

It's in There! So What Else Is Included in Your Estimated Cost of Capital?

By Ted Israel, CPA/ABV/CFF, CVA

In a long-running TV ad for spaghetti sauce during the 1980s, a pitchman repeatedly responds to inquiries about the product's ingredients with the phrase: "It's in there!" This response might also apply to your estimated cost of capital.

Several years ago, while researching a method to objectively estimate company-specific risk, I found indications that the effects of many of the risk attributes I sought to address were already captured in the size premium. My findings were discussed in an article, "Risky Business/The Generous Helping of Company-Specific Risk That May Be Included in Your Size Premium," which appeared in the June 2011 issue of *Business Valuation Update*. The content of that article is too lengthy to repeat here. It called the readers' attention to the relative risk of the companies occupying Ibbotson's lower 10th decile and Duff & Phelps's Portfolio 25 when compared to the larger companies in the respective surveys. It concluded that, within the narrow parameters defined in the article, "when relying on the size premium data discussed above to estimate the cost of capital for the typical small private company, there is little or no need for the analyst to add an additional premium for company-specific risk."

The valuation of private companies is a facts-and-circumstances proposition. There are exceptions to every rule and model. The point of the article mentioned above was to caution valuation analysts about the potential for adding on an incremental company-specific risk when much

of the operating risk they wished to address may already have been accounted for in their size premium. In other words, "it's in there!"

Since writing that article, I have become aware of a few other elements of valuing private companies that are frequently adjusted for as a separate factor—but that also may already be embedded in the analyst's estimated cost of capital.

Illiquidity. It is readily acknowledged that non-controlling interests in private companies are less liquid than their publicly traded counterparts. Fair market value estimates for such interests frequently include an adjustment in the form of a *discount for lack of liquidity or lack of marketability*. However it is labeled, the discount is intended to address the difference in liquidity between a publicly traded equity security (sale and proceeds within three days) and shares in a private company.

Compared to public companies, private company shares lack access to an organized, regulated, and efficient market. Further, a private company's corporate bylaws, operating agreements, and buy/sell agreements may contain terms restricting the transfer of shares and also rights of first refusal in favor of other shareholders. Both of the foregoing represent impairments to the interest's liquidity. Conversely, there may be no such restrictions. The shares are, in every legal and contractual sense, *marketable* but still generally illiquid due to the absence of a regulated, organized, and efficient market. The emphasis will be on liquidity for the rest of this discussion; marketability will be regarded as a label.

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Valuation analysts have relied on a number of means to quantify the extent of impairment due to lack of liquidity. IPO studies, restricted stock surveys, option models, and other approaches all have their theoretical strengths and weaknesses. But what if some of the public companies from which our estimated cost of capital is derived are not as liquid as we had assumed? Would that not highlight the possibility of overestimating the relevant discount for lack of liquidity?

As it turns out, many publicly traded equity securities are *not* as liquid as we may have assumed. I will let you know a little later which ones fit that description. First, we need to discuss how the liquidity of a publicly traded equity security is measured.

A public stock's turnover rate in the market is a very broadly accepted measure of its liquidity. A stock's turnover is merely its trading volume for a specified period divided by the number of shares outstanding for the same period. For example, a stock's *annual* turnover is equal to its trading volume for the year divided by the average number of shares outstanding during the year. Stocks that have a high rate of turnover are more liquid as they are trading more frequently and thereby allow would-be purchasers frequent opportunities to acquire the stock and would-be sellers frequent opportunities to liquidate some or all of their position. Stocks with a low rate of turnover are just the opposite. It should come as no surprise that *generally* the market prices relatively liquid stocks higher than less liquid stocks and vice versa. An illiquidity premium is observable in the form of higher returns associated with lower liquidity stocks. Therefore, the estimated cost of capital of your private company could conceivably include an illiquidity premium. If that were the case, you would want to be cautious when estimating the subject company's discount for lack of liquidity to avoid overlapping with the discount embedded in your estimated cost of capital.

To consider whether and how much illiquidity may be embedded in your estimated cost of capital, it is necessary to identify the type of public companies that exhibit reduced liquidity. It turns out

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there is a strong correlation between size and turnover. The smaller the company, the lower the rate of turnover and therefore the lower its liquidity. For a good illustration of this phenomenon, refer to Chapter 7, pages 105-106 of Morningstar's *Ibbotson SBBi 2013 Valuation Yearbook*.

Is it then redundant to apply a "large" discount for illiquidity or lack of marketability to a company that has been valued using an estimated cost of capital derived from small stock returns? It just may be. In his 2010 paper, "Business Valuation, DLOM and *Daubert*: The Issue of Redundancy" (ssrn.com/abstract=1504134), Robert Comment concludes: "Because there is a high correlation between size and liquidity, there is great likelihood that supplemental discounting for lack of marketability will be redundant." He goes on to express that he is skeptical of any incremental discounts greater than 5%.

Dr. Comment is not the only academic to call attention to this issue. In *Equity Risk Premiums (ERP): Determinants, Estimation and Implications*, September 2008, Dr. Aswath Damodaran points out: "If ... we add a small cap premium ... to the cost of equity of small companies, without attributing this premium to any specific risk factor, we are exposed to the risk of double counting risk. For instance, assume that the small cap premium we have observed ... is attributable to lower liquidity ... of trading small cap stocks. Adding that premium on to the discount rate will reduce the estimated values of small cap and private businesses. If we attach an illiquidity discount to this value, we are double counting the affect of illiquidity."

