BANISTER FINANCIAL, INC.
Business Valuation Specialists
www.businessvalue.com

1338 HARDING PLACE • SUITE 200
CHARLOTTE, NORTH CAROLINA 28204
PHONE: 704-334-4932 FAX: 704-334-5770
Contact: George B. Hawkins, ASA, CFA, President

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DISCOUNTS FOR LACK OF MARKETABILITY: A REVIEW OF STUDIES AND FACTORS TO BE CONSIDERED

By: Michael A. Paschall, ASA, CFA
Managing Director

The discount for a lack of marketability is widely recognized and accepted by courts, valuation experts, and the IRS as the "cost" of the lack of liquidity inherent in stock of companies for which there is no ready market for the shares. Although this discount is widely accepted, the million-dollar issue in each valuation is determining how large a marketability discount to apply. This article will first discuss the various methods used (and results obtained) to measure the differences in value between company stock that is and is not freely marketable. Next, this article will address the problems and pitfalls with blindly applying such data to the privately held stock being valued. Finally, the need for and importance of a well-supported and fully documented valuation report will be examined.


Michael Paschall

Method One: Restricted Stock. Some of the earliest marketability studies (from the mid-1960's to the mid-1980's) focused on value differences between common stock and restricted stock of the same publicly traded company. Restricted or "letter" stock generally has all the attributes of regular common stock with the exception that restricted stock is prohibited from sale on the open market for a specified period of time (usually two years). Because the only difference between common stock and restricted stock is this marketability feature, price differences between the two classes of stock are believed to be a fairly accurate indicator of the discount for lack of marketability.

Two of the more comprehensive studies on restricted stock were the SEC Institutional Investor Study and the Moroney Study. The SEC Study examined restricted stock of 398 publicly traded companies and determined that the mean and median discount for trades of restricted shares was approximately 26%. The SEC Study also isolated non-reporting OTC companies (companies most likely to resemble closely-helds) and found a mean and median discount of approximately 33%. The Moroney Study examined restricted stock of 146 publicly traded companies and found a mean discount of 36% and a median discount of 33%. Although both studies are over 20 years old and may not be perfectly applicable to the current market environment, they do remain two of the most significant studies in terms of the number of companies analyzed.

Method Two: Initial Public Offerings. A more recent and ongoing study of marketability discounts is conducted by John Emory, ASA, of Robert W. Baird & Co., Inc. As opposed to analyzing restricted stock, Mr. Emory examines transaction values of company stock prior to the Initial Public Offering (IPO) with the actual offering price at the IPO. For example, if a shareholder disposes of company stock at $6.00 per share and the stock is then brought public at $10.00 per share, Mr. Emory calculates a marketability discount of 40%. Pre-IPO stock transactions are limited to the five-

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month period preceding the IPO, implying that most buyers and sellers are aware of the impending IPO and the potential marketability of the company stock. In six separate studies conducted over 18-month periods since 1980, Mr. Emory examined 173 companies and found an average discount of 47% and a median discount of 46% between the pre-IPO trades and the actual IPO price.

Method Three: Option Pricing. A third, more recent method of measuring marketability discounts is option pricing. Although appearing complex, option pricing as a measure of the discount for lack of marketability is actually quite appealing once it is simplified and applied to closely held stock. The argument goes as follows: Stock X trades for $100 today. I write a put option that enables the buyer of the option to sell (put) stock X to me in one year for $100 (the strike price). You choose to buy this put from me for $10, the option price. You do not actually own the share of stock X, however, by buying the put option, you are exercising some degree of control over the stock. You hope that the stock price goes down in one year so you can buy the stock cheaply in the market and then sell it back to me for $100.

So how does this apply to the valuation of closely held stock? By buying the option and guaranteeing yourself a sale price of $100, you have "purchased" liquidity for stock X. The $10 price is the cost to you, the buyer, for the ability to convert to cash. Similarly, the $10 represents the value of the risk that I, the seller, am willing to bear in the event I have to repurchase the stock. Given the $10 value of liquidity and the $100 market price, the implied discount for the lack of marketability (or lack of liquidity) is 10%.

In his 1993 study, Mr. David Chaffe calculated discount ranges of 28% to 49% for the lack of marketability (based on put prices expressed as a percentage of the market price). Using the Black-Scholes Option Pricing Model, Mr. Chaffe made certain simplifications and assumptions such as a high implied price volatility (60% to 90%), no dividends paid, options with two to four year terms, and exercise of the option only on the last day of the option period. Although these adjustments mathematically create higher option values, they are necessary as such adjustments ensure a more accurate estimation of the cost of the non-liquidity risk of a privately held stock. While Mr. Chaffe admits his study has limitations, the results generated may serve as confirmation of the 33% to 47% discount range seen in the restricted stock and IPO studies.

