Gift and Estate Tax Valuation Insights

The Combined Discount

Robert P. Schweihs

For a variety of reasons, the value of an ownership interest in a closely-held business enterprise may be subject to the application of a valuation discount. Valuation analysts often apply a "combined discount" to reflect one total value decrement related to both of two common valuation adjustments: (1) the discount for lack of ownership control (2) and the discount for lack of marketability. This discussion describes the theory and the rationale for the combined discount. And, this discussion points to recent empirical data that suggest that the combined discount may be larger than previously indicated.

Introduction

The value of a fractional interest investment in a business enterprise is not necessarily equal to a pro rata percentage of the overall value of the entire enterprise.

A fractional interest in a business enterprise that has little or no voice in company affairs, by definition, suffers from a lack of ownership control. Such a fractional ownership interest is sometimes referred to as a "minority interest." Unless there is a statutory, contractual, or other reason that prevents it, the value of a minority interest in a business enterprise is usually less than the pro rata percentage of the overall value of that business enterprise.

The two valuation adjustments that are most common to the valuation of a minority interest in a closely held business enterprise are (1) the discount for lack of control (DLOC) and (2) the discount for lack of marketability (DLOM). In some circumstances, valuation analysts may consider these two discounts collectively and refer to this aggregate valuation adjustment as a "combined discount."

Important to the discussion of valuation discounts is the notion that discounts have no meaning until the base of value to which they are applied has been clearly defined.

For example, other than lack of control and lack of marketability, the subject ownership interest may have characteristics that justify the application of other miscellaneous valuation discounts that are separate from DLOC and DLOM. These other miscellaneous discounts can be grouped into two categories:

1. discounts related to transferability restrictions
2. discounts related to nonsystematic risk

Some minority ownership interests are subject to transferability restrictions, such as:

1. blockage, related to the size of the subject minority ownership interest;
2. restricted stock, related to SEC regulations or employment agreement provisions; and
3. contractual restrictions, related to shareholder, partnership, or other buy-sell agreements.

Some minority ownership interests are subject to nonsystematic risk-related valuation discounts, such as:

1. key person dependence,
2. key customer dependence,
3. key product dependence,
4. obsolescence of technology or facilities, and
5. built-in capital gains.

This discussion is focused on the DLOC and the DLOM that are applied to minority interests in a closely held business enterprise and that do not suffer from other transferability restrictions or nonsystematic risk. In these situations, valuation analysts will sometimes apply one "combined discount" to reflect both the DLOC and the DLOM.

In other words, after estimating the marketable, controlling ownership interest value of a company, individual discounts for lack of control and for lack of marketability—or an aggregate discount representing a combination of these two investment factors—may be applied by the valuation analyst in order to estimate the value of the subject minority equity interest.

Most of the evidence on which valuation analysts rely to estimate a DLOC and a DLOM is based, at least in part, on an analysis of transactions in publicly traded common equity securities.

Valuation analysts may also consider data on privately negotiated transactions of limited partnership interests. The price discount derived by comparing the transaction price with the partnership's net asset value is typically viewed as a reflection of the limited partnership interest's lack of both control and marketability.

Some valuation analysts believe that, in recent years, the size of the DLOC and DLOM that are applicable to nonmarketable, noncontrolling interests in closely held business enterprises has decreased. This discussion presents: (1) a brief history of studies that reveal the size of these valuation discounts and (2) some recent data that reveal that the size of these valuation discounts may not have decreased (as some valuation analysts have suggested).

Theory and Rationale

All other factors being equal, an investment is more valuable if it is easily marketable and, conversely, less valuable if it is not easily marketable. Simply stated, investors prefer liquidity to lack of liquidity.

It is difficult to liquidate a controlling ownership interest in most closely held businesses. In most situations, it is even more difficult to liquidate a noncontrolling ownership interest in a closely held company.

An investment in the equity of a closely held company is relatively illiquid compared to other investments, and particularly compared to publicly traded securities.

In order to understand the rationale behind applying a valuation discount to a privately owned partnership or a closely held company equity value indication, valuation analysts should consider the basis on which the unadjusted value indication has been estimated.

A controlling ownership interest in a closely held company is often estimated from the perspective of an investor who can directly buy or sell the underlying assets.

An ownership interest in a closely held company is typically subject to liquidity limitations. These limitations are not reflected in the market value of the operating assets owned by the company.

