Attorney
CLE Series

Quantification & Application of Valuation Discounts

UNDERSTANDING THE USES AND MISUSES OF DISCOUNTS FOR LACK OF CONTROL AND LACK OF MARKETABILITY

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Presented by the Business Valuation Services Group

GROSSMAN YANAK & FORD LLP
Certified Public Accountants and Consultants

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Bob heads our firm's Tax and Business Valuation Groups. He brings extensive experience in tax and valuation matters that affect businesses, both public and private, as well as the stakeholders and owners of these businesses. The breadth of his involvement encompasses the development and implementation of innovative business and financial strategies designed to minimize taxation and maximize owner wealth.

As his career has progressed, Bob has risen to a level of national prominence in the business valuation arena. His expertise in business valuation is well known, and Bob is a frequent speaker, regionally and nationally, on tax and valuation matters.

After graduating from Saint Vincent College in 1979 with Highest Honors in Accounting, Bob earned a Masters of Science degree in Taxation with Honors from Robert Morris University. He is a CPA in Pennsylvania and Ohio and is accredited in Business Valuation by the American Institute of Certified Public Accountants. Bob also carries the well-recognized credentials of Accredited Senior Appraiser, Certified Valuation Analyst and Certified Business Appraiser.

Bob has written many articles for several area business publications and professional trade journals. He is a course developer and national instructor for both the American Institute of Certified Public Accountants (AICPA) and the National Association of Certified Valuators and Analysts (NACVA) and served as an adjunct professor for Duquesne University's MBA program.

A member of the American and Pennsylvania Institutes of Certified Public Accountants, Bob previously chaired the Pittsburgh Committee on Taxation. He has also served as Chair of the Executive Advisory Board of NACVA, the largest national valuation organization and its highest Board. Currently Bob is the Chair of NACVA's Professional Standards Committee; he previously chaired its Education Board.

Bob is a member of the Allegheny Tax Society, the Estate Planning Council of Pittsburgh and the American Society of Appraisers. He has held numerous offices and directorships in various regional not-for-profit organizations. Bob received the 2003 Distinguished Public Service Award from the Pennsylvania Institute of Certified Public Accountants and the 2004 Distinguished Alumnus Award from Saint Vincent College.

Bob and his wife, Susie, live in Westmoreland County. They have two children, Matthew and Alyssa.

Melissa A. Bizyak, CPA/ABV/CFF, CVA

Melissa has practiced in public accounting for over 16 years. She has significant experience in business valuation and tax-related issues for privately-held concerns and their owners. Melissa's business valuation experience is very diverse, including valuations of professional practices, as well as companies in the manufacturing, oil and gas and technology industries.

These valuations have been performed for a variety of purposes such as Employee Stock Ownership Plans (ESOPs), marital dissolutions, buy/sell transactions, dissenting shareholder disputes, value enhancement and gift and estate tax purposes.

After graduating from the University of Pittsburgh in 1994 with a B.S. in Business/Accounting, Melissa spent more than two years with a local accounting firm in Pittsburgh. She joined Grossman Yanak & Ford LLP in 1997.

Melissa is a certified public accountant. She is accredited in business valuation and certified in financial forensics by the American Institute of Certified Public Accountants (AICPA). She has also earned the AICPA Certificate of Achievement in business valuation. Additionally, Melissa carries the credentials of Certified Valuation Analyst.

Her professional affiliations include membership in the National Association of Certified Valuators and Analysts (NACVA) as well as the AICPA and the Pennsylvania Institute of Certified Public Accountants (PICPA). She also serves on the Board of Directors of the Estate Planning Council of Pittsburgh as Vice President.

Melissa has authored articles appearing in professional publications and has written business valuation course-related materials for NACVA and the AICPA. She serves as a national instructor for NACVA.

Melissa is a graduate of the Leadership Development Initiative, a Leadership Pittsburgh, Inc. program. She serves on the Executive Leadership Team for the American Heart Association's "Go Red for Women" initiative.

Melissa resides in the South Hills of Pittsburgh with her husband and their two sons.

Sara L. Bergman, AVA

Sara provides industry, economic and corporate research as well as performing calculations required for the preparation of business valuation reports and other consulting projects. She primarily provides services to privately held concerns and their owners.

During her time at Grossman Yanak & Ford LLP, Sara has played a significant role in preparing business valuations for a variety of purposes including marital dissolutions, gift and estate tax purposes, dissenting shareholder disputes, and buy/sell transactions. She is also a frequent speaker at firm-sponsored events and seminars.

Sara graduated cum laude from Mount Union College in 2006. She earned Bachelor of Arts degrees in two majors – business administration and sport management, with a concentration in finance and a minor in accounting.

After graduation, Sara joined the Business Valuation Services Group at Grossman Yanak & Ford LLP. She has completed the training, certification and examination requirements to earn the Accredited Valuation Analyst (AVA) designation as conferred by the National Association of Certified Valuators and Analysts (NACVA).

She continues to pursue additional training and expertise, frequently attending seminars and classes sponsored by NACVA, the American Institute of Certified Public Accountants (AICPA), and the Pennsylvania Institute of Certified Public Accountants (PICPA).

In her spare time, Sara is active in her church and enjoys golfing with family and friends. Sara currently resides in the North Hills with her husband, Josh.

Amy E. Mattie, AVA

Amy has practiced in public accounting for more than 11 years. She has significant experience performing business valuation work for privately-held concerns and their owners.

Amy's business valuation experience spans several industries, including manufacturing, retail and professional services. These valuations have been performed for a variety or purposes, such as marital dissolution, financial reporting, estate and gift tax compliance and planning purposes and buy/sell transactions.

After graduating from Robert Morris University in 1994 with a B.S. degree in Business Management/Accounting, Amy spent several years in local government and employed by a large local bank. She also has nearly a decade of experience in public accounting – working for both regional and international firms in Pittsburgh.

Amy earned the Accredited Valuation Analyst (AVA) designation conferred by the National Association of Certified Valuators and Analysts (NACVA) in 2001. She has also begun the education process necessary to obtain the designation of Accredited Senior Appraiser (ASA) through the American Society of Appraisers. Her professional affiliations include membership in ASA and NACVA.

Committed to community service, Amy has volunteered for a local animal shelter, helping to plan the annual walk-a-thon. She is also involved at her church with various volunteer duties. As a hockey mom, Amy has been involved in many fundraising campaigns as well.

Amy resides in Sewickley with her husband Tom, and their sons, Hunter and Noah.

Grossman Yanak & Ford LLP

Headquartered in Pittsburgh, Grossman Yanak & Ford LLP is a regional certified public accounting and consulting firm that provides assurance and advisory, tax planning and compliance, business valuation and technology services. Led by five partners, the 21-year-old firm employs approximately 55 personnel who serve corporate and not-for-profit entities in western Pennsylvania, eastern Ohio, northern West Virginia and New York.

Our firm was founded on the idea that the key to successful, proactive business assistance is a commitment to a high level of service. The partners at Grossman Yanak & Ford LLP believe that quality service is driven by considerable involvement of seasoned professionals on a continuing basis. Today's complex and dynamic business environment requires that each client received the services of a skilled professional with a broad range of experience and knowledge who can be called upon to provide efficient, effective assistance.

Grossman Yanak & Ford LLP combines a diversity of technical skills with extensive "hands-on" experience to address varied and complex issues for clients on a daily basis. We pride ourselves on bringing value-added resolution to these issues in a progressive and innovative manner. Our ability to produce contemporary, creative solutions is rooted in a very basic and ageless business premise – quality service drives quality results. Our focus on the business basics of quality technical service, responsiveness and reasonable pricing has enabled the firm to develop a stable portfolio of corporate clients as well as sophisticated individuals and nonprofit enterprises.

Our professionals understand the importance of quality and commitment. Currently, the majority of the professional staff in our Assurance and Advisory Services and Tax Services Groups hold the Certified Public Accountant designation or have passed the examination and need to complete the time requirements for certification. Each of our peer reviews has resulted in the highest-level report possible, attesting to the very high quality of our firm's quality control function. The collective effort of our professionals has resulted in our firm earning an exemplary reputation in the business community.

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Quantification & Application of Valuation Discounts

Chapter I – *Introduction*

Determination of the value of an equity interest requires the valuation practitioner to carefully scrutinize the specific investment characteristics inherent in the attendant equity instrument. Knowledge of these investment characteristics is critical to proper risk assessment and, thereby, producing a conclusion of value addressing these risks.

In addition to understanding the investment characteristics of a specific equity instrument, it is equally important that the valuation practitioner understand the mechanics of the many commonly used valuation methodologies under the three broad valuation approaches (income, market and asset-based). Depending upon valuator inputs into the mathematical models under the various methodologies, each has the ability to produce a valuation conclusion that differs in relation to the attendant equity interest. The difference results because of varying investment characteristics contained within the methodologies. If these investment characteristics do not parallel those of the equity interest under valuation, it may be necessary to modify the conclusion of value reached thereunder.

Most often, these modifications are reflected as discounts and/or premiums to the conclusions generated under various valuation methods. The investment characteristics most often addressed in this manner are related to control, or lack thereof, and those related to a lack of liquidity or marketability.

It is important to note that, by themselves, discounts and premiums do not exist. That is to say, these items are not traded on an open market, nor is there discernible direct evidence as to the proper level of discount or premium to use in any specific instance. In effect, "discounts and premiums" are the "fallout" of using "less-than-perfect" market data to measure value.[1]

Nevertheless, the common acceptance of these methodologies necessitates that the business valuator utilize discounts and premiums to modify the conclusions reached thereunder to accommodate the characteristics of the equity interest under valuation. There is often no greater dollar adjustment than that attributable to the business valuator's final determination of discounts and premiums.

As a simple example, a pre-discount value conclusion of $1,000,000 might be reduced by $350,000, should the business valuator select a total discount of 35%. Assuming the lower value is used as an indication of fair market value for estate tax purposes, the federal estate tax savings could be in excess of $175,000. Such significant numbers are not uncommon, thus facilitating an ever-growing attempt by the Internal Revenue Service, as well as various state inheritance tax authorities, to challenge the validity of the valuator's conclusions.

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[1] Michael Bolotsky p. xxi, foreword – Business Valuation Discounts and Premiums, Shannon Pratt, 2001.

Quantification & Application of Valuation Discounts

The primary IRS guidance is based on a foundation of language contained in Revenue Ruling 59-60, 1959-1 Cumulative Bulletin 237, which defines fair market value as:

> *The price at which the subject equity ownership interest would change hands between a willing buyer and a willing seller when the former is under no compulsion to buy and the latter is under no compulsion to sell and both parties having reasonable knowledge of relevant facts.*

Court decisions frequently state that, in addition to hypothetical buyers and sellers being *"willing,"* they must also be *"able"* to trade and be well informed about the property and the market for such property.

Revenue Ruling 59-60 sets forth the premise that valuation of closely held business interests is not an exact science and reasons that sound valuations result from:

- Consideration of all relevant facts
- Use of common sense
- Exercise of informed professional judgment
- Application of reasoned assessment

Other Discounts

Other gross value modifications beyond those considering control and marketability include:

- Market absorption and blockage discounts
- Key person/thin management discounts
- Investment company discount
- Information access and reliability discount
- Lack of diversification discount
- Non-homogenous assets discount
- Restrictive agreement discount
- Small company risk discount
- Specific company risk discount
- Built-in gains discount
- Liquidation costs discount

Quantification & Application of Valuation Discounts

It is important to note that valuation professionals often compensate for value detriment attributable to many of these items in the development of their discount/capitalization rates. As such, it is incumbent upon the business valuator to avoid a "double effect" of these characteristics in his or her valuation conclusion.