Problems in Applying the Data. After examining the data it would appear simple to apply a marketability discount of 30% to 50% (as determined by the various studies) to the closely-held shares being valued. However, a straight application of a marketability discount may not be the proper route once various data- and company-specific factors are considered.

Correlation with Minority Discount. One factor to consider in the application of a marketability discount is the size of the interest being valued. This necessarily brings into consideration the fact that a discount for minority interest may be appropriate and may well be correlated with the marketability discount. The rationale behind this correlation is the fact that a larger percentage block of stock has a greater ability to effect control within the company. This distinction does not necessarily have to be drawn at the 51%-49% line as company bylaws and/or state statutes may require a 2/3 majority (for example) for certain corporate actions. Under such a scenario, a 34% interest may have more marketability (and value) than a 32% interest due to the former's ability to block a potential corporate action.

Illiquidity for Controlling Interests. Similarly, a controlling interest in a business, while properly commanding an appropriate control premium, may still suffer from a lack of marketability. This illiquidity cost can be approximated either by estimating the costs of flotation of an initial public offering of the stock or by the expenses associated with a private sale of the company.

Flotation costs include legal, accounting, and investment banking fees necessary to underwrite and place the issue with investors and typically requires a high degree of due diligence. A 1972 SEC Study on such costs indicated total flotation costs (as a percentage of gross proceeds) of 21.2% for 270 stock issues of up to $1 million and 12.2% for 1,008 stock issues of $1 million to $10 million. Although this particular data may be dated by now, flotation costs nonetheless remain a very real cost and may warrant an appropriate marketability adjustment to the controlling interest of a business. Such a discount is probably not properly applied to a minority interest in a company due to the general proposition that a minority interest of stock cannot force a public

offering. The careful business appraiser must also be aware of IRS and Treasury regulations regarding the treatment of underwriting fees as detailed in Revenue Ruling 83-30 and such cases as *Gillespie v. U.S.*, (23 F.3d 36, 2d Cir., 1994).

A second way of estimating illiquidity costs for controlling interests is to look at the expense of selling the business. This might include intermediary fees to locate a buyer as well as the legal and accounting costs to close the transaction. For small and mid-sized businesses this is likely a much better indicator of illiquidity costs than via flotation, especially given the high costs associated with due diligence and regulatory issues in an IPO that are not present in a private business sale.

Supply and Demand in the Market. Another possible marketability adjustment to consider relates to the size of the block of stock to be valued and the corresponding supply and demand in the marketplace for that stock. For example, a company with 100,000 shares may experience a trading activity of ten 100-share trades per year. If a 10,000-share block of stock is the valuation subject, it is arguable that under current market conditions, it would take 10 years to liquidate the stock. Given the over-supply and under-demand coupled with time value of money considerations, some marketability discount may be in order. Of course, the other side of this argument is the fact that the larger the block of stock, the more attractive it is from a control basis, and the lower marketability discount it should receive.

Problems with Marketability Studies. In addition to company-specific variables that may warrant adjustment of a marketability discount, there may be factors in the specific method of marketability discount that likewise warrant adjustment. As mentioned earlier, the data generated by restricted stock studies is somewhat dated and use of a more current study may be appropriate for a current valuation. Likewise, the Option Pricing Model must make certain assumptions that can affect its results. Finally, the data as determined by the IPO model is subject to several contingencies, including the possible argument that the IPO price is not the true "freely-traded" price and the price of trades several months after the IPO may be more indicative of a true "freely-traded" value. Also, application of the IPO Method is subject to criticism in that the pre-IPO seller of stock is most likely aware of the coming market for the shares whereas the owner of certain closely held stock may have no expectation of a future market for the shares.

Conclusion. The implication of this limited discussion is that there is no such thing as a "standard marketability discount." Differences in the size and nature of the interests being valued as well as discrepancies, assumptions, and imperfections with the application of the various marketability studies all call for a thorough and detailed analysis of the proper marketability discount to apply. Failure to conduct the proper analysis can result in the application of an improper marketability discount that could result in adverse consequences whether through its effect on tax or estate planning or through its inability to be defended in a court of law. Only through a well-supported and fully-documented valuation report can the various factors affecting the marketability discount be isolated, analyzed, and properly applied to the stock interest in question. ♦

Michael A. Paschall is co-author of the *CCH Business Valuation Guide* and a Managing Director of Banister Financial, Inc., a business valuation firm in Charlotte, North Carolina. He can be reached at mpaschall@businessvalue.com or 704-334-4932.