Discount for Lack of Control

Control rights, if any, are an important variable affecting the value of a closely held company. The price premium for control—or the price discount associated with a lack of control—depends on the equity holder's ability to exercise any or all of a variety of rights typically associated with control.

By definition, the holder of a minority interest lacks ownership control. The following list provides examples of some of the common prerogatives of ownership control:

1. elect directors and appoint management
2. determine management compensation and perquisites
3. set policy and change the course of business
4. acquire or liquidate assets
5. select people with whom to do business and award contracts
6. make acquisitions
7. liquidate, dissolve, sell out, or recapitalize the company
8. sell or acquire treasury shares
9. register the company's stock for a public offering
10. declare and pay dividends
11. change the articles of incorporation and bylaws

This list illustrates that the owner of a controlling interest in an enterprise enjoys valuable rights that the owner of a minority interest does not. However, some factors may limit a majority owner's right to exercise many of the prerogatives normally associated with ownership control, thus limiting the value accruing to the control position.

On the other hand, a minority interest investment may not be totally bereft of control factors. For example, a minority interest investor may be in a position to cast crucial swing votes and, in some measure, influence important business policies.

A willing buyer contemplating the purchase of a noncontrolling ownership interest from a willing seller would consider these disadvantages arising from a lack of control. Therefore, regardless of the controlling ownership interest value of a company, one would not expect a willing buyer to purchase a noncontrolling ownership interest—except at a price discount from its pro rata share of the controlling ownership interest value of a company.

Discount for Lack of Marketability

The DLOM measures the difference in the expected price of (1) a liquid asset (that is, the benchmark price measure) and (2) an otherwise comparable illiquid asset (that is, the valuation subject).

The concept of investment marketability relates to the liquidity of an investment—that is, how quickly and certainly the investment can be converted into cash at the owner's discretion. Investors value liquidity. Rational investors will pay a price premium for liquidity. Conversely, rational investors will demand a price discount for lack of liquidity.

The security of a closely held company is not as liquid as the otherwise comparable security of a publicly traded company. That is, a closely held company security does not have the same degree of marketability as the otherwise comparable publicly traded security.

The investment attribute of marketability is not an either/or proposition. That is, there are varying degrees of investment marketability. In fact, there is a spectrum of investment marketability, ranging from fully marketable to fully nonmarketable.

An ownership interest of an actively traded security can typically be converted into cash within three business days of the sell decision. This is the typical investment benchmark for a fully marketable security.

At the other end of the investment marketability spectrum is an ownership interest in a privately owned company that pays no dividends or other distributions, requires capital contributions, and limits ownership of the company to certain individuals.

Of course, there exists a myriad of positions in between these two extremes in the investment marketability spectrum.

Data Sources for Valuation Discounts

The hypothetical willing buyer of a noncontrolling ownership interest in a closely held entity generally has no liquidity or influence over the economic returns generated by the investments of the entity. Similarly, a limited partner has virtually no liquidity or influence over the economic aspects of a partnership.

To estimate the DLOM, valuation analysts will typically consider (1) theoretical models and (2) empirical data.

Theoretical models, unlike empirical models, do not derive their conclusions regarding the size of the appropriate discount from actual capital market transaction data. The theoretical models used to estimate the discounts for the valuation of a private company security generally fall into two categories: (1) option pricing models,[1] and (2) discounted cash flow models.[2]

Although they support the argument that discounts exist and may be material, the results of these theoretical studies are sometimes challenged because of:

1. the limited number of factors considered,
2. their limited acceptance in the courts and in the professional valuation community, and
3. the quantitative sensitivity of the model inputs.

There are several sources of empirical data that are used to estimate valuation discounts for nonmarketable, noncontrolling ownership interests. In order to estimate the appropriate valuation discount, valuation analysts typically rely on data from (1) publicly registered limited partnership units traded in the secondary market and (2) common equity securities.

Empirical Evidence Derived from Limited Partnership Interests

It is not surprising that limited partner interest transactions in partnerships typically occur at price discounts from the adjusted net asset values.

Given the similarities between (1) minority interests in closely held business enterprises and (2) thinly traded limited partnership interests, it is appropriate—for purpose of our discussion—to review the empirical discount data that are observed in transactions involving limited partnership interests that trade in the secondary market.

