Business Valuation Upon Divorce: How Theory and Practice Can Lead to Problems In Court

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AICPA/AAML Conference on Divorce
May 10-12, 2012
Aria Resort & Casino
Las Vegas, NV

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Member, Pattern Jury Charge Committee (Family Law), State Bar of Texas (1987-2000)
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Member, Supreme Court Advisory Committee on Child Support and Visitation Guidelines (1989, 1991; Co-Chair 1992-93; Chair 1994-98)
Member, Board of Directors, Texas Legal Resource Center on Child Abuse & Neglect, Inc. (1991-93)
President, Texas Academy of Family Law Specialists (1990-91)
President, San Antonio Family Lawyers Association (1989-90)
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Recipient of the Franklin Jones, Jr. CLE Article Award for Outstanding Achievement in CLE (2009)
Listed as Texas' Top Family Lawyer, Texas Lawyer's *Go-To-Guide* (2007)
Listed as one of Texas' Top 100 Lawyers, and Top 50 Lawyers in South Texas, *Texas Monthly* Super Lawyers Survey(2003-2010)
Texas Academy of Family Law Specialists' *Sam Emison Award* (2003)
State Bar of Texas *Presidential Citation* "for innovative leadership and relentless pursuit of excellence for continuing legal education" (June, 2001)
State Bar of Texas Family Law Section's *Dan R. Price Award* for outstanding contributions to family law (2001)
State Bar of Texas *Gene Cavin Award for Excellence in Continuing Legal Education* (1996)
State Bar of Texas *Certificate of Merit*, June 1995, June 1996, June 1997 & June 2004
Listed in the BEST LAWYERS IN AMERICA: Family Law (1987-2011); Appellate Law (2007-2011)

Continuing Legal Education and Administration:

Course Director, State Bar of Texas:
- Practice Before the Supreme Court of Texas Course (2002 - 2005, 2007, 2009 & 2011)
- *Enron, The Legal Issues* (Co-director, March, 2002) [Won national ACLEA Award]
- Advanced Expert Witness Course (2001, 2002, 2003, 2004)
- 1999 Impact of the New Rules of Discovery
- 1998 Advanced Civil Appellate Practice Course

- 1991 Advanced Evidence and Discovery
- Computer Workshop at Advanced Family Law (1990-94) and Advanced Civil Trial (1990-91) courses
- 1987 Advanced Family Law Course. Course Director, Texas Academy of Family Law Specialists First Annual Trial Institute, Las Vegas, Nevada (1987)

Books and Journal Articles:

—Editor-in-Chief of the State Bar of Texas' TEXAS SUPREME COURT PRACTICE MANUAL (2005)
—Chief Editor of the State Bar of Texas Family Law Section's EXPERT WITNESS MANUAL (Vols. II & III) (1999)
— Author of Vol. 6 of McDonald Texas Civil Practice, on Texas Civil Appellate Practice, published by Bancroft-Whitney Co. (1992) (900 + pages)
—*A Guide to Proceedings Under the Texas Parent Notification Statute and Rules,* SOUTH TEXAS LAW REVIEW (2000) (co-authored)
—*Obligations of the Trial Lawyer Under Texas Law Toward the Client Relating to an Appeal,* 41 SOUTH TEXAS LAW REVIEW 111 (1999)
—*Asserting Claims for Intentionally or Recklessly Causing Severe Emotional Distress, in Connection With a Divorce*, 25 ST. MARY'S L.J. 1253 (1994), republished in the AMERICAN JOURNAL OF FAMILY LAW (Fall 1994) and Texas Family Law Service *NewsAlert* (Oct. & Dec., 1994 and Feb., 1995)
—Chapter 21 on *Business Interests* in Bancroft-Whitney's TEXAS FAMILY LAW SERVICE (Speer's 6th ed.)
—*Characterization of Marital Property*, 39 BAY. L. REV. 909 (1988) (co-authored)
—*Fitting a Round Peg Into A Square Hole: Section 3.63, Texas Family Code, and the Marriage That Crosses States Lines*, 13 ST. MARY'S L.J. 477 (1982)

SELECTED CLE SPEECHES AND ARTICLES

State Bar of Texas' [SBOT] **Advanced Family Law Course**: Intra and Inter Family Transactions (1983); Handling the Appeal: Procedures and Pitfalls (1984); Methods and Tools of Discovery (1985); Characterization and Reimbursement (1986); Trusts and Family Law (1986); The Family Law Case in the Appellate Court (1987); Post-Divorce Division of Property (1988); Marital Agreements: Enforcement and Defense (1989); Marital Liabilities (1990); Rules of Procedure (1991); Valuation Overview (1992); Deposition Use in Trial: Cassette Tapes, Video, Audio, Reading and Editing (1993); The Great Debate: Dividing Goodwill on Divorce (1994); Characterization (1995); Ordinary Reimbursement and Creative Theories of Reimbursement (1996); Qualifying and Rejecting Expert Witnesses (1997); New Developments in Civil Procedure and Evidence (1998); The Expert Witness Manual (1999); Reimbursement in the 21st Century (2000); Personal Goodwill vs. Commercial Goodwill: A Case Study (2000); What Representing the Judge or Contributing to Her Campaign Can Mean to Your Client: Proposed New Disqualification and Recusal Rules (2001); Tax Workshop: The Fundamentals (2001); Blue Sky or Book Value? Complex Issues in Business Valuation (2001); Private Justice: Arbitration as an Alternative to the Courthouse (2002); International & Cross Border Issues (2002); Premarital and Marital Agreements: Representing the Non-Monied Spouse (2003); *Those Other Texas Codes: Things the Family Lawyer Needs to Know About Codifications Outside the Family Code* (2004); Pearls of Wisdom From Thirty Years of Practicing Family Law (2005); The Road Ahead: Long-Term Financial Planning in Connection With Divorce (2006); A New Approach to Distinguishing Enterprise Goodwill From Personal Goodwill (2007); The Law of Interpreting Contracts: How to Draft Contracts to Avoid or Win Litigation (2008); Effect of Choice of Entities: How Organizational Law, Accounting, and Tax Law for Entities Affect Marital Property Law (2008); Practicing Family Law in a Depressed Economy, Parts I & II (2009); Property Puzzles: 30 Characterization Rules, Explanations & Examples (2009); Troubling Issues of Characterization, Reimbursement, Valuation, and Division Upon Divorce (2010); Separate & Community Property: 30 Rules With Explanations & Examples (2010); The Role of Reasoning in Constructing a Persuasive Argument (2011)

UT School of Law: Trusts in Texas Law: What Are the Community Rights in Separately Created Trusts? (1985); Partnerships and Family Law (1986); Proving Up Separate and Community Property Claims Through Tracing (1987); Appealing Non-Jury Cases in State Court (1991); The New (Proposed) Texas Rules of Appellate Procedure (1995); The Effective Motion for Rehearing (1996); Intellectual Property (1997); Preservation of Error Update (1997); TRAPs Under the New T.R.A.P. (1998); Judicial Perspectives on Appellate Practice (2000)

SBOT's **Advanced Evidence & Discovery Course**: Successful Mandamus Approaches in Discovery (1988); Mandamus (1989); Preservation of Privileges, Exemptions and Objections (1990); Business and Public Records (1993); Grab Bag: Evidence & Discovery (1993); Common Evidence Problems (1994); Managing Documents--The Technology (1996); Evidence Grab Bag (1997); Evidence Grab Bag (1998); Making and Meeting Objections (1998-99); Evidentiary Issues Surrounding Expert Witnesses (1999); Predicates and Objections (2000); Predicates and Objections (2001); Building Blocks of Evidence (2002); Strategies in Making a Daubert Attack (2002); Predicates and Objections (2002); Building Blocks of Evidence (2003); Predicates & Objections (High Tech Emphasis) (2003)

SBOT's **Advanced Civil Appellate Practice Course**: Handling the Appeal from a Bench Trial in a Civil Case (1989); Appeal of Non-Jury Trials (1990); Successful Challenges to Legal/Factual Sufficiency (1991); In the Sup. Ct.: Reversing the Court of Appeals (1992); Brief Writing: Creatively Crafting for the Reader (1993); Interlocutory and Accelerated Appeals (1994); Non-Jury Appeals (1995); Technology and the Courtroom of the Future (1996); Are Non-Jury Trials Ever "Appealing"? (1998); Enforcing the Judgment, Including While on Appeal (1998); Judges vs. Juries: A Debate (2000); Appellate Squares (2000); Texas Supreme Court Trends (2002); New Appellate Rules and New Trial Rules (2003); *Supreme Court Trends* (2004); Recent Developments in the *Daubert* Swamp (2005); Hot Topics in Litigation: Restitution/Unjust Enrichment (2006); The Law of Interpreting Contracts (2007); Judicial Review of Arbitration Rulings: Problems and Possible Alternatives (2008); The Role of Reasoning and Persuasion in the Legal Process (2010)

Various CLE Providers: SBOT Advanced Civil Trial Course: Judgment Enforcement, Turnover and Contempt (1990-1991), Offering and Excluding Evidence (1995), New Appellate Rules (1997), The Communications Revolution: Portability, The Internet and the Practice of Law (1998), Daubert With Emphasis on Commercial Litigation, Damages, and the NonScientific Expert (2000), Rules/Legislation Preview (State Perspective) (2002); College of Advanced Judicial Studies: Evidentiary Issues (2001); El Paso Family Law Bar Ass'n: Foreign Law and Foreign Evidence (2001); American Institute of Certified Public Accounts: Admissibility of Lay and Expert Testimony; General Acceptance Versus Daubert (2002); Texas and Louisiana Associations of Defense Counsel: Use of Fact Witnesses, Lay Opinion, and Expert Testimony; When and How to Raise a Daubert Challenge (2002); SBOT In-House Counsel Course: Marital Property Rights in Corporate Benefits for High-Level Employees (2002); SBOT 19th Annual Litigation Update Institute: Distinguishing Fact Testimony, Lay Opinion & Expert Testimony; Raising a Daubert Challenge (2003); State Bar College Spring Training: Current Events in Family Law (2003); SBOT Practice Before the Supreme Court: Texas Supreme Court Trends (2003); SBOT 26th Annual Advanced Civil Trial: Distinguishing Fact Testimony, Lay Opinion & Expert Testimony; Challenging Qualifications, Reliability, and Underlying Data (2003); SBOT New Frontiers in Marital Property: Busting Trusts Upon Divorce (2003); American Academy of Psychiatry and the Law: Daubert, Kumho Tire and the Forensic Child Expert (2003); AICPA-AAML National Conference on Divorce: Cutting Edge Issues–New Alimony Theories; Measuring Personal Goodwill (2006); New Frontiers` - Distinguishing Enterprise Goodwill from Personal Goodwill; Judicial Conference (2006); SBOT New Frontiers in Marital Property Law: Tracing, Reimbursement and Economic Contribution Claims In Brokerage Accounts (2007); SBOT In-House Counsel Course: When an Officer Divorces: How a Company can be Affected by an Officer's Divorce (2009); SBOT Handling Your First Civil Appeal The Role of Reasoning and Persuasion in Appeals (2011); New Frontiers in Marital Property Law: A New Approach to Determining Enterprise and Personal Goodwill Upon Divorce (2011)

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Business Valuation Upon Divorce: How Theory and Practice Can Lead to Problems In Court

by

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I. INTRODUCTION. There is no objectively valid way to value a business interest that is not freely traded in a marketplace. There are theories, models, and methods, developed in connection with publicly-traded stocks and bonds, that have been adapted for use in valuing privately-owned business interests. Even in their original field, however, these theories, and models, and methods, are attended by controversy. Using these theories, models and methods to value privately-owned businesses further compounds the problems.

Business valuators apply indicators of value derived from stock sales in liquid markets to the task of valuing illiquid privately-owned business interests. These indicators of value have poor predictive ability when applied to the future stock prices of the very companies from whom the measures are taken. There is reason to suspect that these indicators of value work no better in determining the value of a privately-owned business interest.

When a business valuation is done incident to divorce, ascertaining the value is complicated by the fact that standards of value vary from state to state. These complications are further compounded by differing rules regarding the use of marketability and minority discounts, and how enterprise goodwill and personal goodwill are treated in the divorce.

Under the *Frye* case, the test for admissibility of an expert opinion was whether the expert's methodology had been generally accepted. Since the U.S. Supreme Court decided the *Daubert* case in 1993, trial judges and lawyers have become more inclined to question the reliability of the methods and data used by experts, including those who testify to business values. However, approximately one-fourth of the states still use a "general acceptance" standard for admissibility of expert testimony, further confounding business valuation practice.

NOTE: In the pdf version of this article, you can click on the superscripted endnote numbers and jump to the endnote. The URLs in the endnotes are web enabled and link to the underlying cited material. You can download the pdf file from this URL:

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II. STANDARDS OF VALUE. The standard of value is the type of value being used in a specific valuation engagement. In Shannon P. Pratt, VALUING A BUSINESS: THE ANALYSIS AND APPRAISAL OF CLOSELY HELD COMPANIES 22-30 (3d ed. 2008), Pratt recognizes seven standards of value: (i) fair market value, (ii) fair value, (iii) investment value, (vi) intrinsic or fundamental value, (iv) going-concern value, (vi) liquidation value, (vii) book value. See also James R. Hitchner, FINANCIAL VALUATION: APPLICATIONS AND MODELS (2d ed. Wiley 2006) pp. 3-6. To these can be added one more standard, (viii) sentimental value.

A. FAIR MARKET VALUE. In the business valuation field, the idea of value is dominated by the definition that the U.S. Government requires for tax purposes: fair market value.

1. Definitions of Fair Market Value. Treasury Regulation 20.2031-1(b) defines "fair market value" in this way:

> The fair market value is the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts.

See Treasury Reg. 25-2512-1 (fair market value defined for gift tax purposes). Treasury Reg. 20.2031-1(b) goes on to say:

> The fair market value of a particular item of property includible in the decedent's gross estate is not to be determined by a forced sale price. Nor is the fair market value of an item of property to be determined by the sale price of the item in a market other than that in which such item is most commonly sold to the public, taking into account the location of the item wherever appropriate.

Id.

In *United States v. Cartwright*, 411 U.S. 546, 550-51 (1973), the U.S. Supreme Court said:

> In implementing 26 U.S.C. § 2031, the general principle of the Treasury Regulations is that the value of property is to be determined by its fair market value at the time of the decedent's death. 'The fair market value is the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts.' Treas. Reg. § 20.2031-1(b). The willing buyer-willing seller test of fair market value is nearly as old as the federal income, estate, and gifts taxes themselves, and is not challenged here.FN7 Under this test, it is clear that if the decedent had owned ordinary corporate stock listed on an exchange, its 'value' for estate tax purposes would be the price the estate could have obtained if it had sold the stock on the valuation date, that price being, under Treas. Reg. § 20.2031-2(b), the mean between the highest and lowest quoted selling prices on that day.

2. Inputs in Determining Fair Market Value. The IRS Regulations set out a hierarchy of information to be considered in estimating fair market value for estate and gift tax purposes. The more reliable indicators of value must be used if they are available; if none are available, then the next highest level of indicator should be used, and so on, in descending order. Subdivision (f) covers closely-held business interests that has had no recent arms length sales.

IRS Regulation § 20.2031-2 Valuation of stocks and bonds.

> **(a) In general.** The value of stocks and bonds is the fair market value per share or bond on the applicable valuation date.
>
> **(b) Based on selling prices.** (1) In general, if there is a market for stocks or bonds, on a stock exchange, in an over-the-counter market, or otherwise, the mean between the highest and lowest quoted selling prices on the valuation date is the fair market value per share or bond. [Note: the closing price is not used to fix value for tax purposes.] If there were no sales on the valuation date but there were sales on dates within a reasonable period both before and after the valuation date, the fair market value is determined by taking a weighted average of the means between the highest and lowest sales on the nearest date before and the nearest date after the valuation date. The average is to be weighted inversely by the respective numbers of trading days between the selling dates and the valuation date. If the stocks or bonds are listed on more than one exchange, the records of the exchange where the stocks or bonds are principally dealt in should be employed if such records are available in a generally available listing or publication of general circulation. In the event that such records are not so available and such stocks or bonds are listed on a composite listing of combined exchanges available in a generally available listing or publication of general circulation, the records of such combined exchanges should be employed. In valuing listed securities, the executor should be careful to consult accurate records to obtain values as of the applicable valuation date. If quotations of unlisted securities are obtained from brokers, or evidence as to their sale is obtained from officers of the issuing companies, copies of the letters furnishing such quotations or evidence of sale should be attached to the return.
>
> * * *
>
> **(c) Based on bid and asked prices.** If the provisions of paragraph (b) of this section are inapplicable because actual sales are not available during a reasonable period beginning before and ending after the valuation date, the fair market value may be determined by taking the mean

between the bona fide bid and asked prices on the valuation date, or if none, by taking a weighted average of the means between the bona fide bid and asked prices on the nearest trading date before and the nearest trading date after the valuation date, if both such nearest dates are within a reasonable period. The average is to be determined in the manner described in paragraph (b) of this section.

(d) Based on incomplete selling prices or bid and asked prices. If the provisions of paragraphs (b) and (c) of this section are inapplicable because no actual sale prices or bona fide bid and asked prices are available on a date within a reasonable period before the valuation date, but such prices are available on a date within a reasonable period after the valuation date, or vice versa, then the mean between the highest and lowest available sale prices or bid and asked prices may be taken as the value.

(e) Where selling prices or bid and asked prices do not reflect fair market value. If it is established that the value of any bond or share of stock determined on the basis of selling or bid and asked prices as provided under paragraphs (b), (c), and (d) of this section does not reflect the fair market value thereof, then some reasonable modification of that basis or other relevant facts and elements of value are considered in determining the fair market value. Where sales at or near the date of death are few or of a sporadic nature, such sales alone may not indicate fair market value. In certain exceptional cases, the size of the block of stock to be valued in relation to the number of shares changing hands in sales may be relevant in determining whether selling prices reflect the fair market value of the block of stock to be valued. If the executor can show that the block of stock to be valued is so large in relation to the actual sales on the existing market that it could not be liquidated in a reasonable time without depressing the market, the price at which the block could be sold as such outside the usual market, as through an underwriter, may be a more accurate indication of value than market quotations. Complete data in support of any allowance claimed due to the size of the block of stock being valued shall be submitted with the return. On the other hand, 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.

(f) Where selling prices or bid and asked prices are unavailable. If the provisions of paragraphs (b), (c), and (d) of this section are inapplicable because actual sale prices and bona fide bid and asked prices are lacking, then the fair market value is to be determined by taking the following factors into consideration:

(1) In the case of corporate or other bonds, the soundness of the security, the interest yield, the date of maturity, and other relevant factors; and

(2) In the case of shares of stock, the company's net worth, prospective earning power and dividend-paying capacity, and other relevant factors.

Some of the "other relevant factors" referred to in subparagraphs (1) and (2) of this paragraph are: The good will of the business; the economic outlook in the particular industry; the company's position in the industry and its management; the degree of control of the business represented by the block of stock to be valued; and the values of securities of corporations engaged in the same or similar lines of business which are listed on a stock exchange. However, the weight to be accorded such comparisons or any other evidentiary factors considered in the determination of a value depends upon the facts of each case. In addition to the relevant factors described above, consideration shall also be given to nonoperating assets, including proceeds of life insurance policies payable to or for the benefit of the company, to the extent such nonoperating assets have not been taken into account in the determination of net worth, prospective earning power and dividend-earning capacity. Complete financial and other data upon which the valuation is based should be submitted with the return, including copies of reports of any examinations of the company made by accountants, engineers, or any technical experts as of or near the applicable valuation date.