While it appears certain that an illiquidity premium is embedded in small companies' cost of capital, I am not quite ready to accept that it obviates the need to further adjust private company valuations for illiquidity. To me, it is intuitive that the stock of a private company should prove significantly less liquid than shares in even the most illiquid of public companies. However, I currently lack the empirical means to estimate such incremental illiquidity. I do not think I am alone in this, so I believe we can look forward to further research on the subject.

The point of the foregoing discussion is this: If you have estimated the cost of capital for a small private company and applied a size premium, be careful when you consider what degree of illiquidity discount to apply. It is probable there is already some of that in there.

Investor level income taxes. The statement "free cash flow is after corporate taxes and before individual taxes" or similar wording has appeared in the *Ibbotson SBBi Valuation Yearbook* for a number of years. The *Yearbook's* authors' intentions were clear enough. They wanted to be sure that readers understood that the capitalization and discount rates derived from their data should be applied to after-tax cash flow only. The guidance of course made sense because the returns all came from market data for publicly traded C corporations.

Ibbotson's admonishment helped focus the appraisers of private companies on an interesting issue. What about businesses that are not subject to entity-level taxes such as S corporations? When estimating the fair market value of such a "pass-through" entity, should the capitalization and discount rates derived from the Ibbotson data just be applied to the entity's flow-through income? Should a pass-through entity's income be "tax affected" to reflect a hypothetical corporate income tax? Tax affected for individual taxes on the pass-through income? Should the capitalization rate be adjusted? A combination? Or something else?

The best minds in our profession have put forth a number of cogent (although at times complex) models to address the issue. Conversely, some of the best minds in our profession have questioned the need for "tax affecting" and opposed some, if not all, the models. The Internal Revenue Service has been uniformly opposed to tax affecting pass-through entity income. It has been a nonstarter for the IRS, and the Tax Court has consistently ruled in the government's favor.

The Delaware Chancery Court has been more receptive. In *Delaware Open MRI Radiology Associates, P.A. v. Kessler, et al.*, 2006 Del. Ch.

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Lexis 84 (April 26, 2006), Chancellor Strine (then vice chancellor) made his own calculation of the differential in taxes faced by the shareholders of a C corporation versus an S corporation and carried his analysis through to the adjudicated value.

Who is right? To answer this question, you must first answer this threshold question: Is there evidence observable in the market that the value of public companies is influenced by investor-level taxes?

If the answer is “yes,” then the differential in individual taxes imposed upon the shareholder of a public company and shareholder of a private S corporation must somehow be addressed when estimating the fair market value of the S corporation shareholder’s noncontrolling interest.

This question has been the subject of numerous academic research papers going back to the 1960s. It turns out the answer is “yes.” Investor behavior (i.e., what they choose to hold, how they choose to hold it, and what they will pay for it) is influenced by the individual income taxes imposed on dividends and capital gains returns. (For an extensive overview and summary of the research, see Keith F. Sellers and Nancy J. Fannon, *The Impact of Taxes on Value: Implications for Pass-Through Entity Valuation*, June 2012.)

Empirical evidence exists that the P/E multiples, discount rates, capitalization rates, and equity risk premium derived from the public markets and relied upon in the guideline public company method, capital asset pricing model, and build-up method include the effects of taxes on dividends and capital gains at the investor level. S corporation shareholders are not subject to taxes at dividend tax rates. But they are subject to taxes on flow-through income at the potentially higher ordinary tax rates. A tax is a tax. If the public market cost of capital includes the effects of taxes on investors at one rate, then the estimated cost of capital for the private S corp should be adjusted to reflect the fact that the flow-through income to its investors is taxed at a different rate. The question is: “How?”

Michael Barad, while manager of valuation and legal services of Ibbotson, suggested the following:

$$F_s = \frac{(1-T_{PC})}{(1-T_{PS})}$$

Where:

F_s = the factor to adjust the public market cost of capital (say from Ibbotson)

T_{PC} = personal C corp. taxes; tax realized by investors for C corp. distributions

T_{PS} = personal S corp. taxes; tax rate realized by investors for income from S corps.

(See *AICPA ABV E-Alert*, Volume 4, Issue 6, June 3, 2002)

The above is intellectually correct and appealingly simple. It also yields results very similar to models based on adjusting cash flows. But it may be complicated by assumptions related to taxes on capital gains and the fact that the stock of many publicly traded companies are not held by individuals, but by entities exempt from taxes (see Sellers and Fannon). Therefore, you cannot assume that the effects of investor-level taxes are embedded in public companies’ cost of capital at full statutory rates.

This is a controversial area. Again, specific procedural approaches are beyond the scope of this article. The takeaway is this:

The effects of investor-level taxes are embedded in the pricing of publicly traded securities. When estimating the fair market value of a noncontrolling interest in a private S corporation utilizing rates derived from public market data, the effects of the tax differential on value should not be ignored.

Said another way: Effect of investor-level taxes? It’s in there!

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