Over the years, numerous studies have been conducted to quantify the valuation discounts associated with transactions of limited partnership interests. The following discussion summarizes one often-referenced source.

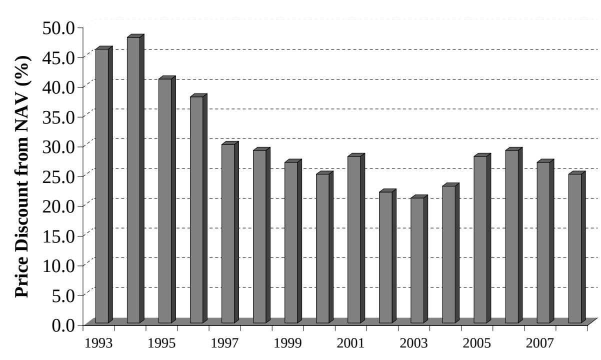
The Direct Investments Spectrum Studies

Some of the more notable limited partnership studies have been conducted by Spencer Jefferies, the editor of *The Direct Investments Spectrum* (formerly known as *The Perspective* and then *The Partnership Spectrum*). Mr. Jefferies conducted a series of annual studies on the resale discounts associated with publicly registered limited partnerships.

Each annual study, which is published in the May/June issue of the publication, contains data on the combined discount for lack of control, and to some degree, lack of marketability for publicly registered limited partnership interests trading in the secondary market. The secondary market consists of approximately eight independent firms, which operate primarily as intermediaries in matching buyers and sellers of publicly registered limited partnership interests.

Exhibit 1 presents the decrease in the average price-to-net asset value discount for all of the publicly registered real estate limited partnerships included in the studies from 1993 to 2008.

Exhibit 1
Direct Investments Spectrum Studies
Summary of Average Resale Discounts



Source: *2008 Executive Summary Report on Partnership Re-Sale Discounts Partnership Profiles, Inc. 2008*

More than any other factor, the decline in average price-to-value discounts since 1993 is the result of the secondary market buyers shortening their anticipated holding periods in their pricing models.

In 1993 and 1994, when there were few partnership liquidations, buyers assumed holding periods of eight to ten years when buying units in the secondary market. In 1995 and 1996, many of the larger real estate partnership managers began to liquidate their partnerships.

These liquidations resulted in a shortening of the buyers' anticipated holding periods. In 1997 and 1998, partnership liquidations became commonplace. These widespread liquidations resulted in many buyers of units assuming a two- to four-year holding period due to high liquidation rates.[3]

A study in the March/April 2000 issue of *The Partnership Spectrum* quantified the effect that the liquidations had on the overall price-to-value discounts reported by the partnerships. The study revealed that the average price-to-value discount on liquidating partnerships—partnerships that announced a near-term liquidation—was 16 percent.[4]

Consequently, the recent trend of declining average discounts from net asset value does not indicate that the publicly registered limited partnership units are becoming more marketable. Rather, the trend of declining discounts indicates that investors were expecting much shorter holding periods for their units, as compared to the longer holding periods that they expected in years past.

A case can be made that the older discount studies—the 1993 and 1994 studies, which were conducted prior to the liquidation announcements—are more relevant than the later studies for purposes of estimating the valuation discount for an illiquid equity interest in a closely held company.

The transactions included in these older studies were conducted by investors who expected to hold their limited partnership investment for a relatively long period of time. In the same respect, investors in closely held equity investments typically have a very long expected holding period, due to the illiquidity of their investment.

This longer holding period would argue for a higher valuation discount, all other factors being equal.

The price-to-value discounts reported in *The Direct Investments Spectrum* studies are often thought to include both (1) a DLOC and (2) a DLOM. However, the valuation analyst cannot ignore the fact that the limited partnership units included in the various studies trade on a secondary market exchange.

While this particular market is not nearly as liquid as the organized stock market exchanges, it does provide some degree of liquidity for investors who want to buy and sell publicly registered limited partnership units.

In general, the limited partnership discount studies presented above provide consistent evidence that limited partnership units are discounted substantially when offered for resale on the secondary market. The early studies—which were conducted when the secondary market was less developed—support price discounts in excess of 50 percent.

Over time, valuation analysts have noted an important relationship among the publicly registered limited partnership data. Partnerships that distribute their cash flow tend to sell at lower discounts to net asset value than those partnerships that do not distribute their cash flow.