> **(g) Pledged securities.** . . .
>
> **(h) Securities subject to an option or contract to purchase.** Another person may hold an option or a contract to purchase securities owned by a decedent at the time of his death. The effect, if any, that is given to the option or contract price in determining the value of the securities for estate tax purposes depends upon the circumstances of the particular case. Little weight will be accorded a price contained in an option or contract under which the decedent is free to dispose of the underlying securities at any price he chooses during his lifetime. Such is the effect, for example, of an agreement on the part of a shareholder to purchase whatever shares of stock the decedent may own at the time of his death. Even if the decedent is not free to dispose of the underlying securities at other than the option or contract price, such price will be disregarded in determining the value of the securities unless it is determined under the circumstances of the particular case that the agreement represents a bona fide business arrangement and not a device to pass the decedent's shares to the natural objects of his bounty for less than an adequate and full consideration in money or money's worth. See section 2703 and the regulations at § 25.2703 of this chapter for special rules involving options and agreements (including contracts to purchase) entered into (or substantially modified after) October 8, 1990.

It is interesting to note that the Treasury Regs' description of factors to consider, when there is no market data from which to draw value inferences, is very much like Intrinsic Value. See Section II.D.

3. Rev. Ruling 59-60's Fair Market Value of a Privately-Owned Business. Modern business valuation theory found an early expression in Revenue Ruling 59-60,[1] where the IRS grappled with the difficulty of determining the fair market value of stock in a corporation where there is no ready market price reflecting investors' consensus on what the stock is worth. Revenue Ruling 59-60 uses the familiar definition of fair market value required by federal law for tax reporting. The IRS eschewed any specific instructions on how to value such a business: "No formula can be devised that will be generally applicable to the multitude of different valuation issues arising in estate and gift tax cases." Rev. Rul. 59-60 § 3.01.

Revenue Ruling 59-60 § 3.03 asserts that the best indicator of value is the price at which stock in a company trades in a free and active market. But where the stock is closely held, or traded infrequently, or traded in an erratic market, some other measure must be used. *Id.* § 3.03. Revenue Ruling 59-60 suggests that the next best measure may be the price of stock in comparable companies that are trading in a "free and open market." *Id.* If comparable companies whose shares are traded on an exchange cannot be found, then sales of comparable companies whose stock is sold "over the counter" should be used. *Id.* § 4.02 (g).

Although Revenue Ruling 59-60 gives the market approach to business valuation first priority, it ultimately settles on an income approach using market-derived multipliers. Earning capacity and dividend paying capacity are both listed as factors to consider in valuing a company. *Id.* § 4.01. In Section 5, Rev. Rule 59-60 says: "Earnings may be the most important criterion of value in some cases . . . . In general, the appraiser will accord primary consideration to earnings when valuing stocks of companies which sell products or services to the public. . . ." *Id.* § 5(a). Section 6 discusses capitalization rates, saying that "[a] determination of the proper capitalization rate presents one of the most difficult problems in valuation." *Id.* § 6.

The United States Tax Court said: "[W]e note that each factor listed in Rev.Rul. 59–60 does not necessarily have a bearing on value and need not be given weight in every case." *Estate of Ford v. C.I.R.*, T.C. Memo. 1993-580, 1993 WL 501917, *11 (U.S. Tax Court 1993).

Revenue Ruling 59-60 has endured remarkably well, considering the level of understanding of business valuation principles in 1959. Its durability is largely attributable to the generality of the principles put forth in the Ruling, and the enduring nature of its insights that predate and really transcend the quantitative revolution that has come to dominate business valuation in recent years. Nowadays business valuators primarily use some version of the Capital Asset Pricing Model (CAPM) and the Build Up Method to arrive at a defensible capitalization or discount rate to reply to projected earnings or cash flows. Both methods are examined in detail later in this Article.

B. FAIR VALUE (ACCOUNTING).

1. Definition of "Fair Value" (Accounting). The accounting profession has adopted the term "fair value" as the equivalent to the legal "fair market value." The current definition and description of "fair value" is set out by the Financial Accounting Standards Board, in Accounting Standards Codification, Glossary:

> Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

See FASB ASC Topic 820 Glossary.

Additional considerations have been established by the FASB regarding determining fair value:

> A fair value measurement assumes that the asset or liability is exchanged in an orderly transaction between market participants to sell the asset or transfer the liability at the measurement date. The transaction to sell the asset or transfer the liability is a hypothetical transaction at the measurement date, considered from the perspective of a market participant that holds the asset or owes the liability (FASB ASC 820-10-35). The exit price objective applies for all assets and liabilities measured at fair value.
>
> Fair value measurements of assets assumes the highest and best use by market participants, considering the use of the asset that is physically possible, legally permissible, and financially feasible at the measurement date. FASB ASC Topic 820 Implementation Guidance, p. 5 (10-20-2009).
>
> Fair value is a market-based measurement, not an entity-specific measurement. For some assets and liabilities, observable market transactions or market information might be available. For other assets and liabilities, observable market transactions and market information might not be available. However, the objective of a fair value measurement in both cases is the same--to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions (that is, an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability).

FASB ASC 820-20-05-1B (as amended May 2011).[2]

> Fair value measures should consider the utility of the asset or liability being measured and specific attributes to the asset or liability.

FASB ASC Topic 820 Implementation Guidance, p. 5 (10-20-2009).

> Transaction costs should be excluded from all fair value measurements.

FASB ASC Topic 820 Implementation Guidance, p. 5 (10-20-2009).

2. Inputs for Determining Fair Value (Accounting). The accounting profession has developed its own hierarchy of indicators of fair market value to be used by accountants when they are valuing assets (and liabilities) to be listed on a financial statement (like a balance sheet or statement of assets and liabilities). Take care to note that the accounting profession uses the term "fair value" to mean what lawyers mean when lawyers say "fair market value."

In the USA, the ultimate authority on Generally Accepted Accounting Principles (GAAP) is the Financial Accounting Standards Board (FASB). In September 2006, FASB promulgated Financial Accounting Standard 157 ("FAS 157"). The document can be found at <http://www.fasb.org/pdf/fas157.pdf>. FAS 157 established a hierarchy of information to use in determining the "fair value" of assets or liabilities under Generally Accepted Accounting Practices (GAAP).

Here is the Federal Reserve Bank of New York's summary of FAS 157:

> FASB Statement No. 157, Fair Value Measurements (FAS 157), issued in September 2006, defines fair value, establishes a framework for measuring the fair value of assets and liabilities based on a three level hierarchy, and expands disclosures about fair value measurements. The FASB's three-level fair value hierarchy gives the

> highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). Level 1 inputs are quoted prices in active markets for identical assets or liabilities that the reporting branch or agency has the ability to access at the measurement date (e.g., the FFIEC 002 reporting date). Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for the asset or liability.[3]

Here is what FAS 157 itself says about the hierarchy of inputs for estimating fair value:

> **Fair Value Hierarchy**
>
> 22. To increase consistency and comparability in fair value measurements and related disclosures, the fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). In some cases, the inputs used to measure fair value might fall in different levels of the fair value hierarchy. The level in the fair value hierarchy within which the fair value measurement in its entirety falls shall be determined based on the lowest level input that is significant to the fair value measurement in its entirety. Assessing the significance of a particular input to the fair value measurement in its entirety requires judgment, considering factors specific to the asset or liability.
>
> 23. The availability of inputs relevant to the asset or liability and the relative reliability of the inputs might affect the selection of appropriate valuation techniques. However, the fair value hierarchy prioritizes the inputs to valuation techniques, not the valuation techniques. For example, a fair value measurement using a present value technique might fall within Level 2 or Level 3, depending on the inputs that are significant to the measurement in its entirety and the level in the fair value hierarchy within which those inputs fall.
>
> **Level 1 inputs**
>
> 24. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date. An active market for the asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis. A quoted price in an active market provides the most reliable evidence of fair value and shall be used to measure fair value whenever available, except as discussed in paragraphs 25 and 26.
>
> 25. If the reporting entity holds a large number of similar assets or liabilities (for example, debt securities) that are required to be measured at fair value, a quoted price in an active market might be available but not readily accessible for each of those assets or liabilities individually. In that case, fair value may be measured using an alternative pricing method that does not rely exclusively on quoted prices (for example, matrix pricing) as a practical expedient. However, the use of an alternative pricing method renders the fair value measurement a lower level measurement.
>
> 26. In some situations, a quoted price in an active market might not represent fair value at the measurement date. That might be the case if, for example, significant events (principal-to-principal transactions, brokered trades, or announcements) occur after the close of a market but before the measurement date. The reporting entity should establish and consistently apply a policy for identifying those events that might affect fair value measurements. However, if the quoted price is adjusted for new information, the adjustment renders the fair value measurement a lower level measurement.
>
> 27. If the reporting entity holds a position in a single financial instrument (including a block) and the instrument is traded in an active market, the fair value of the position shall be measured within Level 1 as the product of the quoted price

for the individual instrument times the quantity held. The quoted price shall not be adjusted because of the size of the position relative to trading volume (blockage factor). The use of a blockage factor is prohibited, even if a market's normal daily trading volume is not sufficient to absorb the quantity held and placing orders to sell the position in a single transaction might affect the quoted price.11

[FN11] The guidance in this Statement applies for positions in financial instruments (including blocks) held by all entities, including broker-dealers and investment companies within the scope of the AICPA Audit and Accounting Guides for those industries.

Level 2 inputs

28. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. If the asset or liability has a specified (contractual) term, a Level 2 input must be observable for substantially the full term of the asset or liability. Level 2 inputs include the following:

a. Quoted prices for similar assets or liabilities in active markets

b. Quoted prices for identical or similar assets or liabilities in markets that are not active, that is, markets in which there are few transactions for the asset or liability, the prices are not current, or price quotations vary substantially either over time or among market makers (for example, some brokered markets), or in which little information is released publicly (for example, a principal-to-principal market)

c. Inputs other than quoted prices that are observable for the asset or liability (for example, interest rates and yield curves observable at commonly quoted intervals, volatilities, prepayment speeds, loss severities, credit risks, and default rates)

d. Inputs that are derived principally from or corroborated by observable market data by correlation or other means (market corroborated inputs).

29. Adjustments to Level 2 inputs will vary depending on factors specific to the asset or liability. Those factors include the condition and/or location of the asset or liability, the extent to which the inputs relate to items that are comparable to the asset or liability, and the volume and level of activity in the markets within which the inputs are observed. An adjustment that is significant to the fair value measurement in its entirety might render the measurement a Level 3 measurement, depending on the level in the fair value hierarchy within which the inputs used to determine the adjustment fall.11 The guidance in this Statement applies for positions in financial instruments (including blocks) held by all entities, including broker-dealers and investment companies within the scope of the AICPA Audit and Accounting Guides for those industries.

Level 3 inputs

30. Level 3 inputs are unobservable inputs for the asset or liability. Unobservable inputs shall be used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date. However, the fair value measurement objective remains the same, that is, an exit price from the perspective of a market participant that holds the asset or owes the liability. Therefore, un-observable inputs shall reflect the reporting entity's own assumptions about the assumptions that market participants would use in pricing the asset or liability (including assumptions about risk). Unobservable inputs shall be developed based on the best information available in the circumstances, which might include the reporting entity's own data. In developing unobservable inputs, the reporting entity need not undertake all possible efforts to obtain information about market participant assumptions. However, the reporting entity shall not ignore information about market participant assumptions that is reasonably available without undue cost and effort. Therefore, the reporting entity's own data used to develop unobservable inputs shall be

> adjusted if information is reasonably available without undue cost and effort that indicates that market participants would use different assumptions.

It is evident that a valuation of a closely-held business interest is likely to rely on Level 3 inputs.

C. FAIR VALUE (DISSENTERS' RIGHTS). Many states have, through statute or case law, provided that, when a minority owner dissents from a merger or sale of the business, the dissenting minority owner is entitled to be paid the value of his proportionate interest in the company, without a minority discount or marketability discount. Examples of state law on this question are set out below. It is important to recognize that the hypothetical sale construct of fair market value forces the valuator and the court into considering minority and marketability discounts that a hypothetical buyer would take into account in determining how much to pay to take a stake in the company. In a dissenting minority liquidation, the public policy in most states is to avoid imposing these detriments of sale on the dissenting minority owner, since they would have the practical effect of unfairly transferring value from the minority dissenter to the controlling owners of the company.

1. Colorado. In *Pueblo Bancorporation v. Lindoe, Inc.*, 63 P.3d 353, 360 (Colo. 2003), the Colorado Supreme Court ruled that "the proper interpretation of fair value is the shareholder's proportionate interest in the value of the corporation. Therefore, a marketability discount should not be applied at the shareholder level to determine the 'fair value' of the dissenter's shares." The applicability of a minority discount was not raised in the case. In *Walter S. Cheesman Realty Co. v. Moore*, 770 P.2d 1308, 1311 (Colo. App. 1988), the court of appeals wrote:

> Moore contends that the term "fair value," as used in § 7–4–124, C.R.S. (1986 Repl.Vol. 3A), is not synonymous with fair market value and, thus, the trial court erred in applying a fair market value method of valuing his stock. We agree that the term "fair value" as used in the dissenters' rights statute imports a broader approach to valuation than does the term "fair market value." However, we conclude that the method of valuation employed by the trial court was, in fact, a fair value standard.

The trial judge had used a net asset value approach to valuing the company, because the company held real estate and the proposed action was to sell the assets and distribute the proceeds to the shareholders. The court of appeals approved this method of determining fair value, even though the net asset value approach is a recognized method of determining fair market value. The appellate court said:

> Here, Cheesman is a close corporation whose business is to own real estate. The major portion of its assets is real estate. Cheesman's stock has not been publicly traded and no market can accurately be constructed. The event which precipitated Moore's dissent was the corporate decision to terminate Cheesman's existence and liquidate the assets. Under these circumstances, any market value attributable to the dissenter's stock would not be reliable. *See Metrmont Materials Corp. v. Pennell*, 270 S.C. 9, 239 S.E.2d 753 (1977).
>
> Net asset value, on the other hand, is relevant and entitled to greater weight than other factors if, as in this case, the business of the corporation is substantially devoted to the mere possession of assets, such as real estate. *See Brown v. Hedahl's–Q B & R, Inc.*, 185 N.W.2d 249 (N.D.1971). Net asset value becomes especially important when, as here, the corporate change in question contemplates a complete liquidation of the assets and the corporation is dissolved.

2. California. California Corporations Code § 2000 provides:

> § 2000. Avoidance of dissolution by purchase of plaintiffs' shares; valuation; vote required; stay of dissolution proceedings; appraisal under court order; confirmation by court; appeal
>
> (a) Subject to any contrary provision in the articles, in any suit for involuntary dissolution, or in any proceeding for voluntary dissolution initiated by the vote of shareholders representing only 50 percent of the voting power, the corporation or, if it does not elect to purchase, the holders of 50 percent or more of the voting power of the corporation (the "purchasing parties") may avoid the dissolution of the corporation and the appointment of any receiver by purchasing for cash the shares

> owned by the plaintiffs or by the shareholders so initiating the proceeding (the "moving parties") at their fair value. The fair value shall be determined on the basis of the liquidation value as of the valuation date but taking into account the possibility, if any, of sale of the entire business as a going concern in a liquidation. . . .

The Court of Appeals in *Mart v. Severson*, 95 Cal.App.4th 521, 531-32, 115 Cal.Rptr.2d 717, 725-26 (Cal. App. 2002), said:

> California case law construing section 2000 approves the use of a hypothetical sale model, like the one employed by the appraisers in this case, to calculate the fair value of a corporation that can be sold as a going concern in liquidation. (*Abrams*, *supra*, 114 Cal.App.3d at pp., 248–249, 170 Cal.Rptr. 656 (*Abrams*).) In *Abrams*, the court held that appraisers who conducted a section 2000 fair value determination acted properly by assuming that the owners of the corporation would have agreed not to compete with the corporation after it was sold as a going concern in liquidation. (*Abrams*, supra, 114 Cal.App.3d 240, 170 Cal.Rptr. 656.) The court reasoned that "[s]ection 2000 states that the appraisers should consider the 'possibility of a sale as a going concern in a liquidation.' Under the statute, the appraisers are not only entitled, but are required, to consider the manner in which the parties to such a hypothetical sale are most likely to maximize their return." (*Id.* at p. 249, 170 Cal.Rptr. 656.)
>
> Case law also confirms that the potential threat of future competition by the current shareholders should not affect the fair value analysis. (*Brown v. Allied Corrugated Box. Co.* (1979) 91 Cal.App.3d 477, 154 Cal.Rptr. 170 (*Brown*)). *Brown* involved a fair value determination conducted pursuant to former section 4659, the predecessor statute to section 2000. (*Brown*, supra, 91 Cal.App.3d at p. 480, fn. 2, 154 Cal.Rptr. 170.) The *Brown* court found that the appraisers who conducted that determination erred by considering the negative impact of the fact that the shareholder who was primarily responsible for developing the corporation's goodwill had not entered into a non-compete agreement with the corporation. (*Id.* at pp. 487–488, 154 Cal.Rptr. 170.) The *Brown* court reasoned that the goodwill of a business is the indivisible property of the corporation and the value of that asset must be reflected in the fair value determination. In other words, discounting the value of the corporation because of the threat of future competition by one of its shareholders unfairly deprives the moving party of the true value of his stock.

The Court of Appeals, in *Brown v. Allied Corrugated Box Co.*, 91 Cal.App.3d 477, 487, 154 Cal.Rptr. 170, 176 (Cal. App. 1979), said:

> [T]he statutes suggest that a minority shareholder who brings an action for the involuntary dissolution of a corporation should not, by virtue of the controlling shareholder's invocation of the buy-out remedy, receive less than he would have received had the dissolution been allowed to proceed. The majority commissioners' decision here to devalue plaintiffs' shares for their lack of control was in direct conflict with this principle.

3. Colorado. In *Pueblo Bancorporation v. Lindoe, Inc.*, 37 P.3d 492, 499 (Colo. App. 2001), the court said:

> [W]e hold that in determining the "fair value" of a dissenter's shares in a closely held corporation, the trial court must first determine the value of the corporation and the pro rata value of each outstanding share of common or equity participating stock. In the case of a going concern, no minority discount is to be applied; and, except under "extraordinary circumstances," no marketability discount is to be applied.

4. Delaware. In the hallmark case of *Cavalier Oil Corp. v. Harnett*, 564 A.2d 1137, 1144 (Del. 1989), the Delaware Supreme Court held that minority dissenters were entitled to be paid their proportionate interest in the company, without minority and marketability discounts:

> A proceeding under Delaware's appraisal statute, 8 Del.C. § 262, requires that the Court of Chancery determine the "fair value" of the dissenting stockholders' shares. The fairness concept has been said to implicate two considerations: fair dealing and fair price. *Weinberger v. UOP, Inc.*,

> 457 A.2d at 711. Since the fairness of the merger process is not in dispute, the Court of Chancery's task here was to value what has been taken from the shareholder: "viz. his proportionate interest in a going concern." *Tri–Continental Corp. v. Battye*, Del. Supr., 74 A.2d 71, 72 (1950). To this end the company must be first valued as an operating entity by application of traditional value factors, weighted as required, but without regard to post-merger events or other possible business combinations. See *Bell v. Kirby Lumber Corp.*, Del. Supr., 413 A.2d 137 (1980). The dissenting shareholder's proportionate interest is determined only after the company as an entity has been valued. In that determination the Court of Chancery is not required to apply further weighting factors at the shareholder level, such as discounts to minority shares for asserted lack of marketability.

The Court in *Cavalier* made this important point regarding the fact that a hypothetical sale is not the paradigm for dissenter's rights:

> The application of a discount to a minority shareholder is contrary to the requirement that the company be viewed as a "going concern." Cavalier's argument, that the only way Harnett would have received value for his 1.5% stock interest was to sell his stock, subject to market treatment of its minority status, misperceives the nature of the appraisal remedy. *Where there is no objective market data available, the appraisal process is not intended to reconstruct a pro forma sale* but to assume that the shareholder was willing to maintain his investment position, however slight, had the merger not occurred. Discounting individual share holdings injects into the appraisal process speculation on the various factors which may dictate the marketability of minority shareholdings. More important, to fail to accord to a minority shareholder the full proportionate value of his shares imposes a penalty for lack of control, and unfairly enriches the majority shareholders who may reap a windfall from the appraisal process by cashing out a dissenting shareholder, a clearly undesirable result. [Emphasis added.]

