Chapter 10: Fractional Interests (Business Interests)

Nothing causes more consternation and disagreement among valuation people, business brokers, the Internal Revenue Service and clients, than minority (fractional) interest discounts. This chapter will look at the control versus minority interest issues, with a focus on the presence or absence of control, the control studies available, the marketability of a minority or control position, as well as other discounts.

Introduction

The value of a fractional interest in a business is ordinarily lowered by a discount to account for certain disadvantages of holding this minority position. Discount adjustments to a base business value are usually made by buyers of minority interests, while premiums are sometimes paid for control interests. These adjustments are made to the base values through the cost, market and income approaches to valuing a company. The magnitude of such adjustments depends on whether one is valuing a minority or control interest.

Obviously a buyer who would gain a control interest would pay a premium for this position in order to exercise control. On the other hand, a potential buyer of a minority interest would discount his or her purchase price from the par value in order to account for lack of control. The rationale is that the buyer of a minority interest would want a higher or enhanced yield on his money in order to compensate him for the additional risk and lack of liquidity of the investment.

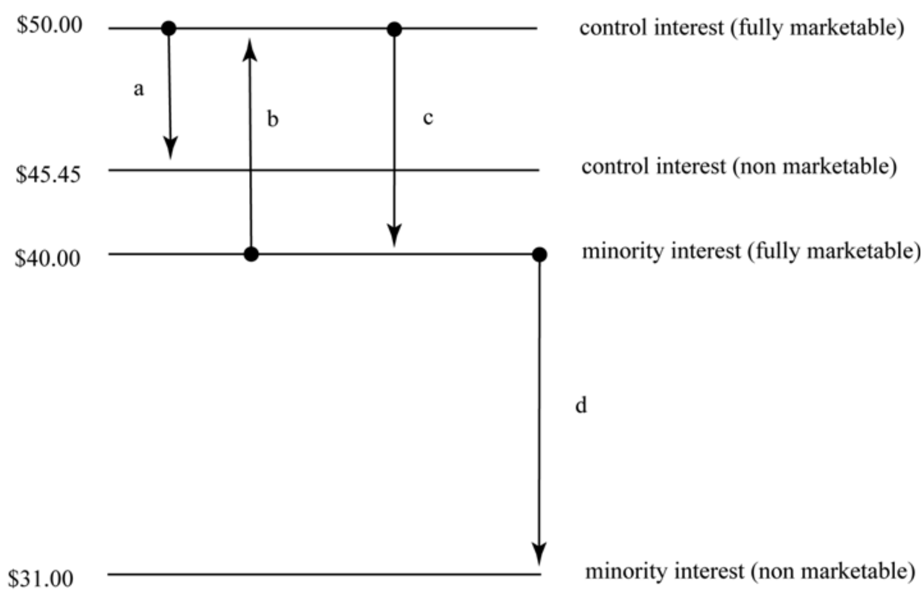
Although most individuals take discounts or premiums in aggregate for a control or lack of control position, quantifying these adjustments should be made in two steps:

- **(1)** adding a premium to a minority interest for a control position or subtracting a discount from a control interest for a minority position; and
- **(2)** subtracting a discount for a lack of marketability (greater discount is for selling a minority position, with a lower discount for selling a control position).

At first, the firm must be valued to determine whether the subject interest is a minority or control position. Once the first step has been made there may or may not be adjustments made for the marketability of this position. Obviously, it is easier to sell a control position than a minority position.

A graphical presentation of the minority and control interest discussion can be seen in Figure 10-1.

Figure 10-1: Possessory Interests versus Discounts



In Figure 10-1, **Range a** is a discount for a lack of marketability for a controlling interest (9.1%). **Range b** represents a premium over and above a minority interest which is fully marketable (e.g., a publicly traded share). This assumes that a base price of $40.00 per share is the minority share price. The control premium in this case is a 25% premium (difference between $40/share and $50/share). **Range c** represents the difference between the value of a controlling and minority interest, assuming that both interests are fully marketable. In this instance, $50 per share represents control (fully marketable), while $40.00 represents a minority interest (fully marketable). The minority interest is the algebraic equivalent of the control premium. In this case it is calculated to be (0.25/1.25)= 20% (see Equation 10-2 on page 238). Finally, **Range d** shows the difference in value of a minority interest (fully marketable) at $40.00/share and a minority interest which lacks marketability ($31.00/share). This equates to approximately a 22.5% discount for lack of marketability for the minority interest. Notice the difference between the lack of marketability for the control position (9.1%) and that of a minority interest (22.5%).

The rest of this chapter will look at the control versus minority interest issues, with a focus on the presence or absence of control, the control studies available, the marketability of a minority or control position, as well as other discounts.