Further, among the partnerships that distribute their cash flow, those partnerships with a higher distribution yield tend to sell at a lower discount to net asset value than those distributing partnerships with relatively lower distribution yields.

Nondistributing partnerships traded at an average price discount from net asset value of 33 percent to 39 percent during the most recent five-year period analyzed by this data.

Empirical Evidence Derived from Equity Securities

A second line of empirical evidence for valuation discounts for nonmarketable, noncontrolling ownership interests is based on the analysis of transactions in corporate equity securities. This empirical evidence is developed from transactions involving corporations rather than partnerships.

This evidence allows for the discrete identification and quantification of (1) a DLOC and (2) a DLOM.

Discount for Lack of Control

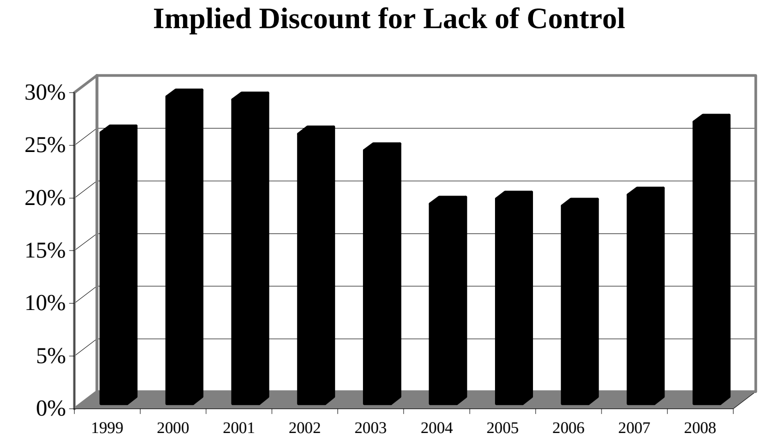
Objective evidence of the appropriate DLOC is developed through the study of cash tender offers. By looking at price premiums offered during a tender for control of a company with publicly held shares, we can approximate the pro rata value difference between controlling and noncontrolling shares.

Control price premiums vary, with the median control price premium being approximately 30 percent to 40 percent over the average public market price in the months just prior to the tender offer announcement. The high end of the range has been a price premium of over 100 percent and the low end of the range has been a price discount of about 10 percent—both ends of the range clearly indicating special factors involved.

It is noteworthy that a price premium for control of 30 percent to 40 percent is equivalent to a value DLOC of approximately 19 percent to 29 percent.

According to *Mergerstat Review*,[5] the median price premium offered over the pre-tender-offer market price in publicly traded company acquisitions was approximately 37 percent (based on 294 transactions) in 2008 (see Exhibit 2). This translated to a DLOC of approximately 27 percent.

Exhibit 2
Implied Discount for Lack of Control



Source: *Mergerstat Review* , 2009.

Exhibit 2 presents a 10-year summary of acquisition control price premiums, as calculated by *Mergerstat Review:*

As summarized in Exhibit 2, the acquisition control price premiums offered over the past 10 years translate to discounts for lack of control of approximately 20 percent to 30 percent.

Discounts for Lack of Marketability

The current evidence providing empirical support for discounts for lack of marketability generally falls into two fields of study:

1. studies of restricted stock transactions
2. studies of private transactions in the common stock of companies that subsequently had initial public offerings

The studies of market prices of restricted stocks cover a span of several decades. These comprehensive studies, considering hundreds of transactions, indicate an average discount for the restricted stock of a publicly traded company as compared to its freely tradable counterpart stock of (1) approximately 35 percent for transactions occurring in the 1968 to 1988 period and (2) approximately 20 percent to 25 percent for transactions occurring after 1990.

However, this price discount is based on transactions in stock that will be freely tradable in a relatively short period of time. One would expect the appropriate DLOM to be higher for a noncontrolling ownership interest in a closely held company (which may never have a public market) than for the securities included in these restricted stock studies.

While studies of restricted stocks provide compelling evidence of the DLOM associated with stocks that are (temporarily) restricted from their public market, a second line of evidence is obtained through studies of private transactions prior to initial public offerings (IPOs).

The scope of these pre-IPO studies includes transactions in the stock of companies that were private at the time of the transaction, but subsequently had a successful initial public offering.