In *In re Shell Oil Co.*, 607 A.2d 1213, 1218 (Del. Supr. 1992), the court said: "Once a shareholder perfects his right to appraisal under 8 Del.C. § 262(d), the Court of Chancery is required to determine the 'fair value' of his shares, 'exclusive of any element of value arising from the accomplishment or expectation of the merger . . . .'"

5. Illinois. The Illinois Supreme Court has ruled that trial judges may–but are not required to–apply minority and marketability discounts in minority dissent cases. See *Stanton v. Republic Bank of South Chicago*, 581 N.E.2d 678, 681 (Ill. 1991) which held:

> With respect to the Bank's argument that the minority and illiquidity discounts were arbitrary and lacked foundation, we find that the trial court acted within its discretion to apply such discounts, even though not required to do so . . . .

6. Iowa. In *Security State Bank v. Ziegeldorf*, 554 N.W.2d 884, 888-89 (Iowa), the Iowa Supreme Court said:

> Given the statutory nature of this action, the starting point in determining fair value is the definition of that term provided in chapter 490:
>
> > "Fair value", with respect to a dissenter's shares, means the value of the shares immediately before the effectuation of the corporate action to which the dissenter objects, excluding any appreciation or depreciation in anticipation of the corporate action unless exclusion would be inequitable.
>
> Id. § 490.1301(4). We have consistently said there is no predominant, perfect formula for arriving at fair value. Sieg, 512 N.W.2d at 278. Similarly, no one factor dominates the determination of fair value. Id. Nevertheless, in interpreting this statute and its predecessors, we have recognized three standard approaches to stock valuation: (1) market value of the stock; (2) net asset value of the corporation; and (3) investment value. Id.; Woodward v. Quigley, 257 Iowa 1077, 1081, 133 N.W.2d 38, 40 (1965). Within the framework of these methods of valuation are innumerable factors that bear on the value of the stock. See Davis–Eisenhart, 539 N.W.2d at 142; Sieg, 512 N.W.2d at 278. The most useful methods of valuation and the most

> relevant factors vary, depending upon the circumstances of each case. 12B Charles R.P. Keating & Jim Perkowitz–Solheim, Fletcher Cyclopedia of the Law of Private Corporations § 5906.120, at 433 (perm. ed. rev.vol.1993) [hereinafter Fletcher].

The Court went on to note that it had previously rejected applying a minority discount in a dissenter's rights case, and in this case it was rejecting the use of a marketability discount, as well. *Id.* at 889.

7. Kansas. In the dissenters' rights case of *Arnaud v. Stockgrowers State Bank of Ashland, Kansas*, 992 P.2d 216, 220 (1999), the Court said:

> To allow a discount under the facts of this case would discourage investments in corporations by persons who would acquire a minority interest because it would enable the majority shareholders to seize the minority shareholders' interest in the corporation to the extent a minority or marketability discount is allowed. Investments should be encouraged, not discouraged.

8. Kentucky. Kentucky Revised Statutes § 271B.13-010, "Definitions for subtitle," provides:

> "Fair value," with respect to a dissenter's shares, means the value of the shares immediately before the effectuation of the corporate action to which the dissenter objects, excluding any appreciation or depreciation in anticipation of the corporate action unless exclusion would be inequitable.

9. Maine. In the case of *In re Valuation of Common Stock of McLoon Oil Co.*, 565 A.2d 997, 1005 (Me. 1989), the Court said:

> Any rule of law that gave the shareholders less than their proportionate share of the whole firm's fair value would produce a transfer of wealth from the minority shareholders to the shareholders in control. Such a rule would inevitably encourage corporate squeeze-outs.

10. New Jersey. In *Lawson Mardon Wheaton, Inc. v. Smith*, 734 A.2d 738, 748 (1999), the New Jersey Supreme Court said:

> The history and policies behind dissenters' rights and appraisal statutes lead us to conclude that marketability discounts generally should not be applied when determining the "fair value" of dissenters' shares in a statutory appraisal action. Of course, there may be situations where equity compels another result. Those situations are best resolved by resort to the "extraordinary circumstances" exception in 2 ALI Principles, ¶ 7.22(a).

11. New York. In *Friedman v. Beway Realty Corp.*, 661 N.E.2d 972, 977-78 (N.Y. 1995), the New York high court ruled that it was impermissible to take a minority discount in a minority dissentors case, but that a marketability discount was allowed.

12. Texas. Texas Business Organizations Code § 10.362, "Procedure for Dissent by Shareholders as to Said Corporate Actions," provides:

> § 10.362. Computation and Determination of Fair Value of Ownership Interest
>
> (a) For purposes of this subchapter, the fair value of an ownership interest of a domestic entity subject to dissenters' rights is the value of the ownership interest on the date preceding the date of the action that is the subject of the appraisal. Any appreciation or depreciation in the value of the ownership interest occurring in anticipation of the proposed action or as a result of the action must be specifically excluded from the computation of the fair value of the ownership interest.
>
> (b) *In computing the fair value of an ownership interest under this subchapter, consideration must be given to the value of the domestic entity as a going concern without including in the computation of value any control premium, any minority ownership discount, or any discount for lack of marketability.* If the domestic entity has different classes or series of ownership interests, the relative rights and preferences of and limitations placed on the class or series of ownership interests, other than relative voting rights, held by the dissenting owner must be taken into account in the computation of value. [Emphasis added]
>
> (c) The determination of the fair value of an ownership interest made for purposes of this

> subchapter may not be used for purposes of making a determination of the fair value of that ownership interest for another purpose or of the fair value of another ownership interest, including for purposes of determining any minority or liquidity discount that might apply to a sale of an ownership interest.

13. Vermont. In *In re 75,629 Shares of Common Stock of Trapp Family Lodge, Inc.,* 725 A.2d 927, 930-31 (Vt. 1999), the Court said:

> The basic concept of fair value under a dissenters' rights statute is that the stockholder is entitled to be paid for his or her "proportionate interest in a going concern." Weinberger v. UOP, Inc., 457 A.2d 701, 713 (Del.1983); accord In re Valuation of Common Stock of McLoon Oil Co., 565 A.2d 997, 1004 (Me.1989); Friedman v. Beway Realty Corp., 87 N.Y.2d 161, 638 N.Y.S.2d 399, 661 N.E.2d 972, 976 (1995). The focus of the valuation "is not the stock as a commodity, but rather the stock only as it represents a proportionate part of the enterprise as a whole." McLoon Oil, 565 A.2d at 1004. Thus, to find fair value, the trial court must determine the best price a single buyer could reasonably be expected to pay for the corporation as an entirety and prorate this value equally among all shares of its common stock. See id. Under this method, all shares of the corporation have the same fair value. See id.
>
> A dissenting shareholder is not in the position of a willing seller, however, and thus, courts have held that fair value cannot be equated with "fair market value." See, e.g., McLoon Oil, 565 A.2d at 1005; Hansen, 957 P.2d at 41. Accordingly, methods of stock valuation used in tax, probate or divorce cases to determine fair market value are inapposite to the determination of "fair value" under the dissenters' rights statute. See McLoon Oil, 565 A.2d at 1004 (stock valuation method used in tax and probate cases not applicable); Hansen, 957 P.2d at 40 (fair market valuation for purposes of property distribution in marriage distinguishable from fair value for purposes of dissenters' rights). A shareholder who disapproves of a proposed merger gives up the right of veto in exchange for the right to be bought out at "fair value," not at market value. See Hansen, 957 P.2d at 41.

The court also rejected the argument that minority dissenters should be charged with the tax liability arising when the corporation had to sell assets to raise the money to pay the minority dissenter, on the ground that the dissenters' rights statute requires the court to value the corporation as "a going concern." *Id.* at 934. The court also refused to apply the formula in a buy-sell agreement which did not expressly say that the formula would apply to a buy-out of a dissenter's rights. *Id.* at 933-35. The court also upheld the trial judge decision to apply a control premium in valuing the entity as a whole: "Under the circumstances presented here, there was no legal error in applying a control premium to adjust a valuation that reflected publicly traded minority interests." *Id.* at 934-35. This adjustment, more accurately called a "control adjustment," is discussed in Section VII.B below.

14. Wyoming. Wyoming Statutes Annotated § 17–16–1301(a)(iv), "Definitions," provides:

> (iv) "Fair value" means the value of the corporation's shares determined:
>
> > (A) Immediately before the effectuation of the corporate action to which the shareholder objects;
> > (B) Using customary and current valuation concepts and techniques generally employed for similar businesses in the context of the transaction requiring appraisal; and
> > (C) Without discounting for lack of marketability or minority status except, if appropriate, for amendments to the articles pursuant to W.S 17-16-1302(a)(v).

In *Brown v. Arp and Hammond Hardware Co.*, 141 P.3d 673, 687 (Wyo. 2006), the Wyoming Supreme Court said:

> We join the majority of courts in holding, as a matter of law, that a minority discount may not be applied in determining the fair value of a dissenting shareholder's interest. . . . . In a dissenters' rights appraisal, the focus of the valuation "is not the stock as a commodity, but rather the stock only as it represents a proportionate part of the enter-

prise as a whole."

The Court also rejected a 5% reduction for trapped-in capital gains as violating the standard of fair value. *Id.* at 687-88.

15. What's Fair? A Mercer Capital article[4] poses the question of "What's Fair?" in the minority dissent and appraisal cases." To explore that topic, the article poses three questions. Number 1–should a dissenting minority shareholder receive its proportional share as if the entire company were to be sold? If so, the minority owner is participating in part of the control value, which is a right it did not have before the transaction triggering dissent rights. *Id*. p. 2. Number 2–should a dissenting minority shareholder receive a value that presumes that the minority interest was as marketable as a controlling interest? That, too is an attribute the minority interest did not have prior to the triggering event. Number 3–Should the dissenting minority shareholder receive only what could have been realized by the sale of the minority interest to a buyer who would discount the price to reflect a lack of control and a lack of liquidity? That would prematurely force a discount on the dissenting shareholder's interest that would not have been effectuated but for the controlling owner's desire to force the sale. Mercer Capital, *Fair Value is Redefined by the Mississippi Legislature* (2008).[5]

D. ANALOGY TO DIVORCE. Some people argue that the same policy that applies to dissenters' rights should apply to a spouse who is forced, by the divorce process, to sell his or her marital interest in a going business. In the case of *In re Marriage of Thornhill*, 232 P.3d 782 (Colo. 2010), the Colorado Supreme Court rejected a spouse's request to extend a prior ruling that a marketability discount could not be applied in dissenting minority, because the earlier case involved statutory interpretation. The court said: "[W]e decline to adopt a per se rule against marketability discounts and instead hold that trial courts may, in their discretion, choose to apply such discounts when valuing an ownership interest in a closely held corporation in a divorce proceeding." The Arizona Court of Appeals rejected a spouse's effort to extend the "Fair Value" rule to a closely-held business in a divorce, in *Mazzocco v. Mazzocco*, 2009 WL 151566, *2 (Ariz. App. 2009). The Washington Court of Appeals accepted the analogy between a divorcing spouse and dissenting shareholder, in *Baltrusis v. Baltrusis*, 113 Wash. App. 1037, 2002 WL 31058365 (Wash. App. 2002) (unpublished opinion), and rejected discounts where the trial court ordered the wife to buy out the husband's minority interest in a company controlled by the wife's family.

E. INTRINSIC VALUE.

1. What is Intrinsic Value? Ibbotson defines "Intrinsic Value" as "the value that an investor considers, on the basis of an evaluation or available facts, to be the 'true' or 'real' value that will become the market value when other investors reach the same conclusion." IBBOTSON SBBI 2011 VALUATION YEARBOOK p. 12. The Intrinsic Value of a company is the value of a company determined from an analysis of its true value, as distinguished from the value that is recognized by others, as reflected in the marketplace. Intrinsic Value involves all aspects of the business, tangible and intangible. Intrinsic Value may or may not equate to Fair Market Value, since Fair Market Value represents the prevailing view of value of the business, or its value in exchange and not its actual value.

Warren Buffett described Intrinsic Value in this way:

> Intrinsic value is an all-important concept that offers the only logical approach to evaluating the relative attractiveness of investments and businesses. Intrinsic value can be defined simply: It is the discounted value of the cash that can be taken out of a business during its remaining life.
> * * *
> The calculation of intrinsic value, though, is not so simple. As our definition suggests, intrinsic value is an estimate rather than a precise figure, and it is additionally an estimate that must be changed if interest rates move or forecasts of future cash flows are revised. Two people looking at the same set of facts, moreover – and this would apply even to Charlie and me – will almost inevitably come up with at least slightly different intrinsic value figures. That is one reason we never give you our estimates of intrinsic value. What our annual reports do supply, though, are the facts that we ourselves use to calculate this value.

Warren E. Buffett, *An Owner's Manual* sent to Berkshire's Class A and Class B shareholders (undated).[6]

From an investment perspective regarding pu-

blicly-traded stock, Intrinsic Value is the underlying value of a company divorced from its market value or share price. It is based on both quantitative factors (capital, earnings, revenue) and qualitative factors (management quality, intellectual capital, past record). The Intrinsic Value of a company may be lower (or higher) than its present market value on an exchange, indicating that the market has undervalued (or overvalued) the company. Intrinsic Value is most often determined using what is called "Fundamental Analysis." The theory of Fundamental Analysis holds that an individual security has an Intrinsic Value (equilibrium price) that depends on the security's earning potential. Eugene F. Fama, *Random Walks in Stock-Market Prices* 3 (1965).[7] This earning potential depends on fundamental factors such as the quality of management, outlook for the industry, outlook for the economy, etc. *Id*. p. 3. Fundamental Analysis proceeds through the study of an investment by looking at the firm's (1) competitive advantage, (2) earnings growth, (3) sales revenue growth, (4) market share, (6) financial reserves, and (6) quality of management, all as reflected in its financial statements.[8] Through this form of analysis the investor can determine whether the current market price of the security is above or below its Intrinsic Value. Because the actual price tends to move toward Intrinsic Value over time, the investment can be made so as to profit when the market price eventually moves to Intrinsic Value. *Id.* at 3. Revenue Ruling 59-60 describes the way to arrive at Fair Market Value for privately-owned company stock that amounts to Fundamental Analysis. If you stop short of envisioning a sale to a third party, the Rev. Rule 59-60 approach leads to Intrinsic Value.

F. INVESTMENT VALUE. "Investment Value" is the value of an asset to a particular investor, based on that investor's investment requirements. Investment Value can also be seen as the value of a business to a specific buyer, as distinguished from a hypothetical buyer. Under prevailing conceptions, a Fair Market Value determination cannot be based on Investment Value because Fair Market Value assumes a hypothetical investor, not a particular investor.

Many readers will no doubt have experienced the frustration of being forced, by the hypothetical buyer construct of the Fair Market Value concept, to ignore a possible or even likely sale of the company to a strategic buyer, in a divorce-related valuation.

G. LIQUIDATION VALUE. "Liquidation Value" describes the total value that could be realized if all of a company's physical assets were sold and the debts paid off and the business terminated. Liquidation value is determined by the likely proceeds from the sale of assets such as the real estate, fixtures, equipment, and inventory, less the expenses of selling the assets and closing the business, less the outstanding debt. Residual intangible assets (including goodwill) are not included in a company's liquidation value.[9] Shannon Pratt distinguishes "value as an orderly disposition" from "value as a forced liquidation." Shannon Pratt, VALUING A BUSINESS 47-48 (5th ed. 2008). Liquidation destroys any going concern value or enterprise goodwill that may exist. However, it always represents the minimum value for the company. See Pablo Fernández, *Company Valuation Methods: The Most Common Errors in Valuation* (2007).[10]

H. BOOK VALUE. "Book Value" is the value of a shareholder's equity as reflected on a company's balance sheet. It is also the difference between assets and liabilities, again on the balance sheet. Book Value is constructed from the historical purchase price of the company's assets, less depreciation. Depreciation is a creature of tax law, and does not necessarily match the economic or functional obsolescence of the improvements or equipment that are being depreciated. Book Value can vary from actual value when assets have appreciated in value since being purchased, or when depreciable assets have declined in value more or less than the tax law assumes. Book Value includes some intangible assets, if they are separately identifiable, but almost never reflects enterprise goodwill, except for the enterprise goodwill of businesses that have been purchased for more than the value of their identifiable tangible and intangible assets. Book Value also omits self-created intangible value, which accounting principles require to be expensed rather than booked as an asset. It is possible that Book Value could reflect the fair market value of a business, but that would usually occur only when the business is a passive vehicle for holding saleable assets, and even then the assets need to be adjusted to market value from their balance sheet values.

Accountants have developed the term "adjusted book value," to reflect a balance sheet with values that are marked to market, meaning that the individual asset values have been adjusted to their fair market values.

While a marked-to-market balance sheet is more accurate than a balance sheet based on historical cost, even a marked-to-market balance sheet omits unidentified intangible assets that are self-generated (and are therefore expensed, not purchased, and are neither listed at their purchase price nor at market value).

In *Bendalin v. Delgado*, 406 S.W.2d 897, 900-01 (Tex. 1966), the Texas Supreme Court said: "Book value is entitled to little, if any, weight in determining the value of corporate stock, and many other factors must be taken into consideration." However, in distinguishing a number Texas cases disparaging book value, the court of appeals in *Sears Roebuck & Co. v. Dallas Cent. Appraisal Dist.*, 53 S.W.3d 382, 390 (Tex. App.--Dallas 2000 pet denied), noted that"[n]one of these cases involve the valuation of merchandise inventory and there is no indication that the book value at issue in any of these cases was calculated in accordance with GAAP." The Dallas Court of Appeals rejected a blanket assertion that Book Value was no evidence of market value. The Court said:

> In some circumstances, book value of inventory may be probative of market value by either serving as some indication of market value or by being equivalent to market value. . . . In other circumstances, the two values may be entirely unrelated. . . . Whether the book value of inventory is in fact indicative of or equivalent to its market value is an issue to be determined by the trier of fact on a case by case basis. We decline Sears's invitation to hold that, as a matter of law, inventory book value derived according to generally accepted accounting principles is not equal to market value. [Citations omitted.]

I. GOING CONCERN VALUE. "Going Concern Value" is the value of a company viewed as an operating enterprise. A profitable, functioning business is made up of individual assets, but the assets taken as a whole are worth more when they are assembled into a functioning business than if each asset were to be valued separately. Going Concern Value at a minimum reflects the cost and time it would take for someone to assemble a going concern from replacement assets. But if the business is profitable, the Going Concern Value reflects not only the cost of duplicating the business, but also the proven ability of the business to make a profit for its owners. The.Free.Dictionary.com defines Going Concern Value as: "the value of a business in operation, taking into account the goodwill and the value of the income, in addition to hard assets, such as real estate and equipment."[11] The Pennsylvania Supreme Court contrasted going concern value and goodwill in this way: "Going-concern value refers generally to the ability of a business to generate income without interruption, even where there has been a change in ownership, whereas goodwill represents a preexisting relationship arising from a continuous course of business which is expected to continue indefinitely." *Butler v. Butler* 663 A.2d 148, 151 n. 9 (Pa. 1995).

J. SENTIMENTAL VALUE. The Texas Supreme Court has recognized the right of persons to recover for the loss of the sentimental value of personal property. In *City of Tyler v. Likes*, 962 S.W.2d 489, 496-97 (Tex. 1997), the Supreme Court said:

> While few persons suffering serious bodily injury would feel made whole by the mere recovery of medical expenses and lost wages, many whose property has been damaged or destroyed will be entirely satisfied by recovery of its value. As a rule, this is measured by the property's market value or the cost of repairing it. *See Pasadena State Bank v. Isaac*, 149 Tex. 47, 228 S.W.2d 127, 128–29 (1950). In some cases, however, the damaged property consists of "articles of small market value" that "have their primary value in sentiment." *Brown v. Frontier Theatres, Inc.*, 369 S.W.2d 299, 304–05 (Tex. 1963). Such property can only be adequately valued subjectively; yet, the owner should still be compensated. As the Court discussed in *Brown*, special rules apply in a suit to recover for the loss of property that is primarily of sentimental value:
>
> > It is a matter of common knowledge that items such as these generally have no market value which would adequately compensate their owner for their loss or destruction. Such property is not susceptible of supply and reproduction in kind, and their greater value is in sentiment and not in the market place. In such cases the most fundamental rule of damages that every wrongful injury or loss to persons or property should be adequately and reasonably compensated requires the allowance of damages in com-

pensation for the reasonable special value of such articles to their owner taking into consideration the feelings of the owner for such property.