The key for successfully utilizing discounts and/or premiums is to truly understand the ownership characteristics and attributes of the subject equity interest and the third party supporting base data.

Discounts are not a matter of law but rather a matter of fact!

Quantification & Application of Valuation Discounts

Chapter II – *Fundamental Concepts of Discounts and Premiums*

- ***The fair market value of a business interest is determined by transactions between buyers and sellers.*** Ultimate estimation of fair market value under commonly accepted valuation approaches and methodologies requires the business valuator to identify and consider those ownership interest characteristics that are specific to the interest being valued. If the valuation approach, and the methodology utilized thereunder, produce an estimate of value that is based on an inherent ownership characteristic(s) not present in the attendant ownership interest, a valuator must consider the appropriate adjustments necessary to produce a credible estimate of value.
- ***Investors are risk averse.*** Ownership interest attributes that increase the risk of holding the investment will inherently depress the value of the ownership interest. Likewise, those specific characteristics that serve to diminish investment risk will increase that ownership interest's value.
- ***The propriety of any discount or premium is undeterminable until the base to which the adjustments are applied is clearly defined.*** Utilization of discounts and premiums cannot produce a correct result if applied to an inappropriate base estimate of value.
- ***No "prescribed" levels or ranges of discounts or premiums exist from which the valuator can ascertain the proper adjustments for a specific case.*** Moreover, the valuator cannot expect to use a common set of computations or formulas to determine the appropriate adjustments in jobs with differing facts and circumstances.
- ***Though not totally mutually exclusive concepts, the discount for a lack of ownership control (minority) and the discount for lack of marketability are generally held to be separate and distinct.*** While it is true that some crossover exists whereby a non-controlling interest is less marketable than a controlling interest by the nature of the non-control feature, sufficient third party information exists to support separation of the two. Otherwise, insurmountable difficulties arise in determining a proper level of combined discount.
- ***In those instances where the business valuator deems it appropriate to apply both a discount for lack of ownership control and a discount for the lack of marketability, the application of the discounts is multiplicative, not additive.*** The discount for lack of ownership control is generally applied first, principally due to the common understanding that both control and minority ownership interests may be subject to a discount for a lack of marketability. Moreover, the only empirical data for lack of marketability is available at the minority interest level, further supporting the concept of applying the minority discount first.
- ***Due to specific characteristics requiring the application of discounts for both lack of control and lack of marketability, minority ownership interests in privately held businesses are generally worth much less than their proportionate share of the overall business value.*** In other words, the sum of the parts may not add up to the whole.

Quantification & Application of Valuation Discounts

General Factors That Influence the Applicability and Size of a Discount or Premium

- Purpose of the valuation – divorce, estate, ESOP, etc.
- Attendant rights and characteristics of specific ownership interest being valued – ownership restrictions or put option
- Ownership structure of the entity being valued – voting vs. non-voting shares
- Quality of management team – thin management, strained family relationships
- Size of company – small "Mom and Pop" vs. large multifaceted business
- Size of block of stock being valued – swing vote consideration
- Propriety of management salaries, prerequisites, etc. – excess compensation and/or benefits out of the control of a minority shareholder
- Stock-related issues – dividend policy and history, stock redemption policies, restrictions on stock sales, right of first refusal, etc.
- Financial condition of the subject company and volatility of earnings – bank restrictions on dividends, etc.
- Federal and state regulatory restrictions – Treasury regulations regarding estates/gifts, Department of Labor regarding ESOPs
- State corporation statutes – New York/Illinois supermajority
- Market desirability – struggling vs. thriving industry
- Potential synergies, if any, with potential buyer(s)
- Investment time horizon

Levels of Value

The business valuation community generally assumes three basic levels of value:

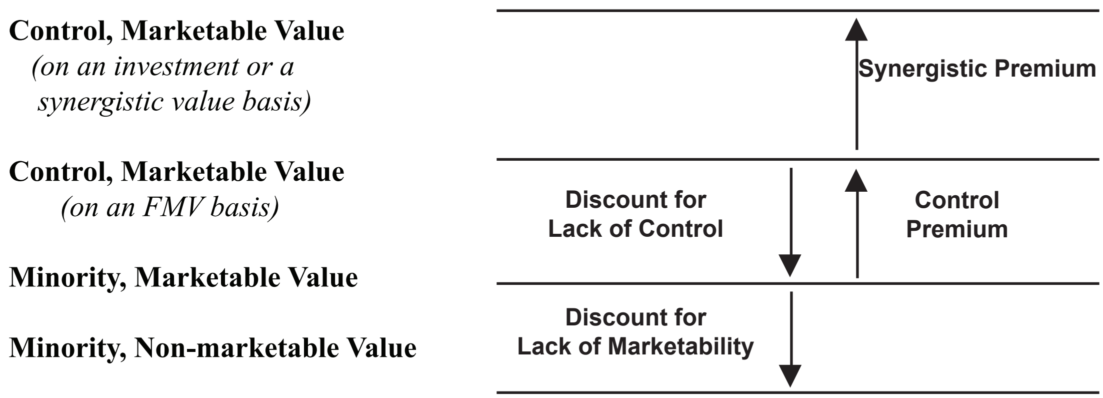
- Controlling marketable interest value
- Marketable minority interest value
- Non-marketable minority interest value

A fourth level of value is often noted:

- Synergistic value (assumes a different standard of value)

Quantification & Application of Valuation Discounts

The graphic below illustrates levels of value in terms of ownership characteristics.



Note the highest level of value is on an investment or synergistic value basis and not fair market value.

A controlling interest in a privately held business may also be subject to a discount for lack of marketability, but usually not at the same level as a minority or non-controlling interest.

However, Dr. Shannon Pratt has suggested that the levels of value chart be updated to account for the difference between the value of restricted stocks of public companies and private company stock. The chart on the following page was originally published in a BV Resources' editorial column by Dr. Pratt.

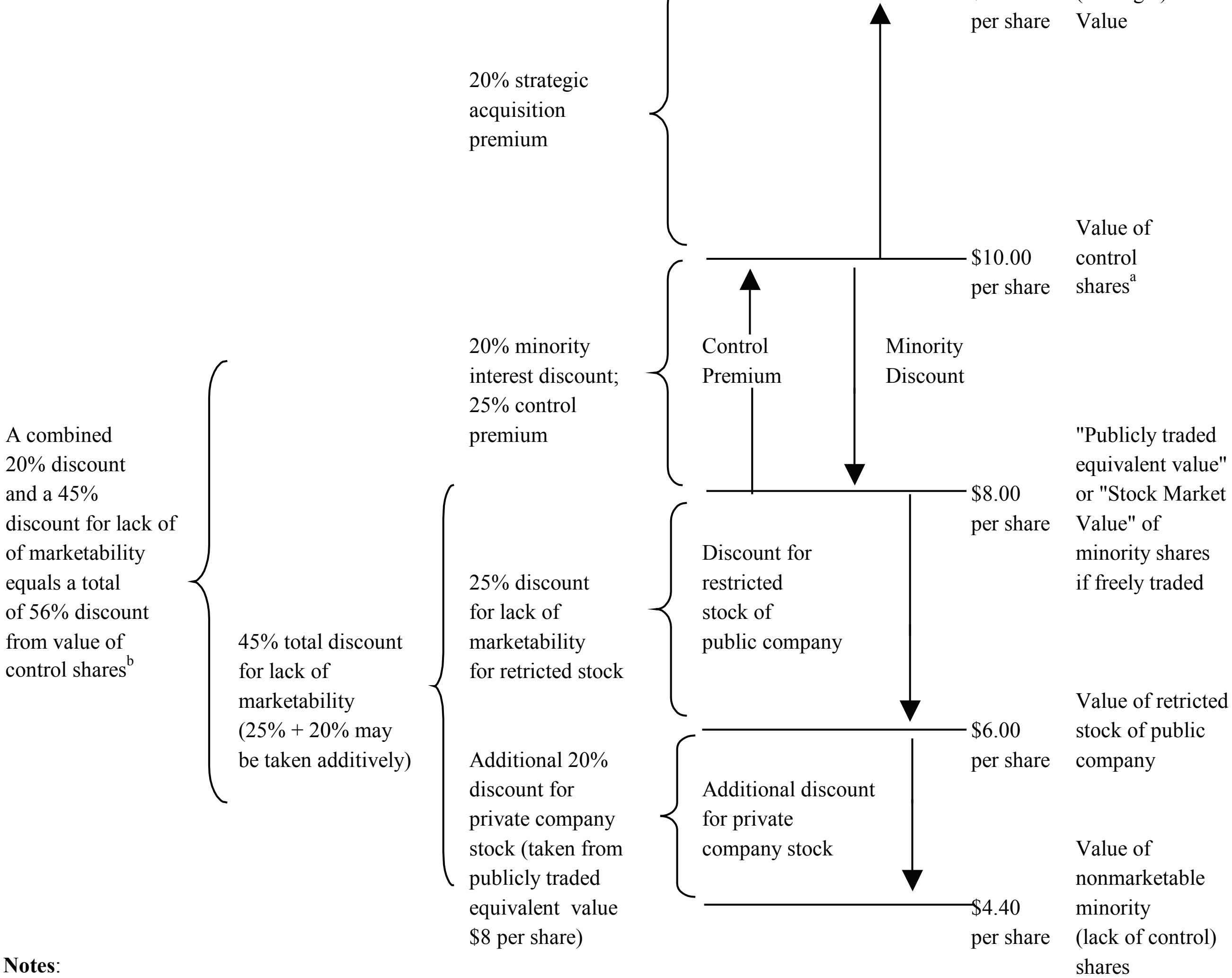
It is imperative to remember that the discounts applied in any situation are dependent on the specific attributes of the interest to be valued. Based on numerous court decisions, benchmarking is no longer an acceptable method of applying discounts! The methods of determining discounts are constantly evolving, and all methods are subject to intense scrutiny.

While there may be no right or wrong answer, it is necessary to substantiate any and all discounts applied. Therefore it is necessary for the valuation professional to:

- Understand and explain why any discount is applicable to a subject interest
- Understand the different methods for applying discounts
- Understand the underlying data of these methods and how they should be adjusted to reflect the specific attributes of a subject interest
- Determine the most appropriate methods
- Understand alternative methods or data, and why they were not used

Quantification & Application of Valuation Discounts

EXHIBIT I: "LEVEL OF VALUE" IN TERMS OF CHARACTERISTICS OF OWNERSHIP



Notes:

a Control shares in a privately held company may also be subject to some discount for lack of marketability, but ususally not nearly as much as minority shares.

b Minority and marketbility discounts normally are multiplicative rather than additive. That is, they are taken in sequence

$10.00	Control Value
-2.00	Less: Minority interest discount (.20 x $10.00)
$8.00	Marketable minority value
-3.60	Less: lack of Marketability discount (.45 x 8.00)
$4.40	Per-share value of non-marketable minority shares

Quantification & Application of Valuation Discounts

Calculation of Total Discount Applicable to a Subject Interest

The following example is provided to illustrate the multiplicative calculation of an overall discount applicable to a minority interest in a privately held business enterprise:

Gross value of entity	$ 1,000
X Subject percentage	10%
10% Interest (pre discounts)	$ 100
Less: Discount for lack of control (30%)	(30)
Minority, marketable value	70
Less: Discount for lack of marketability (20%)	(14)
Minority, non-marketable value	$ 56

Calculation of overall discount:	=	1 – [(1-.30) x (1-.20)]
	=	1 – [(.70) x (.80)]
	=	1 – .56
	=	.44
		Overall discount is 44%

Note that the total discount is 44%, not 50% (the sum of 30% discount for lack of control and 20% discount for lack of marketability.) It is an accepted practice to apply discounts sequentially.

