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Is the Stock Market Really Relevant to My Little Company?

That depends on how little your little is! Companies with less than \$1 million of revenues have almost nothing in common with publicly traded companies. Discount rates, which are at their core based on publicly traded stock yields, require significant adjustment when applied to small companies.

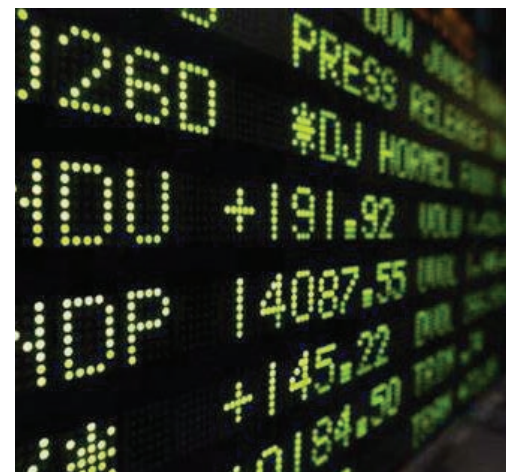
Publicly traded data starts to become relevant to companies with revenues approaching \$5 million. Besides discount rates, meaningful inferences can be drawn from financial ratios, trends and industry issues disclosed in 10-Ks and 10-Qs. As companies get larger, publicly traded data becomes more and more relevant.

An important question to ask is Who is the likely buyer for the company being valued? Many small companies change hands through business brokers and other intermediaries, for which public market data is not relevant. But for others the most likely buyers might be larger companies, some of which are publicly traded. Then, public value multiples become highly relevant as both guidance and limits for the value of the subject.

The stock values of publicly traded companies exhibit great volatility on a daily basis. It is far reaching at best to suggest that daily volatility is relevant to the value of even a large closely held

company. In most situations, the value of a closely held company as of a certain date cannot even be calculated for 45 to 60 days. But longer term pricing trends in the public market can definitely be relevant, as they reflect industry issues affecting all players, even down to very small companies.

Public stock betas reflect monthly price volatility relative to a broad based index, such as the Standard and Poors Five Hundred market index. Research indicates that a stock's beta can explain part of its price movement relative to the movement of the index. While the beta of a single public company similar to a valuation subject is not likely to be helpful, the average betas of a group of similar companies, or of all players in an industry, can be indicative of value trends for a subject.



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Betas are not so explanatory as to be predictive. They are generally regarded as an indicator of the riskiness of an investment in a stock. They say more about the unexpected than the expected. So betas can be helpful for assessing the riskiness of a subject company.

The size effect has been well documented now for several years running by annual studies performed by Ibbotson and by Duff and Phelps. These studies are of publicly traded stock yields, with the smallest company group having revenues well below \$100 million. Unlike beta, the size effect seems to be highly consistent. Thus, valuation professionals will use size adjusted public company discount rates as a jumping off point to determine a discount rate for smaller companies, even very small companies.

Lastly, for the big picture, if the standard of value is fair market value, and the interest at hand is a minority interest in a closely held company, a financial buyer would have to compare this opportunity to the risks and rewards available from an investment in similar publicly traded stocks. No one would be willing to take on the greater risk of a small closely held company unless there is also the possibility of greater reward.

Valuing Start-Up Companies

Both start-up and existing company valuations are determined by similar factors:

- The return on investment that the investor seeks
- The value of what exists already
- The expected upside
- The anticipated requirement of additional capital
- The risks

What makes the start-up valuation both different and difficult is the lack of historical operating data to serve as prologue to future operations. For example, the capitalization of cash flow method cannot be used to value a start-up company because there is no historical cash flow. The market approach will also prove to be not very useful as all of the companies listed in the market transaction databases are mature businesses that are not likely to be in the same stage of product and market development as a start-up. In addition, the lack of current cash flow and revenue prevents the use of traditional pricing metrics to determine value.

In such a situation, the discounted future cash flow method might be the only valuation method available. The real challenge to using the discounted future cash flow method is that it is difficult for valuation analysts to reliably estimate year-by-year results when a company has little or no track record.



Management of the start-up company might have prepared projections in developing a business plan to attract investors and lenders. The projections may be educated guesses at best, or they may be directed at putting the best face on the business and its prospects in order to attract capital and bank financing. Therefore, the valuation analyst must temper the analysis with an understanding that projections (even for existing

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companies with long track records) are inherently subject to variation in their outcomes, particularly in start-ups where there is no operating history.

