

**Determinants of the Discount for
Lack-of-Marketability**

**Preliminary working paper
By Helen Bowers, PhD and Tara Stephenson**

Forward

The Woodward Group, Ltd., a financial advisory firm based near Philadelphia, advises Special Committees of corporate Boards of Directors on issues regarding corporate finance transactions. In these corporate transactions, issues surrounding the use of a discount for lack-of-marketability often arise when valuing stock or assets.

Two major issues surround the use or non-use of the marketability discount: (1) when use is legally allowed; and (2) if prescribed, what should be the magnitude of the discount, given that many of the commonly used benchmarks are based on historical data that in some cases date back to 1966. The discount for lack-of-marketability, if warranted, is intended to create a current, fair market value¹; hence the discount should be based on dynamic data that reflects current market conditions, not historical data or theoretical calculations.

Marketability Discount Defined

A discount for lack-of-marketability is a percentage discount by which the gross, or initial value of a business' stock or assets is reduced to determine fair market value. This discount reflects investors' uncertainty concerning how long it will take and what the cost will be to convert the illiquid asset or security into cash.

The marketability discount is distinct from any other discounts, such as a minority discount, discounts reflecting the small firm effect, and key man discounts. The marketability discount deals solely with the passage of time and added sales and marketing expenses incurred to sell an illiquid security or asset.

When a Marketability Discount is Appropriate

Applying a marketability discount *may* be appropriate if fair market value is sought and there is no ready market for or offer to acquire the securities or assets being sold.

However, the valuation sought is often that of fair value², in which the specifics of a commercial transaction are not considered, merely the aggregate, going-concern business enterprise value. When to apply a marketability discount, both in practice and as legally allowed, followed by a summary of

¹ The typical fair market value definition includes reference to a price at which the security or assets being valued would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of the relevant facts. The US Treasury defines fair market value as: “. . . the closest approximation to a market determined price and would incorporate minority and other discounts, if applicable.” *Treas. Reg. §20.2031-1(b) and §25.2512-1.*

existing marketability discount studies and a summary of Woodward's work to create a discount for lack-of-marketability reflecting current market conditions are provided below.

In Practice

Mergers and acquisitions

In most circumstances, when a valuation is conducted to determine if a *bone fide* merger or acquisition offer is fair, the securities or assets under consideration should not be discounted for lack-of-marketability. Accordingly, the fairness of the merger or acquisition consideration should be assessed from a financial perspective using fair value standards. When a *bone fide* offer exists, the assets or securities are presumably liquid because a ready and liquid market for the stock or assets being valued exists. Thus, there is no significant waiting period or future, unknown sales and marketing expenses to be incurred and, therefore, a discount for lack-of-marketability is not warranted.

This holds true regardless of whether the business is private or public or whether the assets or securities under consideration represent a minority or majority position in the firm. Also, the presence of a *bone fide* offer renders a discount for lack-of-marketability inappropriate regardless of the method of financial analysis used, including comparable company, discounted cash flow or comparable merger and acquisition analyses. However, to the extent that merger or acquisition consideration consists of Rule 144 restricted stock, as discussed below, applying a discount for lack-of-marketability is appropriate in valuating this portion of consideration.

Of particular note is the fact that in assessing the fairness of a transaction in the case of a private company, publicly traded "comparable" companies are often used as one of the methodologies to develop the implied value of the private company. Through this methodology a list of "comparable" publicly traded companies and their key financial statistics are developed, such as revenues, earnings-before-interest-and-taxes (EBIT), earnings-before-interest-taxes-depreciation-and-amortization (EBITDA), net income and book value. By comparing these financial statistics to each comparable company's market and enterprise values, as appropriate, valuation ratios or multiples are generated, which are applied to the historical and forecasted financial results of the private company being valued.

The relevant issue of a *bone fide* offer existing can be obstructed when using the comparable, publicly traded valuation methodology because this methodology uses public company stock prices obtained from national and international stock exchanges. The markets for these public stocks are presumed to be more liquid than the market available for privately owned business. However, the *bone fide* offer provides a market environment that can be considered as liquid as the markets for publicly traded stocks, thereby negating the need for a marketability discount.

² Fair value reflects a shareholders' proportional stake in the business as a going concern, not as adjusted for commercial transactions, and therefore, not as adjusted for a discount for lack-of-marketability.

Therefore, Woodward’s position is that in practice, the application of a discount for lack-of-marketability is not warranted if there exists a *bone fide* offer, even if the purpose of the valuation analysis is to assess if the *bone fide* offer is fair. Because there exists such an offer, this represents a potential level of liquidity for the private company shareholders that, in some cases, rivals liquidity available to public company shareholders. In particular, this greater liquidity in a private company transaction is clear because private company shareholders have an opportunity to liquidate every share in a transaction, without experiencing a decreasing price per share due to the volume of shares offered and/or sold. This opportunity is particularly absent for shareholders of public companies in which the shares are thinly traded³.

