Preferred Stock Valuation Issues

Ronald J. Adams, CPA, CVA, ABV, CBA, CFF, FVS, CGMA

In general the most important factors to be considered in determining the value of preferred stock are:

- The stock's yield rate,
- Dividend coverage ratio, and
- Protection of its liquidation preference.

In addition, the appraiser has to assess the preferred stock voting rights, redemption privileges, and discounts for lack of marketability if the preferred stock is not publicly traded.

Preferred Stock Dividend Yield

Whether the yield of the preferred stock supports a valuation of the stock at par value depends in part on the adequacy of the dividend rate. The adequacy of the dividend rate should be determined by comparing its dividend rate of the preferred stock with the dividend rate of high-grade publicly traded preferred stock. A lower yield than that of high-grade preferred stock indicates a preferred stock value of less than par. If the rate of interest charged by independent creditors to the corporation on loans is higher than the rate such independent creditors charge their most credit worthy borrowers, then the yield on the preferred stock should be correspondingly higher than the yield on high quality preferred stock.

A yield which is not correspondingly higher reduces the value of the preferred stock. In addition, whether the preferred stock has a fixed dividend rate and is non-participating influences the value of the preferred stock. A publicly traded preferred stock for a company having a similar business and similar assets with similar liquidation preferences, voting rights and other similar terms would be the ideal comparable for determining yield required in arm's-length transactions for closely held preferred stock. Such ideal comparables will frequently not exist. In such circumstances, the most comparable publicly traded issues should be selected for comparison and appropriate adjustments made for differing factors.

Dividend Coverage Ratio

The actual dividend rate on preferred stock can be assumed to be its stated rate if the issuing corporation will be able to pay its stated dividends in a timely manner and will, in fact, pay such dividends. The risk that the corporation may be unable to timely pay the stated dividends on the preferred stock can be measured by the coverage of such dividends by the corporation's earnings. Coverage of the dividends or dividend coverage ratio is measured by the ratio of the sum of the pre-tax and pre-interest earnings to the sum of the total interest to be paid and the pre-tax earnings needed to pay the pre-tax dividends. Standard & Poor's Rating Guide, 58 (1979).

Inadequate coverage exists where a decline in corporate profits would be likely to jeopardize the corporation's ability to pay dividends on the preferred stock. The ratio of the preferred stock in question should be compared with the ratios of high quality preferred stock to determine whether the preferred stock has adequate coverage. Prior earnings history is important in this determination. Inadequate coverage indicates that the value of the preferred stock is lower than its par value. Moreover, the absence of the provision that the preferred dividends are cumulative raises substantial questions concerning whether the stated dividend rate will be paid. Accordingly, preferred stock with non-cumulative dividend features will normally have a value substantially lower than a cumulative preferred stock with the same yield, liquidation preference and dividend coverage.

Preferred Stock Liquidation Preference

Whether the issuing corporation will be able to pay the full liquidation preference at liquidation must be taken into account in determining the fair market. This risk can be measured by the protection afforded by the corporation's net assets. Such protection can be measured by the ratio of the excess of the current market value of the corporation's assets over the liabilities to the aggregate liquidation preference. The protection ratio should be compared with the ratios for high quality preferred stock to determine adequacy of coverage. Inadequate asset protection exists where any unforeseen business reverses would be likely to jeopardize the corporation's ability to pay the full liquidation preference to the holders of the preferred stock.

Preferred Stock Voting Rights

Another factor to be considered in valuing the preferred stock is whether it has voting rights and, if so, whether the preferred stock has voting control. Typically preferred stock is non-voting stock and can exert no control of the Company in most profitable operating circumstances. In certain circumstances, where the Company's value has been impaired due to poor financial operating performance, preferred stock shareholder agreements provide feature whereby the preferred shareholders can vote on management and operational decision making, according to the preferred shareholder agreement.

If the preferred stock shareholder's agreement has provisions for voting control under certain circumstances, these provisions could under certain circumstances increase the value of the preferred stock and reduce the value of the common stock. If the preferred stock has voting rights, but cannot exert control, the stock may be subject to a minority interest discount for valuation purposes as compared to a controlling block of preferred stock.

The equity coverage factor provides a protection right to the preferred shareholders over the common stockholders in respect to the payment of dividends. The voting rights factor provides another protection right to the preferred shareholders by allowing the holders to vote as a class on the operations of the Company if the equity coverage falls below the preferred shares' liquidation preference value. In situations where the preferred shareholder's equity coverage, and the liquidation preference value minimums have not been triggered, the preferred shareholders have no voting rights, and therefore a minority

interest discount is appropriate as it reflects the inability of the preferred shareholders to compel liquidation, effect a distribution of equity ownership, or exert any of the elements of absolute business ownership control, and/or thereby realize a pro rata share of the Company's net asset value.