The DLOM is generally determined as the difference between a company IPO stock price and the price at which the company stock traded in private transactions prior to the IPO (when the company's stock did not trade on a public market), adjusted for such factors as changes in earnings levels and industry price/earnings multiples.

The pre-IPO studies (1) add to the evidence presented by the restricted stock studies and (2) assist in determining lack of marketability discounts applicable to non-publicly-traded securities.

The pre-IPO studies covered hundreds of transactions during a span of over 20 years. Median price differences between private transaction prices and public market prices varied under different market conditions, ranging from about 40 to 60 percent, after eliminating the "outliers." This is strong support for the hypothesis that the fair market value of a noncontrolling ownership interest in a privately held company should be discounted from its publicly traded counterparts.

If the subject interest is a privately owned security with an expected holding period exceeding two years, then the pre-IPO DLOM studies may provide a more relevant comparison than the restricted stock DLOM studies. The unique factors of each company and each engagement will affect which specific DLOM studies should be analyzed.

Secondary Transactions Since September 2008

In the wake of the September 2008 bankruptcy filing by Lehman Brothers, the global credit markets almost completely seized up during October, causing liquidity for most instruments to evaporate. Reacting to the worst conditions facing the credit markets since the Great Depression, financial institutions became hyper-sensitive to counter-party risk, driving up the price of credit across the board to unprecedented levels.

These recent economic conditions brought renewed emphasis to the risks investors should consider when evaluating the price to buy (or for sellers to accept) a non-controlling, nonmarketable ownership interest in a closely held business enterprise.

The size of the combined discount during the second half of 2008 was analyzed in several recent studies.

The Size of the Discount from Net Asset Value has Increased Materially

The Secondary Market Services offered by investment bankers focus on transactions involving a portfolio of non-traded securities:

- buyout funds
- venture funds
- mezzanine funds
- real estate funds
- special situation funds
- fund of funds
- direct investments/co-investments

The Cogent Partners study[6] analyzed first-round bids received on a diverse group of approximately 300 private equity partnerships marketed from July 2008 through November 2008. The funds marketed represented a diverse range of fund types: (1) buyout funds accounted for 56 percent, (2) venture funds accounted for 38 percent, and (3) other funds accounted for 6 percent.

The study concluded that the simple average high bid of all funds priced in the second half of 2008 (through November) was 61.0 percent of the net asset value (NAV), or a price discount of 39.0 percent. This was a decline in pricing from the first half of 2008 where the simple average high bid of funds was 84.7 percent of the NAV, or a price discount of 15.3 percent

In addition, the bids in the second half of 2008 (through November) had an average median bid of 55.2 percent of NAV (or a discount of 44.8 percent) and an average low bid of 50.1 of NAV (or a discount of 49.9 percent).

According to Cogent Partners, the price decline in secondary transactions, as a percent of NAV, resulted from "stale holding values and a general decline in all equity valuations," and were not necessarily the result of distressed sales.

"The relatively significant discounts being offered for assets and the poor success rate of transactions brought to market during the second half of 2008 have given certain potential sellers pause about executing a secondary transaction."[7]

The average high price in the 4th quarter of 2008 represented a 55.3 percent discount to NAV.[8]

Secondary buyers heavily discounted direct investments in performing private companies due to exit uncertainty under the prevailing market conditions.[9]

Private Equity Funds

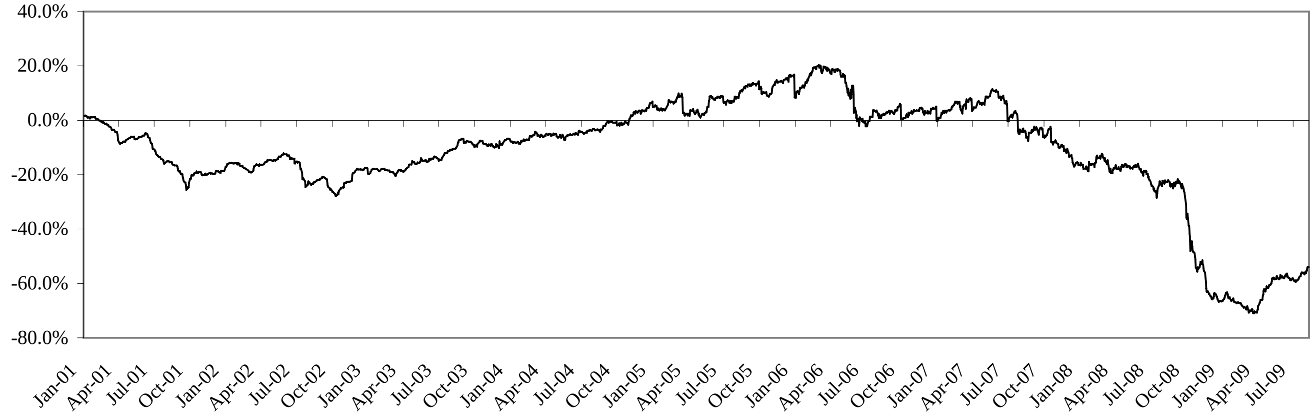
The median discount to net asset value of approximately 64 percent for secondary interests in buyout, venture and fund of funds as of March 31, 2009, is approaching the historical high median discount of approximately 71 percent in 2003 (see Exhibit 3).[10]

