the two is that the DCF analysis discounts to present value the cash flow derived from the one-time sale of finished properties to end users, whereas the Income Capitalization approach applies a market-derived capitalization rate to the annual stream of net income generated by income-producing properties on an ongoing basis—usually commercial, industrial and residential rental properties. The Income Capitalization approach is not well suited to owner-occupied residences, which do not generate income (though, if necessary, a fair market rental can be imputed for this purpose).

If income and sales data for comparable income-producing properties are readily available, an overall capitalization rate can be derived rather easily. Suppose, for example, that a series of commercial structures which have been generating, on average, \$1 million annually recently sold for an average of \$10 million each. Figure 2 below presents the overall capitalization rate formula:

Figure 2

Overall Capitalization Rate Formula

Net Income/Value Indicated by Comparable Sales

$\$1M/\$10M = 10\%$

To value a comparable structure generating \$2 million annually, the appraiser would divide this net income by the capitalization rate of 10 percent to arrive at an estimated value of \$20 million.

Technical Requirements. Appraisals relying on the Income Capitalization approach should include a discussion on the leasing (rental) status of subject property (e.g., percent occupied, rental rates, concessions, terms, rental adjustments).

the absorption period are then discounted to present value by an appropriate discount rate. The appraiser's estimate of land value equals the sum total of the present values of these cash flows. In theory, a developer would be willing to pay this amount for the property in return for the opportunity to develop it and earn these cash flows (through the sale of finished product to end users or improved lots to merchant builders).

DCF analysis can be expressed by the following mathematical formula:

Figure 3

Discounted Cash Flow Analysis

$$PV = CF_0 + \frac{CF_1}{1+r} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n}$$

Where:

PV = Present Value
 CF = Net Cash Flow (per absorption period)
 r = Discount Rate
 n = Final Absorption Period

The key variables in a DCF analysis are discussed below and illustrated in the hypothetical DCF analyses presented in Tables 2 and 3. These two tables present the same DCF analysis, except that in Table 3 the retail values of finished units are discounted to reflect the present value of their future special tax liabilities.

Number and Type of Buildings and/or Sites. DCF analysis values unimproved land as if it were subdivided, developed and sold. The first step in preparing a DCF analysis, therefore, is to determine the mix of residential, commercial and industrial development to occur. For most appraisals undertaken to establish value-to-lien ratios for land-secured financings, the development plan will already have been prepared and all necessary land use approvals secured, eliminating any guesswork on the part of the appraiser. In the hypothetical DCF illustrated in Tables 2 and 3, the development will consist of 500 residential units.

Rate of Absorption. DCF valuations should rely on an *absorption* or market demand study to estimate the dates of sale of finished properties to end users and improved lots to merchant builders. An absorption consultant undertakes a detailed examination of economic and demographic data to estimate how quickly a development project can be *absorbed* or sold to end users. First, the consultant reviews economic indicators such as employment growth to project regional population growth and the likely demand for residential, commercial and industrial development. The consultant then estimates the proportion of overall demand that will be captured by the development project in question by product type. This analysis requires the consultant to assess the supply of existing inventory and product under construction relative to anticipated demand, and to reach a subjective judgment as to the competitiveness of the subject property. Finally, the consultant develops an *absorption schedule*, which estimates the dates of sale and sale prices of finished properties to end users. In the example illustrated in Tables 2 and 3, the 500 units will be absorbed at a rate of 100 units per year during Years 2 through 6.

Table 3

DISCOUNTED CASH FLOW ANALYSIS
 -Retail Values Discounted to Reflect Future Special Tax Payments

Year	1	2	3	4	5	6	Totals
Discounted Value	--	\$ 226,812	\$ 239,829	\$ 253,507	\$ 267,880	\$ 282,984	--
x Absorption Schedule (units per year)	--	100	100	100	100	100	500
= Gross Cash Flow	--	\$22,681,200	\$23,982,900	\$25,350,700	\$26,788,000	\$28,298,400	\$127,101,200
- Construction & Overhead	8,000,000	8,400,000	8,820,000	9,261,000	9,724,050	--	44,205,050
- Developer Profit	--	2,500,000	2,625,000	2,756,250	2,894,063	3,038,768	13,814,078
- Special Tax Undeveloped	--	800,000	600,000	400,000	200,000	--	2,000,000
= Net Cash Flow	-\$8,000,000	\$10,981,200	\$11,637,900	\$12,933,450	\$13,969,888	\$25,259,634	\$ 67,082,072