The valuation analyst needs to maintain a healthy degree of skepticism in assessing the likelihood of success as projected. This will involve asking hard and penetrating questions to assess forecast assumptions in order to determine if the forecast is realistic, reasonable, and achievable. To the extent that third parties such as market analysis consultants have participated in creating the forecast assumptions, the more credible they will be.

There are valuation methodologies to deal with the additional risk inherent in start-up cash flow projections. Assigning a higher discount rate to the projected results than one would apply to that of a comparable size company that had been in existence for a while and which had an operating track record is a common way of dealing with the issue. However, this may not produce acceptable results, as the choice of a discount rate can become arbitrary at higher levels.

The second and more complex approach is to prepare a probabilistic cash flow forecast by either employing various scenarios and weighting each of them along the lines of best case, worst case and most probable case or by assigning probabilities of success to numerous forecasts such that the total probabilities equal 100%. The most sophisticated way to perform the latter type of probability weighting is to use Monte Carlo simulation which produces results that will have considered as many contingencies as the analyst can model. The discrete annual cash flows produced by these latter methods would then be discounted at rates typically used when valuing comparable size companies that have been in existence for a while and which have operating track records.

Of course, one should never combine these two methods—higher discounts and probability weighted cash flows. To do so would undervalue the company, as risk would be accounted for twice.

While a discounted cash flow methodology can be used to value a start-up company, special consideration is needed, however, to address the unique risk factors associated with such businesses.

Valuing Intellectual Property

There are many definitions of intellectual property. The most concise definition is assets without any physical substance. They are intangible assets with physical descriptions of specific knowledge that can be owned and readily traded. Intangible assets that receive legal protections become intellectual property. Some examples are patents, copyrights, trade names, trademarks, trade secrets, and recipes.

Intellectual property is difficult to describe and value because it has no tangible qualities. But, often, the intangible assets of a business are easily the most valuable assets. Thus, when intellectual property is stolen, damaged, destroyed, or impaired, the owner may seek redress because of the significance of the financial loss.

When valuing intellectual property, it is important to keep in mind that the conclusion of value will be based in one form or another on the cash flow that the property could reasonably be expected to produce in the future. There are two significant factors to keep in mind: the

projected income stream and the risk associated with the projected income stream.

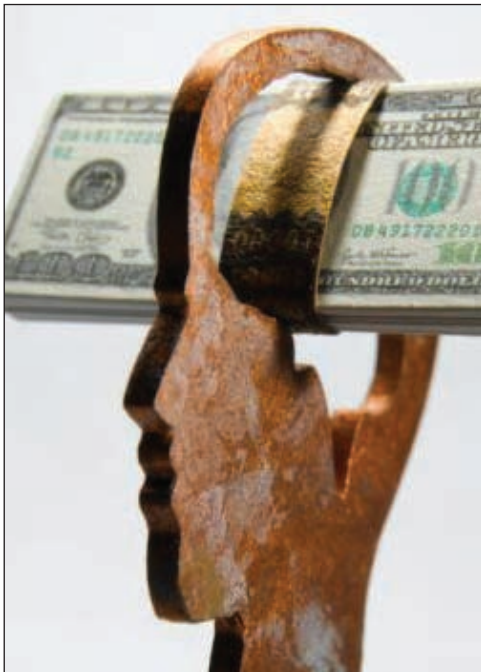
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The income stream projection is based on several potential cash flow scenarios. The cost approach determines what it would cost to replace the intellectual asset. This is also known as replacement value. Another approach is to determine royalties that would be paid on the property. A royalty calculation is based on estimates of revenue produced by the intellectual property and an appropriate royalty rate. An income approach determines the revenue and expense cash flow generated by the intellectual property. Finally, a market approach determines an income stream based on prior or concurrent transactions or contracts for similar intellectual property. This is a common approach when valuing franchise agreements.

The risk rate associated with intellectual property is the most subjective element of the estimate. The risk rate contemplates several factors including the time value of money, inherent uncertainty of actually meeting the projected income stream, market imperfections, the viability of the intangible asset, regulatory risk, competition, patent expirations, etc.

Why would two competent experts disagree on the value of an intellectual property? It can be boiled down to one of two elements. The disagreement is either the projected income stream or the assumed rate of risk associated with the income stream—or both. The use of a valuation professional who can explain the value and identify the areas of disagreement is valuable in the successful conclusion to disputes that involve the valuation of intellectual property.