Chapter III – *Control Premiums and Minority Discounts*

Of all the intrinsic characteristics related to an equity interest, arguably none may be more important than the element of control. Widely accepted theory within the business valuation community holds that an investment in a privately held company is worth the present value of all of the future benefits inuring to the holder of that equity interest. Clearly, then, if the equity holder has a control position, he or she can accelerate the receipt of those future benefits and via management and operational initiatives, take direct steps to enhance the future benefits – or at least the probability that they will be generated.

On the other hand, a minority or non-controlling position in a privately held company is generally held at the great risk of being subject to the judgment, ethics and management skills of the control shareholder(s). Depending on a number of items, the impairment of value can be significant in this circumstance.

It is not proper to use the term minority discount in all cases. A minority discount is a discount for lack of control applicable to a minority interest. A discount for lack of control is an amount or percentage deducted from the subject pro rata share value of 100% of an equity interest to compensate for the lack of any or all powers afforded a control position in the subject entity.

Control premiums and discounts for lack of control – sometimes referred to collectively as "control adjustments" – have enjoyed wide acceptance in the federal tax system. The estate and gift tax regulations on valuing publicly traded stock recognize a basic inequality between controlling and non-controlling interests, noting in Treasury regulation sections 20.2031-2(e) and 25.2512-2(e):

> *If the block of stock to be valued represents a controlling interest, either actual or effective, in a going business, the price at which other lots change hands may have little relation to its true value.*

Regulation sections 20.2031-2(f) and 25.2512-2(f) also list as a factor in valuing closely held stock "the degree of control of the business represented by the block of stock to be valued". This provision prompts swing vote consideration as well.

The primary IRS ruling on valuation of closely held shares, Revenue Ruling 59-60, clarifies which way this factor cuts. The ruling states:

> *Although it is true that a minority interest in an unlisted corporation's stock is more difficult to sell than a similar block of listed stock, it is equally true that control of a corporation, either actual or in effect, representing as it does an added element of value, may justify a higher value for a specific block of stock.*

Quantification & Application of Valuation Discounts

Court decisions and rulings employing minority discounts and control premiums have become the standard over the years, applying these principles not only to stocks, but other types of property as well. The application of these discounts is also broadly accepted by the business valuation community in "non-estate/gift tax" venues, such as family court and in buy/sell agreement applications.

Advantages of Maintaining a Control Position in a Privately Held Enterprise

- Setting company policy and influencing the operations of the business
- Appointing management and determining management compensation and benefits
- Power to acquire and dispose of business assets
- Power to select vendors and suppliers
- Facilitating business reorganizations
  - Business acquisitions and dispositions
  - Liquidation or recapitalization
  - Initial public offering
- Sell or acquire treasury shares
- Power to dictate dividend policy and payments
- Power to revise company organization documents
- Ability to establish or revise buy/sell documents
- Power to block any of the above

Consideration of Ownership Characteristics in Assessing Control

- Representation on the Board of Directors
  - Direct representation
  - Indirect via cumulative voting shares
- Contractual restrictions
  - Loan agreements with restrictive covenants
- Other agreements including organization documents
  - Shareholder agreements setting shareholder responsibilities (i.e. buy/sell agreements)

Quantification & Application of Valuation Discounts

- Employment agreements
- Voting Trusts

- Industry regulations
  - Limiting many advantages of control
- State corporate law and statutes
  - Simple majority vs. super majority
- Voting rights
  - Related to control – the greater the shareholder's control, the more significant the voting rights become in the valuator's determination of value
- Financial condition of business
  - Potentially severe control limitations can arise in a business suffering from financial difficulties
- Size of the block of stock being valued
  - Noted in Revenue Ruling 59-60 as relevant
- Concentration of Ownership
  - A 2% interest in conjunction with two 49% interests would invoke a lower minority discount than where the remaining 98% was held by 10 equal equity owners or a single shareholder.

Ownership Interests (Minority or Majority)

Usually Valued Using Generally Accepted Valuation Methods[2]

- ***Capitalized returns and discounted future returns*** – These methods usually provide freely tradable minority interest values primarily because the capitalization or discount rate is based on information about minority interests in public companies. This is true regardless of whether the build-up or CAPM method is used to determine the rate.[3] However, if the value is based on a forecast of future operations that reflects expected returns a new control owner will make, a discounted future returns method can be used to develop a control value.

[2] Jay E. Fishman, Shannon P. Pratt, J. Clifford Griffith & D. Keith Wilson, Guide to Business Valuations, 12th ed. (Fort Worth, Texas: Practitioners Publishing Company, 2002)

[3] Most practitioners hold that the control/non-control aspects of a valuation conclusion under these methods are based on whether or not the benefit stream has been adjusted for control prerequisites.

Quantification & Application of Valuation Discounts

- ***Methods based on comparative company data*** – These methods usually provide freely-tradable minority interest values if the numerator of the value multiple represents the share price of a comparative public company and the denominator (measure of the comparative company's operating results or financial position) has not been adjusted for excess compensation or similar items. However, the minority value so indicated may be converted to a control value by using an appropriate control premium. In contrast, these methods may provide control values if the numerator represents a comparative company's total price based on a purchase/sale transaction and the denominator has been adjusted for excess compensation or similar items.
- ***Underlying assets methods*** – These methods are more suited to valuing controlling interests. Generally, these methods should be used to value minority interests only if those interests can cause the company to sell its assets or if it is the type of company whose stock should normally be valued primarily on an asset basis.
- ***Excess earnings method*** – This method usually results in a controlling interest value.
- ***Multiple of discretionary earnings method*** – This method usually results in a controlling interest value, based on purchase/sale transactions.

Methodologies for Valuing Minority Interests

- ***Horizontal*** – computed by comparison with other minority interest transactions
- ***Top Down*** – control value less applicable discounts
- ***Bottom Up*** – start with minority value and add premiums for control interest valuations

Most practitioners prefer horizontal and/or top down; however, all approaches are viable.

Range of Control/Minority Positions in a Privately Held Enterprise

CONTROL

100% Equity Ownership Position

Control Interest with Liquidating Control

51% Operating Control

Two equity holders, each with 50% interest

Minority with largest block of equity interest

Minority with "swing vote" attributes

Minority with "cumulative voting" rights

Pure minority interest – no control features

MINORITY

Quantification & Application of Valuation Discounts

Sources of Empirical Data on Control/Minority Interests

- *Mergerstat® Review* – published annually by FactSet Mergerstat, LLC (formerly Applied Financial Information LP and Houlihan, Lokey, Howard & Zukin). The 2011 edition marks the 31st publication anniversary.
  - Extensive analysis of tender offers and completed transactions by industry
  - Published yearly with historical data included
  - Premium paid over market is based on seller's closing market price five business days prior to initial announcement of the sale. Negative premiums are excluded.
  - May understate the control premiums and implied minority interest discounts because the stock of the target's acquisition may begin to rise more than five days prior to the public announcement
  - Industry-wide mean average for 2010: 51.5%
  - Industry-wide median average for 2010: 34.6%
  - Implied minority discount: 1 – [1/(1+Median premium paid)]

- *Houlihan, Lokey, Howard and Zukin, Inc. (HLHZ) Control Premium Study*
  - Issued quarterly
  - Data from 1986
  - Study was undertaken to:
    - Quantify the difference, if any, in the premiums paid by synergistic buyers and those paid by other types of buyers
    - Understand composition of transactions, by type of buyer, in Control Premium Study
  - The study determined that synergistic buyers generally pay similar or lower premiums than non-synergistic and other types of buyers
  - Those performing the study stated that they found no evidence that an appraiser needs to adjust the beta to result in a non-synergistic control premium
  - Attempts to select a price that is unaffected by pre-announcement speculation about the proposed transaction

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- *Coolidge Study* – found in, "Fixing Value of Minority Interest in a Business: Actual Sales Suggest Discounts as High as 70 Percent," Estate Planning, Spring 1975, pp. 138-140.
  - Bank officer from Chicago analyzed 49 sales in two studies and calculated the discount from book value that was required to sell minority interests of closely-held companies
  - Book value used as an estimate of fair market value of the subject closely-held companies
  - Analyzed sales of minority interests between 1961 and 1983
  - Range of discounts: 20 to 78%
  - Mean average discounts: 36%
- *SEC Studies* – found in, "The Effects of Dual-Class Recapitalizations on the Wealth of Shareholders," Office of the Chief Economist –SEC, June 1987, pp. 1-34.
  - Studies compared the prices of two identical classes of publicly traded common securities in the same company except one had voting privileges and the other did not.
  - Mean average discounts: 5 to 8%
  - For small minority interests, the value of voting rights is limited because of their inability to influence the prerogatives of control
- *Quantification of Control Premiums and Minority Interest Discounts* – Primary base observations are extrapolated from the sale of controlling interests in freely traded public companies. Numerous sales of this type occur annually with most transaction prices including a premium over the market price at which the stock previously traded.
  - The "premiums" associated with these controlling interest purchases are compiled and published by several services – the most notable is Mergerstat® Review

Calculating the Premium

The most common practice is to observe the premiums in the public securities markets. The primary source of base information market evidence is Mergerstat® Review. As described in the publication, the Mergerstat® database, published by FactSet Mergerstat, LLC.,

> *...tracks 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. When a transaction involves less than 100% of an entity, the percentage bought is stated after the seller's name. When REM accompanies this percentage, the buyer already owns a portion of the selling entity and this transaction will lead to 100% ownership. Data is collected for publicly traded, privately owned and foreign companies.*

Quantification & Application of Valuation Discounts

The primary issue encompassed in utilizing the Mergerstat® data is the composition of the premium and the lack of clarity in the conclusions. The data is generally developed by Mergerstat® by comparing prices at which publicly traded companies are acquired with pre-acquisition announcement prices of the same stock.

The Mergerstat® Review notes that the calculations are based on the seller's closing market price five business days before the initial announcement. An example of the basis for the Mergerstat® Review calculations is as follows:

WIDGET COMPANY COMPUTATION OF CONTROL PREMIUM

Date	*Price per Share*	*Days before Transaction*
Day 1 – Mon.	$21.50	6
Day 2 – Tues.	$21.25	5
Day 3 – Wed.	$23.25	4
Day 4 – Thurs.	$23.75	3
Day 5 – Fri.	$24.00	2
Day 9 – Tues.	$28.00	Date of Announcement

Observed Premium (28.00 – 21.25)/21.25=31.8%
– Announcement to fifth prior day –

A historical analysis of the control premiums and corresponding minority discounts calculated in this study follow.