Legal Entity

The type of legal business entity and the percentage of overall ownership in that entity determines the magnitude of the discount adjustment (if a minority interest is considered), or the premium adjustment (if a majority interest is considered). The types of legal entities to consider are: general or limited partnerships, C or S Corps, or limited liability corporations. Business legal entities have idiosyncrasies which need to be noted before any application of discounts can be made. Sole proprietorships are typically not considered, since they do not involve fractional business interests. These minority interest nuances are summarized in Table 10-1 on page 232. Please see Table 2-17 on page 53 for an overview of the nuances of different business entities.

As will be shown below, the magnitude or lack of a discount is a function of many different variables, and therefore there is no set formula approach.

Classification of Capital Stock

Before applying a control premium or minority interest discount adjustment, it is also important to understand the different classifications of capital stock. Stock shares have different preferences. Sometimes these preferences have elements of a control or minority interest, or lack thereof. There are two basic types of capital stock: common and preferred.

Common Stock

The common stock is the basic ownership equity of a company, having no preference but reaping all residual rewards as well as being subject to all losses. Occasionally, there is more than one class of common stock. In such cases, distinctions between one class and the other are based on the dividend, voting, or other rights. Common stockholders generally control the management of the corporation and profit the most if the company is successful. Common shareholders are guaranteed neither dividends nor assets upon liquidation.

Preferred Stock

Sometimes certain shareholder rights are sacrificed in return for other special rights or privileges. This special class is most typically called preferred stock and is usually preferred in liquidation and preferred as to dividends. It may be entitled to a par value in liquidation or it may be entitled to a premium. However, its rights to dividends are generally fixed, although they may be cumulative, which means that preferred shareholders are entitled to arrearages (accumulation) of dividends before the common stockholders may receive any dividends. In addition, preferred stockholders may sacrifice their rights to control management.

Table 10-1: Entity Discount Overview

Legal Entity*	Most frequently valued position	Comments
General partnership	50% interest for two partners, or a 33% interest for three partners	While a 50% interest (assuming two partners) has elements of a minority interest, the discount is not as great as a smaller interest (e.g., a 45% interest of one partner vs. a 55% interest by the other). Typically, the larger the number of partners, the greater the discount; three partners with two having 49% and one with 2%, the 2% would represent a swing vote and would have a limited discount on its pro-rata share of the company value.
Limited partnership	Usually range from between 1-10% interest for a general partner and between 10-99% for a limited partnership interest	Limited partner has no or limited control and therefore typically has a substantial discount; general partner has control and therefore limited discount for overall marketability; some states allow a 1% interest to force liquidation, therefore check each state's rules; review the Commercial Code in state where operating.
Family limited partnership	Same as limited partnership	Same as above
Real estate limited partnership	Same as limited partnership	Same as above; typically also involves fractional interests in real estate.
C Corporation	Usually a range from between 1-49% for a minority interest or 51% for a control position	Degrees of control or lack thereof need to be weighed; review types of stock and ability to vote or not, and whether fiduciary duty is important in the state of incorporation; similar to comments for general partnership; review the Commercial Code in state where operating.
S Corporation	Same as C Corporation	Similar to C corporation; maximum of 75 shareholders.
Limited liability corporation (LLC)	Similar to limited partnership and S corporation	Has elements of both corporation and limited partnership interests; can have 75 different member classes; commercial code applies in state where operating; member vs. non-member managed LLCs can alter magnitude of discount. Member managed minority interests have more elements of control than non-member managed minority interests.

*Review Commercial Code of each state where business entity is operating.

The characteristics of preferred stock are dividend participation rights, voting rights, and rights of conversion into common stock. Within the preferred stock classes there may be a variety of orders of priority and preference relating to dividends and liquidation rights. In summary, preferred stock gives up *some* degree of control for a guaranteed return on investment.

Sometimes companies can accomplish the same results of a preferred and common class of stock by issuing Class A and B stock. When this has been done, one of the issues is the common stock and the other issue has some preference or restriction of basic rights.

Rationale for a Control Premium or Lack Thereof

Why should one apply a control premium adjustment for a majority position, or a discount adjustment for a minority interest? With corporate stock, a controlling block of shares allows the possessor to elect a majority of the board of directors. The board of directors controls the identity and wages of the company's management, and, therefore, the direction of the business. In addition, the possession of control implies the power to force or stop certain fundamental changes in the structure of the company, such as a merger, sale of assets, liquidation, and so on. These considerations favor controlling interests over noncontrolling interests in all kinds of property. The ability to control current operations, and/or to block dispositions or other major changes, are an additional element of value, the presence of which commands the premium, and its absence warrants a discount.

Other cited reasons for an application of a premium are: the opportunity to improve performance, the safety of investment, the psychic and other nonfinancial values, self dealing opportunities, or superior access to information. *Self dealing opportunities are perhaps the best rationale for providing control adjustments.* This last reason is most applicable to privately held firms.