Minority Interest Discount

A minority interest discount is a reduction in the control value of the appraisal subject that is intended to reflect the fact that a minority stockholder cannot control the daily activities or policy decisions of a business enterprise, especially under financially distressed circumstances, thus reducing its value. The size of the discount will depend on the size of the interest being appraised, the amount of control, the stockholder's ability to liquidate the company, and other factors. A minority interest discount is basically the opposite of a control premium for control. This type of discount is used to obtain the value of non-controlling interest in the appraisal subject, when a control value is the starting point. Conversely, a control premium is used to determine the control value when the freely traded minority value is the starting point. The starting point is determined based on the method of valuation, the normalization adjustments made, and the source of the discount or capitalization rates. Minority discounts can be mathematically determined using control premiums that are measured in the public market. The formula to determine the minority interest is as follows: [1-(1/1.0 + Control Premium)]. One of the more common sources of information used to measure the discount is *MergerStat Review*. *MergerStat Review* always uses public price of the stock five days prior to a takeover announcement. The benefit of this method is that it is consistent and objective way of measuring the premium or discount. The draw back of this method is that based on rumors of a deal, the public price may have already started to climb, which thus understates the premium.

While the determination of a minority interest discount is highly subjective, recent research on the market for corporate control provides some guidance. *MergerStat* compiles statistics on publicly-announced mergers, acquisition, and divestitures. The statistics provide a trend in prices, methods of payment and other financial data. *Mergerstat* provides statistics of the premium paid for control and the implied minority interest discount for lack of control by industry classification. *Mergerstat* determines control premiums paid in consummated merger and acquisition transactions. The survey is arrayed by industry SIC code, and transaction size, etc.

The inverse of the control premium as noted above is the minority interest discount. Based on *Mergerstat* observed control premiums a minority interest discount can be determined utilizing the following formula: [1- (1/(1+control premium)].

According to *MergerStat* "A control premium is defined as the additional consideration that an investor would pay over a marketable minority equity value (current, publicly traded stock price) in order to own a controlling interest in the stock of a company." In the *MergerStat* studies, the premium is expressed as a percentage of the unaffected marketable minority price per share. This is the price just prior to the point of change in the representative normal pricing of a given security. A minority interest is by definition

control of less than 50% of the shares of a company. This lack of control results in a shareholder being unable to appoint management, set company compensation levels, determine dividends, set company policy, sell the company, etc. This lack of control can result in a minority interest discount.

The comparable industries include agricultural, mining, construction, manufacturing, transportation, commercial, electric and gas, wholesale, retail, financial services, and general services. The size of transactions are millions to billions of dollars.

Peculiar covenants or provisions of the preferred stock of a type not ordinarily found in the publicly traded preferred stock should be carefully evaluated to determine the effects of such covenants on the value of the preferred stock. In general, if covenants would inhibit the marketability of the stock or the power of the holder to enforce dividend or liquidation rights, such provisions will reduce the value of the preferred stock by comparison to the value of preferred stock not containing such provisions or covenants.

Preferred Stock Redemption Privileges

Whether the preferred stock contains redemption privilege is another factor to be considered in determining the fair market value of the preferred stock. The value of the redemption privilege triggered by death of the preferred shareholder will not exceed the present value of the redemption premium payable at the preferred shareholder's death (i.e., the present value of the excess of the redemption price over the fair market value of the preferred stock upon issuance). The value of the redemption privilege should be reduced to reflect any risk that the corporation may not possess sufficient assets to redeem its preferred stock at the stated redemption price.

Marketability Discounts

Typically, a controlling interest in a company is considered to have greater value than a minority interest because of the holder's ability to effect change in the overall business structure and to influence business policies. Marketability adds value to a held security due to the ability that it gives the holder to liquidate their position. Conversely, lack of marketability detracts from a security's value.

Marketability refers to an investor's ability to convert an equity interest to cash with minimal cost and with a high degree of confidence of receiving certain expected proceeds. The benchmark for minority interest marketability is the U.S. public securities market, whereby an investor can sell a minority equity interest and receive the cash proceeds within three days.

A discount for lack of marketability is normally appropriate for an individual shareholder seeking to sell an interest in a private corporation with no ready market. An owner of such an interest is subject to the personal objectivity of management as to dividends and the sale of the company as a whole. Lack of marketability forces an investor to seek a price concession to compensate for being locked into an illiquid and long-term investment. The concession reflects an investor's assessment of the length of time that the investment must be held before it can be liquidated, combined with the investment

return required and appreciation expected during the holding period. This forms the basis for a lack of marketability discount.

There are several ways to approach a discount for lack of marketability. One is to determine flotation costs; i.e., the cost of creating a public market for a security. In a study[1] by Jay R. Ritter, which was published in 1987, Mr. Ritter details "The Costs of Going Public" for numerous transactions, where the gross proceeds exceeded $10 million, the total cash expenses to the company involved were 9.34% of proceeds on a firm commitment underwriting basis, and 10.43% on a best-efforts basis.

A second basis for estimating the discount for lack of marketability is to analogize the discount to that obtained by mutual funds in purchasing "letter" stock. A study[2] by J. Michael Maher published in 1976 indicates that the average discount for the period 1969 through 1973 was 35.4 %. That figure remained essentially unchanged when the top and bottom 10% of purchases were eliminated to remove extremes of high and low risks. It may be argued that higher discounts are called for in the case of closely-held stock since mutual fund purchases involved registration rights that were acquired with the stock, and mutual funds sought out only "promising" situations.