Year of Buyout	*Number of Transactions*	*Average Premium Paid over Market (%)*	*Median Premium Paid over Market (%)*	*Implied Minority Interest Discount (%)*
2000	574	49.2	41.1	29.1
2001	439	57.2	40.5	28.8
2002	326	59.7	34.4	25.6
2003	371	62.3	31.6	24.0
2004	322	30.7	23.4	19.0
2005	392	34.5	24.1	19.4
2006	454	31.5	23.1	18.8
2007	491	31.5	24.7	19.8
2008	294	56.5	36.5	26.7
2009	239	58.7	39.8	28.5
2010	348	51.5	34.6	25.7

Source: Mergerstat® Review 2011 (Santa Monica: FactSet Mergerstat, LLC)

Quantification & Application of Valuation Discounts

Observations and Issues

Upon analysis of the Mergerstat® Review data, it can be observed:

- The annual median control premium observations conducted over this historical period range from 23.1% to 41.1%
- Mean ranges from 30.7% to 62.3%
- The dispersion of the premiums is broad with 93 of 348 transactions in 2010 having a premium under 20% to 36 of the base transactions having a premium over 100%

However, several issues must be addressed in regard to the data:

- Negative premiums are excluded from the median and mean calculations, thereby inflating the control premium data.
- Data for the computations is extrapolated from the reported financial information and not the adjusted financial information both parties might consider.
- The observation methodology does not provide for quantification of buyer differences – specific transactions result from specific buyers with alternating motives. As such, transactions with synergistic buyers are interspersed with transactions with financial buyers.

The conclusion that the business valuator must draw from the above noted issues is that utilization of the scheduled Mergerstat® Review median and/or mean premiums for control without adjustment are likely overstating control premiums in many valuation engagements.

Conversely, as many valuation professionals develop the implied minority ownership interest discount from the observed premiums, these discounts are often overstated, underestimating the value of minority ownership interests.

Computation of Implied Minority Discount from Mergerstat® Review Data

Formula:

$x = 1 - [1/(1 + y)]$

x = implied minority discount   y = median premium paid

Application (from Mergerstat® Review 2011):

$x = 1 - [1/(1 + .346)]$ $x = 1 - (1/1.346)$ $\mathbf{x = 1 - .7429}$ $\mathbf{x = .2571}$

Quantification & Application of Valuation Discounts

The Mergerstat®/Shannon Pratt's Control Premium Study (BV Resources: Mergerstat FAQs, http://www.bvmarketdata.com) is a web-based tool that aids business valuators in quantifying minority discounts and control premiums rather than relying on benchmarking, which the courts have determined is unreliable. The data is gathered from SEC/Government/Regulatory Filings and public announcements for merger and acquisition transactions. The transactions are only included when a public company is being acquired. Each deal contains detailed information (55 data fields) on the control premium, and implied minority discount, paid for a controlling interest in a public company.

The application of quantifying a lack of control discount using Mergerstat®/Shannon Pratt's Control Premium Study has yet to succeed or fail the scrutiny of the court system. The database is searchable by any of the following variables: SIC code, industry, financial performance ratios, keyword from a business description, a range of control premiums, financial data, and sales details, and has 12-plus years of data (1998-present).

Because Mergerstat® contains 8,000+ total transactions, when it is used, the data generated must be carefully considered and reviewed to ensure relevance to the interest under valuation.

Quantification & Application of Valuation Discounts

Chapter IV – *IRS Position on Family Attribution*

For years, the Internal Revenue Service has tried to eliminate minority interest discounts for transfers of stock in family-owned corporations. Without judicial intervention, such discounts would now be completely disallowed. Despite the directive from the courts to allow discounts in such cases, until 1993 the IRS attempted to disallow them. Revenue Ruling 93-12 provided a clear picture of the applicability of minority discounts and the IRS acquiescence on this issue. However, the benefits garnered under the ruling were soon pared back with the use by the IRS of "swing vote" considerations. The use of swing vote value as described in TAM 9436005, is but one of the ways the IRS attempts to reduce or eliminate the amount of minority interest discounts being applied.

Given the current IRS position, especially after ***Estate of Richard R. Simplot v. Commissioner,*** 112 T.C. No. 13 (March 22, 1999), No. 00-70013 (9th Cir. May 14, 2001), swing vote attributes must be taken into account when valuing minority stock interests. Therefore, it is important to understand how the IRS defines a swing vote attribute. It is also important to understand that swing vote potential <u>is not</u> tantamount to control. Thus, in many cases, the discount between a control and minority value would be reduced by the swing vote potential, but it would not be eliminated!

<u>Family Attribution Issues – History</u>

A long-time nemesis of estate planners and business valuation professionals assessing the proper level of discounts for lack of control was the Internal Revenue Service's application of family attribution principles to valuation. In short, this position disallowed discounts for lack of control when control was available through the combined holdings of the equity holder's family.

The leading court decision in this area is ***Estate of Bright v. United States,*** 658 F.2nd 999 (5th Cir. 1981). In this case the decedent, Mary Bright, owned, as community property along with her husband under Texas law, 55% of the outstanding stock of two different corporations. Unrelated third parties, including one individual who owned 30%, held the other 45% of each company. The decedent's will left her interest in the stocks to a trust for the benefit of her children, with her widower as trustee.

Quantification & Application of Valuation Discounts

As summarized by the court in ***Estate of Bright***, the IRS arguments were its then-typical line of attack on the attribution question. According to the government, the key facts were:

> *The fact that Mr. and Mrs. Bright were husband and wife and held their stock during her lifetime as a control block of 55%; the fact that Mr. Bright held the estate's 27½% block in his individual capacity, thus continuing the control block after death; and...that Mr. Bright, as executor or trustee would not be willing to sell the estate's 27½% block as a minority interest, but would be willing to sell it only as a part of the block of 55% including his individually owned stock so a substantial control premium could be realized.*

Thus, because the undivided interests were likely to be managed in unison, and since they would most likely be sold together, if at all, the IRS sought to treat the decedent's interest and her husband's interest as parts of a unified controlling interest.

But the Court found all of these facts irrelevant, since, based on its reading of the best view among prior precedents, family attribution for purposes of determining control was impermissible. In an important passage, the Court declared that the "willing seller" in the classic definition of fair market value "is not the estate itself, but is a hypothetical seller." It elaborated as follows:

> *It is clear that the "willing seller" cannot be identified with Mrs. Bright, and therefore, there can be no family attribution with respect to those related to Mrs. Bright. Similarly...the "willing seller" cannot be identified with Mr. Bright as executor or trustee of the testamentary trust...It would be strange indeed if the estate tax value of a block of stock would vary depending upon the legatee to whom it was devised...We hold that family attribution cannot be applied to lump the estate's stock to that of any related party, but rather that the stock is deemed to be held by a hypothetical willing seller who is related to no one.*

Thus, the Court upheld a hefty discount that included, among other factors, the lack of control inherent in the decedent's shares. Finally the Court acknowledged the most pertinent implication of the fair market value standard is that the identity of the buyer and seller are irrelevant. ***Estate of Bright***, which followed an earlier line of cases that held against attribution, has itself been followed in numerous subsequent decisions.

In Revenue Ruling 81-253, 1981-2 CB 187, 188, the IRS concluded that no minority interest discount is allowed with respect to transfers of shares of stock between family members, if based upon a composite of the family members' interest at the time of the transfer, control of the corporation (either majority voting control or de facto control through family relationships) if the corporation exists in the family unit.

The IRS noted that it would continue to litigate the matter in spite of the ***Estate of Bright*** decision. **Revenue Ruling 81-253 was revoked in 1993.**

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IRS Surrender – Revenue Ruling 93-12

Rev. Rul. 93-12 concluded that for estate and gift tax valuation purposes, the Service will follow case law in not assuming all voting power held by family members may be aggregated for purposes of determining whether the shares should be valued as part of a controlling interest. Consequently, a minority discount will not be disallowed solely because a transferred interest, when aggregated with the interests held by family members would be part of a controlling interest.

Rev. Rul. 93-12 does have some limitations, as follows:

- Rev. Rul. 93-12 did not state that a minority interest discount would be allowed, just that it would not be disallowed solely because of family control
- Applies only for estate and gift tax purposes
- Application to income tax problems (i.e. IRC §83, noncash compensation) is not assured
- Applies only to corporate stock
- Does not expressly address ownership interests in other types of business entities

Planning Under Rev. Rul 93-12

Rev. Rul. 93-12 highlighted differences in the Federal estate and gift taxes: under certain circumstances, property (including closely held stock) is valued differently (and more favorably) for gift tax purposes than for estate tax purposes.

In Letter Rul. (TAM) 9449001, the IRS recognized the different focus on each tax, stating that, unlike the estate tax, which is imposed on the aggregation of all the decedent's assets, the gift tax is imposed on the value of the property passing from the donor to each donee. The value of the property passing from the donor to the donee is the basis for measuring the tax. Therefore, the total of the assets passing via a gift would not total the value of all assets in the estate.

Rev. Rul. 93-12 presents a tremendous opportunity for owners of family held businesses to reduce future estate tax obligations by giving minority interests of Company stock to children or other relatives at discounted values. The main effect is that the minority holder gets the discounted stock earlier, thus deferring the appreciation of the stock until it is ultimately disposed of or gifted.

The ultimate result is that the value of the interests transferred in life is less than the value of the same interest transferred at death. The conclusion to be drawn is that greater wealth can be transferred through lifetime gifts than

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through bequests. This is now tempered with the "family business exclusion" provided under Code section 2057 in which an exclusion amount is allowed for a qualified family business where the value of the business interests exceeds 50% of the adjusted gross estate.

Swing Vote Premium Cuts Rev. Rul. 93-12 Benefits

The IRS has positioned itself to regain some of the ground relinquished in Rev. Rul. 93-12. In letter rulings TAM 9436005 and TAM 9449001, the IRS attempted to reposition itself and reduce future transfer tax saving opportunities.

The swing vote premium is based on the Regs. Sec. 25.2512-1(b) willing buyer-seller standard. In ***Estate of Bright***, the IRS was unsuccessful in its attempt to impose a control premium on the decedent's undivided one-half interest in a 55% block of stock held as community property.

In ***Estate of Winkler v. Commissioner,*** TCM 1989-232, the Tax Court recognized that the decedent's minority block had special characteristics that enhanced its value. The 10% block of voting stock held by an unrelated party (the other two shareholders held 40% and 50%, respectively) "could indeed become critical". The court increased the value of the stock by 10%. The conclusion to be drawn – the greater dispersion, the smaller the swing vote effect.

More recently issued TAM 9436005 advanced questions raised by Rev. Rul. 93-12. In this TAM, the IRS stated that certain 30% blocks of gifted stock carried a "swing vote" opportunity that required a valuation premium. This swing vote premium reflected the fact that each donee had the ability to combine with any other donee to exert control. TAM 9449001 addressed the issue of making simultaneous gifts to 11 family members. The IRS again stated that it would value each gift separately.

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Chapter V – *Lack of Marketability (or Liquidity) Discount*

Protection from many risks attendant to holding a minority interest in a business can be controlled in the public stock market by selling the equity holdings, should the holder decide that management actions are elevating his or her risk beyond an acceptable level. This same ability to liquidate (convert into cash) an interest in a privately held company rarely exists. Moreover, due to size and other specific company nuances, as well as a lack of a perfect market mechanism for disposition, risk attendant to a lack of liquidity or of marketability can often be an issue for even a control interest in a privately held enterprise.

The ability to convert an investment from an illiquid asset to cash is an ownership characteristic of considerable value. Often, when this trait is missing, an investor is subject to substantially higher risk, and valuation of the attendant equity interest must be adjusted accordingly.

Marketability, as a business valuation concept, has been defined a number of ways in business valuation treaties. Dr. Shannon Pratt defines marketability as:

> *The ability to convert the business ownership interest (at whatever ownership level) to cash quickly, with minimum transaction and administrative costs in so doing and with a high degree of certainty of realizing the expected amount of net proceeds*[4]

Another definition can be found in the Encyclopedia of Banking and Finance[5] where marketability is found to connote the existence of a buying interest and a selling interest and is indicated by the average daily volume of current transactions and the size of the bid-ask spread. The smaller the size of the spread, i.e., the smaller the mark-up demanded by the market maker, the more active is the market for the underlying security. Alternatively, the more infrequent an equity interest is traded, the larger the bid-ask spread.

