NORMALIZED DISCOUNT RATES VERSUS RISK-ADJUSTED DISCOUNT RATES

Discount rates for rental properties are affected by levels of risk associated with the characteristics of tenants.

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The way in which discount rates are selected as part of the appraisal process has been evolving as an issue for some time. Because the discount rate applied in a discounted cash flow (DCF) model actually is the prospective internal rate of return (IRR) for the investment that is being analyzed, questions arise concerning the appropriateness of making inferences from historical rates, such as: What is the current investor thinking regarding investment criteria? Should real estate discount rates move in sync with other indicated capital market yields?

Notwithstanding these issues, it is apparent that the discount rate now used in the majority of appraisal reports represents a proxy that has been obtained from some type of market sampling. This sampling takes various forms: published investor surveys, an average of buyer calculus assumptions from specific transactions and/or the perceived norm for the property type based on the conclusions of a particular appraiser's peer group for a particular month. Whatever their source, the rates inferred from market sampling represent "normalized discount rates" for a property type.

If the purchase of investment-grade real estate, particularly office and retail properties, essentially is an investment in a portfolio of leases, it is reasonable to assume that each property will be unique and that the risk inherent in each lease portfolio will cause rates of return to vary slightly. In essence, elements of risk used in the evaluation of multi-property portfolios also are appropriate to consider in the assessment of risk associated with individual properties. Measurements of the quantity, quality and durability of the income stream to be derived from a lease portfolio should be of significant concern to the appraiser. However, historic rent levels and occupancy rates often are the basis for the appraiser's projections, and these projections do not consider the character of the portfolio in its historic context as compared with current and expected levels of performance.

Property-specific analysis addresses what will be referred to herein as tenant risk. Several elements that influence the extent of tenant risk are inherent in each property or portfolio of leases. A number of these factors typically are addressed in modern portfolio theory in the context of other asset classes. Their application in an analysis of a real estate lease portfolio, in some instances, involves only an alteration of semantics; leases are investment contracts (securities?) that represent the

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tradeoff between the possession of space and a prescribed income flow.

Four basic areas that affect tenant risk deal with the quality, quantity and durability of the income stream: the diversification of tenants, creditworthiness of tenants, duration of lease terms and size of individual tenants. All of these areas reflect the fundamental risk that can be diversified away with appropriate managerial strategies.

Tenant Diversification

Different industries are affected in different ways by economic cycles. Service firms, such as those involving attorneys and accountants, may fare well during recessionary periods, while manufacturing or retail-oriented businesses may be adversely affected. While there is no definitive index with which to rate the effect of economic cycles on office tenancies in various industrial groupings, analysis of tenant mix in relation to competing properties or the economic base of a city provides insight into probable tenant movement upon lease expirations. The tenant mix by Standard Industrial Classification (SIC) codes forms a basis for this analysis.

Another issue pertaining to tenant mix concerns micro-market characteristics. Many communities typically have a concentration of legal firms in proximity to the courthouse complex. Likewise, office facilities in proximity to hospitals have a propensity to attract doctors, medical labs, etc., as tenants. The inherent risk of investing in buildings that cater to industrial groupings may be viewed in an entirely different light than the risk of investing in typical multi-tenanted, suburban office buildings. The determination of risk consequently requires adjustment to the normalized discount rates indicated by the market in general.

Credit Worthiness

A Fortune 500 company has a significantly different perceived financial stability than a real estate syndicate that has been in business for only one year. Therefore, the risk of default affects the required rates of return in the same way the bond rating system affects the capital market.

The risk inherent in an office lease portfolio dominated by a large credit tenant (e.g., Exxon) historically has had a direct impact on the required return reflected through the sale prices for those types of properties. Obviously, this is most evident in single tenanted buildings with long-term leases. The income portion of the investment return, in this situation, may be viewed as an investment in the company for the duration of the lease. Therefore, the risk inherent in that portion of the investment may be reflected through the company's bond rating. The overall discount rate then should prorate the difference between the risk inherent in the income to be derived from the lease agreement and the risk inherent in the property upon expiration of the lease or at the time of the property's resale. In fact, when a single, national credit tenant vacates and the building must be converted to a multi-tenant facility, a split discount rate may be utilized to reflect the systematic business and market risk exposure of a cash flow contract and the liquidity risk exposure of a real asset with higher capital requirements. This complex combination of risk factors may require the use of one rate to discount the assured income from the existing lease and a second rate to address the operation of the building after the large credit tenant vacates.

In a more traditionally tenanted building the mix of credit and non-credit tenants may be compared with the tenancy mix in other competing buildings. Variations from the normalized discount rate should be made by exception. That is, a premium should be applied to the subject property only if a major, nationally credit-rated tenant is atypical in a particular market. Likewise, an adjustment for a lease portfolio with a weak overall credit rating would be appropriate only if its characteristics differed significantly from those of competing buildings.