DISCOUNTED CASH FLOW

7% Discount Rate	-\$8,000,000	\$10,262,804	\$10,427,024	\$10,557,548	\$10,657,560	\$18,009,770	\$51,914,706
Value-To-Lien Ratio*	--	--	--	--	--	--	4.46:1
15% Discount Rate	-\$8,000,000	\$9,548,870	\$9,026,767	\$8,503,953	\$7,987,329	\$12,558,503	\$39,625,421
Value-To-Lien Ratio*	--	--	--	--	--	--	3.41:1
20% Discount Rate	-\$8,000,000	\$9,151,000	\$8,290,208	\$7,484,635	\$6,737,021	\$10,151,281	\$33,814,146
Value-To-Lien Ratio*	--	--	--	--	--	--	2.91:1
25% Discount Rate	-\$8,000,000	\$8,784,960	\$7,640,256	\$6,621,926	\$5,722,066	\$8,277,077	\$29,046,285
Value-To-Lien Ratio*	--	--	--	--	--	--	2.50:1

*Lien = \$11,635,000 (principal amount of bonds)
 --debt service paid from capitalized interest in year 1
 --debt service paid from reserve in final 3 years

It is not necessary for the appraiser to estimate these three components of the discount rate separately, since each already is present in both the interest rates on construction loans charged by commercial lenders and the rates of return demanded by equity investors. The appraiser merely needs to survey commercial lenders and sources of equity capital to find the going rates.

The rate of return required to attract equity investment in a real estate development project will be higher than that charged for a commercial loan, reflecting the greater degree of risk assumed by the equity investor. The equity investor puts his or her capital at risk, and may even assume responsibility for losses of the partnership. A commercial loan, by contrast, is secured a private lien on the property or other collateral. As a consequence, the portion of a project financed through equity should be discounted at a higher rate than the portion financed through debt. At the time these *Appraisal Standards* were prepared, for example, equity investors were demanding annual rates of return of 20 percent or more to compensate for the high degree of business risk perceived in new development projects. Construction loans, to the extent available, were charging interest rates closer to 10 percent. Though the risks of construction lending should, in theory, be priceable through interest rates, most commercial lenders restrict credit through nonprice terms—specifically loan-to-value ratios, caps on loan amounts, and geographic restrictions on lending. A curtailment in construction lending, or a *credit crunch*, will necessitate a greater equity investment in real estate project, which affects the appraisal by driving up the discount rate and depressing the present value of future cash flows.

The discount rate should reflect current market conditions and be consistent with the assumptions used in the balance of the appraisal. The discount rate formula below is a weighted average (debt and equity) cost of capital and was used in the hypothetical DCF analyses presented in Tables 2 and 3.

Figure 4

Discount Rate Formula

$$DF_p \times IR_{df} + EF_p \times ROR_{ef}$$

Where:

DF_p = Debt financing as a percent of total financed costs (in decimal form, exclusive of publicly financed costs).

IR_{df} = Interest rate on debt financing (in decimal form).

EF_p = Equity financing as a percent of total financed costs (in decimal form, exclusive of publicly financed costs).

ROR_{ef} = Annual rate of return required on equity financing (in decimal form).

Mass Appraisal Techniques

When an entire tract or project has been built and fully absorbed, the appraiser may employ mass appraisal techniques, utilizing conservative per dwelling unit estimates.

It may be appropriate for large projects that have built-out and occupied product to use mass appraisal techniques. When an entire tract or project has been built and fully absorbed, the appraiser may use an aggregate value estimate utilizing conservative per dwelling unit estimates. These estimates may be the actual base selling prices of each plan, provided resales in the tract do not indicate a downward price trend. If price reductions have occurred, these indications must be considered.

Interpretation and Correlation of Estimates

The appraiser's estimate of value should be explained and supported by relevant information.

Appraisers should reconcile their estimates of value and state their reasons why the conclusions reached under the chosen valuation method(s) are indicative of the market value of the property.

Value Allocations

Appraisers should report values by ownerships or assessor parcel numbers.

Appraisers should report values by ownerships or assessor parcel numbers. In CFDs or assessment districts where production units have been built and sold, these separate ownerships may be grouped together by logical categories (e.g., tract). Appraisals for projects with numerous tracts owned by one or related property owners should indicate value (which may be general) by phase, planning area, or other logical basis of differentiations. These value allocations are necessary for preparation of the Official Statement for the bond sale offering.