While privately held business interests never have a "market maker," except, perhaps, the ultimate business broker, the general concept accorded the bid-ask theory is equally applicable to these interests. Investors are risk averse and will prefer investment holdings that can easily be converted into cash. Investment holdings lacking this attribute will almost always trade for less. The difference in trading value is that specific equity interest's discount for lack of marketability.

Quantification of the discount for lack of marketability is an ardent task, even for the most seasoned of valuation professionals. A great amount of research has been developed over the last four decades in an attempt to quantify

[4] Valuing a Business, Fourth Edition, Shannon P. Pratt, Robert F. Reilly and Robert P. Schweihs, p. 393

[5] Encyclopedia of Banking & Finance, Tenth Edition, Charles J. Woelfel, p. 729

the phenomenon of illiquidity as it applies to a specific investment. However, valuators continue to struggle with the reconciliation of the available research to the attendant equity interest under valuation. A logical path from the research to the ultimate discount selected is imperative to attain the proper conclusion of value.

Internal Revenue Service Position

The Service addressed the issue of discounts for lack of marketability in Rev. Rul 77-287:

Securities traded on a public market generally are worth more to investors than those that are not traded on a public market.

The Internal Revenue Service Valuation Training for Appeals Officers, 1997 exhibit 9-4, lists two primary court cases as the basis for discounts for lack of marketability:

- In ***Central Trust Co. v. United States,*** 305 F 2d 292 (Ct. Cl., 1962) Court of Claims stated:

  It seems clear, however, that an unlisted closely held stock of a corporation, in which trading is infrequent and which therefore lacks marketability, is less attractive than a similar stock which is listed on an exchange and has ready access to the investing public.

  The courts have followed this principle. This discount is meant to act as a means of equalizing an investment in closely held stock with an investment in publicly traded stock. All other attributes being similar, the only resulting issue from not being traded on a public market is marketability or liquidity.

- In ***Estate of Andrews,*** 79 T.C. 938, page 953, the Court stated:

  Even controlling shares in a nonpublic corporation suffer from lack of marketability because of the absence of a ready private placement market and the fact that flotation costs would have to be incurred if the corporation were to publicly offer its stock.

Control vs. Minority Interest

One of the more controversial issues in the area of discounts for lack of marketability is whether any discount is applied to a control interest in a business enterprise. The issue has frequently been addressed by the United States Tax Court, which affirms the use of such discounts when valuing controlling interests, as referenced in ***Andrews*** above.

Theoretical support for the use of a discount for lack of marketability in valuing controlling interests arise from the risks associated with a potential sale of the interest. Dr. Pratt categorizes these risks into five categories. [6]

[6] Valuing a Business, Fourth Edition, Shannon P. Pratt, Robert F. Reilly and Robert P. Schweihs, p. 413

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1. Uncertain time horizon to complete the offering or sale
2. Cost to prepare for and execute the offering or sale
3. Risk as to eventual sale price
4. Non-cash and deferred transaction proceeds
5. Inability to hypothecate (or inability to borrow against the estimated value of stock)

The key element to keep in mind is that very diverse considerations go into the determination of a discount for lack of marketability related to a minority interest versus one related to a controlling interest. While many considerations may overlap, rarely will the discount for a controlling interest be as high as one for a minority interest.

Discount for Lack of Marketability Checklist

Factors That May Increase the Discount:

- Restrictions on transfers
- Little or no dividends or partnership payout
- Little or no prospect of either public offering or sale of company – especially if so stated in corporate minutes or other documentation
- Limited access to financial information

Factors That May Decrease the Discount:

- "Put" option
- Limited market available that may be interested in purchasing shares (i.e. ESOP)
- Imminent public offering or sale of company
- High dividend or partnership payouts

Factors That May Increase or Decrease the Discount:

- Size of block – depending on size and circumstances
- Buy/sell agreement – depending on provisions

Quantification & Application of Valuation Discounts

Common Research Sources

A significant number of studies have been undertaken in an attempt to understand the impact of marketability as a characteristic of equity ownership. The studies are discussed further in Chapter VI. However, they can be (and are) generally classified into four categories:

- ***Restricted Stock Studies*** – Comparison of private placements of restricted shares of public company stocks with publicly traded unrestricted shares (restrictions imposed by SEC)
- ***IPO Studies*** – Comparisons of pre-initial public offering stock transaction values with post-initial public offering transactions and stock value of the same company
- Comparisons of public companies price/earnings ratios with price earnings multiples on acquisitions of privately held companies
- Measurement of flotation costs as a means of measuring effects of marketability on control interest value (not commonly used due to numerous practical limitations)

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Chapter VI – *Empirical Studies*

Lack of marketability is defined as the absence of a ready or existing market for the sale or purchase of the securities being valued. Tax cases are not determinative of discounts in non-tax related valuations, but the valuator must be aware of these cases when performing a valuation for a tax-related purpose. The courts have repeatedly indicated that prior decisions are an important element for the valuator to consider when determining the level of discount and the method of determining those discounts. The courts have been stingy in the level of lack of marketability discounts they have allowed.

The studies discussed in this chapter give some support to the level of discount to apply in lack of marketability situations. The key to the successful application of discounts in a valuation situation (whether tax related or not) is to properly support and explain the basis for the discount. Traditionally, this is an area where valuators fail the most.

It is not uncommon for business valuators to devote 30 to 50 pages of text determining a pre-discounted value of a privately held business. It is also not uncommon for a valuator to devote a few paragraphs discussing pre-IPO studies and restricted stock studies and reducing an entity's value by 25-40% with little explanation or support. The courts are slowly becoming more sophisticated and are less likely to blindly accept such a discount without proper explanation or support.

The studies noted throughout the remainder of this chapter are the better-known studies that are being utilized by valuation professionals. Each restricted stock or pre-IPO study examines transactions in the shares of public and private companies to gauge the impact of the absence of marketability on shares of closely held businesses. A summary of the studies is included at the end of each section.

Restricted Stock Studies

- ***SEC Institutional Investor Study (1971)***
  - Overall mean discount was 25.8% – the average discounts rose over the period January 1, 1966 through June 30, 1969; and the average discounts were 27.9% in the first half of 1969
  - For non-reporting OTC companies, that are more likely to resemble most closely held companies, the average discount was 32.6%

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- ***Gelman Study (1972)***
  - Both the average and median discounts were 33%
  - Almost 60% of the purchases were at discounts of 30% or higher
- ***Moroney Study (1973)***
  - Found that courts allowed discounts for lack of marketability ranging between 10% to 30%
  - Average discount was 35.6%; median discount was 33%
  - Concluded that the courts were overvaluing interests in closely held companies
- ***Maher Study (1976)***
  - Mean discount of all transactions amounted to 35.43%
  - Maher then eliminated the top 10% and bottom 10% to remove especially high risk or low risk purchases; the result was remarkably similar, yielding a mean discount of 34.73%
  - Concluded that most appraisers underestimate discounts for lack of marketability
- ***Trout Study (1977)***
  - Trout applied multiple regression analysis to data and determined a discount of 33.5%
  - However, Trout states that the statistical correlations indicate "a moderate ability of this model to account for variations in the observed discounts"
  - Trout concludes that this is not surprising, given the unique characteristics of various letter stock transactions and the lack of an auction market for restricted securities
- ***Willamette Management Assoc. Study (1981-1984)***
  - Analyzed 33 restricted stock transactions between January 1981 and May 1984
  - Median discount was 31.2%
- ***Stryker/Pittock Study (1983)– Std. Research Consultants***
  - Analyzed private placements of common stock to test current applicability of the SEC study
  - Discounts ranged from 7% to 91% with a median of 45%

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- ***Silber Study (1991)***
  - By applying least-squares estimation to the data, the study found characteristics of companies (34) with discounts greater than 35% and characteristics of companies (35) with discounts less than 35%
  - Median discount was 35%
  - Found that firms with higher revenues, earnings and market capitalizations were associated with lower discounts; the reverse is also true
  - Also, discounts are larger when a block of restricted stock is large relative to total shares outstanding
  - Likewise, volume (in dollars) is inversely related to size of discount

- ***Hall & Polacek Study (1994)***
  - Corroborated the conclusions of the SEC Study – the size of the discount is often a function of the size of the subject company's revenues, earnings, and the exchange on which the restricted stock was traded
  - Mean discount of 23% was similar to overall mean discounts of 25.8% from SEC Study
  - Highlighted three additional variables influencing the size of discount for lack of marketability:
    - Dollar value of the block of stock
    - Percentage size of the block of stock being sold
    - Market value or capitalization of the issuing company

- ***Johnson Study (1999)***
  - Average discount for lack of marketability was 20%
  - Discount for lack of marketability less than earlier studies, primarily due to increase in the number of investors who entered the market for restricted stocks in the previous five years

- ***Columbia Financial Advisors, Inc. Studies (2000)***
  - Encompassed the period of January 1, 1996 through April 30, 1997
  - Addressed change in restricted stock discounts resulting from two key events that increased the liquidity of these securities over time:
    - In 1990, the SEC adopted Rule 144A, which relaxed SEC filing restrictions on private transactions
    - Then in 1997, the holding period requirements under Rule 144 were amended to permit the resale of

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limited amounts of restricted stock after one year; additionally, the amendment permitted unlimited re-sales of restricted stock held by non-affiliates of the issuer after a holding period of two years, rather than three years

- ***Management Planning Study (2000)***
  - Observations regarding the 53 transactions in stocks without registration rights:
    - The average discount was approximately 27%
    - The median discount was approximately 25%
    - Only one of the transactions occurred at a price equal to the market price; the remaining transactions reflected discounts ranging from 3% to 58%
  - Observations regarding the 27 transactions in stocks with registration rights:
    - The average discount was 12.8%
    - The median discount was 9.1%

- ***FMV Opinions (2001)***
  - Provides a method for determining the appropriate discount for restricted liquid securities and a method for distinguishing among the discounts appropriate for privately held companies as opposed to restricted stock of public entities
  - Overall average discount is 22.1%
  - Median discount is 20.1%
  - Median discount for securities traded on an exchange is 15.3%, while the median discount for over-the-counter securities is 22.4%
  - Concluded that since privately held companies have less of a market for their stock, and many smaller, less attractive public companies have little prospect of establishing a market for their stock, discounts for restricted stock with longer-than-average holding periods are particularly applicable to privately held stock

- ***The Hertzel/Smith Study (1993)***
  - Mean and median discounts of 20.14% and 13.25%, respectively
  - Additional discount of 13.5% on placement of restricted shares (18 of 106 announcements)
  - Suggests lower discounts for companies with larger market values and vice versa

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- ***FMV Opinions Restricted Stock Study***
  - The Study contains information on 430 transactions with 55 data fields
  - Median discount of 20% and mean of 22%