Attributes of Control

Determining the Presence or Absence of Control

The first issue to resolve is the degree of control that one is valuing. From this point, all discounts or premiums are generated. Control is generally measured by the ability to hire or fire management, set dividend frequency and amounts, cause fundamental changes in the structure or operations of the business, and the ability to liquidate the business. A more elaborate list has been put forward by Shannon P. Pratt, as seen in Table 10-2 on page 234.

Furthermore, the degree of control is reflected by a number of additional factors:

- cumulative versus noncumulative voting
- contractual restrictions
- the effect of regulation
- the financial condition of the business
- the effect of state statutes
- the effect of distribution of ownership

If the company has noncumulative voting with respect to the election of directors, then the company belongs to the majority. If the company has cumulative voting, then some of the value attributable to the ability to elect directors will shift from the majority holder to the minority interests.

The difference between cumulative and noncumulative voting is that cumulative voting allows minority shareholders to accumulate all of their votes and cast these votes among a few director or management candidates, or just one. The ability to accumulate these votes increases the chances of obtaining some representation for the minority shareholders. Cumulative voting applies *only* to shareholder elections and not to other matters.

Table 10-2: Prerogatives of 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 public offering.
10.	Declare and pay dividends.
11.	Change the articles of incorporation or bylaws.

Source: Pratt, Shannon P., et al. *Valuing a Business*, Chicago, pp. 301.

Example of Cumulative Voting

Let us assume that Katarina has 65 shares and George has 35. In an election of 5 directors, Katarina will have 325 (65 x 5) votes and George will have 175 votes. If George votes shrewdly, then his cumulative votes will assure him of at least one candidate of his choice, out of 5 being elected. If George casts all 175 votes for a candidate, then there is no way that Katarina can block the appointment of this candidate.

Contractual restrictions may also have an impact if items such as management compensation or indenture provisions of a debt obligation are accounted for. *Much of the premium for a controlling position can be eroded if the company is ailing financially.*

The ability to affect a swing vote can translate into substantial control and, therefore, a premium accounted to it. For example, if two stockholders have a 48 percent interest and one has the other 4 percent, then the shareholder with the 4 percent will have a substantial impact on the ability to affect control since this 4 percent represents a swing vote.

To further complicate matters, if one individual has $1/3^{rd}$ of the interest in a company and there are three shareholders, each having an equal interest, then no individual can affect control. The same would hold for two stockholders who have an equal 50 percent interest. As a result, the minority discount will not be as great. In summary, every situation must be looked at differently and analyzed based upon the above variables.

Other related issues which are important are:

- the differences between supermajority versus majority
- effective or working control relative to the lack thereof
- voting versus non-voting interests
- minority/non-voting shares' veto rights

Supermajority versus Majority

Often times it is important to assess the voting strength of various owners and how this strength exercises control. There is no single percentage ownership which prevails on every issue. In some cases having 50 percent plus one vote constitutes control and determines a favorable outcome. In other cases (by law or agreement), a larger percentage than an overall majority is required, or a "supermajority."

For example, in one estate tax case, the Tax Court noted that while a 50.25 percent shareholder controlled the board of directors, thus controlling management, dividends, and possible merger of the corporation, he did not have the power to liquidate the corporation. As a result, a much lower premium was added than with full control.[1] A district court found that a 50 percent block did not possess control, because among other things, it did not have the two-thirds vote required under local corporate law to liquidate the corporation.[2]

State statutes can also have a substantial impact on the ability to control. In almost half of the states, a simple majority constitutes control. In the other states there is a $2/3^{rds}$ majority needed to affect control. As a result, a minority interest in some cases where there is a third or less of the stock, can block any decision.

Effective or Working Control

Sometimes a percentage of ownership interest which is less than 50 percent still has elements of control. If a number of shareholders have a smaller percentage ownership relative to one who has a large block, then the one who has the larger block will be able to command some degree of control. *The reason why the block has a degree of control is that the odds are high that the smaller shareholders will join a large block owner to create a needed majority.* Therefore, the owner of the large block will have "effective," or "working" control of the corporation, even though he or she does not posses the actual control.

1. Estate of Yeager v. Commissioner, suptra note 177; see also Estate of Murchy v. Commissioner, suptra note 223, TC Memo No. 1990-472 at 2256, 60 TCM 657.
2. Obermer v. United States, 238 F. Supp. 29, 34 (D. Haw. 1964); see also Whittemore v. Fitzpatrick, supra note 177, 127F. Supp. At 719.

Voting Versus Non-voting Interests

In addition to the differences between minority versus control, there is an additional problem of quantifying voting rights versus non-voting. In general, the greater the degree of the ability to vote, the greater the importance of voting rights in terms of the value enhancement of the interest. With respect to a minority interest, the stock market ascribes little value to voting rights. For a control position, the ability to vote can have a large impact upon value.