Cash out mergers

In a cash-out merger, which allows, under Section 253 of Delaware General Corporation Law, the holder of 90% or more of a company’s outstanding stock to eliminate minority share holdings through a merger and payment to the minority shareholders cash, there is a *de facto, bone fide*, imminent offer, thus no marketability discount should be allowed as indicated above.

Going private transactions

A going-private transaction often involves a purchase offer to minority shareholders as a way to decrease the number of shareholders and/or shares outstanding below the stock exchange requirement for a public company listing—thus creating a non-public entity that has “gone private” once the tendered shares are acquired and/or extinguished by the sponsoring person or entity.

In determining fair value in a going-private transaction, no marketability discount should be applied, given that the offer represents an opportunity for current liquidity—thus an opportunity to avoid the time and/or expense to market the shares being sold. Hence, the correct practice is to not apply a discount for lack-of-marketability in determining fair consideration in a going private transaction. Furthermore, if the going-private transaction involves the shares of a thinly traded company, using the market value of this stock, plus a control premium, as one of the methodologies to assess fair value may not be appropriate, because a marketability discount may already be embedded in the stock price.

Other

In cases involving valuations for bankruptcy proceedings, or those before the tax courts, attempting to resolve income, inheritance, gift or real estate taxes, or portfolio analyses or strategic planning, a marketability discount is warranted if there is expected to be a time lag and/or sales and marketing expenses in selling the securities or assets being valued and a fair market valuation is sought. In all of these cases there is not necessarily an imminent transaction as of the time of the valuation; thus, to determine fair market value, a discount for

³ A “thin” market for a public stock is one with few bid and ask offers, relative to the total number of issued and outstanding shares of the particular public stock. Other characteristics of a thin market include large spreads between bid and ask prices for the stock and high price volatility.

lack-of-marketability, reflecting the expected passage of time and/or related expenses to liquefy the investment, is reasonable.

Private versus Public Companies

For a privately held company, if all the necessary conditions are met, the decision to apply a discount for lack-of-marketability is straightforward. This is not, however, the case for a public firm. There are certain public company valuations that warrant applying a marketability discount. For example, with illiquid or thinly traded stocks, such as those that trade by bulletin board postings, penny stocks, or stocks traded on the NASDAQ small cap exchange, a marketability discount may apply if a valuation is performed that does not rely solely on the market price of such companies' securities. In addition, there exist securities traded on national exchanges that are thinly traded and where a marketability discount may similarly apply.

In the Law and in the Courts

Delaware

Delaware law in many ways is considered the “bellwether” of corporate governance and corporate transaction/finance issues, including issues concerning valuations and the use of discounts for lack-of-marketability. The number of incorporations in the state⁴ reflects in part the clarity, logic and intelligence of the General Corporation Law of the State of Delaware (the “DGCL”), the Delaware Court of Chancery and the Delaware Supreme Court.

Under Section 262 of the DGCL, when appraisal rights are sought, these dissenting stockholders are entitled to receive the “fair value” of their shares on the date of the merger⁵. The statute does not, however, stipulate the process for determining fair value. In this context, “fair value” does not mean “fair market value”—in other words, a discount for lack-of-marketability is not allowed.

In *Cavalier Oil Corp. v. Harnett*⁶, the Delaware Supreme Court spoke to why a minority discount should not be used in determining fair value for an appraisal action as provided under Section 262 of the DGCL: “To fail to accord to a minority shareholder the full proportionate value of his share imposes a penalty for lack of control, and unfairly enriches the majority shareholders who may reap a windfall from the appraisal process by cashing out a dissenting shareholder.”

⁴ According to the State of Delaware, Division of Corporations, as of March 19, 2004, “More than half a million business entities have their legal home in Delaware including more than 50% of all U.S. publicly-traded companies and 58% of the Fortune 500.”

⁵ “After determining the stockholder entitled to an appraisal, the Court shall appraise the shares, determining their fair value exclusive of any element of value arising from the accomplishment or expectation for the merger or consolidations, together with a fair rate of interest, if any, to be paid upon the amount determined to be the fair value.” The Delaware Code Title 8 Chapter 1. General Corporation Law, Subchapter IX. Merger, Consolidation or Conversion, Subsection 262, Appraisal Rights, (h).

⁶ *Cavalier Oil Corp. v. Harnett* 564 A.2d 1145 (Del. 1989).

While the opinion of the Delaware Supreme Court in this case speaks to minority discounts, it nonetheless established the *pro rata* value doctrine, whereby minority shareholders are entitled to all elements of value on a pan-corporate basis, not adjusted for the specifics of an individual shareholder, other than such shareholders' percentage of the issued and outstanding shares of the enterprise.