K. STANDARD OF VALUE FOR DIVORCE. With 51+ different sets of divorce laws in America and its territories and protectorates, it should come as no surprise that a variety of approaches exist to valuing a closely-held business interest in a divorce. A great number of states ascribe to a fair market value standard, but in practice they give trial judges great freedom to arrive at any value that finds support in the evidence. In a number of cases, where a court most probably arrived at an intrinsic value and not a value upon sale, the court's decision was upheld as being within its discretion.

Alabama. Alabama is not a Fair Market Value state. In *Grelier v. Grelier*, 44 So.3d 1092, 1097 (Ala. App. 2009), the court said:

> Alabama law has not adopted a "fair market value" standard for assessing marital property. Rather, under Alabama law, a trial court must determine the value of property with the only limitation being that the value must be equitable under the circumstances of the particular case. *See generally Yohey v. Yohey*, 890 So.2d 160 (Ala. Civ. App. 2004). That standard implies that the valuation must be fair to all parties concerned. See generally Black's Law Dictionary 578 (8th ed.2004) (defining "equitable distribution" as the "fair ... allocation" of marital property). In cases in which a divorce court does not contemplate the sale of a business in which one of the spouses holds a minority interest but, instead, intends that the business shall remain a going concern, it makes little sense to determine fair value by the measuring stick of a hypothetical sales price. That methodology would artificially reduce the value of the marital asset in almost every case, which would be unfair, i.e., inequitable, to the party receiving only a portion of the reduced value or the property equivalent to that reduced value but would be advantageous to the party retaining the business interest, including its actual value to him or her as the holder.

Arizona. Arizona uses fair market value in divorces. In *Mazzocco v. Mazzocco*, 2009 WL 151566, *2 (Ariz. App. 2009), the Arizona Court of Appeals held that it was not error for a trial court to value a closely-held business at fair market value (with a marketability discount) as opposed to fair value (i.e., without a marketability discount).

Arkansas. Arkansas has a statute that requires, in a divorce, that the court determine the fair market value of "stocks, bonds, or other securities issued by a corporation, association, or government."A.C.A. § 9-12-315. The court of appeals in *Cole v. Cole*, 82 Ark. App. 47, 110 S.W.3d 310, 313 (Ark. App. 2003), said: "Arkansas law requires the use of the 'fair market value' standard for valuing businesses in a marital property context." For this reason, courts in Arkansas divorces apply marketability and minority discounts. *Winn v. Winn Enters., Ltd. P'ship*, 265 S.W3d 125, 128-29 (2007) (contrasting divorce value from value of dissenting minority shareholders).

California. California does not require its divorce judges to use the Fair Market Value standard in valuing a closely held business interest upon divorce. Investment value is an acceptable measure of value. *In re Marriage of Hewitson*, 142 Cal.App.3d 874, 886-87, 191 Cal.Rptr. 392, 400-01 (Cal. App. 2nd Dist. 1983) ("We hold, therefore, that the determination of the value of Ronan by its investment value, as distinguished from its market value, will satisfy the mandate of Civil Code section 4800, subdivision (a)).

Colorado. In *In re Marriage of Thornhill*, 232 P.3d 782, 783 (Colo. 2010), the Colorado Supreme Court said it was within the discretion of the court to apply a marketability discount to an ownership interest in a privately-owned company, thus suggesting a fair market value standard.

Connecticut. In *Turgeon v. Turgeon*, 460 A.2d 1260, 1265 (Conn. 1983), the Supreme Court indicated that a privately-owned company would be valued at fair market value for purposes of divorce.

Delaware. In *E.E.C. v. E.J.C.*, 457 A.2d 688, 694 (Del. 1983), the Delaware Supreme Court held it would not be proper to value husband's solo law practice by reference to future income. Instead, the business should be valued based on net assets.

Florida. *Christians v. Christians*, 732 So.2d 47, 47-48

(Fla. App. 1999): "The valuation of a business is calculated by determining the fair market value of the business, which is the amount a willing buyer and a willing seller would exchange assets absent duress. . . . Typically, fair market value measures the value of the assets of the business plus the value of goodwill."

Hawaii. *Antolik v. Harvey*, 761 P.2d 305, 318-19 (Haw. App. 1988): "When dividing and distributing the value of the property of the parties in a divorce case, the relevant value is, as a general rule, the fair market value (FMV) of the parties' interest therein on the relevant date. We define the FMV as being the amount at which an item would change hands from a willing seller to a willing buyer, neither being under any compulsion to buy or sell and both having reasonable knowledge of the relevant facts. . . . We disagree with the position advanced by Wife, and *In re Marriage of Fleege*, 91 Wash.2d 324, 588 P.2d 1136 (1979), that the relevant value of a sole professional business is its value to the professional who operates it. Other assets are, as a general rule, valued at their FMV. We know of no valid reason why sole professional businesses should not be valued at their FMVs."

Idaho. In *McAfee v. McAffee*, 971 P.2d 734, 739 (Idaho App. 1994), the court of appeals affirmed a trial court's valuation based on "net fair market value" when the closely-held business had no profits to capitalize and was not a going business.

Illinois. In the case of *In re Marriage of Melnick*, 468 N.E.2d 490, 495 (Ill. App. 1984), the court said:

> The worth of a corporation's stock is usually its market value, which is defined as "the price which a willing purchaser will pay to a willing seller in a voluntary transaction" . . . . Valuation based upon market value should, of course, be determined as accurately as is professionally possible using such business and accounting expertise as may be available. Although there may be no established market for the stock of a closed corporation, "courts have recognized an ascertainable value" for such shares. *In re Marriage of Reib* (1983), 114 Ill.App.3d 993, 1000, 70 Ill.Dec. 572, 578, 449 N.E. 919, 925.

In *In re Marriage of Mitchell* (1981), 103 Ill.App.3d 242, 248, 58 Ill.Dec. 684, 688, 430 N.E.2d 716, 720, the court held that "precise rules for determining the value of closely held stock cannot be laid down but that every relevant evidential fact entering into the value of the corporate property reflecting itself in the worth of the corporate stock should be considered, including past sales if relevant."

In *In re Marriage of Grunsten*, 709 N.E.2d 500, 601 (Ill. App. 1999), the Illinois court of appeals held that a closely-held business should be valued based on fair market value.

Indiana. In *Trost-Steffen v. Steffen*, 772 N.E.2d 597, 508 (Ind. App. 2002), the appellate court affirmed a fair market value found for a closely-held business.

Iowa. In *In re Marriage of Hogeland*, 448 N.W.2d 678, 681 (Iowa App. 1989), the court of appeals said: "Generally, stock should be valued at market value if the market value can be ascertained."

Kansas. In *Bohl v. Bohl*, 657 P.2d 1106, 1108-09 (Kan. 1983), the appellate court affirmed a fair market value determination of a closely-held business.

Mississippi. Fair Market Value was used to value a business in *Broome v. Broome,* 75 So.3d 1132, 1142 (Miss. App. 2011).

Missouri. In *Wood v. Wood*, 2011 WL 5926162, *1-2 (Mo. App. 2011), the Missouri Court of Appeals held that a closely-held business should be value for divorce based on fair market value.

New York. In *Bricker v. Bricker*, 893 N.Y.S.2d 128, 130 (N.Y. App. Div., 2010), the court said: "There is no uniform rule for fixing the value of a going business and the valuation of a business for equitable distribution purposes is an exercise properly with the fact-finding power of the trial court, guided by expert testimony."In *Sieger v. Sieger*, 859 N.Y.S.2d 240, 242 (N.Y. App. Div. 2008), the court said: "It is well-established that the determination of the value of business interests is a function properly within the fact-finding power of the court . . . . Where the determination as to the value of a business is within the range of the testimony presented, it will not be disturbed on appeal if it rests primarily on the credibility of expert witnesses and their valuation techniques . . . ."

New Jersey. In *Brown v. Brown*, 792 A.2d 463, 470-91 (N.J. App. 2002), the court of appeals used a Fair Market Value standard of value in connection with a privately-owned business in a divorce.

New Mexico. In *Trego v. Scott*, 961 P.2d 168, 172-73 (N.M. App. 1998), fair market value was used in a divorce calculation. In *Smith v. Smith*, 837 P.2d 869, 874 (N.M. App. 1992), the court affirmed the valuation of a business at fair market value.

North Carolina. *Walter v. Walter*, 561 S.E.2d 571, 577 (2002) ("In an equitable distribution proceeding, the trial court is to determine the net fair market value of the property based on the evidence offered by the parties").

North Dakota. In *Nuveen v. Nuveen*, 795 N.W.2d 308, 313 (N.D. 2011), the Supreme Court of North Dakota said: "The fair market value of a business is ordinarily the proper method for valuing property in a divorce. . . . Fair market value is the price a buyer is willing to pay and the seller is willing to accept under circumstances that do not amount to coercion." [Citations omitted.]

Ohio. *Cronin v. Cronin*, 2005 WL 188191, *2 (Ohio App. 2005): "[T]he trial court is not bound to any particular valuation method. *James*, *supra*. Moreover, income methods have been used by courts to value businesses. . . . The trial court has broad discretion in determining which expert to believe in assigning a value of marital property." [Citation omitted.]

Oklahoma. In *Mocnik v. Mocnik*, 838 P.2d 500, 505 (Okl. 1992), the Supreme Court said that goodwill of a business must be valued based on a contract or based on fair market value.

Pennsylvania. *Verholek v. Verholek*, 741 A.2d 792, 795-96 (Pa. Super.1999): " Husband's second and third arguments relate to the trial court's valuation of the 310 shares of Cattron stock. The Divorce Code does not contain a specific method for valuing assets. The trial court must exercise its discretion and rely on the estimates, inventories, records of purchase prices, and appraisals submitted by the parties. . . . The court is free to accept all, none, or portions of the testimony regarding the true and correct value of property. . . . Additionally, the court may reject evidence offered by both parties in favor of its own valuation method." [Citations omitted.]

South Carolina. In *Browder v. Browder*, 675 S.E.2d 820, 825 (S.C. App. 2009), the court said: " "In making an equitable distribution of marital property, the court must . . . . determine the fair market value of the property . . . ." *Accord*, *Perry v. Estate of Perry*, 473 S.E.2d 860, 863 (S.C. App. 1996) ("In dividing marital property, the family court must identify both real and personal property and determine the fair market value of the identified property").

Tennessee. The court in *Kerce v. Kerce*, 2003 WL 22037526, *3-4 (Tenn. App. 2003), recognized the "Delaware Block Method" and Rev. Ruling 59-60 as valid ways to value a privately-owned business. In *Roberts v. Roberts*, 2010 WL 4865441, *5 (Tenn. App. 2010), the court did not expressly endorse a standard of value for a privately-owned business; the court said: "The value of a marital asset is determined by considering all relevant evidence regarding value. The burden is on the parties to produce competent evidence of value, and the parties are bound by the evidence they present. Thus the trial court, in its discretion, is free to place a value on a marital asset that is within the range of the evidence submitted."

Texas. It is unclear from Texas appellate opinions whether a Texas court must use the Fair Market Value standard in valuing a business upon divorce. The case of *R.V.K. v. L.L.K.*, 103 S.W.3d 612, 618 (Tex. App.--San Antonio 2003, no pet.), explicitly said that the value to be accorded a business that is to be divided in a divorce proceeding is "market value." However, that language is in a plurality opinion, not a majority opinion, and as such is not binding legal precedent. Other Texas cases say that closely-held business interests have no market value, and that the court must use some other measure of value. *See Mandell v. Mandell*, 310 S.W.3d 531, 536-37 (Tex. App.--Fort Worth 2010, pet. denied) ("When the sale of stock is restricted by a requirement that the shares be offered first to the corporation or to other shareholders, then essentially the fair market value of the stock is zero. . . . In this situation, the parties may show the actual value of the property interest to the owner."); *Elliott v. Whitten*, 2004 WL 2115420 at *12 (Tex. App.--Houston [1st Dist.] 2004, pet. denied) (memorandum opinion) ("There can be no cash market value of corporate stock where it has not been sold in sufficient quantities to establish a prevailing sales

price").

Vermont. In *Goodrich v. Goodrich*, 613 A.2d 203, 204-06 (Vt. 1992), the Supreme Court affirmed a valuation of a privately-held company based on fair market value, and endorsed the Revenue Ruling 59-60 approach to valuation.

Virginia. The Supreme Court of Virginia has rejected a "willing buyer/willing seller" standard of value for divorce. In *Owens v. Owens*, 589 S.E.2d 488, 493 (Va. 2003), the Court stated:

> Virginia's equitable distribution law employs the concept of "intrinsic value" when determining the worth of certain types of marital assets. *See Howell v. Howell*, 31 Va.App. 332, 339, 523 S.E.2d 514, 517 (2000). "Intrinsic value is a very subjective concept that looks to the worth of the property to the parties." *Id.* It cannot be limited by objective criteria commonly used in open market transactions:
>
> > The item may have no established market value, and neither party may contemplate selling the item; indeed, sale may be restricted or forbidden. Commonly, one party will continue to enjoy the benefits of the property while the other must relinquish all future benefits. Still, its intrinsic value must be translated into a monetary amount. The parties must rely on accepted methods of valuation, but the particular method of valuing and the precise application of that method to the singular facts of the case must vary with the myriad situations that exist among married couples.
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> *Id.* at 339, 523 S.E.2d at 517–18; *Bosserman v. Bosserman*, 9 Va.App. 1, 6, 384 S.E.2d 104, 107 (1989) (observing that Virginia courts "must determine from the evidence that value which represents the property's intrinsic worth to the parties").

In *Hoebelheinrich v. Hoebelheinrich*, 600 S.E.2d 152, 154-55 (Va. App. 2004), the court said:

> In Virginia, the courts look to the intrinsic value of the property to the parties to measure value for equitable distribution purposes. . . . "Intrinsic value is a very subjective concept that looks to the worth of the property to the parties and their marriage." . . . As a consequence of the subjective nature of intrinsic value, "the particular method of valuing and the precise application of that method to the singular facts of the case . . . must vary with the myriad situations that exist among married couples." [Citations omitted.]

West Virginia. In *Tankersley v. Tankersley*, 390 S.E.2d 826, 828 (1990), the Supreme Court of West Virginia said: "The concept of 'net value' is rather simple when a court is valuing a single asset which has a valid lien or encumbrance. In these situations, the net value equals the fair market value of the property less the amount of any lien or encumbrance." In *Durnell v. Durnell*, 460 S.E. 710, 717 (W. Va. 1995), the Supreme Court affirmed a net asset approach to valuing a medical practice.

Wisconsin. In *McReath v. McReath*, 335 Wis.2d 643, 800 N.W.2d 399, 408 (Wis. 2011), the Supreme Court of Wisconsin said:

> Property valued for the purpose of dividing the marital estate should be valued at its fair market value. . . . "Fair market value is the price that property will bring when offered for sale by one who desires but is not obligated to sell and bought by one who is willing but not obligated to buy." [Citations omitted.]

III. STANDARDS OF LEGAL ADMISSIBILITY. The state court standards for admissibility of expert witness testimony generally fall into two camps: general acceptance (*Frye*) and scientific reliability (*Daubert*).

A. GENERAL ACCEPTANCE. In 1923, the Court of Appeals for the District of Columbia decided *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). In *Frye*, the defendant sought exoneration based on passing a blood pressure deception test, conducted on a precursor to the polygraph. *Id.* 1014. In a two-page opinion, the appellate court disposed of the case in this way:

> Counsel for defendant, in their able presentation of the novel question involved, correctly state in their brief that no cases directly in point have been found. The broad ground, however, upon which

they plant their case, is succinctly stated in their brief as follows:

> 'The rule is that the opinions of experts or skilled witnesses are admissible in evidence in those cases in which the matter of inquiry is such that inexperienced persons are unlikely to prove capable of forming a correct judgment upon it, for the reason that the subject-matter so far partakes of a science, art, or trade as to require a previous habit or experience or study in it, in order to acquire a knowledge of it. When the question involved does not lie within the range of common experience or common knowledge, but requires special experience or special knowledge, then the opinions of witnesses skilled in that particular science, art, or trade to which the question relates are admissible in evidence.'

Numerous cases are cited in support of this rule. Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.

We think the systolic blood pressure deception test has not yet gained such standing and scientific recognition among physiological and psychological authorities as would justify the courts in admitting expert testimony deduced from the discovery, development, and experiments thus far made.

Id. at 1014. *Frye* was taken to establish the "general acceptance test," that scientific expert testimony was admissible only if it relied on principles that had been generally accepted. After *Frye*, some courts struggled against this popularity-based litmus test, and instead looked past general acceptance to the more fundamental question of the reliability of the underlying principles relied upon by the expert. Black, *A Unified Theory of Scientific Evidence*, 56 FORDHAM L.REV. 595, 644 n. 268 & 269 (1988).

B. DAUBERT RELIABILITY. In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S. Ct. 2786, 125 L.Ed.2d 469 (1993), the U.S. Supreme Court held that Federal Rule of Evidence 702 overturned earlier case law requiring that expert scientific testimony must be based upon principles which have "general acceptance" in the field to which they belong. *See Frye v. U.S.*, 293 F. 1013 (D.C. Cir. 1923) (establishing the "general acceptance" test for scientific expert testimony). Under Rule 702, the expert's opinion must be based on "scientific knowledge," which requires that it be derived by the scientific method, meaning the formulation of hypotheses which are verified by experimentation or observation. The Court used the word "reliability" to describe this necessary quality. The U.S. Supreme Court's opinion in *Daubert* applies in all federal court proceedings.

In *Daubert*, the Supreme Court gave a non-exclusive list of factors to consider on the admissibility of expert testimony in the scientific realm: (1) whether the expert's technique or theory can be or has been tested; (2) whether the technique or theory has been subject to peer review and publication; (3) the known or potential rate of error of the technique or theory when applied; (4) the existence and maintenance of standards and controls; and (5) whether the technique or theory has been generally accepted in the scientific community.

In *Kuhmo Tire Co. v. Carmichael*, 526 U.S.137, 11 S. Ct. 1167, 143 L.Ed.2d 238 (1999), the Supreme Court said that the reliability and relevancy principles of *Daubert* apply to all experts, not just scientists, and where objection is made the court must determine whether the evidence has "a reliable basis in the knowledge and experience of [the relevant] discipline." The trial court has broad discretion in determining how to test the expert's reliability. *Id. Kuhmo Tire* acknowledged that the list of factors in *Daubert* did not apply well to certain types of expertise, and that other factors would have to be considered by the court in such instances. The admissibility criteria for non-scientific fields might be summarized: (1) the opinion must be based on sufficient facts or data; (2) the testimony must be the product of reliable principles and (3) the expert must reliably apply these principles and methods to the facts of the case. Carl Lloyd Sheeler, *Business Valua-*

tion, p. 70.[12]

Thus, under the Federal Rules of Evidence, the court must determine the appropriate criteria of reliability and relevancy for all experts who testify, and as a preliminary matter must determine that those criteria are met before the expert is permitted to testify. Many states have adopted the Federal Rules of Evidence as their states rules. Many states have therefore adopted *Daubert* as the standard for admissibility of expert testimony in their courts. *Daubert*, however was a "hard science" case, based on scientific techniques. Business valuation is not a science at all, so *Kuhmo Tire* would seem to be the more relevant approach to determining the admissibility of business valuation expert testimony. *Kuhmo Tire* utilizes as the standard of admissibility the "knowledge and experiences of [the relevant] discipline."

So in a business valuation case the trial judge must evaluate the admissibility of expert opinion on business valuation in light of the knowledge and experience of the discipline. That draws the judges into business valuation theory and business valuation practices. Thus, professional standards in the business valuation community in essence become legal standards.