Summary Results of Restricted Stock Studies

Study	Transactions Observed	Median	Mean	Std. Dev.	Range Low	Range High
SEC Inst. Investors	398	24%	26%	N/A	(15%)	80%
Gelman	89	33%	33%	N/A	<15%	>40%
Moroney	146	34%	35%	18%	(30%)	90%
Maher	34	33%	35%	18%	3%	76%
Trout	60	N/A	34%	N/A	N/A	N/A
Williamette Mgt.	33	31%	N/A	N/A	N/A	N/A
Stryker/Pittock	28	45%	N/A	N/A	7%	91%
Silber	69	N/A	34%	24%	(13%)	84%
Hall & Polacek	100+	N/A	23%	N/A	N/A	N/A
Johnson	72	N/A	20%	15%	(10%)	60%
CFIA (1)	23	14%	21%	N/A	0.8%	68%
CFIA (2)	15	9%	13%	N/A	0%	30%
Mgt. Planning (1)	53	25%	27%	N/A	3%	58%
Mgt. Planning (2)	27	9%	12%	N/A	N/A	N/A
FMV Opinions	243	20%	22%	16%	N/A	N/A
Averages		25%	26%			

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IPO Studies

- ***Robert W. Baird & Co. Studies (The Emory Studies)***
  - Conducted eight pre-IPO studies covering various time periods from 1980 through 1997 (results below)
  - Mean discount was 44%; median was 43%

Time Period	No. of IPOs	Discount to IPO Mean	Discount to IPO Median	Observations High	Observations Low	Observations StdDev
1980-1981	13	60%	66%	N/A	N/A	N/A
1985-1986	21	43%	43%	83%	3%	21%
1987-1989	27	45%	45%	82%	4%	21%
1989-1990	23	45%	40%	94%	6%	22%
1990-1992	35	42%	40%	94%	(6%)	22%
1992-1993	54	45%	44%	90%	(4%)	21%
1994-1995	46	45%	45%	76%	6%	18%
1995-1997	91	43%	42%	N/A	N/A	N/A
All Years	**310**	**44%**	**43%**			

- ***Willamette Management Associates Studies***
  - Conducted 12 pre-IPO studies (1975 to 1993) examining prices of private stock transactions relative to those of subsequent price offerings of stock of same companies
  - Average discounts varied, but in all cases, were higher than average discounts shown in the studies for restricted stocks of companies that already had established public trading market
  - Discounts for the last year (2000) were:
    - Standard mean: 18.0%; Trimmed mean: 22.9%; Median: 31.9%
  - Overall averages for all years were:
    - Standard mean: 37.3%; trimmed mean: 42.2%; Median: 48.4%
  - The 1999 and 2000 WMA pre-IPO studies resulted in lower median discounts than the historical average of the study, which is believed to be the result of the following:
    - Few IPO companies and private sale transactions qualified for inclusion
    - The height of the dot.com "bubble" occurred during this two-year period
    - The average first-day returns for pre-IPO stocks were extraordinarily high

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- ***Emory (Dot-Com) Studies***
  - Outgrowth of the eight pre-IPO discount studies covering the time period 1980 through 1987 published by John D. Emory Sr.
  - Analyzed discounts arising from sale transactions in 92 IPOs of companies with ".com" in their names
  - Mean discount prior to IPO was 54%; median discount also 54%
    - 42 convertible preferred stock transactions: mean = 54% median = 59%
    - 11 common stock transactions: mean = 54% median = 53%

- ***Emory Business Valuation, LLC***
  - Resulted in a mean discount of 48% and a median discount of 44%

- ***Hitchner Studies No. 1 and No. 2***
  - James R. Hitchner's studies took the Emory study data a step further
  - Hitchner's first study analyzes the discounts at which stock and options traded by months remaining to the date of the IPO
  - In Hitchner's second study, the breakdown of information is the same as the first study, but, the subject of the analysis changed
    - This study was based on 23 transactions of 14 consulting industry companies that filed prospectuses between February 1995 and June 1996 and became public companies
  - The results of the analyses suggest that the longer the period until a company's IPO, the greater the discount applicable to its stock price
  - The theory behind the higher discount is, that the longer period remaining until the company's IPO creates more uncertainty that the IPO will actually occur; thus, the stock and/or options trade at a larger discount
  - The discount is related to the expectation of liquidity of the investment
  - In the application of discounts for small closely-held businesses, the argument is made that since there is little or no chance that the company will ever go public, the discounts are at least as high as those calculated in some of these studies

Quantification & Application of Valuation Discounts

- ***Valuation Advisors' Lack of Marketability Discount Study***
  - Pre-IPO database with over 2,400 transactions
  - The chart below illustrates median discounts by IPO year

Valuation Advisors' Lack of Marketability Discount Study

Median Marketability Discounts by IPO Year

IPO Year	0-3 Months	4-6 Months	7-9 Months	10-12 Months	1-2 Years	Count
1999	30.9%	54.2%	75.0%	76.9%	82.2%	695
2000	28.7%	45.1%	61.5%	68.9%	76.6%	653
2001	14.7%	33.2%	33.4%	52.1%	51.6%	115
2002	6.2%	17.3%	21.9%	39.5%	55.0%	81

Summary of Private Transaction Studies

- Baird and Willamette studies covered hundreds of transactions over 21 years
- Average differentials between private and public market prices varied under different market conditions, ranging from 40% - 63%
- Pre-IPO and restricted stock discount studies have been the subject of attacks regarding their validity and applicability – articles addressing these attacks can be found starting in the March 2002 issue of Shannon Pratt's BV Update

Recent Challenges to Discount for Lack of Marketability

There have been long standing criticisms of both the restricted stock and pre-IPO studies, but recent IRS attacks are bringing the debate to the forefront. Recent cases such as ***Gross, McCord, Lappo,*** and ***Perrachio*** have been very critical of how the discount for lack of marketability is being determined. One of the approaches adopted by the IRS is that of Dr. Mukesh Bajaj.

Dr. Bajaj's research of the restricted stock transactions leads him to believe that the entire discount calculated in the studies is attributable to more than just the stock's lack of liquidity. He believes part of the discount is also attributable to compensating the buyer for assessing the investment, monitoring the investment, advising management, and a promise of future investments.

Quantification & Application of Valuation Discounts

Dr. Bajaj's study encompassed a group of 40 restricted and 38 registered private placement transactions and the assumptions that all unregistered shares are equally illiquid and all registered shares are liquid. His analysis resulted in median discounts of 14.5% and 26.47% for the registered shares and unregistered shares, respectively. Thus, under his assumption that registered shares are fully liquid, the 14.5% discount cannot represent a discount for lack of liquidity.

Further, Dr. Bajaj states the discount for lack of liquidity cannot exceed the difference of the discount between registered and unregistered shares. He also notes that the marketability discount may be less than the difference of 16.62%, as a portion of the difference may be attributable to other differences between the groups.

Critique of the Bajaj Approach by Lance Hall

One of Dr. Bajaj's assumptions is that all restricted stock is equally illiquid. However, under the Securities and Exchange Commission's (SEC) Rule 144 there is a dribble-out provision for shares of restricted stock. The dribble-out rule may limit the amount of shares one can sell, depending on the size of the holding, after the one-year holding period. The dribble-out rule allows for the sale of restricted shares every quarter the greater of (a) one percent of the total shares outstanding, or (b) the average weekly trading volume over the four-week period. Under the dribble-out rule it could take years to sell all of an individual's holding.

Another of Bajaj's assumptions is that all registered stock is liquid. However, the dribble-out rule only applies to individuals holding 10% of the total stock outstanding. The average block of stock in Bajaj's study of 38 registered private placement transactions was 13.1%, thereby restricting the liquidity of the shares and likely contributing to the 14.5% discount.

Observations & Conclusions upon Examination of Empirical Studies

- The smaller the company (revenues, earnings, market capitalization), the larger the discount for lack of marketability
- Issuers of restricted stock are generally considered good credit risks – not necessarily true of the closely held business (CHB)
- Issuers of restricted stock are publicly traded companies for whom an active market exists for their stock
- Owners of stock in a CHB have no access to an active market for their stock – CHB's will never be publicly traded

Quantification & Application of Valuation Discounts

- Publicly traded companies offer annual dividends and/or an established record of capital appreciation in share price – CHB's seldom (if ever) can offer either
- Purchasers of restricted stock are institutional investors with investment goals and criteria far different from the individual purchaser of a CHB
- Institutional investors have different levels of risk perception and risk tolerance than purchasers of CHB stock
- Purchasers of restricted securities usually intend to market these securities in the future and a ready market will exist at that time
- Purchasers of CHB stock have little or no expectation to market the CHB stock in the future and if so, a limited market exists
- Investments of venture capital companies in OTC non-reporting companies most closely resemble purchases by CHB owners
- Venture capital investments are generally of relatively short duration, suggesting even higher discounts by CHB owners
- The restricted stock "studies" (excepting the SEC Study) represent articles in respected tax periodicals which essentially bear out the results of the SEC Study
- Use of median discounts from restricted stock studies by valuators of CHB's infer that publicly traded issuers of restricted stock are "comparable" to CHB's – this may not be the case
- The courts are allowing discounts that are less than those determined by the restricted stock studies – blind reliance on empirical studies or discounts allowed by the courts in other cases is dangerous as each valuation has its own unique facts
- Valuation analysts who rely solely upon empirical studies often understate discounts and overstate value
- Valuation analysts often fail to adequately support discounts with sound reasoning to support a specific discount
- In the valuation of stock in most closely held businesses, mean discounts observed in the results of the restricted stock studies should be used as minimum discounts

Quantification & Application of Valuation Discounts

Other Methods for Determining Marketability Discounts

Due to the increased attacks on the restricted stock studies and the pre-IPO studies, there have been several new approaches developed by financial professionals and academia. A brief summary of some newer concepts and approaches follow, however, the summaries are developed from extremely detailed and/or technical studies and white papers that should be read in full.

Dr. Ashok Abbott – Lambda

Dr. Abbott is currently a professor at West Virginia University, where he has taken an active role in the debate of marketability and liquidity issues. In his paper, *Role of Liquidity in Asset Pricin*g, Dr. Abbott introduces a directly observable measure of liquidity. By using 795,118 firm/month observations during January 1993 through December 2003 from all listed securities from the NYSE, AMEX and the NASDAQ, Dr. Abbott researched two measures of liquidity.

The two measures included a standard bid-ask spread measure and a new statistical measure, Lamda. Dr. Abbott concludes that the measure of liquidity measured by Lambda performs significantly better than spread based measures of liquidity. Given the results, observed liquidity can be a predictor of future returns such that an increase (decrease) in liquidity is expected to be followed by lower (higher) returns, indicating higher (lower) prices.

Another article written by Dr. Abbott, *Estimating the Holding Period for Listed Securities*, was published in the September/October 2004 volume of Valuation Strategies. This article sets forth an empirical method of estimating the expected holding period for a stock. Dr. Abbott notes that while the concepts of marketability and liquidity are closely aligned, they are quite separate and distinct and defines them as such:

- Marketability – The capability and ease of transfer or salability of an asset, business, business ownership interest or security. The costs associated with the cost of an IPO (including registration, distribution, and regulatory costs would be encompassed in marketability).
- Liquidity – The ability to readily convert an asset, business, business ownership interest or security into cash without significant loss of principal during the liquidation period (not the holding period).

Additionally, he states that the presence of one does not automatically indicate that the other is also present. An estimated holding period for each firm/month combination was calculated using a standard constant decay method. The results of the empirical study concluded that the average holding period (half-life) for listed securities is much longer than the standard of instantaneous liquidity assumed in existing literature.

Quantification & Application of Valuation Discounts

The average holding period for individual stocks is significantly influenced by the size of the firm (market capitalization), market liquidity, stock returns excluding dividends, dividend distributions, and stock price per share. A shorter average holding period associated with larger firm capitalization, higher stock prices, and higher investment returns. However a higher dividend yield will result in longer holding periods.

As a result of his study, Dr. Abbott concluded that markets appear to be relatively illiquid, especially for smaller firms. Thus, benchmark discounts applied based upon restricted stock studies assuming holding periods of 24 months and less, may result in a severe underestimation of the true discount.