According to the 2009 *Preqin Global Private Equity Review*,[12] gaining liquidity was the most popular reason given as to why they would be selling, with the denominator

Exhibit 3
Historical Average Secondary Price Executions for Interests in Buyout, Venture, and Fund of Funds (Expressed as a Percentage of Net Asset Value)[11]

	2002	2003	2004	2005	2006	2007	2008	1Q2009
Average Price	35.15	29.24	41.08	58.99	84.55	79.63	73.95	36.26

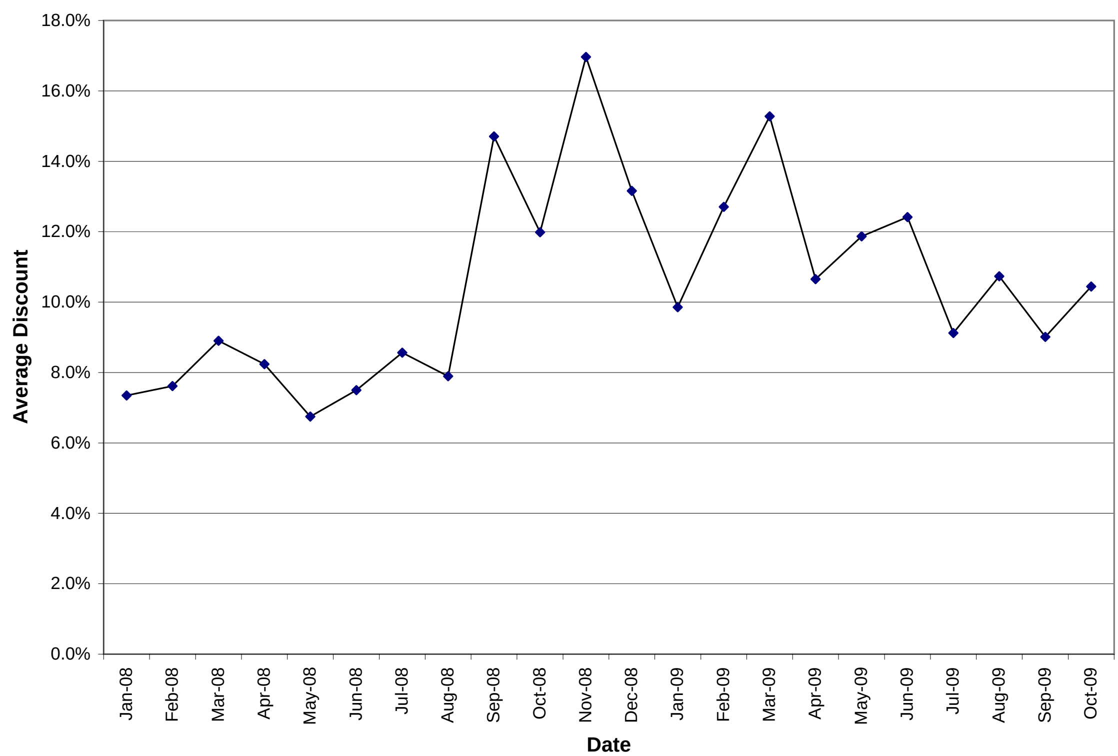
Exhibit 4
PE Index—Sector Premium (Discount) to NAV



Note:
1. The index includes the following private equity funds: Candover Investment Trust, Dunedin Enterprise Investment Trust, Electra Private Equity Investment Trust, F&C Private Equity A Trust, F&C Private Equity B Trust, Graphite Enterprise Trust, HG Capital Trust, Mithras Investment Trust, Henderson Private Equity Investment Trust plc, Northern Investors Company, Pantheon International Participations, Prelude Trust plc, Private Equity Investors plc, Standard Life European Private Equity Trust, and SVG Capital. The index is weighted based on the total net asset value of each fund.