An application of these evidentiary principles to accounting is reflected in *Garnac Grain Co., Inc. v. Blackley*, 932 F.2d 1563 (8th Cir. 1991). There a corporate client sued its auditors for negligently failing to conduct audits in accordance with Generally Accepted Auditing Standards (GAAS). The corporation hired a new auditing firm to review the old auditing firm's work, and the new auditing firm concluded that the old auditors failed to adhere to GAAS during the fiscal year ending 1-1-82. At trial, plaintiff offered the testimony of an accounting professor who opined that the auditors violated GAAS for a period of six years, not just one year. Although the second auditing firm spent 600 hours in arriving at its conclusion as compared to the 20 hours spent by the professor, and although the second auditors looked at the first auditors' work papers while the professor looked only at the second auditors' report before arriving at his opinion, the appellate court ruled that the professor's opinion was admissible under Fed. R. Evid. 702 and 703. The appellate court noted that the professor later reviewed the first auditors' work papers and reaffirmed his earlier conclusion. Note that in *Garnac Grain Co.*, the legal standard of care was taken to be GAAS; the issue was whether the plaintiff's experts had the qualifications and used the proper methodology in determining whether the defendant breached that standard of care.

C. WHERE THE STATES FALL. While many states have rules of evidence that are identical to the Federal Rules of Evidence, and have endorsed the *Daubert* reliability standard for the admissibility of expert testimony, a number of states have rejected *Daubert*. For example, the **Alabama** Supreme Court, in *Vesta Fire Ins. Corp. v. Milam & Co. Const., Inc.*, 901 So.2d 84, 106 (Ala. 2004), said: "This Court has not yet explicitly adopted the *Daubert* test. . . . Further, we decline to adopt *Daubert* under the circumstances of this case." In *Logerquist v. McVey*, 1 P.3d 113, 132 (Ariz. 2000), the **Arizona** Supreme Court rejected *Daubert*, saying: "We thus conclude that we should not and cannot adopt the *Joiner* and *Kumho* interpretation of *Daubert* but will continue to apply Ariz. R. Evid. 702 as written." In *People v. Leahy*, 882 P.2d 321, 332 (Cal. 1994), the **California** Supreme Court held that "the *People v. Kelly* formulation survived *Daubert* in this state, and that none of the above described authorities critical of that formulation persuades us to reconsider or modify it at this time." The **Florida** Supreme Court rejected *Daubert* and reaffirmed Florida's reliance on the *Frye* standard in *Brim v. State*, 695 So. 2d 268 (Fla. 1997). The **Georgia** Court of Appeals, in *Dailey v. State*, 271 Ga.App. 492, 610 S.E.2d 126, 129 (Ga. App. 2005), said: "This court is not, of course, bound by *Daubert*. Indeed, we have been consistent in declining to apply the *Daubert* standard." In *Weeks v. Eastern Idaho Health Services*, 153 P.3d 1180, 1183 (Idaho 2007), the **Idaho** Supreme Court said that Idaho "has not adopted the *Daubert* standard for admissibility of an expert's testimony but has used some of *Daubert*'s standards in assessing whether the basis of an expert's opinion is scientifically valid.". In *People v. Basler*, 710 N.E.2d 431, 434 (Ill. App. 5 Dist. 1999), an **Illinois** Court of Appeals said: "the use of the *Frye* standard in federal courts was overruled by *Daubert* . . . , but *Frye* remains the law in Illinois." The **Indiana** court of appeals, in *Turner v. State*, 953 N.E.2d 1039, 1050 (Ind. Ct. App. 2011), said that, "in light of the differences between Indiana Rule 702 and Federal Rule 702, we have previously declined to follow *Kumho Tire* in applying the *Daubert* reliability analysis to non-scientific expert testimony." In *Clemons v. State*, 392 Md. 339, 896 A.2d 1059, 1065 (Md. 2006), the **Maryland** Supreme Court said: "Maryland has continued to adhere

to the *Frye* test rather than the *Daubert* standard." Although **Missouri** has adopted evidence rules similar to the Federal rules, the Missouri Court of Appeals, in *Bailey v. Cameron Mut. Ins. Co.*, 122 S.W.3d 599, 603 (Mo. App. E.D. 2003), said: "Missouri, however, has not adopted *Daubert*." The **Nevada** Supreme Court, in *Higgs v. State*, 222 P.3d 648, 650 (Nev. 2010), said: "While Nevada's statute of admissibility tracks the language of its federal counterpart, Federal Rule of Evidence (FRE) 702, we see no reason to part with our existing legal standard. In so deciding, we decline Higgs' invitation to adopt the standard of admissibility set forth in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* . . ." An intermediate **New Jersey** appellate court, in *State v. Calleia*, 997 A.2d 1051, 1060 (N.J. Super. A. D. 2010), said: "Although in 1993 the United States Supreme Court abandoned the general acceptability standard in *Frye v. United States*, . . . in favor of a more relaxed scientific reliability standard, *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, . . . the test in New Jersey continues to be whether the scientific community generally accepts the reliability of the proffered evidence." The **North Carolina** Supreme Court rejected *Daubert* in *Howerton v. Arai Helmet, Ltd.,* 597 S.E.2d 674, 692 (N.C. 2004), where it said: "[W]e are concerned that trial courts asserting sweeping pre-trial 'gatekeeping' authority under *Daubert* may unnecessarily encroach upon the constitutionally-mandated function of the jury to decide issues of fact and to assess the weight of the evidence." The **North Dakota** Supreme Court rejected *Daubert* in *State v. Hernandez*, 707 N.W.2d 449, 453 (N.D. 2005) ("This Court has a formal process for adopting procedural rules after appropriate study and recommendation by the Joint Procedure Committee, and we decline Hernandez's invitation to adopt *Daubert* by judicial decision"). The **South Carolina** Supreme Court, in *State v. Council*, 515 S.E.2d 508, 518 (S.C. 1999), said: "While this Court does not adopt *Daubert*, we find the proper analysis for determining admissibility of scientific evidence is now under the SCRE. When admitting scientific evidence under Rule 702, SCRE, the trial judge must find the evidence will assist the trier of fact, the expert witness is qualified, and the underlying science is reliable." The **Wisconsin** Court of Appeals, in *City of West Bend v. Wilkens*, 278 Wis.2d 643, 693 N.W.2d 324, 329 (Wis. App. 2005), said: "Wisconsin, unlike the federal courts, considers the reliability of scientific evidence a question of weight and credibility for the trier of fact to decide. . . . Wisconsin is not a *Daubert* state."

On the other hand, *Daubert* has been adopted as the standard for admissibility of expert testimony in the following states: **Alaska**, *Marron v. Stromstad*, 123 P.3d 992 (Alaska 2005); **Arkansas**, *Farm Bureau Mutual Insurance Co. v. Foote*, 14 S.W.3d 512 (Ark. 2000); **Connecticut**, *State v. Porter*, 698 A.2d 739, 746 (Conn. 1997) (criminal case); **Delaware**, *M.G. Bancorporation v. Le Beau*, 737 A.2d 513, 521 (Del. 1999); **Georgia**, *Moran v. Kia Motors Am., Inc.*, 276 Ga. App. 96, 97 (Ga. Ct. App. 2005); **Idaho**, *State v. Parkinson*, 909 P.2d 647, 652 (Idaho 1996) (criminal); **Indiana**, *Smith v. Yang*, 829 N.E.2d 624, 626 (Ind. App. 2005) (*Daubert* analysis is permitted but not required); **Iowa**, *Leaf v. Goodyear Tire & Rubber Company*, 591 N.W.2d 10 (Iowa 1999) (*Daubert* allowed but not required); **Kentucky**, *Goodyear Tire and Rubber Co. v. Thompson*, 11 S.W.3d 575, 577-78 (Ky. 2000); **Louisiana**, *State v. Foret*, 628 So. 2d 1116, 1123 (La. 1993) (criminal); **Maine**, *Searles v. Fleetwood Homes of Pennsylvania, Inc.*, 878 A.2d 509 (Me. 2005) (*Daubert* and general acceptance standards both apply); **Massachusetts**, *Commonwealth v. Patterson*, 840 N.E.2d 12 (Mass. 2005) (*Daubert* and general acceptance standards both apply); **Michigan**, *Gilbert v. DaimlerChrysler Corp.*, 685 NW2d 391 (2004); Mississippi, *Poole v. Avara*, 908 So. 2d 716, 722 (Miss. 2005); **Montana**, *Hart-Albin Company v. McLees Inc.*, 870 P.2d 51, 56 (Mont. 1994); **Nebraska**, *Schafersman v. Agland Coop.*, 262 Neb. 215 (Neb. 2001); **New Hampshire**, *Baker Valley Lumber, Inc. v. Ingersoll-Rand Company*, 813 A.2d 409 (N.H. 2002); **New Mexico**, *State v. Torres*, 976 P.2d 20 (N.M. 1999) ("'application of the *Daubert* factors is unwarranted in cases where expert testimony is based solely on experience or training," citing *Compton v. Subaru of Am. Inc.*, 82 F.3d 1513, 1518 (10th Cir. 1996)); **Ohio**, *State v. Williams*, 446 N.E.2d 444, 446-47 (Ohio 1983) (rejecting the general acceptance test long before *Daubert* was handed down); **Oklahoma**, *Christian v. Gray*, 65 P.3d 591 (Okla. 2003) (adopting *Daubert* but only with regard to novel expert testimony or where the expert's method has not been established); **Oregon**, *State v. Brown*, 687 P.2d 751, 759 (Or. 1984) (a *Daubert*-like case that predated *Daubert*); **Rhode Island**, *State v. Quattrocchi*, 681 A.2d 879, 884 (R.I. 1996) (applied to novel scientific evidence); **South Dakota**, *State v. Guthrie*, 2001 SD 61, P33 (S.D. 2001) (adopting *Kuhmo Tire)*; **Tennessee**, *Brown v. Crown Equipment Corp.*, 181 S.W.3d 268 (Tenn. 2005); **Texas**, *E.I. du Pont de Nemours and Co.*

v. Robinson, 923 S.W.2d 549, 556 (Tex. 1995); **Utah**, *Haupt v. Heaps*, 775 P.2d 388 (Utah App. 2005) (heightened vigilance in cases involving scientific methods and techniques); **Vermont**, *USGen New England, Inc. v. Town of Rockingham*, 862 A.2d 269 (Vt. 2004); **West Virginia**, *Wilt v. Buracker*, 443, S.E.2d 196, 203 (W. Va. 1993), *cert. denied*, 511 U.S. 1129 (1994); **Wyoming**, *Hoy v. DRM, Inc.*, 114 P.3d 1268 (Wyo. 2005).

With all the focus on admissibility it is easy to forget the fact that admissibility is just a threshold, and the event is only won if the evidence persuades the finder of fact. In many courtroom business valuation disputes, both experts will pass the admissibility test. The question becomes which expert is more credible, and which expert's work product carries the greater weight.

McCord v. Commissioner of Internal Revenue, 120 T.C. 358, 374 (May 14, 2003), said:

> In deciding valuation cases, courts often look to the opinions of expert witnesses. Nonetheless, we are not bound by the opinion of any expert witness, and we may accept or reject expert testimony in the exercise of our sound judgment. *Helvering v. Natl. Grocery Co.*, 304 U.S. 282, 295, 58 S.Ct. 932, 82 L.Ed. 1346 (1938); *Estate of Newhouse v. Commissioner*, *supra* at 217. Although we may largely accept the opinion of one party's expert over that of the other party's expert, *see Buffalo Tool & Die Manufacturing Co. v. Commissioner*, 74 T.C. 441, 452, 1980 WL 4569 (1980), we may be selective in determining what portions of each expert's opinion, if any, to accept, *Parker v. Commissioner*, 86 T.C. 547, 562, 1986 WL 22106 (1986). Finally, because valuation necessarily involves an approximation, the figure at which we arrive need not be directly traceable to specific testimony if it is within the range of values that may be properly derived from consideration of all the evidence. *Estate of True v. Commissioner*, T.C. Memo.2001-167 (citing *Silverman v. Commissioner*, 538 F.2d 927, 933 (2d Cir.1976), affg. T.C. Memo.1974-285).

The issues discussed in this article can apply both to admissibility and persuasiveness. For some time, business valuators could skate by in reliance on ill-informed lawyers and judges who did not understand business valuation methods. Slowly that is beginning to change, and questions are being raised and assumptions challenged, and as time goes on business valuators will have to endure more rigorous assessment of their methods.

D. HOW MIGHT THESE STANDARDS APPLY TO BUSINESS VALUATION? In considering the intersection of business valuation and the law, it is good to remember the statement of the U.S. Court of Appeals for the District of Columbia Circuit, which said "we do not sit as a panel of statisticians, but as a panel of generalist judges." *AEP Texas North Co. v. Surface Transp. Bd.*, 609 F.3d 432, 443 (D.C. Cir. 2010) (while considering the relative merits of the Capital Asset Pricing Model and Discounted Cash Flow methods of valuing businesses). A bankruptcy appellate panel in Rhode Island noted "the irony that judges, few of whom would qualify as expert witnesses in any trial of asset valuation, regularly determine the worth of assets . . . ." Many of the fundamental principles of valuing privately-owned business are generally accepted. Whether all of these generally-accepted principles can be shown to be reliable close inspection is less certain.

In many states, general acceptance of basic principles can be demonstrated by adherence to Revenue Ruling 59-60. *See e.g. Wright v. Quillen*, 909 S.W.2d 804 (Tenn. App. 1995) (recognizing Revenue Ruling 59-60 as an acceptable approach to valuation). General acceptance can also be shown by referring to Treasury Regulations on valuation. General acceptance can be shown by referring to private publications on business valuation, such as Shannon Pratt's VALUING A BUSINESS: THE ANALYSIS AND APPRAISAL OF CLOSELY HELD COMPANIES (5th ed. 2008). General acceptance of both methodology and historical data is reflected in IBBOTSON SBBI VALUATION YEARBOOKS. Widespread acceptance of valuation theory can be demonstrated by course materials from AICPA or NACVA or ASA continuing education courses. Valuation principles for some types of businesses are set out by the Appraisal Institute. On some of the close questions in business valuation, however, general acceptance breaks down into competing schools of thought, so that general acceptance is harder to demonstrate. Some degree of acceptance can be gleaned from federal court cases that accept or reject particular assumptions or particular techniques in cases that come before them. *See ASARCO LLC v. Americas Mining Corp.*, 396 B.R. 278, 361

(S.D. Tex. 2008) (federal district judge rejected the Fama-French method of valuation, saying that "Fama–French may be prevalent in academia and may be used in the investment community. It may eventually evolve into the preferred approach universally; however, this is not the method that the parties in this case (or a hypothetical willing buyer and willing seller) would have utilized to determine the value of SPCC's stock in 2002–2003.") *In re Mann*, 249 B.R. 831, 839 (1st Cir. Bankr. Panel R.I. 2000). Some state court cases also accept or reject approaches that are presented in the cases they adjudicate. These decision often are ad hoc, and mostly do not engender general principles that can be applied across the board to other fact situations. Sometimes what these opinions say reflects an embarrassing lack of understanding of acceptable business valuation practices.

There is general acceptance for the use of the Capital Asset Pricing Model (CAPM) (see Section V.B below) to determine a Discount Rate in finance theory. However, the U.S. Tax Court has rejected the CAPM for use in valuing small, privately-owned businesses, several times. See Section V.J.5. On the other hand, there is general acceptance of using the Build Up Method (see Section V.F below) as a way to arrive at a Discount Rate to determine the present value of future benefits to be derived from owning a company, but the Industry Premium and Size Premium used in the Build Up Method both constitute adjustments to the CAPM. The Build Up Method is in fact an extension of the CAPM (see Section V.F.6 below), and close analysis of the constituent parts of each method presents difficult reliability issues (see Sections V.G, V.H, V.I, V.J, V.K and V.L below). There is general acceptance of different approaches to a Discount For Lack of Marketability (DLOM). However, a close *Daubert* analysis of the bases for quantifying a DLOM reveals important weaknesses. Similar concerns arise with the Discount for Lack of Control (DLOC). These issues are explored later in this Article. Also, some states disregard the DLOM and DLOC in divorce cases. See Section VIII.E below.

IV. THE INCOME APPROACH (EARNINGS AND CASH FLOW). The Massachusetts Supreme Court said in *Adams v. Adams*, 945 N.E.2d 844, 864 (Mass. 2011):

> The consensus approach to valuation deployed by appraisers and experts in marriage dissolutions has coalesced around some variation of what is known as the "income approach." S.P. Pratt, R.F. Reilly, & R.P. Schweihs, Valuing Small Businesses and Professional Practices 724–725 (3d ed. 1998). The income approach rests on the proposition that "[i]n theory, the value of a business or an interest in a business depends on the future economic benefits that will accrue to that business, with the value of those future benefits being discounted back to present value at some appropriate discount rate." S.P. Pratt & A.V. Niculita, Valuing a Business: The Analysis and Appraisal of Closely Held Companies 175 (5th ed. 2008). "In other words, the basic concept of the income approach is to project the future economic income associated with the investment and to discount this projected income stream to a present value at a discount rate appropriate for the expected risk of the prospective income stream." *Id.*

Mercer Capital identifies "two generic subsets" of the income approach: single period capitalization and discounted future benefits.[13] Single period capitalization methods "apply a pricing multiple, which embodies the risk profile and growth expectations of a company as determined from the perspective of an investor, to an appropriate earnings measure for a reporting unit." *Id.* at 1. These pricing multiples for the subject company can be obtained by comparison to publicly-traded guideline companies, or they can be obtained by estimating the company's cost of equity or cost of capital and the company's sustainable growth rate. *Id.* at 1. Discounted future benefits methods, primarily the Discounted Cash Flow (DCF method), are used when the company being valued is not expected to have stable earnings, which requires the valuator to separately forecast the benefits (i.e., earnings or cash flow) to be received from each future period until stable earnings are expected to be achieved. The discounted future benefits method has three critical components: (i) forecasting future benefits; (ii) determining terminal value, and (iii) determining the appropriate discount rate. *Id.*

To recap, where the valuator expects stable growth in earnings, the valuator uses a Capitalization of Earnings method to value the company, whereby a Capitalization Rate is applied to projected future earnings to derive a present value. Where the growth of future earnings is

expected to be variable, then the valuator typically switches to the Discounted Cash Flow (DCF) method, whereby a Discount Rate is applied to the cash flow that is projected for each period of the future until earnings are assumed to stabilize, after which all subsequent earnings are capitalized using an appropriate capitalization rate.

Warning. In *Adams*, the Supreme Court reversed the trial judge for adopting a capitalization of earnings approach instead of a discounted cash flow approach, because the capitalization of earnings approach assumed earnings in perpetuity and the evidence showed that the husband's future earnings were actuarially set at 17 years. *Id.* at 868-69. The Court did not realize that the discounted cash flow approach involves a terminal value that is capitalized in perpetuity.

A. PROJECTING FUTURE CASH FLOWS. As Vice Chancellor Strine wrote in *Delaware Open MRI Radiology Associates, P.A. v. Kessler*, 898 A.2d 290, 332 (Del. Ch. 2006):

> The most important input necessary for performing a proper DCF is a projection of the subject company's cash flows. Without a reliable estimate of cash flows, a DCF analysis is simply a guess.

Revenue Ruling 59-60 says this:

> Potential future income is a major factor in many valuations of closely-held stocks, and all information concerning past income which will be helpful in predicting the future should be secured. Prior earnings records usually are the most reliable guide as to the future expectancy, but resort to arbitrary five-or-ten-year averages without regard to current trends or future prospects will not produce a realistic valuation. If, for instance, a record of progressively increasing or decreasing net income is found, then greater weight may be accorded the most recent years' profits in estimating earning power.

Rev. Rul. 59-60, para. 3.02.d, pp. 11-12. In many instances, the business valuator will look at the company's historical income as reflected in its income statements as a basis for projecting future income. Where growth in earnings is expected to vary from past earnings, then the business valuator will have to project future earnings on some other basis. The valuator might rely upon the company's management to provide projections of cash flow, or might have to independently develop new cash flow projections.