Non-voting shares usually have the right to participate in decisions on certain fundamental matters such as liquidation. These non-voting shares are generally worth less than other stock, all things being equal. *Limited partnership interests bear similarities to non-voting corporate stock. When making adjustments, a control stock block will have a premium above that for identical non-voting control block shares. On the other hand, a discount would be made from a voting control block to arrive at the value of a non-voting control block.*

Recent studies now suggest that there is not as great a difference in value between voting and non-voting classes of shares.

Minority/Nonvoting Shares' Veto Rights

Even when a minority or non-voting share is conceded for a lack of control, the minority's presence may be enough to reduce the control premium for a large share block at the same company. There are two reasons for this: (1) local law and corporate documents; and, (2) loyalty and fairness duties which stem from control.

First, the local law and corporate documents may require the consent of a minority or non-voting block on certain matters, such as things pertaining to structural changes of the business. Therefore, while a minority shareholder may not control management or dividends, they may have equal power when issues such as liquidation are considered. Second, even when the minority interest lacks veto rights, the majority owner may have a fiduciary obligation to be fair to the minority or non-voting owner's interests.

Empirical Studies of Control Adjustments

There are generally three sources of data for quantifying the amount of a control or minority interest adjustment:

(1) control premium studies
(2) data from trust and estate sales
(3) other miscellaneous sources

Control Premium Studies

Out of all of the minority interest trades on a stock exchange, every year there are a few trades which, although being fractional interests, represent controlling block purchases of companies. The most widely cited source in the industry is the *Mergerstat Review.* This publication tracks the percentage premium paid over the market price.

Mergerstat Review describes its database as follows:

> *The Mergerstat Review Research Department tracks publicly announced formal transfers of ownership of at least 10% of a company's equity where the purchase price is at least $1,000,000, and where at least one of the parties is a U.S. entity. These transactions are recorded as they are announced, not as they are completed. Open market stock purchases are not recorded. For sellers in our database with competing bids, only the highest offer is included in our calculations. Cancelled transactions are deducted from total announcements for the period. Unless otherwise noted, all merger and acquisition statistics contained in this publication reflect completed or pending transactions as of the end of the applicable period.*[1]

One small portion of the *Mergerstat Review* premium data can be seen in Table 10-3.

Table 10-3: Premiums Offered Over Market

Year	Average Percentage	Median Percentage
1985	37.1%	27.7%
1986	38.2	29.9
1987	38.3	30.8
1988	41.9	30.9
1989	41.0	29.0
1990	42.0	32.0
1991	35.1	29.4
1992	41.0	34.7
1993	38.7	33.0
1994	41.9	35.0
1995	44.7	29.2
1996	36.6	27.3
1997	35.7	27.5
1998	40.7	30.1
1999	43.3	34.6

Source: Mergerstat Review

1. *Mergerstat Review 2000*, pp. 24.

The Link Between Control Premiums and Minority Interests

The percentages shown in Table 10-3 on page 237 represent the control premiums paid in the market. To convert these control premiums to minority interest discounts, one simply uses the following formula (algebraic equivalent).

$$\text{Minority discount} = \frac{Premium}{(1 + Premium)} \qquad \textbf{(EQ 10-1)}$$

Therefore, if the premium paid for control in 1995 averaged 44.7%, then the equivalent minority interest discount equates to 30.9%, or

$$\text{Minority discount} = \frac{0.447}{(1 + 0.447)} = 30.9\% \qquad \textbf{(EQ 10-2)}$$

Trust and Estate Sales

A second source of information on minority interest discounts and control premia is trust and estate sales. Most of this information was derived from first hand experience of H. Calvin Coolidge as a bank trust officer. Overall, he states that:

> *A number of years of experience has demonstrated that it is extremely difficult to find any market for minority interests…, despite efforts to do so…On the relatively rare occasions when an offer is made to buy a minority interest, it is almost always for an amount far less than the fiduciary and the beneficiary expect to get.*[1]

He conducted two studies with the first in 1975, and the second in 1983. In his 1975 study he reviewed 30 transactions of minority interests. He found that the average transaction price was 36 percent below the book value. In his 1983 study he found discounts at an even higher amount. The average discount for the two studies combined was approximately 40 percent. *It must be noted that the 40% represents a cumulative discount for a minority interest and lack of marketability.* Therefore, using trust and estate studies is only a basis for a range for the combination of both minority and marketability discounts.