Dr. Abbott also set out to provide further empirical analysis in his paper, *Discount for Lack of Marketability: An Empirical Analysis*, Dr. Abbott notes two problems with applying discounts determined from the restricted stock and pre-IPO benchmark studies. First, discounts are applied without exploring causal relationships between the observed discount and the characteristics of the subject company. The second problem is the failure to distinguish between the returns attributable to changes in liquidity and the combined effects of market conditions and other confounding factors.

In an effort to provide empirical evidence, Dr. Abbott developed a quantitative model utilizing the delisting of stocks from the NASDAQ market and the observed change in market value of the delisted securities that separates the discount between the loss of liquidity and the effect of market conditions by looking at the excess returns attributable to the loss of liquidity event. Delisted stocks from the NASDAQ market during 1982 through 2001 serve as the foundation for the study.

Dr. Abbott determined that the discount for lack of marketability decreases as the firm becomes larger, more profitable and the volume of trades increases. He sets forth the following regression model: *Discount for lack of marketability = alpha + b1Xmarket value + b2Xfirm performance relative to the market + b3Xannual turnover of the stock*

By virtue of Dr. Abbott's regression analysis, he claims that the model explains 35% of the observed variance in excess returns representing the DLOM and that the model results have a less than one in ten thousand chance of being a result of random occurrences.

<u>Minimum Marketability Discounts – Second Edition, Ronald M. Seaman</u>

Robert R. Trout wrote the first edition of *Minimum Marketability Discounts* in which he provided a guideline for a minimum discount of 24% for lack of marketability. The study analyzed the discounts on put options known as long term equity anticipation securities (LEAPS). Trout believes that these discounts provide a reasonable base for the discount for lack of marketability applicable to holding a privately held stock.

Quantification & Application of Valuation Discounts

The study was updated by Ronald Seaman and incorporated the effects of time and risk on the discounts. Seaman's update confirms that the insurance provided by the LEAPS correspond to the risk involved. The result of the study shows that the cost of the insurance ranged from 9% to 30% for two years of protection. The 9% cost was for the safest public companies and the 30% for the riskiest; the overall study average was around 15%.

As denoted in the title, the discount represents a minimum discount based on the facts that:

- longer holding periods generally require larger discounts,
- smaller companies tend to be more risky, and
- holders of LEAPS options can exercise the option at any time.

Mr. Seaman notes that this study should serve as a sanity check for an expert's discount for lack of marketability.

Willamette Management Associates Failed IPO Study

The IRS opposes marketability discounts for controlling interests; however, among the business valuation community discounts for controlling interests are valid, albeit at a significantly reduced rate. Willamette Management Associates Failed IPO Study set out to provide empirical data for discounts for lack of marketability applicable to controlling interests. The study analyzed quarterly stock market data from 1990 through 2002 and compares the number of companies that filed IPO registrations with the SEC versus the number of IPOs that were successful. The study also analyzed the successful IPOs in which the company is no longer in business.

The purpose of this study was to determine the likelihood of a successful IPO and to determine if some level of DLOM should be applied to controlling interests of privately held companies. As a result of the study, it was concluded that even if a company makes it through the registration process and is registered to go public, there is still significant risk that the IPO may not take place.

Also, not all companies that were successful achieved full liquidity immediately, in fact, it took companies an average of three months after the IPO registration to experience "full" liquidity. In addition to the uncertainty involved, the cost of going public includes fees from investment banks of approximately 7.5% of the initial market capitalization, plus other professional fees. The time lag and significant costs to make a closely held company "liquid" illustrates the fact that closely held companies should not be valued as if readily marketable.

Conclusion

Numerous research papers and studies exist that critique existing methods of determining illiquidity and marketability discounts and/or provide new or alternative methods of determining such discounts. The above summaries are not inclusive of all such studies or papers, in fact, they represent only a small portion of such available information.

Quantification & Application of Valuation Discounts

Chapter VII – *Mandelbaum Decision*

Mandelbaum v. Commissioner (T.C. Memo 1995-255, Affd. 91F3d 124, 3rd Cir. 1996) is an important case in business valuation, in that it isolates the size of a discount for lack of marketability as its only substantial issue. Rarely have the courts been so specific in their analysis of an issue nor has a court's decision been open to so much commentary and review by practitioners.

Setting up a list of factors to consider in developing a discount for a lack of marketability could have and should have provided the business valuation community with a useful tool. However, given the listing provided by Judge Laro in the decision, practitioners, once again, find themselves addressing tough issues with added cloudiness and complexity.

Mandelbaum v. Commissioner, is an important decision for two reasons:

- Issue of a lack of marketability discount was the only issue before the court
- Court's ultimate and unusual resolution of the case sheds light on possible matters to consider in assessing the size of discounts for lack of marketability in the future

Mandelbaum Case Summary

Facts in Mandelbaum

- Three brothers owned 100% of stock in a New Jersey based corporation, "Big M," which operated a chain of women's apparel stores
- Ultimately, the brothers entered "gifting" programs as part of their estate planning
- Values on gift tax returns were disputed by the IRS
- By trial, both parties stipulated as to the "freely traded value" of each share of the stock that had been previously gifted
- Court records indicate that stipulated values consider any applicable minority discount
- Only open issue – discount for the subject stocks' lack of marketability
  - IRS expert determined 30% for all six dates of gift
  - Taxpayers' expert determined 75% for 1986-1989 and 70% for 1990

Quantification & Application of Valuation Discounts

Expert's Case – Respondent (IRS): BDO Seidman, Paul R. Mallarkey

- Utilized three studies on sale of "restricted" stock
  - SEC Institutional Investor Study
  - Moroney, "Most Courts Overvalue Closely-Held Stocks"
    - Median Discounts 30.1% to 40%
    - Average cash-purchase discounts of 36% over unrestricted shares
  - Maher, "Discounts for Lack of Marketability for Closely-Held Business Interests"
    - Mean discount is 34.73%
- Summary of three studies – 30% to 35%
- Additional expert testimony
  - Big M stock risk was neutralized by its size and stable gross profits, allowing company to remain profitable
- Expert conclusion – 30% for all three years

Expert's Case – Petitioner (Mandelbaum): Price Waterhouse, Roger J. Grabowski

- Utilized three studies on sale of "restricted" stock (same as IRS)
- Utilized four additional restricted stock studies
  - Gelman, "An Economist - Financial Analysts Approach"
  - Trout, "Estimation of the Discount Associated with the Transfer of Restricted Securities"
  - Pittock and Stryker, "Revenue Ruling 77-287 Revisited"
  - Willamette Management Associates Study
    - Study of 33 arms-length private placements of restricted stock compared to freely-traded counterparts from January 1, 1981 to May 31, 1984
- Combined, the seven restricted stock studies found an average discount of 35% for marketability
- Also utilized three IPO studies
  - Emory, "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock – January 1980 through June 1981"
  - Emory, "The Value of Marketability as Illustrated in Initial Public Offerings of Common Stock – January 1985 through June 1986"

Quantification & Application of Valuation Discounts

  - Willamette Management Associates Study: 14 studies of company private stock transactions to subsequent public offerings of stock in the same companies

- In combination, all three IPO studies found an average discount of 45%
- Additional expert testimony
  - Big M is illiquid and, as such, requires a higher discount
  - Research of investment firms resulted in the expert's judgment that Big M investors would require a 35% to 40% yield, requiring a 10 to 20 year holding period
- Expert Conclusion: 75% for first five years and 70% for final year

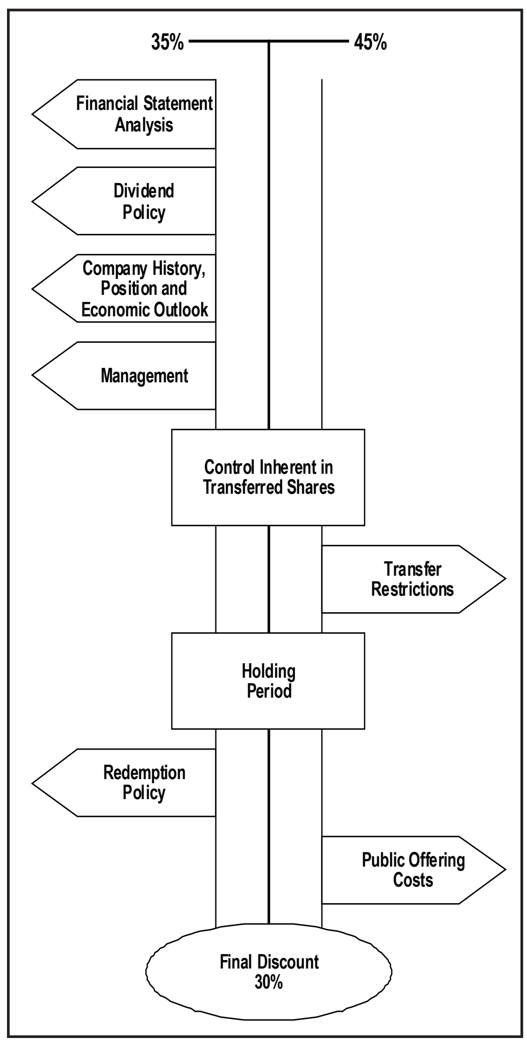
Court's Decision – Judge Laro

- Disregarded both experts
  - IRS expert:
    - Did not give adequate focus to outside investors buying into Big M, as intent was to hold Big M in the family
    - Did not give adequate focus to transferability restrictions in shareholders' agreements
    - Focused too sharply on "restricted stock" studies (holding period of stock studied was approximately 2 years), and expert did not support such a short period for Big M
    - Also failed to reconcile the fact that restricted stock studies encompass publicly traded corporations and Big M is not a publicly traded corporation
  - Taxpayers' expert:
    - Focused only on willing buyer and not willing seller
    - Too focused on shareholder's agreements – the expert's perception that the right of first refusal significantly impairs value is not supported, especially as no fixed price is set (right of first refusal is only a buyer ordering mechanism, it does not limit the buyers to whom the seller can sell)
    - Only interviewed venture capital investors and did not consider a more representative group of willing buyers
    - Reliance on interviews of venture capital investors for rates of return and holding period misplaced

Quantification & Application of Valuation Discounts

Court Solution

- "Find Appropriate Discount for Lack of Marketability Based on Evidence before the Court"
- Starting Point:
  - Taxpayer's analysis of 10 studies
  - Used as a benchmark
  - IPO studies: 45%
  - Restricted stock studies: 35%
- Factors considered by the court to increase or decrease benchmark discount:
  - Financial statement analysis
  - Dividend policy
  - Nature of the company, its history, position in the industry, and economic outlook
  - Management
  - Amount of control in the transferred shares
  - Restrictions on transferability of the stock
  - Holding period for the stock
  - Company's redemption policy
  - Costs associated with a public offering
- Final assessment of 9 factors:
  - 5 Below Average
  - 2 Neutral
  - 2 Above Average
- Conclusion:
  - A below average discount is warranted
  - Court determined 30%



Quantification & Application of Valuation Discounts

Mandelbaum is the most critical case addressing discounts for lack of marketability in the last decade. While Judge Laro's method of determining the final discount causes as much confusion as it does clarity, the case at least allows the practitioner to frame his or her discount for lack of marketability in view of the noted factors.

The ***Mandelbaum*** case was affirmed in the Third Circuit in 1996. A more recent case, ***Estate of Kaufman v. Commissioner***, embraced the nine factors under ***Mandelbaum***. Judge Laro also decided this case.