Many business valuators like to consider the future benefits as being earnings before interest and taxes (EBIT) or earnings before interest, taxes, depreciation, and amortization[14] (EBITDA), because these measures are independent of the company's capital structure (mix of debt and equity). *See* Koeplin, Sarin and Shapiro, *The Private Company Discount*, 12 JOURNAL OF APPLIED CORPORATE FINANCE 94, 96 (2000).[15] Others prefer to use "free cash flow," which is the "total amount of cash that can be generated by an entity, or the amount of cash than can potentially flow to the stakeholders of a company." IBBOTSON SBBI 2011 VALUATION YEARBOOK, p. 199. Ibbotson elaborates that free cash flow consists of earnings before interest and taxes ("EBIT"), plus depreciation, amortization and deferred taxes, less capital expenditures and changes in working capital. *Id.* at 14. Ibbotson says:

> Free cash flow is the relevant cash flow stream because it represents the broadest level of earnings that can be generated by the asset. With free cash flow as a starting point, the owners of a firm can decide how much of the cash flow stream should be diverted toward new ventures, capital expenditures, interest payments, and dividend payments. It is incorrect to focus on earnings as the cash flow stream to be valued because earnings contain a number of accounting adjustments and already include the impact of capital structure.

Id. at 14.

In a Discounted Cash Flow (DCF) method, the valuator separately forecasts the cash flow for each future period (during the forecast period) until a stable income stream is achieved (at which point the Terminal Value is determined). Some writers recommend pushing the forecast period as far into the future as reliability permits. Lawrence A. Hamermesh & Michael L. Wachter, *The Short and Puzzling Life of the "Implicit Minority Discount" in Delaware Appraisal Law*, 156 UNIV. OF PENNSYLVANIA LAW REVIEW 1, 29 (2007) ("Hamermesh").[16] However, some business valuators use an arbitrary cut-off, such as 5 years, to be the point at which they assume stable income will be achieved.

Foretelling the end of the forecast period involves some degree of subjectivity. If the firm is presently losing money, it may still have positive future cash flows in the future if the current losses are transient, for example if they are attributable to the spot in the business cycle, or result from one time charges against profits, or poor management, or participation in a sector of the economy that is in its early stages.[17]

Mercer Capital points out that business valuators assume either that all cash flows in a year are received midway through the year, or that the cash flows are received at the end of the year of the discrete forecast period. Mercer Capital, *A User's Guide to Understanding the Discounted Future Benefits (Cash Flow) Valuation Methods*.[18] Using the mid-year assumption causes some valuators to discount Terminal Value (see Section IV.D below) from 4.5 years instead of 5 full years. *Id.* at 6.

B. NORMALIZING HISTORICAL EARNINGS OR CASH FLOW. Business valuators consider past performance as a basis for projecting future performance. Since many private companies are operated in an idiosynchratic manner, it is often necessary for the valuator to make adjustments to the way income and expenses have been reported, so that past cash flows are more comparable to business practices of companies listed on national stock exchanges. Professor Aswath Domodoran put it delicately: "Many private businesses understate earnings to reduce their tax liabilities, and the expenses at many private businesses often reflect the blurring of lines between private and business expenses." Aswath Damodoran, APPLIED CORPORATE FINANCE: A USER'S MANUAL, ch. 12.[19]

1. Adjustments to the Income Statement. Potential adjustments to the income statement are to: (i) remove nonrecurring income and expenses; (ii) adjust owner compensation to the market rate for hiring a replacement; (iii) add back unreasonably high fringe benefits; (iv) adjust other employees' salaries and benefits to market rates; (v) add back depreciation to income; (vi) add back R&D expenses if they are going to be reflected as assets in the adjusted balance sheet; and (vii) adjust leases to market rates. Chris Mercer describes normalizing adjustments to income statements in Chapter 4 of his book, Z. Christopher Mercer and Travis W. Harms, BUSINESS VALUATION: AN INTEGRATED THEORY 107-125 (2nd ed. 2008) ("Mercer & Harms"). Mercer distinguishes between three types of adjustments to company earnings: normalizing adjustments, control adjustments, and fundamental adjustments. *Id.* at 107. Normalizing adjustments are made "to develop private company earnings that correspond to the valuation multiples of guideline companies to yield marketable minority indications of value." *Id.* at 107. Control adjustments are "earnings adjustments that relate to the other enterprise levels of value, namely the financial control and strategic control levels of value." *Id.* at 107. Fundamental adjustments "relate appropriate private company valuation multiples to the median or average multiples of guideline company groups." *Id.* at 107.

a. Normalizing Adjustments. Mercer says that normalizing adjustments should eliminate one-time gains or losses, other one-time events, abandoned lines of business, expenses of non-operating assets, and other items of such nature. He calls these "Type 1 Normalizing Adjustments." *Id.* at 113. Mercer also lists adjustments to normalize officer/owner compensation and other discretionary expenses that are not characteristic of publicly-traded companies. He calls these "Type 2 Normalizing Adjustments." *Id*. at 113. Mercer observes that some business valuators consider Type 2 Normalizing Adjustments to be control adjustments and thus refuse to make them when determining a nonmarketable minority interest. *Id.* at 113-14. Mercer disagrees, in that both types of adjustments are needed to arrive at an accurate projection of future earnings that is necessary to make accurate comparisons between the subject company and publicly-traded companies. *Id.* at 107.

b. Control Adjustments. Mercer suggests two types of control adjustments: financial control adjustments and strategic control adjustments. Financial control adjustments reflect adjustments that the purchaser of a controlling interest in the business could make to improve the normalized earnings stream. Mercer and Harms, p. 118. Strategic control adjustments reflect synergies that would result from a strategic buyer's addition of the business to the buyer's portfolio. *Id.* at 119-20.[20]

c. Fundamental Adjustments. Mercer's third category of adjustments he calls fundamental adjustments. Mercer and Harms, pp. 129-52. Fundamental adjustments come into play when the business valuator is using the guideline company method as part of the market approach, and is contemplating multipliers

involving public company earnings, such as the price-to-earnings ratio. *Id.* at 129 & 139. The problem is to reconcile differences between expectations of growth in future earnings of public companies and of the privately-owned company being valued. *Id.* at 107-08, 134-35.

d. Determining Reasonable Compensation. The valuation firm of Stout|Risius|Ross ("SRR") has posted a short piece on assessing the reasonableness of owners' compensation. Jesse A. Utiz, *The Reasonbleness of Owners' Compensation: An Often Overlooked But Key Assumption in Valuing a Business*.[21] The article notes that C-corporations sometimes pay owners above-market compensation to reduce corporate taxes, while S-corporations underpay owners so as to reduce payroll taxes. *Id.* at 1. Normal compensation can be sought from (i) compensation databases and surveys; (ii) compensation-to-reverse ratios drawn from guideline companies; and (iii) compensation-to-equity ratios drawn from guideline companies. *Id.* at 3.

2. Applicable to the Market Approach as Well. Adjustments to historical earnings or cash flows are used not only in the Income Approach, but also as part of the Market Approach to valuation. See Section VI below. While the Market Approach typically involves multiples of things other than earnings or cash flow, the multiples that do involve earnings or cash flow will require normalizedt earnings or cash flow.

C. DETERMINING AN EXPECTED GROWTH RATE. To project future cash flows during the forecast period, the business valuator must project the growth rate of earnings or future cash flows. Many times valuators will use the subject company's historical growth rate as the basis for a projecting future growth. Professor Aswath Damodoran says that company fundamentals may be the better choice. He says what really counts is the firm's reinvestment policy and its project quality. Aswath Damodaran, *Discussion Issues and Derivations*, p. 1.[22] He suggests that the expected growth in earnings is the product of the reinvestment rate multiplied times the return on investment. *Id.* at 1. He suggests that a greater current growth rate means a longer period of above stable growth. Also, barriers to competitors' entry into the market (patents, brand names, etc.) increase the period of high growth. He suggests that the larger the firm is, the shorter the high growth period. *Id.* at 1. He also comments that net capital expenditures and the growth rate are connected; net capital expenditures will decline as the growth rate declines. *Id.* at 2. In estimating the Terminal Value at the end of the high growth period, it is necessary to assess the stable growth rate at that point in time. One consideration is that no firm can, in the long run, grow faster than rate of growth of the economy in which it operates. *Id.* at 2. It also follows that the stable growth rate cannot exceed the Discount Rate, since the Risk Free Rate embedded in the Discount Rate (DR) is based on real growth in the economy. *Id.* at 2. Also, if the stable growth rate exceeds the DR, then the value of the company would rise to infinity.[23] In practice, many valuators set the subject company's long-term growth rate at the expected growth rate for the economy as a whole. Historically, the growth rate of the U.S. economy has been about 3.25% per year. This growth rate may not be sustainable due to "the triple threat of deficits, debt, and demographics." Robert D. Arnott, *Equity Risk Premium Myths* p. 84 (Dec. 2011).[24]

D. DETERMINING TERMINAL VALUE. Under the DCF method, valuators forecast earnings for each of the years in the forecast period, until the company's cash flows are expected to stabilize. At that point a Terminal Value is calculated for the company. The Terminal Value is fixed by determining the then-present value of all subsequent cash flows by capitalizing them. Terminal Value is extremely important in the business valuation. Mercer Capital, *A User's Guide to Understanding the Discounted Future Benefits (Cash Flow) Valuation Methods*.[25] Mercer Capital estimates that the Terminal Value arrived at by the business valuator represents between 65% and 70% of the total discounted present value of the business. *Id.* at 6. In *Estate of Maggos v. C.I.R.*, T.C. Memo. 2000-129, 2000 WL 366265, *12 (U.S. Tax Ct. 2000), the court said: "A DCF analysis contains an inherent difficulty when used for a company that has a significant residual value because to determine the present value of a company, the DCF analysis requires an estimate of what a company will be worth at the end of the forecast period (residual value)."

Two popular approaches to determining Terminal Value are: (i) the Gordon Growth Model and (ii) the comparable company method. Hamermesh, pp. 26-27.[26] The Gordon Growth Model is a simplified model that says the value of stock is the expected dividend per share divided by a quantity consisting of the required rate of

return less the expected growth rate.[27,28] The comparable company method uses multiples observed for companies traded on public stock exchanges, be they price-to-earnings ratios, stock price to book value, stock price to EBITDA, etc. *Id.* at 27. The Gordon Growth Model calculation is based on firm-specific information, while the comparable company method uses information from other companies. The latter may be necessary where the valuator cannot reliably determine the specific company's future growth rate. *Id.* at 27. In either event, all future earnings after the terminal date must be capitalized using some Capitalization Rate, either developed by the valuator or taken from the market multiples of comparable companies. Hamermesh, p. 29.

V. THE INCOME APPROACH (DEVELOPING A CAP RATE/DISCOUNT RATE). The techniques that business valuators use to develop an appropriate Discount Rate to use in discounting to present value a business's future benefits can profitably be viewed in an historical context. The background is Modern Portfolio Theory, and its implementation through the Capital Asset Pricing Model.

A. MODERN PORTFOLIO THEORY. In 1952, Harry Markowitz published an article in THE JOURNAL OF FINANCE entitled "*Portfolio Selection*."[29] In it he outlined a theoretical approach which investors should pursue in constructing a portfolio, based on the expected performance of the investments and the risk appetite of the investor. Its purpose was to show how an investor or portfolio manager could maximize return while minimizing risk. The key to Markowitz's approach was to reduce the downside risk of the overall portfolio by mixing together sufficiently different investments that the individual risks of the individual investments cancel each other out. Markowitz argued that the necessary degree of diversification could be measured by assessing the degree to which the returns on various investments in the portfolio were correlated (or covariant), and to use this knowledge to avoid overweighting the portfolio with assets that would all decline in value at the same time. *See* Frank J. Fabozzi, Francis Gupta, & Harry Markowitz, *The Legacy of Modern Portfolio Theory*, 11 THE JOURNAL OF INVESTING 7, 7-8 (Fall 2002).[30] In this view, the riskiness of an asset could be measured by the degree to which its expected returns varied from the mean (numerical average) of the returns of all assets in the portfolio. This "mean variance theory" became a cornerstone of finance theory, and Markowitz's overall approach, called Modern Portfolio Theory (MPT), brought him the 1990 Nobel Prize in Economics.[31]

B. CAPM. In 1960, while Markowitz was working at the Rand Corporation in Los Angeles, a 26-year old graduate student knocked on his door, asking for help in selecting a dissertation topic. Markowitz suggested MPT. Even before completing his dissertation, the student prepared a paper on his ideas, and in 1962 submitted the paper to THE JOURNAL OF FINANCE, which rejected it. The student asked for a new referee, and the editor of the journal changed, and the paper was accepted and published in 1964.[32] The paper extended MPT by applying Markowitz's principles to the task of pricing an individual security that is being considered for inclusion in a portfolio of investments. The student was William F. Sharpe, and the article *Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk*, published in 29 THE JOURNAL OF FINANCE 425-442 (September 1964),[33] became the foundation for what would come to be called the Capital Asset Pricing Model (CAPM).[34] The CAPM now dominates investment theory and practice. The paper, and follow-up work by himself and others, earned Sharpe part of the same 1990 Nobel Prize in Economics that was awarded to Markowitz.[35]

Sharpe's seminal article made four major points. First, he divided investment returns into two components: the price of time (i.e., the time value of money) and the price of risk. *Id.* at 425. He visualized this proposition as a graph plotting risk (Y-axis) over expected rate of return (X-axis), with a line rising upward and to the right. *Id.* at 420, Figure 1. The line rises above the X axis (zero risk) at the point representing the "pure interest rate" (now called the "Risk Free Rate").[36] Each investor could stake out his own position on the line that balances risk against the expected rate of return, based on the investor's tolerance for risk and motivation for reward. Sharpe called that line the "Capital Market Line." *Id.* Sharpe's second point was that the decision to invest was driven by the expected future value of the investment, and the risk that that value would not be realized. *Id.* at 427-8. Sharpe's third point was that the action of all investors, seeking their unique points on the Capital Market Line, would "clear" the market and lead to the equilibrium of a stable price for each stock. *Id.* at 433-36. This achieving of equilibrium was based on two assumptions that Sharpe admitted were "highly

restrictive and undoubtedly unrealistic"[37]: that all investors could borrow and lend at the Risk Free Rate, and that all investors agreed on all aspects of various investments. *Id.* at 433-34.[38] In his fourth point, Sharpe accepted MPT's idea that "diversification enables the investor to escape all but the risk resulting from swings in economic activity–this type of risk remains even in efficient combinations." *Id.* at 441. Sharpe called this undiversifiable risk "systematic risk," *Id.* at 436, and suggested that the systematic risk of a particular investment could be measured by the deviation of the investment's return from the overall return on the entire portfolio. *Id.* at 436-442.

To recap, the CAPM posits a straight-line correlation between the value of an asset and its risk. Building on Markowitz's idea of diversification, Sharpe assumed that part of the risk inherent in an investment can be eliminated by adding it to a diversified portfolio, and he focused his attention on the part of the risk that could not be diversified away. Sharpe proposed that, while investors viewed the outcome of an investment in probabilistic terms, the decision to invest could be reduced to two parameters: the expected future value of the investment and the probability that the expected future value would be achieved. *Id*. at 427-28. Sharpe suggested that this probability could be determined on a forward-looking (ex ante) basis by calculating the historical variance between the investment's return and the return of the portfolio as a whole. *Id.* at 438-39. This variance is now called "Beta." See Section V.E.1 below. Thus, Sharpe was suggesting that an uncertain future could be predicted by statistical analysis of the past.

Nowadays, the CAPM (or some variation) is often used to determine the appropriate Discount Rate to apply to the stream of future benefits expected to flow to the owner of an investment. By discounting the future benefits, the investor can calculate the price s/he should pay for a particular company's stock, based solely on the history of the variability of the stock's returns compared to the variability of the return on the stock market as a whole (this variability is called "volatility"). The hypothesis that the single parameter volatility captures allrisk is dependent on the assumption that you can diversify away the risks that are individual to the particular investment. It is also dependent on the assumption that there is a stable relationship between volatility and return. The CAPM's attraction, that risk could be assessed by statistical analysis, also made the theory verifiable, and it has not held up well under scrutiny. Note that the CAPM relies upon a single "index" for calculations; this index is a proxy of stock market value, such as the S&P 500.

Subsequent empirical studies have suggested that volatility does not have a stable relationship with investment returns, and cannot alone provide a reliable basis for valuing stocks. Subsequent theorists have added other parameters to the CAPM, including measures unique to the particular company such as the book-to-market ratio, earnings-to-price ratio, or the dividend yield (effectively modifying the assumption that all risks individual to the company can be ignored due to diversification). Another problem with CAPM is that the returns predicted for small companies based on their Beta are too low. Some theorists and practitioners therefore add to the CAPM formula an additional factor (a "premium") related to the size of the company (as measured by market capitalization or some other parameter). These patches suggest that the CAPM is not valid for its intended use, but no other mathematical/statistical approach for quantifying risk has been able to supplant the CAPM, so its widespread acceptance continues.

A lucid explanation of the important aspects of the CAPM is set out in André F. Perold, *The Capital Asset Pricing Model*, 18 JOURNAL OF ECONOMIC PERSPECTIVES 3 (2004).[39]

C. THE RISK FREE RATE. In theory, there is an investment that has no risk of default, and the rate of return on that investment is the "Risk Free Rate" (RFR). In simplified models, this rate of return is taken to reflect the time value of money. (Sharpe called this the "pure interest rate.") Roger Grabowski says that the RFR reflects a return on three components: the "rental rate" (real return for lending funds over the investment period); inflation (the expected rate over the term of the investment); and "maturity risk" or "investment rate risk" (risk that the bond values will rise or fall during the period to liquidation of the investment due to fluctuations in market interest rates). Roger J. Grabowski, *Problems with Cost of Capital Estimation in the Current Environment Update* (Feb. 4, 2009);[40] Roger J. Grabowski, *Developing the Cost of Equity Capital: Risk-Free Rate and ERP During Periods of "Flight to Quality*" p. 2 (Jan. 29, 2011).[41]

For short term investments, the Risk Free Rate in the U.S. is sometimes taken to be the yield on U.S. Treasury notes (up to one-year maturity). However, for longer-term investments, a longer-term government security (2, 3, 5, 7, 10, or 20- yr. notes, or 30-yr. bond) would be considered the Risk Free Rate. With S&P's downgrade of the United States' long term sovereign credit rating, it makes less sense to talk of a Risk Free Rate.[42] However, U.S. Treasury securities probably still represent the safest investment in the American economy (perhaps we should call this the "Least Risk Rate"), and any risk in buying Treasuries is presumably reflected in the yield-to-maturity required to attract buyers to Treasury Securities. As a practical matter, it is unlikely that the U.S. government would ever actually default on its security obligations. In a fiscal crisis, the Federal Reserve Bank would create dollars to retire maturing Treasury securities and to buy newly-issued Treasury bills, notes, and bonds. This would increase the money supply and reduce the purchasing power of existing dollars, causing price inflation. The risk of inflation depresses the price and drives up the yield on longer-term Treasury bonds, resulting in an upward sloping Yield Curve.[43] Some theorists argue that Treasury Inflation-Protected Securities ("TIPS") of five, ten or thirty year maturities, are the best measure of the Risk Free Rate, because they eliminate inflation risk. Additionally, with the Federal Reserve System presently buying U.S. government bills, notes and bonds in order to artificially depress the rate on U.S. Treasury securities, the Risk Free Rate is no longer solely determined by market forces and may therefore be sending inaccurate signals about investors' expectations. See Section V.G., which discusses problems with determining the Risk Free Rate.

