NEVADA DEPARTMENT OF TAXATION

Capitalization Rate Study Principles of Development

Calendar Year 2012
For the 2014-2015 Secured &
2013-2014 Unsecured Tax Year Valuation

In the Department's capitalization rate study, four capitalization criteria are considered:

1.) The estimate of the equity cost of capital must comport with common sense.
2.) The company's equity risk premium should be reasonably stable over short periods of time.
3.) The estimate of the cost of equity should apply for the long term.
4.) The estimation procedure must be sufficiently straightforward so that it can be easily understood, applied, and even adjusted by educated practitioners.

"The duration of the cost of equity should approximately match the duration of the dividend stream." "Estimating the Cost of Equity Capital" (Bradford Cornell, John I. Hirshleifer, and Elizabeth P. James, Contemporary Finance Digest, Vol. 1, Number 1, Autumn, 1997).

"With the respect to the oldest and most established model, the capital asset pricing model (CAPM), the academic consensus, to the extent that there is one, is that it does not work. Furthermore, there is no widely accepted alternative that does. (Cornell, p. 7)

The Department's capitalization rate model uses comparables, and:

1.) It provides development of "pure plays*".
2.) It uses comparables to reduce measurement error, however, there is a trade-off between the reduced measurement error that averaging makes possible and the potent bias that it introduces. "There is no unambiguous way to identify comparability."
3.) Because of the impact of diversification, averaging reduces the short-term variation in the estimated cost of equity. From the standpoint of regulatory agencies, which must set policies based on estimates of the cost of capital, this increased stability is a major benefit." (Cornell, p. 9).

"The fact that the target company is not a "pure play" in the business for which the cost of equity is to be estimated is not an uncommon problem. The typical solution is to find comparable companies that more closely approximate pure plays." (Cornell, p. 8).

*Define Pure Play: The pure play method for estimating the cost of capital for a project requires the analyst to identify two or more publicly traded firms that operate in a similar line of business. These firms must be pure play, i.e., they must not have significant operations in other lines of business.

The Department's applicable model decision considered:

The pure DCF model: k=Div/P+g is a constant growth model. "Practitioners have come to recognize that this is not applicable in most situations . . . .it is far better to use a multiple-stage model that more appropriately mirrors the path of future dividend growth than to attempt to estimate a constant sustainable growth rate . . . .the practical problem, of course, is determining a reasonable growth path for future dividends." (Cornell, p. 10).

1.) Using a three or six month average (or more) of stock prices introduces the problem that outdated information which can bias the estimate of the cost of equity is introduced. Use the current stock price.
2.) Should flotation cost be considered? This is still under investigation or consideration by the Department to determine whether it is warranted. The purpose of flotation cost adjustments is to permit a company to be able to sell new shares with a net cost at least equal to its book value. In other words, to recognize the legitimate cost of issuing or floating common equity in the time period being evaluated or appraised. Issuance costs are the out-of-pocket costs directly associated with the public offering of new shares. These costs include legal fees, printing costs and underwriter fees (or discounts). These costs are measurable and can usually be precisely quantified. Studies have shown that issuance costs have averaged 3 to 4 percent of the gross proceeds on new stock sales. There are several ways in which flotation costs can be recognized with regards to assessed valuations/appraisals. The first method, and the way previously recognized by the Department, has been to adjust upward the return on equity to reflect the flotation costs incurred to issue the securities. The second method, and one being considered for future proceedings, is the cost of service or operating expense approach. This method treats flotation costs like most other operating costs and allow for their recovery or in the assessed valuation process allows these expenses as any other legitimate expenses to offset the cash flows under the income approach. Expensing issuance costs in the year incurred has the advantage of simplicity. The alternative recovery can be accomplished via straight line amortization over a short period of time.

3.) The application of the DCF approach involves an added difficulty with respect to the selection of comparable companies. From the standpoint of the cost of equity, comparability depends not only on the line of business, but also financial leverage. Two otherwise identical companies will not have the same cost of equity if they have markedly different capital structures. Whereas adjustment for leverage can be made using asset-pricing models, in the context of the DCF approach there is no procedure for taking account of differences in the financial leverage. Consequently, the sample of companies used to estimate the cost of equity should all have similar capital structures to the target company or the analysis is likely to be misleading (Cornell, p. 11).

The most common approach is to assume that the dividend-pay-out rate remains effectively constant and to use analysts' forecasts of earnings as a proxy for dividend forecasts. The practical problem raised by relying on analysts' forecasts is that such forecasts typically have short horizons. Services that aggregate forecasts, including Institutional Brokers Estimates System (I/B/E/S) and Zack's Investment Research do not provide forecasts beyond five years.

From the standpoint of the DCF model that extends into perpetuity, the five year horizon is too short. While it is possible that a company's dividends can grow significantly faster than the general economy over five years, it is not possible for such growth to continue into perpetuity. Between five and twenty years, the growth rate is assumed to converge from the short to the long-term rate.

A transition must occur between the growth rate forecasts by analysts for the first five years and the company's long run, sustainable growth rate. In the first five years: dividends are assumed to grow at the median five year earnings growth rate of I/B/E/S; from year twenty on, dividends are assumed to grow at the same nominal rate of the national economy.

Note: It is critical that eventually all company rates drop to a level consistent with the growth rate of the aggregate economy.