Retail properties have similar characteristics, but their characteristics have a more fundamental impact on risk analysis. Occupancy in retail properties, particularly community and regional shopping centers, typically involves national chain-type tenants. National retail chains, such as The Limited, Victoria's Secret, Foot Locker, etc., have distinctly different risk characteristics than local, "mom and pop"-type operations. The mix of national chain affiliates and local retailers affects the risk and, therefore, the required yield for a prospective investor. It is reasonable to assume that two community-type shopping centers of equal size in the same micro-market would require different discount rates depending on the character of their tenant mix.

The appropriate rate spreads in this instance may be gauged by comparing actual bond ratings for national chains with junk bond ratings. The normalized discount rate then may be adjusted based on a comparative proration of the tenant mix for comparable properties and the tenant mix for the subject property.

Lease Term

Lease expiration schedules within a building have a direct impact on the quantity of income to be derived from an investment. The valuation of a property following the DCF model generally uses two distinct elements to make the total present value estimate: the present value attributable to cash flow during the holding period and the present value of the net proceeds obtained from the eventual sale of the property. Obviously, the proration of value between these elements provides an insight into the risk of the investment. For example, a property that attributes 60% of its current value to the future sale price or asset appreciation would have greater risk than a property that attributes only 20% of the total present value to the return from the sale of the property.

Often ignored is the portion of present value attributable to the cash flows obtained during the holding period. A property with lease contracts that

will expire within three years of the time of purchase intuitively would be less desirable than a property with lease contracts that do not expire for seven or eight years. Therefore, the amount of "assured income," or the present value of the income to be derived from existing lease contracts, as a percentage of the value of the cash flow component, could be of greater importance with respect to risk than the proration of value between total cash flow and property appreciation.

The present value of the "assured income" is the only component of return on the property that can be quantified with any certainty. Lease rates upon renewal, percentage of tenant retention, downtime between leases, etc., may be inferred from market research, but they nonetheless are prospective estimates. Therefore, the greater the percentage of value that is attributed to assumptions regarding future market behavior the greater the likelihood that the value estimate will vary over time. As a result, it is reasonable to assume that the required yield would increase in accordance with the uncertainty of future returns.

This factor probably has the greatest impact on the appropriate discount rate, and it is the easiest to quantify. Elements specifically addressing this factor include the following:

- lease expiration schedule, including annual expirations as a percentage of the total building area;
- existing options to renew which may be at below-market rent levels;
- a schedule of contract rental income from existing lease agreements.

Adjustments to the normalized discount rate should be based on the relative differentials between the subject property and properties used as market comparables. This requirement places a burden on the appraiser to obtain a substantial amount of financial data during the sale confirmation process. The choice of comparable sales then becomes a matter of data quality rather than quantity. Three to five well-confirmed sales are far more valuable than 10 sales for which the data include only sale price per square foot and the going-in capitalization rate. In the analysis of investment-grade real estate, details of the lease structure and financial operation of comparable properties are essential.

Tenant Size

This particular comparative element may be construed as a double-edged sword in the analysis of office buildings. On one hand, a building that has a large tenant, such as Exxon, occupying a majority of its space may be viewed as a relatively low-risk investment by investors because the leasing risk is minimized, the management burden is reduced or the long-term presence of the tenant is assured by the enormous costs of relocation. Counter to this argument is the AT&T Building in New York, which must be retrofitted for multi-tenant use or face a prolonged period of vacancy while managers try to find another major corporation to occupy it. This situation demonstrates the high level of liquidity risk exposure in real estate that may override the business risk or operating risk represented in the traditional DCF model.

The submarket in which the property is located may dictate the extent of these concerns. Central business districts often find themselves lacking large blocs of contiguous space. Therefore, a building that is occupied mainly by smaller tenants may be at a disadvantage. Suburban markets may encounter the opposite problem. If typical tenants are small-space users, a building with a large-space user may have difficulty releasing when that tenant vacates.

The issue of tenant size takes on a different character with retail properties. Large-space users, typically known as anchor tenants, are focal points for shopping centers. Market research clearly has demonstrated that stabilized occupancy rates in anchored shopping centers are significantly higher than occupancy rates in non-anchored centers. While this factor may be addressed in the DCF model through the vacancy and credit loss assumption, it alters the perception of risk differential for the center as a whole in the mind of an investor. Anchor tenants are the principal destinations for most shoppers; the presence of an anchor tenant in a shopping center therefore is a consideration in the leasing decisions made by other tenants. The overall character of a retail center also is affected by the type of anchor tenant present. For example, centers anchored by a grocery store chain tend to attract drug stores, hardware stores and other tenants oriented toward weekly, repeat business. Department store-anchored centers tend to attract a slightly different type of tenant. Economic cycles affect various retail operations in different ways; therefore, the character of the tenant mix may affect an investor's perception of risk.