Under an appraisal rights action, there obviously exists/existed a firm, *bone fide* offer to acquire the securities of a company, hence a marketability discount because the time lag in selling an illiquid security and future costs to do so have been virtually eliminated through the presence of such an offer, which represents a liquid market. Thus, through not applying a discount for lack-of-marketability, minority shareholders effectively receive the fair value of their proportionate share of consideration tendered for the stock or assets of a business.

Other State Courts

New York, Illinois, and a number of other states permit a lack-of-marketability discount in valuing shares held by dissenters. The rationale for allowing a marketability discount is seen as a liquidity risk that affects majority and minority shareholders equally and can thus be applied fairly when determining the value of a dissenter's shares. However, many jurisdictions in appraisal rights cases conclude that applying a marketability discount in dissenting shareholder/appraisal remedy instances, such as cash-out mergers, is not fair, because this discount impedes the proportional distribution of consideration to all shareholders.

The Tax Court—Definition Determines Size

Of note when and if applying a marketability discount, in *Bernard Mandelbaum, et al. v Commissioner of Internal Revenue*, TC Memo June 12, 1995, the court stipulated that a willing buyer and a willing seller must be assumed. In this case, the court did not accept plaintiff's 70% discount for lack-of-marketability because the Court deemed it unlikely that a willing seller would accept such a high discount, which plaintiff's expert asserted for gift tax purposes. The Court's finding is consistent with the fair value definition noted above.

Marketability Discounts Measured

If a marketability discount is warranted, then either empirical data from public company stock transactions or theoretical algorithms must be used.

With respect to empirical data, existing marketability discount studies generally fall into two categories: (1) public company or public funds' stock price discounts observed relative to the company or the funds' freely traded stock at the time of issuance of restricted stock; and (2) examining sale prices of stock in private companies prior to such private companies' initial public offerings.

The theoretical marketability discount studies use hypothetical calculations and assumptions, including forecasted interest rates, dividend payments and other factors, such as stock volatility, to estimate a marketability discount. Given that these theoretical methods do not necessarily reflect current market

conditions, we do not consider these practical alternatives for determining reliable and supportable marketability discounts.

Published, empirical studies, the most often cited of which are indicated below, analyze market data during 1966-1988 in which public company stock prices were viewed relative to the prices of such companies' restricted stock issues. Because restricted stock currently requires investors to hold the stock for at least one year⁷, the prices at which restricted stocks were issued relative to freely traded stocks of the same company is considered a proxy for a marketability discount.

Restricted Stock Studies		
Empirical Study (full citation below)	Time Period Covered	Average Discount
SEC Institutional Investor	1966-1969	24.0%
Gelman	1968-1970	33.0%
Trout	1968-1972	34.2%
Moroney	through 1972	36.0% ⁸
Maher	1969-1973	35.4%
Pittock/Stryker	1978-1982	34.0% ⁹
Silber	1981-1988	33.8%

Discounts Involved in Purchases of Common Stock (1966-1969), *Institutional Investor Study Report of the Securities and Exchange Commission*, H.R. Do. No. 92-64, Part 5, 92nd Congress, 1st Session, 1971, 2444- 2456.

Gelman, Milton, An Economist Financial Analyst's Approach to Valuing Stock of a Closely Held Company, *Journal of Taxation*, June 1972, 353-354.

Trout, Robert R., Estimation of the Discount Associated with the Transfer of Restricted Securities, *Taxes*, June 1997, 381-384.

Moroney, Robert E., Most Courts Overvalue Closely Held Stocks, *Taxes*, March 1993, 144-154.

Maher, Michael J., Discounts for Lack-of-marketability for Closely Held Business Interests, *Taxes*, September 1976, 562-71.

Pittock, William F., and Stryker, Charles H., Revenue Ruling 77-287 Revisited, *SRC Quarterly Reports*, Spring 1983.

Silber, William L., Discounts on Restricted Stock: The Impact of Illiquidity on Stock Prices, *Financial Analysts Journal*, July-August 1991, 60-64.

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⁷ As defined within the Securities Act of 1933, as amended, Rule 144. Effective April 1977, the holding period for restricted stock was shortened to 1 year. Previous to this time the holding period was 2 years.

⁸ Not specified in study; calculated as the average from data presented in article.

⁹ Median, not average, for companies profitable in five of the latest five years analyzed in the study.

Why Existing Marketability Discount Studies are Limited

Lack of Current Market Data

The most compelling criticism of existing studies is that they rely on historical market data. A discount for lack-of-marketability is applied as part of the valuation process to estimate the fair *market* value of an asset or security. With some of the data in the above-indicated studies reaching back to 1966 and the most current data indicated above being at least sixteen years old, these data do not reflect the dynamics of current market conditions.