V. CONTENTS OF APPRAISAL

The appropriate format and level of documentation for an appraisal can vary according to its complexity. A detailed appraisal should reflect nationally recognized appraisal standards, including, to the extent appropriate, the Uniform Standards of Professional Appraisal Practice. An appraisal must contain sufficient documentation, including valuation data and the appraiser's analysis of the data, to support the opinion of value. At a minimum, an appraisal should contain the following items:

1. **Purpose of Appraisal** — This should include the reason for the appraisal, a definition of all values required, and property rights appraised.
2. **Area, City and Neighborhood Data** — These data should include such information as directly affects the appraised property together with the appraiser's conclusions as to significant trends.
3. **Property Data** — This should include a detailed physical description of the property, its size, shape, soil conditions, topography, improvements, and other physical characteristics which affect the property being appraised. The availability, capacity of, and proximity to, utilities and other infrastructure should also be discussed.
4. **Title Condition** — The condition of title of the property appraised should be discussed in the appraisal report based upon examination of a title report to be furnished by the property owner, a copy of which shall be included in the report addenda. In those instances where numerous homes, units, lots, etc., are being appraised (within a single tract or planned unit development), a title report of a sample property should be reviewed as opposed to a title report for each parcel. The appraiser should analyze and discuss those title issues which are concluded to impact the value of the property being appraised (for example, property within a flood zone).
5. **Improvement Description**
 - a. Land parcels which have been developed with residences and subsequently sold should at a minimum indicate land parcel size, number of lots, density, number of plans, square footage, room counts, year construction was initiated, year of completion, and when sales were initiated.
 - b. Land parcels with residential product under construction or with standing inventory should be described as in (a) above and include a summary of the stage of development re: number of units completed, number of models, status of units under construction, finished lots and mass-graded or raw lots. In addition, a comment on the marketability of the units (architecture, size, etc.) is appropriate.

VI. APPRAISAL REVIEW

Overview of the appraisal process and professional review of completed appraisal reports is an important element in assuring that such appraisals meet these *Appraisal Standards* and that such work was competently performed. Such overview and appraisal review should be performed by either professionally qualified agency staff or by an independent review appraiser engaged by the agency who meets the credential requirements set forth in this document.

VII. DEFINITIONS

Appraisal — An appraisal is a written statement independently and impartially prepared by a qualified appraiser setting forth an opinion of defined value of an adequately described property as of a specific date, supported by the presentation and analysis of relevant market information.

Bulk Sale Value — The most probable price, in a sale of *all* parcels within a tract or development project, to a single purchaser or sales to multiple buyers, over a reasonable absorption period discounted to present value, as of a specified date, in cash, or in terms equivalent to cash, for which the property rights should sell after reasonable exposure, in a competitive market under all conditions requisite to a fair sale, with buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue stress. The bulk sale is executed in lieu of the seller proceeding with development and/or marketing of the individual parcels or tracts to end users or merchant builders over a market-oriented absorption period for the type of project.

Capitalization Rate — The rate of return by which the market values an income-producing property. Net income is divided by the capitalization rate to derive a value estimate.

Comparable Property — A property with the same value elements as the property being appraised, though not necessarily in the same proportions.

Cost Approach to Value — A valuation method which involves estimating the replacement or reproduction costs of structures and improvements. This approach cannot be used for valuing unimproved land, because land cannot be reproduced or replaced.

Developer — A person or firm who organizes the various activities required to construct a real estate project, including (1) acquiring the site, (2) obtaining necessary land use entitlements, (3) arranging financing, (4) awarding construction contracts, and (5) selling or managing the completed property.

Discounted Cash Flow Analysis — A valuation method under which the dates of sale and prices of finished properties are estimated to derive a cash flow which is discounted to present value by a market-derived discount rate. This valuation method also is referred to as the *Subdivision Development* or *Land Development Approach to Value* in the appraisal literature.

Exactions — Fees or land dedications required as a condition of development approval.

Income Capitalization Approach to Value — A valuation method applied to income-producing properties (i.e., rentals). This method requires forecasting the earning expectancy of the subject property and calculating the present value of this net income according to a capitalization rate.

MAI — Member of the Appraisal Institute.