Capital Market Comparative Example

The following examples illustrate the risk-adjusted rate concept for real estate through a correlation with capital market risk-adjusted rates. The underlying basis for this example is the discussion of real estate and the bond market by James E. Gibbons, CRE.[1] He compares the definition of the risk rating for Baa bonds as set forth in Moody's Investor Survey and real estate characteristics. Moody's Investor Service, Inc., defines this rating as:

> Bonds which are rated Baa are considered medium-grade obligations, i.e., they are neither highly protected nor poorly secured. Interest payments and principal security appear adequate for the present, but certain protective elements may be lacking or may be characteristically unreliable over any great length of time. Such bonds lack outstanding investment characteristics and in fact have speculative characteristics as well.

When comparing Baa rates to yield rates for real estate, an additional adjustment must be made for the management burden and the liquidity risk. Management risk does not necessarily relate to the

management of the property itself but to the rate charged by fund managers to manage investment portfolios. The liquidity risk relates to the lack of daily trading in the real estate market and the effect of market conditions on prolonged marketing periods.

Using these parameters, a normalized discount rate may be defined as follows:

Current Baa bond rate (capital market base)	9.00%
Management burden	1.00%
Liquidity risk	2.50%
Normalized discount rate	12.50%

The normalized discount rate reflects property whose characteristics are typical for a particular marketplace. A property falls in this category if the characteristics of the tenant mix, average lease term, value distribution between the present value of the cash flow and the present value of the reversionary sale price, etc., match the assumptions utilized in the appraiser's DCF model. For the purposes of the example, let us assume the following normalized characteristics:

Average lease term	5 years	
Value distribution		
Present value of cash flow		60%
Assured contract income	50%	
Prospective income	10%	
Present value of reversion		40%
Total property value		100%

Example 1

This example details the impact of a substantial credit tenant on the discount rate. The tenant in question is a Fortune 500 company with a Aaa bond rating and a remaining lease term of five years. The present value of the contract income to be derived from this tenant represents approximately 75% of the assured income component of the property value. The current yield on five-year bonds for this company is 7.9%.

Capital market base		
Credit tenant		
Assured income component (.50 x .75)	37.5%	
Capital market yield	7.9%	
Weighted average		2.96%
Normalized value component		
Value component	62.5%	
Capital market yield (Baa)	9.0%	
Weighted average		5.63%
Management burden		1.00%
Liquidity risk		2.50%
Risk-adjusted discount rate		12.09%
	(rounded)	12.1%

Example 2

This example details the impact of a substantial tenant with questionable tenure on the discount rate. The tenant in question is a large accounting firm that must pay a court-directed liability judgment amounting to several times the net worth of the company. It has a remaining lease term of five years. The present value of the contract income to be derived from this tenant represents approximately 75% of the assured income component of the property value. For the capital market base, assume a junk bond rate of 11%.

Capital market base		
Questionable tenant		
Assured income component	37.5%	
Capital market yield	11.0%	
Weighted average		4.13%
Normalized value component		
Value component	62.5%	
Capital market yield (Baa)	9.0%	
Weighted average		5.63%
Management burden		1.00%
Liquidity risk		2.50%
Risk-adjusted discount rate		13.26%
	(rounded)	13.3%

In this particular example the additional 80 basis points above the normalized discount rate represent the possible risk of default. Despite the fact that the tenant has a remaining lease term of five years, not reflecting the additional increment of tenant risk by using the normalized, or typical discount rate for that property would be inappropriate.

Summary

Because of tenant risk factors, a normalized discount rate for a particular area or property type may not represent the risk inherent in a lease portfolio. For that reason, discount and capitalization rate selections based on investor surveys may be a valid starting point in the analysis, but use of a 12% discount rate for all office buildings or shopping centers in suburban Anytown, USA, is not appropriate.

Some elements of risk may be addressed directly in the various assumptions involving the DCF analysis; subsequent adjustment of the discount or capitalization rates therefore may be double counting. Nevertheless, certain elements of tenant risk cannot be specifically quantified in lease rollover assumptions, credit loss levels, etc., and should be reflected in rate adjustments. Risk assessment is typical in the analysis of other capital market investments (i.e., bonds). For real estate to be further integrated into the institutional investment portfolio, it is incumbent upon the analyst to explain market behavior in similar terms.

NOTE

1. James E. Gibbons, CRE: *Real Estate and the Money Markets*; (American Society of Real Estate Counselors, 1989) pp. 25-29.