Other Studies

Other studies or proxy data which are sometimes used as a proxy variable are:

- holding company and net asset value data
- secondary markets for limited partnerships & REITs (Real Estate Investment Trusts)
- real estate fractional interests
- court decisions

1. H. Calvin Coolidge, “Fixing Value of Minority Interest in Business: Actual Sales Suggest Discount as High as 70%,” *Estate Planning*, Spring 1975, pp. 141

Holding Company and Net Asset Value Data

Oftentimes discounts can be obtained from closed-ended mutual funds, however this application is most relevant for valuing a holding company rather than a minority interest in a privately held company. Closed-end funds are unlike open-ended mutual funds, since their sponsoring investment companies do not stand ready to issue and redeem shares on a continuous basis. In addition, they have a fixed capitalization which is represented by publicly traded shares that are often listed on the major stock exchanges.

The discounts of closed-end mutual funds, from their net asset values (NAVs), are derived by the interaction of the following four forces:

- **(1)** the differences in concerns of closed versus open end management
- **(2)** management fees
- **(3)** ownership rights
- **(4)** stigma of the public towards this lack of flexibility

First, closed-end fund management is not concerned with continuous buying and selling to accommodate new investors and redemptions (a responsibility of open-end funds). This arrangement is similar to a controlling position, there being no urgency of liquidating a minority holder. The lack of urgency means that the fund managers (controlling position) are at an advantage, while the shareholders (minority position) are at a disadvantage. This disadvantage of the shareholders translates into a discount from NAV (net asset value or adjusted book value) by a potential buyer of a minority position in a fund.

Second, the closed-end fund documents allow management fee and administrative charges to be made against the fund over the life of the fund. This is an ongoing cost to the unit holder as compared to directly holding the securities which have no annual costs. If the fees are 2.5% per year, then there is a future stream of expenses built into the actual value of the fund. The fund will either deduct these expenses from the fund income or sell holdings in order to pay the management fees. In summary, if you have a long term duration of say 10 years, then a 1% per year management fee would equate to a 10% discount from NAV, and a 2.5% per year management fee would equate to a 25% discount. These expenses are not unlike that of a controlling partner or majority interest holder in a company who pays him or herself a salary for control of the business entity.

Third, the holder of a unit of a closed-end fund holds the legal title to her pro rata share of the fund’s investments. This is different than holding all of the investments and their positions in the fund for two reasons. If the investor were to hold the exact dollar amount of the underlying securities as the pro-rata share of the fund, then she could liquidate them at their market prices to obtain their market value at any time. However, by holding units of the fund, she must sell these less liquid funds as units. Also, if she is not happy with the asset allocation of her closed-end fund, then she cannot sell or rebalance the fund. She can only sell the entire fund to reallocate her position.

Fourth, new minority buyers of the fund have the perception that closed-end funds have less flexibility than open-ended funds. As a result of the stigma of less flexibility, the shares of closed-end funds are usually obtained at a discount (similar to marketability discount) from their net asset values. The discount is a result of the new buyers of the fund needing to be compensated for the lack of flexibility.

An example of some discounts of equity closed ended mutual funds can be seen in Table 10-4.

Table 10-4: Closed-End Mutual Funds

Fund	Dividend Yield	Discount from Net Asset Value
Adams Express	1.1%	(13.5)%
Gabelli Equity	0.4%	1.0%
General American Investors Co.	1.0%	(7.0)%
Liberty All Star	0.4%	(13.0)%
Royce Value Trust	1.1%	(16.6)%
Salomon Brothers Fund	1.3%	(10.0)%
Tri-Continental Corp.	2.0%	(21.0)%
Median (all funds)	1.0%	(11.4)%
Average (all funds)	1.1%	(13.0)%

Source: Value Line

Obviously the greater the illiquidity of the underlying assets, the greater will be the discounts. An interesting inverse correlation typically exists between the discounts of the funds, and that of the dividend yield for bond funds, but not as much for equity funds. The higher the yield, the lower the discount. This is the old “bird in the hand” maxim.

REITs (Real Estate Investment Trusts)

With respect to real estate funds, closed ended real estate holding companies will have a greater discount than closed ended real estate investment trusts (REITs). It must be noted that appraisers used to use REIT studies when REIT stock was trading at discounts to their NAV (net asset value). However, since they are trading at premiums one does not see this type of usage as a proxy variable for minority interests as much.

Limited Partnerships

The market for publicly-registered limited partnerships (LP's) has risen and fallen over the past twenty years. As a result of the illiquidity of the blocks held within these publicly-registered limited partnerships in the early 1980's, entrepreneurs created resale opportunities in otherwise non-traded limited partnerships. Not all limited partnerships are fortunate enough to enjoy a resale market, but a relatively low volume of trades have been reported in over 1,000 such securities, with most of these trades involving publicly registered limited partnerships.

Liquidity in this market is still not as great as it is in the stock market. Trade execution is not assured, and execution time is much longer than in stocks. However, these investments provide a proxy adjustment which can be used as a base by which to show a lack of control.