D. THE EQUITY RISK PREMIUM. John Stuart Mill, in his famous book PRINCIPLES OF POLITICAL ECONOMY (1848), wrote that an investor would buy land if it afforded a "surplus profit" in excess of the "value of the risk" and "the interest which he must pay for the capital if borrowed."[44] This insight was largely forgotten in subsequent decades. Then in 1921, a Chicago economist Frank Knight suggested that investors should and do demand compensation for making a risky investment by requiring increased returns on the investment. Knight differentiated quantifiable from unquantifiable risk, but he did not suggest a method to quantify risk. Knight, RISK, UNCERTAINTY AND PROFIT (1921).[45] In 1924, Edgar Lawrence Smith published a book in which he advocated investing in stocks as a way to achieve higher returns than investing in bonds, and backed up his suggestion with a comparison of historical returns on stocks versus bonds.[46] In 1925, Yale University Professor Irving Fisher published a paper suggesting that the safety of bonds was illusory due to inflation risk and that the risks of investing in stocks could be reduced by diversification. Irving Fisher, *Stock vs. Bonds*, AMERICAN REVIEW OF REVIEWS (July 1925).[47] In 1938, Alfred Cowles III published a study of stock prices and dividends from 1871 to 1937, using the technique of reinvesting dividends so as to avoid the difficulty of having to track income and capital appreciation separately.[48] Cowles also tracked virtually all stocks on the New York Stock Exchange and capital-weighted them. *Id.* Also in 1938, John Burr Williams published *The Theory of Investment Value*, in which he was the first to calculate the risk premium for stocks by comparing the historical rate of return on stock investments versus investments in long-term government bonds.[49] Thus, while the idea that an investor is attracted to investing in order to obtain a return in excess of the time value of money dates back to the mid-1800s, it was not until the 1930s that people began to focus on quantifying the return on investments in companies.[50]

Under the current paradigm, the "Equity Risk Premium" (ERP) is the additional return investors expect to receive to compensate for the additional risk associated with investing in the stock market as opposed to investing in risk-free government securities. The ERP is the expected "excess return" of stocks (dividends plus capital gains upon liquidation) over bonds (interest plus return of capital upon maturity). Usually the ERP, or extra return required to induce an investor to move from super-safe government bonds into the riskier stock market, is measured by comparing the historical rate of return on the stock market as a whole versus the historical rate of return on government notes, bills, or bonds over the same period. Concerns with this conceptualization are discussed in Section V.H. below.

The fundamental problem is that the ERP is not an observable quantity, and there is no universally agreed-upon method for determining the ERP. Generally acknowledged methods for estimating the ERP are: (i) surveys, (ii) ex post analysis of historical data (i.e., hindsight), and (iii) ex ante modeling of future circumstances. Domantas Skardziukas, *Practical Approach to Estimating Cost of Capital* p. 32 (9/20/2010)

("Skardziukas").[51]

1. Surveys. One way of determining the current ERP is to sample current opinions on that issue. Traditionally, few business valuators rely on surveys to indicate the current ERP. Professor Aswath Damodaran asserts that his 2010 study showed no predictive power or possibly even an inverse relationship for surveys. But as time goes on serious surveys are being undertaken with more diverse samples that should improve representativeness. And it should be remembered that the most important thing about the ERP to a business valuator is to capture investors' expectations, regardless of whether those expectations are in fact accurate. If a survey captures investors' current expectations of risk and future rates of return, then it is valid for use in business valuation, regardless of how correct it may ultimately prove to be.

In March/April 2011, Professor Pablo Fernández sent 19,500 emails to finance and economics professors, analysts, and companies, asking for their estimates of the "required" ERP in the USA. He received 5,731 specific estimates, of which 1,438 related to the USA. In a 2011 paper, Professor Fernández published the following estimates for the forward-looking ERP: professors (mean=5.7%; median=5.5%); analysts (mean=5.0%; median=5.0%); companies (mean=5.6%; median=5.2%). Pablo Férnandez, *Market Risk Premium Used in 2010 by Analysts and Companies: A Survey with 2,400 Answers* (May 2011).[52]

Psychological analysis of the problem suggests that investors are more influenced by recent price movements, and that fear of loss of value is weighted more greatly than the enticement of increase in value (called "myopic loss aversion"). For purposes of business valuation, however, whether investor sentiment it purely rational or not makes no difference; it is the present perception of future rewards for undertaking risks among competing investments that matters, not the reality of it.

Professors John R. Graham and Campbell R. Harvey of the Fuqua School of Business at Duke University analyzed the results from a survey of CFO's conducted in 2010:

> We analyze the history of the equity risk premium from surveys of U.S. Chief Financial Officers (CFOs) conducted every quarter from June 2000 to June 2010. The risk premium is the expected 10-year S&P 500 return relative to a 10-year U.S. Treasury bond yield. While the risk premium sharply increased during the financial crisis peaking in February 2009, the current surveys show that the premium has returned to levels observed in late 2006 and early 2007.

Graham & Harvey, *The Equity Risk Premium in 2010* (August 9, 2010).[53] The survey results, in more detail, indicated:

> During the past ten years, we have collected 13,668 responses to the survey. Table 1 presents the date that the survey window opened, the number of responses for each survey, the 10-year Treasury bond rate, as well as the average and median expected excess returns. There is relatively little time variation in the risk premium. This is confirmed in Fig. 1, which displays the historical risk premiums contained in Table 1. The current premium, 3.00%, is considerably lower than the peak premium of 4.74% observed in February 2009. The June 2010 survey shows that the expected annual S&P 500 return is 6.31% and the implied risk premium is 3.00% (6.31% - 3.31%). The expected annual S&P 500 return is the lowest observed in the history of the survey.
>
> Panel B of Table 1 presents some summary statistics that pool all 13,668 responses. The overall average ten-year risk premium return is 3.40%.[3] The standard deviation is 3.25%.

Id.

The Graziadio School of Business at Pepperdine University conducts the Pepperdine Private Capital Markets Project ("PPCMP"), a survey designed to capture the thinking of 2,500 business people across the world, including bankers, venture capitalists, owners of privately-held businesses, and business valuators. *Survey Report V* (Summer 2011). At Figure 26, the PPCMP sets out risk premiums used by the survey respondents who were business valuators. On average the business valuator respondents used a RFR of 4.35% and an ERP of 6.99%. *Id.* at 32.

Professor Roger G. Ibbotson has expressed reservations

about surveys (he uses the term "consensus method"). Professor Ibbotson says:

> Most of these investors have no clear opinion about the long-run outlook. Many of them have only very short-term horizons. Individual investors often exhibit extreme optimism or pessimism and make procyclical forecasts . . . . I have seen surveys . . . that do not seem to even clarify whether the questionnaire refers to arithmetic mean returns or geometric mean returns. Many returns also do not make clear whether the ERP to which they refer is the excess return of stocks over government bonds or Treasury bills or some other type of bond. This lack of clarity makes the surveys very difficult to interpret.

Roger G. Ibbotson, *The Equity Risk Premium*, RETHINKING THE EQUITY RISK PREMIUM p. 20 (Dec. 23, 2011).[54]

Admissibility in Court. From a *Frye* standpoint, the fact that the use of surveys to establish the ERP is not yet generally accepted in the business valuation community is grounds for exclusion. From a *Daubert* reliability standpoint, general acceptance is only one of the relevant factors so a lack of general acceptance is not fatal. However, the fact that the surveys are not yet sufficiently random to be statistically valid creates a risk of exclusion. Importantly, even imperfect surveys may be more reliable than formulaic reliance on historical data, for example if the window of the historical data is too short to be statistically reliable.

2. Ex Post Analysis. The most prevalent approach to estimating the present ERP is the ex post (backward looking) approach. Robert S. Harris and Felicia C. Marston, *The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts*, 11 JOURNAL OF APPLIED FINANCE 1 (2001).[55] The ex post method of determining the RFR compares the historical return on stocks to the historical yield to maturity on U.S. Treasury bills, notes, or bonds, over specified periods of time. This is called the "excess historical return." The ex post method is based on the assumption that past actual performance is a valid proxy for current expectations of future performance. It reflects the belief that future expectations are shaped by past experience. The problem with ex post analysis is "the possibility that the future may not turn out to be like the past."[56] From a business valuator's perspective, however, what counts is what most investors are doing, not whether the prevalent approach to estimating the ERP is the best one.

There are many sources for ex post determinations of the ERP. Two of the most prominent are IBBOTSON SBBI VALUATION YEARBOOK, and Duff & Phelps. Many of the troubling issues that can arise from using the ex post method of determining the ERP are discussed in Section V.H. below.

3. Ex Ante Analysis. Another way to infer the current and expected future ERP is the ex ante (forward looking) approach which usually involves feeding observable current market data into a financial model and then solving for the ERP. Models include the CAPM, the Arbitrage Pricing Theory, the Gordon Growth Model (of stable dividend growth), as well as other models discussed below and many more. The data that is fed into the models include current stock prices, current and expected dividend yields, projected cash flows, analyst estimates, volatility,[57] default spreads between government and corporate bonds,[58] the Risk Free Rate, price/earnings ratios, future growth in the economy, future inflation rates, etc.

Dimson, Marsh and Staunton suggest that the ex ante ERP can be determined by taking analysts' projections of the current dividend yield, and adding the expected dividend growth rate, plus or minus any change in the price-to-dividend ratio, less the RFR.[59]

A "supply side" estimate of the ERP is based on the idea that stock market returns have to come from the productivity of corporations in the real economy. Peng Chen, *Will Bonds Outperform Stocks Over the Long Run? Not Likely*, RETHINKING THE EQUITY RISK PREMIUM p. 125.[60] In this view, the two main components of equity returns are dividends and earnings growth (which translates into capital gains), with an adjustment for inflation. *Id.* at 126-27. However, historically the increase in stock prices exceeded earnings growth because investors were willing to pay more and more for a level of earnings, which raised the price-to-earnings (P/E) ratio. According to this view, in the past, return on stocks has consisted of three components: current dividend yield + earnings growth + P/E change. *Id*. at 118. The P/E ratio rose from 10.22 in 1926 to 20.61 in 2009, although it reached a high of 136.50 in 1931 and a low of 7.07 in 1948. *Id.* at 126-27.

This amounts to an average annual increase of 0.84% in P/E ratio from 1926-2009. *Id.* at 127. To calculate future stock returns, Ibbotson Associates (where Chen works) subtracts the P/E ratio growth rate from the historical ERP, because "we do not believe that the P/E will continue to increase in the future." *Id.* at 127. After removing past expansion in the P/E rating, Ibbotson calculates the expected future return on stocks as follows: dividend yield plus real growth in earnings per share, plus the inflation rate. *Id.* at 127. Ibbotson assumes that the historical ERP of 4.16% will continue into the future, so subtracting the P/E expansion rate of 0.84% from the historical ERP leaves a supply side estimate of the geometric (compounded) ERP over the next 20 years of 3.34%–which is 0.82% lower than the historical average. *Id*. at 128. In 2011, a "supply side" estimate of the ex ante ERP was determined by Richard C. Grinold, Kenneth F. Kroner, & Laurence B. Siegel, in *A Supply Model of the Equity Premium*, CFA Institute's RETHINKING THE EQUITY RISK PREMIUM 56 (2011) ("Grinold").[61] Projecting a nominal (i.e., including inflation) return on equities (dividends and stock repurchases) of 1.98% and capital gains of 5.05%, they arrived at a total expected return on equities of 7%. Subtracting the yield on 10-year Treasury bonds of 3.4%, they arrived at an expected ERP of 3.6%. *Id.* at 67-68. The figure is based on geometric mean; an arithmetic mean-derived ERP is 4.63%. *Id.* at 68. Vice Chancellor Strine, in *Global GT LP v. Golden Telecom, Inc.*, 993 A.2d 497, 516 (Del. Ch. 2010), compared an ex post assessment of the ERP against a supply side assessment of the ERP, and decided to go with the supply side assessment.

The accounting conglomerate Grant Thornton has a computer program for inferring the current ERP. It works like this:

> On a company-by-company basis for all companies comprising the applicable stock index, (i) future cash flows are estimated based on a consensus of analysts, and (ii) an expected rate of return (ERR) is determined for the stocks making up that index. Those calculations are fed into the CAPM formula, K*i* = R*f* + ß*(ERP), where K*i* is the index level expected rate of return, R*f* is the risk free rate, ß is Market Beta, and ERP is the Equity Risk Premium. Market Beta is set to one (because the index by definition is the market). Solve for the ERP using K*i* - R*f* = ERP.[62]

Stephen Hassett is a businessman, a University of Virginia Business School graduate with a background in mergers and acquisitions, who developed a model for determining the implied ERP and published it in *The Risk Premium Factor Valuation Model for Calculating the Equity Market Risk Premium and Explaining the Value of the S&P with Two Variables*, in 22 JOURNAL OF APPLIED CORPORATE FINANCE 118-130 (SPRING 2010).[63] Hassett believes that fluctuations in the ERP (as measured by the S&P 500) are attributable to three factors: earnings, growth, and the RFR. He uses the formula P=E/(C-G) (where P is the price of the investment, E is projected earnings, C is the cost of capital, and G is the growth rate) to determine what he calls the "Risk Premium Factor," which he then uses in cost of capital caluculations instead of the ERP. Hassett attributes the decline in the ERP since the early 1980s to a lowering of the RFR over that same period. Duff & Phelps considered Hassett's estimation of the ERP as one factor in making its determination of the U.S. ERP as of September 30, 2011.[64]

Aswath Damodaran is a Professor of Finance at the Stern School of Business of New York University. Professor Damodaran regularly calculates an ERP for the S&P 500 and publishes it at his web site.[65] Damodaran employs a two-stage model (5 years and >5 years) based upon an average of analysts' projections of stock dividends and buybacks for a period of five years, and the RFR thereafter.[66] Duff & Phelps considered Damodaran's estimation of the ERP as one factor in making its determination of the U.S. ERP as of September 30, 2011.[67]

Duff & Phelps ("D&P") is an investment research and investment advice company headquartered in New York City. D&P publishes a Recommended U.S. ERP which it updates when they feel that it needs to be changed. D&P's Recommended U.S. ERP was 5.5% from July 2011 to September 29, 2011, then it was raised to 6% from September 30, 2011 to January 14, 2012, when it was dropped back to 5.5%.[68] Duff & Phelps analyzes general economic conditions, and the results of ex ante models such as Hassett's and Damodaran's, in making its assessment of the current ERP. For more thorough analysis, see Roger J. Grabowski, *Developing the Cost of Equity Capital: Risk-Free Rate and ERP During Periods of "Flight to Quality."*[69]

Although ex ante analysis of the ERP has its adherents,

it has not yet achieved widespread acceptance, which might undermine admissibility under the *Frye* test. Under a *Daubert* analysis, however, general acceptance is just one factor, and an ex ante model can be tested by applying it to various historical dates to determine an error rate in predicting the ERP. Again, however, testing a model against historical data conflates past accuracy with the model's ability to discern present expectations of future returns. Accuracy is the concern of the portfolio managers and investors; current expectations is the concern of business valuators.

E. MODERN APPLICATIONS OF MPT AND THE CAPM. In Modern Portfolio Theory, risk is conceived as the likely variance around an expected rate of return. The Capital Asset Pricing Model (CAPM) provides that the risk of a particular investment is broken down into two components: (i) firm-specific risk, and (ii) systematic market risk. It is assumed that an investor can eliminate all firm-specific risk by widely-diversifying his overall investment portfolio, leaving as the only remaining risk the risk associated with the market as a whole ("market risk" or "systematic risk"). The reward for taking on the risk of the market as a whole (i.e., systematic risk) is called the "Equity Risk Premium" (ERP). The ERP is by definition the amount of additional reward an investor requires before he will move from a risk free investment (i.e., U.S. government securities) into riskier corporate stock.

Under the CAPM, this expected rate of return (the RFR plus the ERP) can be used to determine the price an investor should pay to buy stock in a particular company, by taking the estimated future benefits to be received from stock ownership (dividend reinvestment plus proceeds from eventual sale of the stock) and dividing that by the rate of return required by the investor to offset the risk of the investment.

1. Beta. In the CAPM, the risk associated with buying stock of a particular company is said to be statistically determinable by calculating the variance of past returns from the expected rate of return. This could be done by assessing the variability of the company's dividend payment history and stock price, but the conventional approach is to calculate the variance of the company's historical rate of return compared to that of the stock market as a whole. In the CAPM, the variability of the return earned by the market as a whole is assigned the number 1, and the measure of the variability of a specific company's return compared to that of the market as a whole (the "Beta coefficient," called "Beta" and symbolized as "β") can be calculated using historical numbers. A security with a Beta of more than 1 means a systematic risk of fluctuating return that is greater than the systematic risk of the market as a whole; a security with a Beta of less than 1 means it has systematic risk of fluctuating return that is less than the systematic risk of the market as a whole. U.S. Treasury securities have a Beta of zero because they do not covary with the stock market. A negative Beta means that the return on that investment moves in the opposite direction from the return on the stock market as a whole. An investor considering a stock with a Beta greater than 1 would pay less for the anticipated return because only by lowering the purchase price can the investor achieve the higher rate of return that the greater risk (expressed as a larger Beta) requires. A stock with a Beta less than 1 can justify a higher purchase price since there is a greater likelihood that the anticipated rate of return will be realized. There are a number of financial services that publish Betas for publicly-traded stocks, including Bloomberg, Ibbotson-Morningstar, Merrill Lynch, Standard & Poor's, Trade Line North America, and Value Line. For further discussion see Section V.I, Problems with Beta.

2. The CAPM Formula. The CAPM formula is a simple equation:

$$E(R_i) = R_f + ß_i \bullet (E_m - R_f)$$

$E(R_i)$= the expected rate of return on an individual security *i*
R_f = the risk free rate (RFR)
$ß_i$ = Beta for the individual security *i*
E_m = the expected return on the market as a whole
R_f = the Risk Free Rate
$(E_m - R_f)$ = the Equity Risk Premium (ERP).