Sources: Bloomberg and Capital IQ.

Exhibit 5
Closed-End Fund Average Discounts
From January 2008 to November 2008



effect, rebalancing portfolios and wishing to exit poorly performing funds among the other responses. The largest group of sellers included public pension funds, followed by private sector funds, insurance companies, and endowments.

Directional Barometer – Quoted PE Index

During the fourth quarter of 2008, a material increase in the size of the DLOM was observed in secondary market services, as presented in Exhibit 4.

Publicly traded closed-end mutual fund pricing data can be used as support for estimating a discount for a noncontrolling ownership interest. The owner of a noncontrolling interest in a closely held business enterprise depends on the performance of others, much like an investor in a closed-end mutual fund depends on the fund manager's success in managing the fund portfolio. Average closed-end fund price discounts are displayed in Exhibit 5.

Supply of secondary investments changed because endowments and foundations were (1) rebalancing due to the reduction in the value of their traditional equity position and (2) applying a more conservative investment policy which includes a lower allocation to alternative investments.

> April 13 2009 (Bloomberg) -- Goldman Sachs Group Inc. raised $5.5 billion to buy interests in private-equity funds just as owners such as endowments and pensions are being forced to offer steeper discounts for their buyout holdings.
>
> Median bids for the so-called secondary interests dropped to about 36 cents on the dollar, down from more than 80 cents last January, according to NYPPEX, LLC, which trades stakes in private-equity funds and tracks pricing.
>
> Goldman Sachs gathered commitments for its fifth fund dedicated to secondary purchases that could range in value from $1 million to more than $1 billion, the New York–based company said in a statement today. The fund is designed to take advantage of distress at endowments such as Harvard University and pensions including the California Public Employees' Retirement System, which have sought to unload buyout stakes as their overall assets plunged.

There was a creeping concern among investors that the pace of capital calls would increase significantly in the near term without a commensurate increase in distribution activity (a trend that began in the second half of 2007).

There were big discounts reported in the fourth quarter of 2008 (average of the high bids = 55.3 percent discount from reported NAV).

Some valuation analysts attributed this larger discount to the presumption that fund managers may not have written down NAV as much as expected.

Some funds reject requests for transfer at any price. If more than 2 percent of the fund's capital and profits are transferred during a year, the pass-through tax status of the entity is in jeopardy. Transactions excepted from the 2 percent measurement are block transfers and qualified matching services.

Therefore, fund managers and investment bankers were searching for ways to meet the seller's demand for liquidity without changing the tax status of the investors who wish to continue to hold.

Structured joint ventures (SJV) were offered to match interests of sellers (e.g., purchase price, up-front liquidity, unfunded relief, administrative burden) and buyers (e.g., mitigate downside risk).

In an SJV, the seller gets a higher purchase price for a portion of the portfolio by giving the buyer a priority return and over-collateralization. These transactions may be masking the size of the DLOM.

Long-Term Equity Anticipation Securities (LEAPS)

LEAPS are publicly traded, long-term options to buy or to sell an underlying publicly traded equity.

A LEAPS put option (option to sell) allows the holder to protect the purchase value of his investment for a period of 14 to 26 months into the future at a known cost.

LEAPS are American-style options that may be exercised at any time prior to the expiration date. For example, LEAPS issued in September, October or November 2009 expire in mid-January of either 2011 or 2012.

The cost of the option is a proxy for much of the DLOM of a closely held stock, because it eliminates the risk of loss in value. A discount amount (percentage) is calculated as the cost of the put option divided by the cost of a share of the stock.

In November 2008, the total universe of LEAPS was about 1245 (based on 1036 data points and excluding exchange traded funds (41) and low priced ($2.50) stock (162)). This is an increase from 903 in 2006.

LEAPS Study[13] Results

The analysis was limited to means, medians, and ranges of the middle 50 percent of occurrences.

1. Price discounts change over time and are not constant in size. Price discounts in November 2008 were double or greater than price discounts in October 2006.