In addition to all of the risks routinely associated with buying and selling securities, such as economic, business, and market factors, additional risks associated with publicly traded limited partnerships and other direct investments include, but are not limited to: lack of control, conflicts of interest between the investor and the issuer, restricted voting rights, restrictions on transferability, and untimely and incomplete information.

The types of assets held by the publicly traded limited partnerships include: equity capital funds, real estate, operating businesses, tax credit vehicles, equipment leasing, media, and natural resources.

These publicly traded limited partnership sales provide good information, since they more accurately reflect minority interests in privately held companies than minority interests in stocks. Of great value is the enormous amount of data which shows the magnitude of the adjustments for risk factors such as distributions and leverage. All things being equal, the lower the distribution or yield, the higher the discount. Also, the higher the leverage, the higher the discount. Therefore, limited partnerships which have high distribution yields and low amounts of leverage usually have very low discounts, while those with high leverage and no distributions will have very high discounts. The average of these studies usually ranges between 30-35%, with a low of between 10-15% and a high of between 40-60%. Table 10-5 summarizes these characteristics.

Table 10-5: Variables Affecting Limited Partnership Values

Leverage	Yield	Resulting Discount	Typical Percentage
Low or No Leverage	High	Lowest Discount	5-15%
High Leverage	High	Higher Discount	15-25
Low or No Leverage	Low or Zero	Even Higher Discount	25-40
High Leverage	Low or Zero	Highest Discount	40-50

Once again, the yield or return on investment is the most important variable affecting a limited partnership interest, with leverage being the next most important variable. Running a regression can help statistically support the percentage discount for certain variables. The riskiness of the asset or business can also increase or decrease the discount.

Real Estate Fractional Interests

In general, real estate fractional interest discounts should not be used as support for minority interest discounts. More discussion of this can be seen in Chapter 11.

Marketability Adjustments

An investor in publicly traded securities enjoys relatively good marketability and may readily liquidate his investment position in a short period of time, should this be desired. An investor or buyer of securities of closely held companies does not enjoy a ready market and, therefore, would require an additional yield enhancement as an offsetting compensation. This yield enhancement usually comes by applying a discount to the par value.

A simple example can be seen in Table 10-6 on page 243. Let's assume that a limited partnership interest is currently yielding 10% but has a high degree of leverage. A buyer would discount the market value in order to enhance the yield. If there is no yield, then a buyer would discount the par value even further in order to adjust for any potential legal or liquidity problems in the future.

Table 10-6: How Discounts Enhance Yields

	Yield with no discount		Yield with discount	
Income		$10		$10
Market or Par Value	$100		$100	
Discount	0		$(35)	
Adjusted Value		$100		$65
Yield		10%		15.38%

Discounts for lack of marketability can take into consideration such things as: the dispersion of the company's stock among shareholders, the block of the stock being appraised, restrictions on the sale of the stock to third parties, the spread between the bid price and the offer price (the greater the spread, the greater the marketability risk), time horizon risk or cost of flotation, to name a few issues.

Factors affecting the discount

The major factors affecting the need and magnitude of the discount are:

- put option rights
- dividend payments
- potential buyers
- size of the block
- information access and reliability
- restrictive transfer provisions[1]

First, if there is a put option right, then the marketability discount might be no greater than 5-10%. A put is an option which allows the holder to sell the security or asset back to the put writer for a previously agreed upon amount. Put options are found mostly in ESOP (Employee Stock Ownership Plans) owned stock.

Second, the dividend or distribution payments contribute largely to the amount of the marketability discount. This is the old "bird in the hand" maxim. Obviously, if one is receiving a dividend, then the discount for a lack of marketability would not be that severe. On the other hand, if there are no dividends being paid and no prospect of one in the future, then the adjustment would be high.

1. Pratt, Shannon P., Reilly, Robert F., Scheweihs, Robert P., *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, Chicago, 1996, pp. 358-359.

Third, the breadth of the market is an important factor. If there are only three potential buyers, then this would severely impact the value due to the illiquidity of the investment.

Fourth, a large block of publicly traded stock would typically have a greater illiquidity than a smaller one. Fifth, the information available about the market and prospective buyers is an important consideration. Finally, any transfer restrictions will severely limit the holder of a security interest from liquidating her position (this is very true for limited partnership interests).

Table 10-7: Hierarchy of Investment Marketability

	Investment	
(Highest Return/		
Lowest Safety)	Foreign Venture Capital	
	Venture Capital	
	Foreign Real Estate	
	Emerging Market Securities	
	Large Domestic Privately Held Company	
	Small Domestic Privately Held Company	
	Domestic Real Estate	
	Domestic Small Cap Securities	
	International Large Cap Securities	
	Non-Dollar Bonds	
	Large Cap Equity (Domestic)	
	Mutual Funds	
	Convertible Bonds	
	Corporate Bonds	
	Municipal Bonds	
	Treasury Bills/Bonds	(Lowest Return/
		Highest Safety)

In addition, the marketability of an investment vehicle can be hindered by a further combination of:

- the time needed to liquidate a holding.
- the volatility of the investment vehicle, with volatility meaning the chance of loss.