Quantification & Application of Valuation Discounts

Chapter VIII – *Judicial Decisions Affecting Premiums and Discounts*

While all determinations of value are fact-specific, historical judicial decisions often offer considerable insight into complex matters and how those matters are handled and interpreted. Issues involving valuation premiums, and more often, discounts, often arise in the context of valuing privately held business interests.

These issues, due to complexity and the need for a great deal of professional judgment, often lead to varying opinions, and, eventually, litigation. As such, historical case law presents users of business valuations, as well as those preparing the business valuations, a very significant forum for public observation.

A sample of more recent cases that we believe are relevant to the evolution of current practices regarding the use of premiums and discounts is included in this chapter. Please note that the listing is not intended to be exhaustive and all-inclusive. We intend only to share what we feel are some of the key decisions relating to this topic area.

Relevant Cases

- ***Estate of Joseph Cidulka,*** T.C. Memo 1996-149
  - Minority discount
- ***Bonner v. United States,*** KTC 1996-278 (5th Cir. 1996)
  - Fractional interest discount
- ***Estate of Davis v. Commissioner,*** Docket No. 9337-96 (U.S. Tax Court, June 30, 1998)
  - Discount for lack of marketability
- ***Estate of Mellinger v. Commissioner,*** 112 T.C. 26 (January 26, 1999)
  - Fractional interest discount
- ***Estate of Jameson v. Commissioner,*** Docket No. 2322-96, T.C. Memo 1999-43 (February 9, 1999)
  - Discount for lack of marketability
- ***Estate of Richard R. Simplot v. Commissioner,*** 112 T.C. No. 13, 1999 WL 152610 (March 22, 1999)
  - Control premium and minority discount
- ***Estate of William J. Desmond v. Commissioner,*** Docket No. 26237-96, T.C. Memo 1999-76 (March, 1999)
  - Marketability discount

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- ***Walter L. Gross, Jr. v. Commissioner,*** T.C. Memo 1999-254 (July 29, 1999)
  - Discount for lack of marketability
- ***Estate of Weinberg v. Commissioner,*** TC Memo 2000-51 (Feb 2000)
  - Minority discount, discount for lack of marketability
- ***Ferraro v. Ferraro,*** 2000 Va. App. LEXIS 164 (Mar 2000)
  - Discounts for lack of control and lack of marketability
- ***Gow v. Commissioner,*** T.C. Memo. 2000-93, 79 T.C.M.
  - Two-tier discounts, minority discount
- ***Maggos v. Commissioner,*** TC Memo 2000-129 (Apr 2000)
  - Discount for lack of marketability and control premium
- ***HMO-W v. SSM Health Care System,*** 2000 WI 46, 234 Wis.2d 707, 611 N.W. 2d 250 (June 2000)
  - Minority discount
- ***Adams v. United States,*** 218 F.3d 383 (5th Cir, July 2000) and 2001 U.S. Dist. LEXIS 13092, N.D. Tex.
  - Discounts for lack of marketability, control, and portfolio (lack of diversification) discount
- ***Janda v. Commissioner,*** T.C. Memo 2001-24 (Feb 2001)
  - Marketability discount
- ***Swope v. Siegel-Robert, Inc.,*** 2001 U.S. App. LEXIS 2760 (8th Cir. Feb 2001)
  - Discount for lack of marketability
- ***Wall v. Commissioner,*** T.C. Memo 2001-75 (Mar 2001)
  - Discount for lack of marketability and discount for non-voting stock
- ***Estate of Hoffman v. Commissioner,*** T.C. Memo 2001-109 (May 9, 2001)
  - Discounts for lack of marketability and control
- ***Offenbecher v. Baron Services, Inc.,*** 2001 Ala. Civ. App. LEXIS 219 (May 2001)
  - Discount for lack of marketability

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- ***Estate of True v. Commissioner,*** T.C. Memo 2001-167
  - Discount for lack of marketability and minority interest discount
- ***Pueblo Bancorporation v. Lindoe, Inc.,*** 37P.3d492, 2001 Colo. App. LEXIS 1330 (August 16, 2001)
  - Discounts for lack of control and marketability
- ***Estate of Godley v. Commissioner,*** 286 F.3d 210, (April 15, 2002)
  - Discount for lack of control
- ***Norton Co v. Smyth,*** 112 Wn. App. 865, 51P.3d159, 2002 Wash. App. LEXIS 1841 (August 5, 2002)
  - Discounts for lack of marketability and control
- ***Okerlund v. United States,*** 2002 U.S. Claims LEXIS 221 (Fed. Cl. August 2002)
  - Discounts for lack of marketability and lack of voting rights
- ***Estate of Heck v. Commissioner,*** *T.C. Memo 2002-34, U.S. Tax Ct.*
  - Discount for lack of marketability and discount for right of first refusal
- ***Estate of Mitchell v. Commissioner***, T.C. Memo 2002-98
  - Minority and marketability discounts
- ***Estate of Bailey v. Commissioner,*** T.C. Memo 2002-152
  - Minority, marketability, and key person discounts
- ***Baltrusis v. Baltrusis,*** 2002 Wash. App. LEXIS (Sept. 2002)
  - Discounts for lack of marketability and control
- ***Gottsacker v. Gottsacker***, 2002 Minn. App. LEXIS 1290 (November 26, 2002)
  - Combined discount for lack of marketability and control
- ***In re the Marriage of Sims,*** 2003 Wash. App. LEXIS 86 (January 23, 2003)
  - Discounts for lack of marketability and control
- ***McCord v. Commissioner,*** 120 T.C. No. 13 (March 2003); U.S. Court of Appeals 5th Cir. (August 22, 2006)
  - Discounts for lack of marketability and control

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- ***Deputy v. Commissioner,*** T.C. Memo 2003-176 (June 13, 2003)
  - Discounts for lack of marketability and control
- ***Clarissa W. Lappo v. Commissioner,*** T.C. Memo 2003-258 (September 2003)
  - Discounts for lack of marketability and control
- ***Peter S. Peracchio v. Commissioner***, T.C. Memo 2003-280 (September 2003)
  - Combined discount for lack of marketability and control
- ***Estate of Green v. Commissioner,*** T.C. Memo 2003-348 (December 29, 2003)
  - Discounts for lack of marketability and control
- ***Estate of Trompeter,*** T.C. Memo 2004-27 (February 4, 2004)
  - Discount for lack of marketability
- ***Estate of Hillgren v. Commissioner,*** T.C. Memo 2004-46
  - Discounts for lack of marketability and control
- ***Cole v. Cole,*** (2001) and Appeals, 2005 Ark. App. LEXIS 8 (January 5, 2005)
  - Discounts for lack of marketability and control
- ***Estate of Jelke v. Commissioner***, T.C. Memo. 2005-131 Docket No. 3512-03 (May 31, 2005)
  - Discounts for lack of control and marketability, built in gains discount
- ***Estate of Kelley v. Commissioner,*** T.C. Memo 2005-235, Docket No. 16894-03 (U.S. Tax Ct, October 11, 2005)
  - Discounts for lack of control and lack of marketability
- ***Kapp v. Kapp***, 2005 Ohio 6830 (December 23, 2005)
  - Discount for lack of marketability
- ***Robertson v. United States of America***, 3:03-cv-02113 (January 13, 2006)
  - Discounts for lack of control and marketability and right of first refusal
- ***East Park Limited Partnership v. Barbara A. Larkin***, No. 289 MD Court of Special Appeals (March 6, 2006)
  - Discounts for lack of marketability and control

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- ***Estate of Temple v. United States of America***, Civil Action No. 9:03-CV-165, U.S. District Court for the Eastern District of Texas (March 10, 2006)
  - Discount for lack of control and discount for lack of marketability
- ***Koblick v. Internal Revenue Service***, 2006 T.C. Memo LEXIS 63 (April 3, 2006)
  - Discount for lack of control
- ***In re the Marriage of Keener***, Iowa No. 6-375 (June 28, 2006)
  - Discount for lack of marketability
- ***Vicario v. Vicario,*** No. 2005-244 Rhode Island (June 29, 2006)
  - Discounts for lack of marketability and control
- ***Brown v. Arp and Hammond Hardware Company,*** 2006 WY 107 Wyoming (August 29, 2006)
  - Discounts for lack of marketability and control
- ***Dallas v. Commissioner,*** T.C. Memo 2006-212 (September 28, 2006)
  - Discount for lack of marketability
- ***Estate of Gimbel v. Commissioner of Internal Revenue***, 2006 T.C. Memo LEXIS 274 U.S. Tax Court (December 19, 2006)
  - Combined discount for lack of marketability and control
- ***In re the Estate of Helen H. Berry,*** No 1485 C.D. 2006 (April 24, 2007)
  - Discounts for lack of marketability and control
- ***Litman v. United States,*** 2007 U.S. Claims LEXIS 273 (August 22, 2007)
  - Discount for lack of marketability
- ***In the Matter of the Estate of Norman B. Hjersted,*** 2008 WL 269013 Kansas Sup. Court (February 1, 2008)
  - Discounts for lack of marketability and control
- ***Entingh v. Entingh***, 2008 Ohio 756 WL 498978 Ohio Court of Appeals (February 22, 2008)
  - Combined discount for lack of marketability and control

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- ***Cannon v. Bertrand***, 2008 WL 1734158 Louisiana Court of Appeals (April 16, 2008)
  - Discounts for lack of marketability and control
- ***Astleford v. Commissioner of Internal Revenue,*** T.C. Memo 2008-128, Docket No. 4342-06 (May 5, 2008)
  - Discounts for lack of marketability and control
- ***Bussa v. Bussa,*** 2008 WL 2117138 Michigan Court of Appeals (May 20, 2008)
  - Discounts for lack of control, key man, and lack of information about comparable transactions
- ***Holman v. Commissioner,*** 130 T.C. No. 12 (May 27, 2008)
  - Discounts for lack of marketability and control
- ***Litchfield v. Commissioner***, 2009 WL 211421, U.S. Tax Court (January 29, 2009)
  - Discount for lack of marketability
- ***Kaplan v. First Hartford Corp.***, 2009 WL 737681 (D.ME.) (March 20, 2009)
  - Discount for lack of control
- ***Heckerman v. Commissioner***, 2009 WL 2240326, W.D. Wash (July 27, 2009)
  - Discount for lack of marketability
- ***Keller v. United States***, 2009 WL 2601611 (August 20, 2009)
  - Discount for lack of marketability and control
- ***Murphy v. United States***, 2009 WL 3366099, W.D. Ark (October 2, 2009)
  - Discount for lack of marketability and control
- ***Ringgold Telephone Co. v. Commissioner***, T.C. Memo. 2010-103, 2010 WL 1850426 (U.S. Tax Ct.) (May 10, 2010)
  - Discount for lack of marketability
- ***Pierre v. Commissioner***, 2010 WL 1945779, U.S. Tax Court (May 13, 2010)
  - Discount for lack of marketability and control

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- ***Estate of Foster v. Commissioner***, 2011 WL 1598633 (U.S. Tax Ct.) (April 28, 2011)
  - Discount for lack of marketability and control
- ***Estate of Giustina v. Commissioner***, T.C. Memo. 2011-141, 2011 WL 2516168 (U.S. Tax Court) (June 22, 2011)
  - Discount for lack of marketability
- ***Estate of Gallagher v. Commissioner***, T.C. Memo 2011-148, 2011 WL 2559847 (U.S. Tax Court) (June 28, 2011)
  - Discount for lack of marketability and control