In support of the Maher study, the following summary of ten restricted stock studies, covering a 27-year period from 1966-1992, indicates an average discount of 32.9%. More importantly, 7 of the 10 studies found averages between 31% and 36%.

Summary of Restricted Stock Studies

Study	Years Covered in Study	Average Discount (%)
SEC Overall Average	1966-69	25.8
SEC Nonreporting OTC Companies	1966-69	32.6
Gelman	1968-70	33.0
Trout	1968-72	33.5
Moroney	1972-73	35.6
Maher	1969-73	35.4
Standard Research Consultants	1978-82	45.0
Willamette Management Associates	1982-84	31.2
Silber	1981-88	33.8
FMV Opinions, Inc.	1972-1992	23.0
Average		**32.9**

[1] Jay R. Ritter, "The Costs of Going Public," *Journal of Financial Economics*, January 1987, p. 272.
[2] J. Michael Maher, "Discounts for Lack of Marketability for Closely-Held Business Interests," page 54, *Taxes – The Tax Magazine 562* (1976).

The first study[3] was the SEC *Institutional Investor Study* published in 1971. It examined more than 300 transactions involving restricted stocks and compared the prices to prices of stock identical except for trading restrictions. The study found an average discount of 25.8%. For stocks that would trade on the over-the-counter market rather than the New York Stock Exchange or American Stock Exchange, the average discount was 32.6%. This suggests that smaller companies incur a higher discount than their larger counterparts.

Another relevant approach is reviewing the price relationship of stock transactions occurring within several of a subsequent initial public offering ("IPO") of the same stock. The offering prospectus filed with the Securities and Exchange Commission ("SEC") is obligated to identify stock transactions and prices among insiders within the previous years. The most recent study[4] indicates that the median discount for 91 transactions during the period of 18 months from November 1995 through April 1997 was 42%. In previous similar studies over a period of 18 years, the average median discount was 42%.

The following table summarizes the findings of the eight periods studied:

The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock

Study	No. of IPO Prospectuses Reviewed	No. of Qualifying Transactions	Discount Mean %	Discount Median %
1980-81	97	13	60	66
1985-86	130	21	43	43
1987-89	98	27	45	45
1989-90	157	23	45	40
1990-92	266	35	42	40
1991-93	443	54	45	44
1994-95	318	46	45	45
1995-97	732	91	43	42
	2,241	**310**	**44**	**43**

The various cited studies suggest a consistent range of marketability discounts for restricted securities and unregistered pre-IPO securities from 25% to 45% over a period covering more than 30 years.

More recently, data is available from a study prepared by Houlihan Valuation, which analyzed private placements of restricted stock in the period from 1980 through 1991. In

[3] "Discounts Involved in Purchase of Common Stock (1966-1992)," "Institutional Investor Study Report of the Securities and Exchange commission," H.R. Doc No. 64, Part 5, 92nd Cong. 1st Sess. 2444-2456 (1971).
[4] Emory, John D., "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock – November 1995 through April 1997," *Business Valuation Review*, Vol. 16, No. 3, September 1997.

this study, 77 private placement transactions involving restricted stock of publicly traded companies were analyzed. The discounts from freely traded market prices of these securities varied significantly, ranging from a premium of 6% to a discount of 72% and a median discount of 24%.

In general, companies with larger annual revenues exhibited lower discounts as indicated by the median discounts by quartile, summarized as follows:

Marketability Discount Relative to Revenues		
	Annual Revenue (Millions $)	**Median Discounts**
1st Quartile	48 to 527	16%
2nd Quartile	8 to 48	17%
3rd Quartile	4 to 15	24%
4th Quartile	0 to 3	42%

It should be noted that the Houlihan study involved transactions of securities that will be marketable when Rule 144 restrictions expire. Whereas closely-held stock of private companies generally have no imminent prospects for marketability, as such they are considered less liquid and likely to result in a higher discount.

The appraiser needs to consider the Company 's operating history, trend in revenue, plans for profitability, and cash flow in relation to the various available data on marketability discounts. The appraiser also needs to considered the fact that there may be key employees who could certainly detract from the marketability of a minority interest. This opinion was based primarily on the SEC *Institutional Investor Study* of the over-the-counter market, as the company , can most closely resemble this type of security and, in fact, all of the comparable companies selected currently trade on this basis.

Sources:

1. *Understanding Business Valuation, A Practical Guide to Valuing Small to Medium-sized Businesses*, by Gary R. Trugman, published by the American Institute of Certified Public Accountants (AICPA), 1998, New York, NY , pp. 528-530, pp. 265-267

2. Merger Stat 2013 Control Premium Study .

For a consultation, please call **Ronald Adams, CPA, CVA, ABV, CBA, CFF, CGMA, Managing Director – Valuations, Foxboro Consulting Group, Inc.** at (774) 719-2236; or on my cell at: (508) 878-8390; or by e-mail at: adams.r@foxboro-consulting.com. On the web at: www.foxboro-consulting.com