The volatility or standard deviation of an investment vehicle does not, by itself, indicate a marketability discount. However, an investment vehicle that is already high in risk limits the number of potential purchasers for the investment.

Table 10-7 indicates a hierarchy of investment vehicle marketability for various investments.

In essence, the marketability discount for the minority interest represents a discount for the absence of the liquidity afforded by a public market. A marketability discount for a closely held security can be significant due to the difficulty of selling a fractional or minority interest.

As can be seen by Table 10-7 on page 244, foreign venture capital would rank the highest in terms of lack of marketability, with United States treasury bills having the greatest marketability.

Empirical Data for Marketability Discounts

There are four general sources of information on the discounts for a lack of marketability:

- restricted stock studies
- studies of private transactions prior to public offerings
- studies of the costs of flotation
- primary research for brokering the security interest

Restricted Stocks

Restricted securities are securities acquired in a transaction not involving a public offering. Examples of restricted stock include: stock acquired in a private placement; stock acquired from a person who directly or indirectly controls the management of the issuer; securities acquired through employee stock options; securities obtained through employee stock purchase plans without registration; or securities distributed to employees as a bonus for a pension or profit sharing plan. Most of these situations are closely related to Rules 144, 145 and Employee Stock Options which were created by the Securities and Exchange Commission (SEC).

Restricted stock data provide support for market discounts. Since these shares exchange in private placements, one can measure the difference between the private placement price to the day-to-day trading price. The percentage difference is a proxy for the discount for lack of marketability.[1] Three of the most important studies are the SEC Institutional Investor Study, the Gelman Study, and the Moroney Study.

First, the SEC Institutional Investor Study examined the discounts at which transactions in restricted stock (letter stock) took place compared to the shares of identical unrestricted stock on the open market, from 1966 to 1969. The discounts were from 0% to 80%. However, most of the stock transactions had ranges from 30-40%. This study tracked transactions for companies trading on the NYSE, ASE, OTC (Reporting Companies), and OTC (Nonreporting Companies). These are private transactions in publicly traded stocks that are equiva-

1. *Valuation of Closely Held Companies and Inactively Traded Securities,* Edited by E. Theodore Veit, December 5, 1989, pp. 45.

lent to the freely tradable public stock, except for the fact that they have limitations on their trading. Second, the Gelman Study looked at the prices paid for restricted securities by four closed-end investment companies specializing in restricted-securities investments. The study found that both the arithmetic average and median discounts were 33%. Finally, the Moroney Study looked at the prices of 146 transactions in restricted securities by 10 registered investment companies. Moroney's study indicated an average discount of 35.6%. A summary of these and other study results can be seen in Table 10-8.

Studies from Private Transactions Prior to Public Offerings

Stocks that have a secondary market, but have restrictions, benefit from an established market once the restrictions have ended. Restrictions on private placements usually have a greater lack of marketability relative to restricted publicly traded stock. Since this is true, private placements can also be used as a proxy for a lack of marketability.

There are two studies which support these marketability discounts. These are the studies conducted by Robert W. Baird & Co. and Willamette Management Associates. The Baird study which reviewed transactions prior to their IPO (initial public offering) indicated an average discount of 60%, and a 66% discount from the price at which they ultimately went public. In a subsequent study, the average discount was about 43%. The Willamette Study showed an average discount of 43% for private placements.

Table 10-8: Summary of Restricted Stock Studies

Study	Years Covered In Survey	Average Discount
SEC, Overall Average	1966-1969	25.8%
SEC, Nonreporting OTC Companies	1966-1969	32.6%
Gelman	1968-1970	33.0%
Trout	1968-1972	33.5%
Moroney	1969-1972	35.6%
Maher	1969-1973	35.4%
Standard Research Consultants	1978-1982	45.0%
Willamette Mgmt. Assoc., Inc.	1981-1984	31.2%
Siber	1981-1988	33.8%
FMV Opinions, Inc.	1979-April 1992	23.0%

Source: Pratt, Reilly, Schweihs *Valuing a Business*, pp. 343.

One must be wary of using the IPO data as support for adjustments, due to the over-valuation of IPOs on the first few weeks of trading, relative to the stock value after being more seasoned in its trading. In essence, there is often a very large gap between the privately held value and that of the IPO, due to the exhilaration surrounding an IPO. As a result, the above discounts would probably be lower, if the comparison included the seasonal trading prices. Furthermore, many of these studies use comparisons of stock values in relating to their previous five month values before being traded. Furthermore, there are brokerage firms which are in the business of assisting in the liquidation of restricted stock to cash.