2. The median cost/discount for all companies in the 2006 study was 13.9 percent for the 18-month LEAPS put options and 17.4 percent for the 30-month option, an increase of 3.5 percent. In 2008, the median cost for all companies increased to 33.5 percent for the 14-month options and 40.6 percent for the 26-month option, an increase of 7.2 percent.
3. Company size has a clear and major effect on discounts: The smaller the company (in revenues or assets), the larger the price discount. In November 2008, discounts for companies with less than $1 billion in revenue often were from 35 percent to 50 percent.
4. The greater the company risk (as measured by the company's beta), the greater the price discount.

Summary and Conclusion

An understanding of how the subject ownership interest compares to the ownership interests analyzed in the various empirical studies is important to the analysis and conclusion of the size of the combined discount.

For example, if the subject company or subject security has an expected holding period of one year or less, then it may be more meaningful to place more emphasis on the results from the post-1990 restricted stock studies than the pre-IPO studies. Alternatively, if a public market or liquidity event is not expected to occur for many years, then the results from pre-IPO DLOM studies may be more meaningful.

The most important company-specific and security-specific factors to consider are: (1) dividend payments, (2) expected holding period, and (3) subject company risk. The importance of analyzing the subject company relative to the empirical studies is illustrated by the wide range of discounts observed within each empirical study. The wide range of observed discounts illustrates that a multitude of company-specific and security-specific factors affect stock pricing and the size of the combined discount.

In spite of the disagreements regarding the size of the combined discount, there is a large body of literature that supports its existence. Restricted stock studies, the first type of analysis performed to estimate the DLOM, appeared beginning in 1971.

Between the first restricted stock study published by the SEC in 1971 and today, the DLOM literature has developed considerably. Studies have expanded to include pre-IPO DLOM studies, option pricing studies, and discounted cash flow models.

Dozens of published studies have affirmed that: (1) price discounts are an economically valid concept and (2) the size of the combined discount is often substantial.

Based on the unique facts of a specific analysis, there are times when one study is more relevant than another study. This is because the degree of control and marketability are relative (and not absolute) terms.

Recent evidence suggests that the size of the combined discount that is applicable to a nonmarketable, noncontrolling ownership interest in a closely held business enterprises is material.

Notes:

1. One example is the Longstaff study. The Longstaff study assumes an investor has a single-security portfolio, perfect market timing, and trading restrictions that prevent the security from being sold at the optimal time. The value of marketability, based on these assumptions, is the payoff from an option on the maximum value of the security. Francis A. Longstaff. "How Much Can Marketability Affect Security Values?" *The Journal of Finance*, December 1995, pp. 1767–74.
2. One example is the Quantifying Marketability Discounts Model (QMDM). The analyst calculates the future business enterprise value using the required holding period return. The analyst then adds the present value of the dividend stream expected to be received during the holding period to the present value of the business enterprise. The resulting value equals the shareholder value. The calculation of one minus the ratio of shareholder value divided by the present enterprise value equals the DLOM, based on the QMDM. Z. Christopher Mercer, *Quantifying Marketability Discounts* (Memphis: Peabody Publishing, 1997).
3. Spencer Jefferies, *The Partnership Spectrum*, a publication of Partnership Profiles, Inc., May/June 2002, p. 2.
4. Ibid.
5. *Mergerstat Review 2009* (Santa Monica, CA: FactSet Mergerstat, LLC, 2009).
6. "Secondary Pricing Analysis Interim Update, Winter 2008" by Colin McGrady and Brad Heffern, Cogent Partners.
7. UBS Private Funds Group, "Secondary Market Update" June 2009.
8. Ibid.
9. NYPPEX. "4Q 2008 Secondary Private Markets Price Data and Trends." October 27, 2008.
10. NYPPEX. "Secondary Prices Decline Significantly in 1Q2009 vs. 2008." April 8, 2009.
11. Ibid., p. 1.
12. "Secondary Buyers Outweigh Sellers," *Private Equity Week*, March 23, 2009.
13. Ronald M Seaman, "DLOM Is Valuation-Date Specific, New Study on LEAPS Put Options Shows," Business Valuation Update, May 2009.

Bob Schweihs is a managing director of the firm, and he is resident in our Chicago office. Bob can be reached at (773) 399-4320 or at rpschweihs@willamette.com.