Change in Holding Period for Restricted Stocks

All of the above studies use market data pre-April 1997, reflecting the then-current law requiring a two-year holding period prior to sale of Rule 144 issued restricted stock by an investor. The current law, effective April 1997, requires only a one-year holding period by investors, implying a lower discount for lack-of-marketability, given that this discount is designed in part to reflect investors' expectations regarding the length of time needed to convert an illiquid security into cash.

Bias

The restricted stock studies use data from public company restricted stock sales; *i.e.*, blocks of stock sold in private placements to institutional investors under Securities Act of 1933 Rule 144, which are not registered to freely trade in the market at the time of issuance.

Typically there is a discount to current market for this registration restriction; however, this discount does not purely reflect illiquidity or lack of trading characteristics. The discount also reflects the fact that the issuer may have few other capital raising options and is typically a poor credit—in other words, the company issuing the restricted stock would in all likelihood first attempt to issue registered stock in an underwritten offering or borrow funds. This is seen directly in the Silber study, where, according to the author, “. . . firms issuing restricted stock are relatively small (\$40 million in total revenues, on average) and not very profitable (\$912,000 in earnings, on average). In fact, a number are development-stage companies; that is, they have no revenues at all”¹⁰.

Other studies

Other studies, not indicated above, include (i) the sale of stock by investors in a private business previous to an initial public offering by the business; (ii) using merger and acquisition data to determine if valuation multiples for private firms are less than the multiples for similar public firms, thus implying a discount for lack-of-marketability; and (iii) theoretical calculations.

¹⁰ Silber, p. 61.

Sales of stock by stockholders pre-initial public offering are used as a proxy for a marketability discount because such sales are obviously completed in an illiquid market and presumably took longer to accomplish than the sale through a national stock exchange. The bias built into such studies, however, is the fact that many sellers had knowledge of the pending initial public offering and yet still sold their stock, evidencing potential financial distress and willingness to accept pricing that was not fully negotiated, possibly as a result of personal needs and circumstances that do not necessarily reflect efficient market behavior. Furthermore, in the most recent study, which spans an 18-year history dating to 1980, there were only 67 stock sales transactions examined, averaging fewer than 4 transactions per annum during the study period.

With respect to using merger and acquisition data to estimate the marketability discount, in Woodward's experience, the typical disclosure made in connection with a merger or acquisitions transaction, including the accounting for purchase prices, is inconsistent and/or incomplete. In addition, if the acquisition is deemed immaterial to the public, acquiring company's financial results, then no disclosure may be made. Distortions in using merger and acquisition data for estimating a marketability discount include the fact that the purchase price may not reflect consideration paid in the form of employment contracts or the assumption of debt, which may be either added to or subtracted from the reported purchase price.

As indicated above, theoretical calculations do not reflect current market conditions and are therefore not considered a practical alternative for developing reliable and supportable lack-of-marketability discounts.

Alternative Approach to Measuring the Marketability Discount

Woodward is developing a more current, time sensitive calculation of marketability discounts based on the bid/ask spreads for the smallest 1,683 publicly traded common stocks on the NYSE, AMEX and NASDAQ exchanges based on equity value. This analysis is currently underway and we expect to publish our results and use the model and data for client valuation purposes. The bid-ask spread differential is considered to be a reasonable proxy for the marketability discount, given that this amount represents current market illiquidity in the stock, measured as the difference between the high price sought by the seller and the low price offered by the potential buyer. Furthermore, the smallest publicly traded stocks, while still public, do include thinly traded stocks, which exhibit measurable illiquidity characteristics.

Conclusion

Woodward's position on the use of a lack-of-marketability discount, which is supported empirically and legally, is that if a transaction is imminent, whether the business being valued is private or public, then no marketability discount should be used in assessing the value of the business. Furthermore, if a discount for lack-of-marketability is warranted, the correct approach is to use data that best approximates current market conditions, not historical events or theoretical calculations.

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About The Woodward Group, Ltd.

The Woodward Group, Ltd., based near Philadelphia, is a financial advisory firm specializing in corporate finance matters, including mergers and acquisitions, private placements, valuations and fairness opinions. Woodward, as part of its financial advisory services, is engaged in the valuation of assets, securities and companies in various types of asset and security transactions, including the valuation of assets, securities and companies in mergers, acquisitions, divestitures, joint ventures and leveraged buyouts and in the determination of adequate consideration in such transactions. Woodward's professionals have completed transactions aggregating in excess of \$3 billion in capital raises, mergers and acquisitions and their experience spans virtually every industry within the US, Pacific Rim and Europe. Woodward is focused mainly on middle market transactions; however its clients include NYSE firms, in addition to small NASDAQ firms and private businesses. Woodward is located in historic Media, Pennsylvania at 6 and 8 South Plum Street. Additional information on Woodward is available via www.woodwardgroup.com.