Cost of Taking the Stock Public

The cost of taking the stock public is sometimes cited as a proxy variable for measuring the illiquidity of a position. Table 10-9 gives a summary of these costs, based upon the size of the transaction. It must be noted that this data is dated and costs would most likely be higher today.

Similarly, the brokerage costs of selling a privately held business are between 10-12% for a business which is worth less than $1 million, as a good rule of thumb. For larger businesses this would generally range from 5-8% of the selling price (see “Commissions” on page 280 for a discussion of typical broker fees). Now consider the cost of selling a minority interest in a company, limited partnership or LLC. A broker would typically charge more than the 5-12% since there is more time involved, less demand, and a smaller number of potential buyers for these positions.

Table 10-9: Cost of Flotation

Size of Issue (Millions)	Number	Compensation (Percent of Gross Proceeds)	Other Expense (Percent of Gross Proceeds)
Under 0.5	43	13.24	10.35
0.5-0.99	227	12.48	8.26
1.00-1.99	271	10.60	5.87
2.00-4.99	450	8.19	3.71
5.00-9.99	287	6.70	2.03
10.00-19.99	170	5.52	1.11
20.00-49.99	109	4.41	0.62
50.00-99.99	30	3.94	0.31
100.00-499.99	12	3.03	0.16
Over 500.00	0	-----	---
Total/Averages	1,599	8.41	4.02

Source: *Cost of Flotation of Registered Issues 1971-72*. Washington, D.C.: Securities and Exchange Commission (1974:9).

Primary Research

If you really need hard evidence, then you have to survey trust companies, brokers and attorneys. You will quickly find out how difficult it is to sell a private security interest, let alone one with a minority stake.

Other Discounts

Other commonly cited discounts are those for:

- Blockage
- Potential loss of key person
- Portfolio holdings
- Lack of liquidity
- Legal/contractual restrictions

Blockage

Blockage is a term which is more commonly used with publicly traded securities, rather than in the privately held securities arena. This term refers to large quantities, or "blocks," of securities which may have less of a value per unit than that of smaller quantities of an asset or item. This term is similar to the concept of economies of scale, where larger portfolios or groups of assets will sell for a smaller dollar/unit, than smaller portfolios or groups of assets.

The most typical example would be a large block of stock in a publicly held corporation. If the size of the block is large, relative to the daily trading volume, then a discount from the current market price is made in order to induce a trader to buy the entire block. This concept is typically confronted when valuing estate interests or for filing an estate gift tax form with the Internal Revenue Service.

Key Person Discount

Sometimes one person in an organization will provide the "lynch pin" to the entire operation. If this person dies or leaves, then the risk of the business operating as a going concern increases, and the value of the business decreases.

Portfolio Discount

Sometimes businesses (e.g., conglomerates) have two or more lines of businesses which are non-related. In this case, a discount may be paid for a position in the stock of the conglomerate holding company. The rationale is that one or more lines of business would not fit into an expansion or acquisition plan of a company, and that the non related businesses would be a drag on the overall business of the acquiring company. Some studies have indicated a 10 percent discount from the breakup value. However, the discount would depend upon the situation and the company.

On the other hand, there may be a premium due to the reduction of risk or acquisition and due diligence costs from an investor's point of view. More business entities means less risk due to diversification. The real issue is who the most typical buyer would be. If the most typical buyer would be an investor, then there may be no discount, and possibly a slight premium. If the most typical buyer would be a company in the same industry as one of the subsidiary companies of the holding company, then there may be a discount.

Liquidity (Waiting for a Dividend)

In some cases holding companies have leaseholds or other assets where the yield is quite low and the reversion of these assets constitutes the entire value. In this case, a higher than normal discount rate is applied in order to bring a reversionary or terminal value to a present value in today's dollars. Another example would be that of an ESOP cashout. While the put option may be called by the employee, the employee often has to wait for 9-12 months in order to receive the proceeds. Therefore, while the proceeds are fixed, the amount would still have to be discounted for the cost having lost simple interest on the proceeds.

Legal/Contractual Restrictions

Sometimes contractual restrictions are so limiting that a buyer would place a discount on the purchase price in order to account for a lack of liquidity and the amount of litigation that it would take in order to obtain the liquidity of the investment to cash.

Summary

The most important issues to remember when valuing an interest in a company are:

(1) the risk associated with the class of asset;
(2) the historical business entity distribution or dividend and debt; and
(3) the payback period after the discount is made.

The last item is the most important. If the payback or investment becomes less than one to two years (after the discount has been made), then investors will "come out of the woodwork" to invest in this investment or business interest. Therefore, there is less of a marketability problem, and therefore less of a discount.