The formula can be restated by saying that the expected rate of return on an individual security is the rate of return of the risk free investment, plus the product of multiplying the extra return required to draw investors into equity investments (the ERP) by the divergence of the specific company's returns (Beta) from the stock market's return as a whole:

$$E(R_i) = R_f + ß_i \bullet ERP$$

Put in different words, under the CAPM, the expected rate of return on an investment varies with the risk of the investment. Because optimal diversification is assumed to eliminate Specific Company Risk, the sole risk factor of a specific company that must be compensated is the extent to which that company's return is expected to deviate from the return on the stock market as a whole. This deviation is the company's Beta, which is measured by seeing how much the company's return has changed in the past when the return on entire market changed by one percent, usually viewed over an historical period of five years. A market index, like the S&P 500 or Wilshire 5000, is taken to represent the entire market for purposes of determining a company's Beta. A Beta greater than 1 means that the stock return has been more volatile than that of the market; a Beta of 1 means that the stock's return has moved up and down in step with the market; a Beta between 1 and zero means the stock's return has been less volatile than the market; a Beta of zero means there is no correlation between the return on the company's stock and the market (which would apply to cash and to risk-free investments like Treasury bills); a negative Beta means that the return on the investment moves inversely to the return of market (i.e., decreases when market return goes up, or vice versa).[70]

3. Size Premium. Under the CAPM, the expected rate of return of an investment is supposed to be equal to the Risk Free Rate, plus the product of the company's Beta times the Equity Risk Premium. Over time, people noticed that small companies on the national stock exchanges garner a return in excess of what the CAPM predicted given their Betas. In fact, the smaller the company, the greater the extra return. Yale University Finance Professor Roger Ibbotson suggests adding a Size Premium to the standard CAPM formula, because although Betas for small companies are greater than Betas for large companies, "small company stocks have had returns in excess of those implied by their betas." IBBOTSON SBBI VALUATION YEARBOOK (2011), p. 87. Implicit in the discussion is the recognition that the outsized returns for investing in small companies results from the investor paying less to buy the company's stock, and then achieving or exceeding the expected dividend income and/or stock price appreciation. Ibbotson's modified CAPM formula is:

$$K_s = R_f + (ß_s \bullet ERP) + SP_s$$

K_s is the expected rate of return on security *s*, and SP_s is the "Beta-adjusted" Size Premium based on the size of the company's market capitalization. *See* IBBOTSON SBBI VALUATION YEARBOOK (2011), pp. 44-45 & 87. The Pepperdine University Private Capital Markets Project Survey for 2011 (Business Appraiser Survey portion) showed that the respondents used the following size premiums based on EBITDA (not market cap): $250 million, 3.78%; $25 million, 5.13%; $1 million, 6.4%. PPCMP (Summer 2011) p. 32, Figure 26. The Business Appraiser Survey included 271 persons, of whom 39% were CPAs, 30% were ABV, and 35% were ASA certified, and 60 had over 10 years in business appraising. *Id.* p. 29. In *Estate of Hendrickson v. C.I.R.*, T.C. Memo. 1999-278, 1999 WL 637089, *18 (U.S. Tax Ct. 1999), an expert's opnion of value based on the CAPM was rejected for his failure to utilize a size premium. In *Gesoff v. IIC Indus.*, 902 A.2d 1130, 1159 (Del. Ch. 2006), the Chancery Judge said that "[t]he small-size premium, although somewhat controversial, is a generally accepted premise of both financial analyses and of this court's valuation opinions." See *Delaware Open MRI Radiology Associates*, 898 A.2d 290, 338 n.129 (Del. Ch. 2006) (endorsing the small size premium, despite the "great debate" over is appropriateness); *ONTI, Inc. v. Integra Bank*, 751 A.2d 904, 920 (Del. Ch. 1999) ("This court has traditionally recognized the existence of a small stock premium in appraisal matters"). *See* discussion in Lawrence A. Hamermesh & Michael L. Wachter, *The Short and Puzzling Life of the "Implicit Minority Discount" in Delaware Appraisal Law*, 156 UNIV. OF PENNSYLVANIA LAW REVIEW 1, 48 (2007).[71] Michael Barad, of Ibbotson Associates, cautions on the difference between the Small Stock Premium and the Size Premium, both of which are included in the IBBOTSON SBBI VALUATION YEARBOOK. The small stock premium is meant for use by security analysts to construct expected returns for a small stock benchmark, while the Size Premium is intended to use to determine a Discount Rate to discount future cash flows. The Size Premium removes the return attributable to Beta, to avoid double counting when the Size Premium is used in the CAPM or Build Up methods. Michael W. Barad, *Technical Analysis of the Size Premium* (undated).[72]

4. What Constitutes Diversification. According to one study, in 1997 it took 20 stocks to eliminate non-systematic firm-specific risk; today it takes 40 stocks. Jason Zweig, *Simple Index Funds May be Complicating*

the Markets, THE WALL STREET JOURNAL (Feb. 18-19, 2012), p. B-1.[73] A convenient way for an investor to diversify is to invest in an index fund. In 1976, Vanguard launched the first market index fund, which was a passive (essentially unmanaged) fund that was invested in a portfolio of stocks that matched the S&P 500 based on relative market capitalization.[74] The Beta of the portfolio was essentially the Beta of the stock market, which was 1. In the intervening years, index funds have proliferated to the point that they are starting to affect the behavior of the overall market. See Jason Zweig, *Id.*

5. Using the CAPM to Value Private Businesses. Many business valuators use the CAPM as the starting point for determining the appropriate Discount Rate to apply to the projected future cash flows of a closely-held business in order to determine a value for the business. The CAPM claims to capture the risk associated with investing in a publicly-held company through the company's Beta coefficient. The theory goes that, if selected publicly-traded companies are comparable to the privately-owned business being valued, then by taking the Discount Rate suggested by the CAPM for those publicly-traded comparables, after adjusting for differences, and adding risk premia to account for risks associated with the subject company that are not reflected in Beta and cannot be diversified away, the CAPM can be used to establish a Discount Rate to apply to projected future cash flows of a privately-held company to arrive at a value. However, as Shannon Pratt notes: "A major weakness of using the CAPM for its original purpose of understanding the value of securities in a portfolio is the measurement of the various components of the CAPM equation." Pratt, VALUING A BUSINESS: THE ANALYSIS AND APPRAISAL OF CLOSELY HELD COMPANIES 211 (5th ed. 2008) ("Pratt"). These problems are carried over to the domain of business valuation when the CAPM is used as the foundation for developing a Discount Rate for business valuation purposes.

6. Alternative Asset Pricing Models. Some have noted that the original CAPM was based on simplifying assumptions that have caused the model to perform poorly against empirical data. Different theorists have undertaken to modify the original CAPM to make it better accord with the data. Many theorists have proposed various modifications to the CAPM. In 1976, the Arbitrage Pricing Theory was suggested as a better way to determine Beta for an individual investment by comparing the investment's correlation to multiple macro-economic factors (GDP, inflation rate, etc.), determining a Beta for each factor, and combining these measures into an overall Beta for that investment.[75] Successive efforts to make the CAPM more robust have addressed particular criticisms, but on the whole, according to Professor Eugene F. Fama, "the empirical record of the model is poor–poor enough to invalidate the way it is used in applications." Eugene F. Fama & Kenneth R. French, THE CAPITAL ASSET PRICING MODEL: THEORY AND EVIDENCE (2004) p. 1.[76] Despite these criticisms, the CAPM has endured as a central tenet of portfolio management, investment analysis, and business valuation.

F. BUILD UP METHOD. Another popular approach to determining an appropriate Discount Rate for the income approach to valuing a business is the "Build Up Method." Using the Build Up Method, the Discount Rate for use in discounting projected future cash flows of a business is determined by adding together various components, as follows:

Risk Free Rate
+ Equity Risk Premium
+ Size Premium
+/- Industry Risk Premium
+ Specific Company Risk Premium
Discount Rate

The Build Up Method is an additive model in which the required rate of return on an investment–what would be sufficient to attract a buyer--is estimated by taking the Risk Free Rate and adding to that the Equity Risk Premium and other risk premia that reflect the various risks associated with buying an interest in a privately-owned company. These additional risk premia include the Firm Size Premium, the Industry Premium, and the Specific Company Risk Premium.

It is important to note that the Build Up Method for valuing the stock in a small, closely-held company is, in essence, the CAPM, where the Beta of the industry is substituted for the Beta of the stock, and where the CAPM is adjusted for smaller company size, and where the non-systematic risk of the company is assessed rather than being diversified away.

Recall that under the CAPM it is assumed that all risks

associated with investing in a specific company can be eliminated from an investment portfolio by investing in a sufficient number of diverse companies that the Specific Company Risks cancel each other out. One recent estimate is that it takes 40 well-chosen companies to achieve the necessary diversification. Jason Zweig, *Simple Index Funds May be Complicating the Markets,* THE WALL STREET JOURNAL (Feb. 18-19, 2012), p. B-1.[77] There is reason to doubt whether the potential buyers of a small, closely-held company are looking for increased risk/increased return in order to offset super-safe investments in their existing portfolios. It is much more likely that potential investors are looking to buy a small, privately-owned company in pursuit of returns that exceed the returns on even high Beta stocks traded on an exchange. Viewed in this light, the key difference between the CAPM and the Build Up Method thus lies in the CAPM's ignoring Specific Company Risk while the Build up Method reflects it in a specific premium. Specific Company Risk can only be assessed using Fundamental Analysis of the company's unique advantages and disadvantages.

1. The Risk Free Rate. As used in the Build Up Method, the Risk Free Rate (RFR) is the same concept we saw in Section V.C. above. It represents the yield to maturity of U.S. Treasury notes, bills or bonds. Since longer-term securities usually have higher yields (the "Yield Curve"), the choice of Treasury security used in the calculation affects the RFR, and thus the Discount Rate. Temporary anomalies affecting the RFR can be avoided by taking an historical average RFR instead of the current RFR, or by making adjustments to offset temporary irregularities. See Section V.G. below. However, making such adjustments may introduce other errors, so caution is advised.

2. The Equity Risk Premium. As used in the Build Up Method, the Equity Risk Premium (ERP) is the same concept we saw in Section V.D above. It represents the reward for investing money in the U.S. stock market instead of U.S. Treasuries. While it is the expected *future* ERP that concerns business valuators, it is common to use the *historical* ERP as a proxy for the expected future ERP. While the use of the historical ERP in developing a Discount Rate is generally accepted in the business valuation community, concerns have been raised about the accuracy of this approach to determining the forward-looking ERP. See Section V.H. Ironically, since business valuators are dealing with the expectations of a hypothetical investor, a generally accepted view of the forward-looking ERP will work for business valuation, regardless of whether that prevailing view is right or wrong.

3. The Size Premium. Studies have shown that the return on "small cap" stocks is higher than the CAPM predicts. IBBOTSON SBBI 2011 VALUATION YEARBOOK 83 ("IBBOTSON SBBI"). Ibbotson and Duff & Phelps ("D&P") both present size premia that are based on statistical analysis of historical data of stocks listed on the American stock exchanges. Ibbotson started his Size Premium in 2000, with ten size categories ("deciles") based on market capitalization. The 10th Decile includes the smallest 10% of stocks on the NYSE, AMEX, and NASDAQ, based on market cap. In 2001, Ibbotson broke up the smallest Decile (the 10th decile) into two subcategories, 10a and 10b. Then in 2010, Ibbotson broke the 10th Decile down into four subcategories: 10w, 10x, 10y and 10z. IBBOTSON SBBI p. 89. D&P publishes its own Size Premium data. Duff & Phelps, LLC, *Risk Premium Report.*[78] D&P uses eight alternate measures of company size to break NYSE-listed companies into 25 size-ranked portfolios of equal size, then adds to that pool, companies listed on the AMEX and NASDAQ (mostly to the small cap end of the portfolios). *Id.* at 4- 7. D&P measures size in various ways, including accounting measures (such as assets, net income) as well as non-accounting measures (such as number of employees). *Id.* at 5, 28. Concerns about the validity of the Size Premium are discussed in Section V.K. below.

4. The Industry Risk Premium. Researchers and statisticians testing the CAPM noticed that individual company Betas were too variable to be considered reliable, so they began to aggregate groups of stocks in order to reduce statistical "noise." Some researchers began to aggregate companies by industry in order to get a more reliable Beta. Starting in 2000, Ibbotson began publishing an Industry Risk Premium (IRP), using to the following formula:

$$IRP_i = (RI_i \times ERP) - ERP$$

IRP_i= industry risk premium for industry "i"
RI_i = risk index for industry "i"
ERP = Equity Risk Premium.

To identify each industry, Ibbotson adopted the United

States Census Bureau's Standard Industrial Classification Codes (SIC Codes). Ibbotson developed a risk index for each industry, using the full information Beta of that industry. He multiplied that form of Beta times the ERP to get an adjusted ERP, then subtracted the unadjusted ERP to isolate the adjustment, which he called the Industry Risk Premium. Thus, the IRP is a CAPM Beta for a particular industry as a whole. As such, the IRP indicates the degree to which the return on stocks of companies in the industry (i.e., sharing the same SIC Code) vary with changes in the return of the overall stock market. If the industry moves in tandem with the overall market, the Industry Risk Index is 1 and the IRP is zero. If the industry moves more than the market, the Industry Risk Index is more than 1, and the IRP will be a positive number that will increase the Discount Rate. If the Industry Risk Index is less than 1, the IRP will be a negative number, and will lower the Discount Rate. An IRP greater than 0 means that the industry is riskier than the market. *See* Michael Barad & Tara McDowell, *Capturing Industry Risk in a Buildup Model*.[79] The Betas for the industries are calculated using the return on the S&P 500 as a proxy for the market return and the yield on 30-day Treasuries as a proxy for the RFR. *Id.* at 3.

As noted above, the Build Up Method ignores individual company Beta. Adding an IRP to the Build Up effectively substitutes the Industry Beta for the individual company Beta adjustment in the traditional CAPM formula. Viewed this way, the Build Up Method is in essence a modified CAPM. Being the product of a CAPM analysis, the IRP (and a Build up using the IRP) is subject to the same concerns that surround the CAPM. See Section V.J.

5. The Specific Company Risk Premium. "Specific Company Risk" (SCR) has been defined to be "[a]n unsystemic risk specific to a certain company's operations and reputation."[80] The Specific Company Risk Premium (SCRP) is central to business valuations of closely-held companies, because the SCRP represents the risks inherent in investing in a privately-owned business that has lower sales and thinner capitalization and a more vulnerable market position and less management depth than the smallest companies traded on the national stock exchanges. Ownership interests in a privately-held company cannot be valued objectively by comparison to a stock price on a liquid national exchange. The challenge, then, about the SCRP is that, by necessity, it is unique to the company being valued, and thus cannot be standardized or subjected to statistical analysis. See Section V.N. below.

A good explanation of the SCRP is available at Mercercapital.com.[81] One effort to objectify Specific Company Risk is described at BVresources.com.[82] Factors contributing to the SCRP are: smaller size; more limited access to capital markets; a narrower customer base; a limited geographic area; dependency on key executives; limited product line or services offered; litigation or regulatory risk; industry volatility; etc. Because other premia sometimes capture parts of these risks, care must be taken not to double-count any of these risks by including them in two premia, which would overstate the Discount Rate.

In most instances, the SCRP is a subjective assessment by the business valuator. Duff & Phelps has taken a step to introduce more objectivity into the process of arriving at an SCRP. D&P has taken its Size Premium database and segregated publicly-traded companies based not on size alone but rather on various risk factors. The results are published in its Risk Premium Report. D&P suggests using its risk figures in a modified CAPM formula, where the Required Rate of Return (Discount Rate) is equal to the RFR plus a risk premium that consists of the ERP, plus a Size Premium, plus a Specific Company Risk Premium (SCRP) constructed using comparisons from its Risk Premium Report. Duff & Phelps, LLC, *Risk Premium Report 2010* (excerpt) pp. 33-34, 44-46.[83]

6. The Build-Up Method as an Extension of the CAPM. While some courts and some business valuators treat the Build-Up Method as if it is different from the CAPM, they are in fact very similar. Under the CAPM, the Discount Rate consists of the RFR, plus the ERP multiplied by the firm's Beta. Theorists have suggested that Industry Betas are more reliable than firm Betas, and that the Beta of the industry in which the firm is located should be substituted for firm Beta. Ibbotson and others note that the CAPM is too high for large cap stocks and too low for small cap stocks. Ibbotson suggests adding a Size Premium to the Build-Up Discount Rate. So a modified CAPM would consists of the RFR, plus the ERP multiplied by the Industry Beta, plus a Size Premium. If you convert Industry Beta to an Industry Premium (which Ibbotson does in his SBBI VALUATION YEARBOOK), and add a Size Premium, then

the modified CAPM is essentially the Build-Up Method, with the exception that Specific Company Risk is "diversified away" in the CAPM but it is explicitly included in the Build Up Method as the Specific Company Risk Premium (SCRP). Viewed in this way, the Build Up Method is the modified CAPM with a Specific Company Risk Premium (SCRP) added. Since the SCRP is arrived at subjectively, not statistically like the other components of the CAPM, there is reason to wonder why the Build Up Rate has been accepted by many as being more reliable than a modified CAPM in determining an appropriate Discount Rate to use in valuing privately-owned companies.

G. PROBLEMS WITH THE RISK FREE RATE. In selecting a Risk Free Rate (RFR) for business valuation purposes, the following issues can arise.

1. Nominal vs. Real Yields. The RFR is the theoretical rate of return of an investment with zero risk. As used in finance, the RFR includes expected inflation (nominal yield).[84] However, if TIPS are used to establish the RFR, that rate would filter out the expectation of inflation (real yield). The U.S. government did not introduce TIPS until 1997, so real returns prior to that date must be calculated by subtracting the inflation rate from nominal bond yields.[85] If the nominal RFR is used, the valuator should use future cash flows that are nominal (i.e., reflect future inflation). If the real RFR is used, then real future cash flows should be used. Roger J. Grabowski, *Cost of Capital Estimation in the Current Distressed Environment*, 4, JOURNAL OF APPLIED RESEARCH IN ACCOUNTING AND FINANCE 31, 32 (2009) ("Grabowski").[86]

2. Risk Free You Say? Another concern is the impact of the growing awareness that U.S. Treasury securities are no longer risk free, and perhaps haven't been for some time. Stern, Stewart & Co.'s *Equity Risk Measurement Handbook* (2001)[87] suggests that, since the early 1970s, long term U.S. government bonds (if sold prior to maturity) have been positively correlated with the stock market, suggesting systematic risk if you do not hold the bond to maturity. *Id.* at 5. This study underscores the fact that U.S. Treasury securities are risk free *only if they are held to maturity*. Also, on August 6, 2011, Standard & Poor's downgraded U.S. Treasury securities from AAA to AA+ status, below the level of Liechtenstein's debt. In reality, the RFR doesn't really exist, because all investments have risk, even U.S. Treasury securities. Billions of dollars were lost in 2011 and 2012 by investors and money managers, as well as European banks and a particular American hedge fund, who ignored the fact that European sovereign debt was not truly risk free. Time will tell how long it will be before investors in U.S. Treasuries realize that their investments will either be defaulted or repaid in excessively inflated dollars leading to rising interest rates and a decline in value of unmatured securities. Realizing that U.S. Treasuries are not risk free calls into question the practice of using Treasuries as a proxy for the time value of money.

3. Negative Yields. In principle, the RFR is the minimum rate of return an investor would require before making a risky investment, because no investor will accept risk unless the potential rate of return is greater than the Risk Free Rate. However, the RFR turned negative in the USA in 2008 and again in Germany in 2011-2012, when investors bid up the price of government securities to the point that the price paid compared to the coupon rate on the security resulted in a negative yield to maturity. These were temporary conditions that manifested the "flight to quality" carried to its extreme, where investors were so worried about holding alternative investments, *including currency*, that they were willing to pay a premium just to have the government hold their money.[88] If the present RFR in fact reflects a transient perception of the riskiness of other investments, then adding the historical ERP to the current RFR would understate the Discount Rate and make businesses seem more valuable than they are. When this occurs, Duff & Phelps "normalizes" the RFR used in its calculations of the ERP, such as by using a trailing 12-month average.[89]

4. The Flip Side of Fear. In 2011-2012, the RFR was reduced by panicked flight-to-quality investors from around the world bidding up the price of U.S. Treasury securities. This drove the yields down, which reduced the RFR and thus the Discount Rate used by business valuators. This would cause businesses to appear to be more valuable than otherwise. Grabowski, p. 33. When people are so scared of investment losses that they flock to government bonds, does that really mean that risky businesses are worth more?[90] Common sense would suggest that the same fear that is driving down the RFR is at the same time driving up the risk premium for investing in equities (the ERP), and that,

after netting the downward movement of the RFR against the upward movement of the ERP, the Discount Rate should be higher now than in a non-fearful environment. Business valuators who are combining the current RFR with an historical ERP are not adjusting for the effect of fear on the current ERP. For further study, see Roger J.Grabowski, *Developing the Cost of Equity Capital: Risk-Free Rate and ERP During Periods of "Flight to Quality,"* pp. 17-23.[91]

5. Government Manipulation. At various points of U.S. history, the federal government has manipulated the interest rate on its Treasury securities so that they do no reflect market forces. This occurred from 1942 to 1951, when the FED was buying U.S. Treasury securities to pay for World War II and later was depressing the interest rate to avoid a relapse into depression. Roger J. Grabowski estimates that this ten-year intervention into the market overstated the ERP by 5% for ten years.[92] Government manipulation of the RFR occurred beginning September 21, 2011, when the Federal Reserve started artificially depressing long-term T-bond rates (by swapping short term Treasuries for long term T-bonds in "Operation Twist"). As of March, 2012, Treasury yields are near a 70-year low. The current artificially-depressed yield on Treasury securities has had the effect of moving investors away from U.S. Treasuries and into more risky investments like equities and gold, thus artificially boosting the prices of stock in the equity markets (as Ben Bernanke intended) and of precious metals. An artificially-depressed RFR reduces the Discount Rate used to discount a business's future cash flows. A lower Discount Rate increases the present value of future cash flows. So an artificially low RFR makes a business valued using the CAPM or Build Up Method appear to be more valuable than it would otherwise, for those who are using the current RFR in arriving at a Discount Rate. Duff & Phelps said:

> Because of the impact of the Fed's unprecedented quantitative easing measures on the economy and financial markets, many of the relationships we historically held true in finance are no longer stable or very meaningful.[93]

In reaching its January 2012 ERP recommendation, Duff & Phelps used a normalized 20-year yield on U.S. government bonds of 4.0%. D&P spokesman Jim Harrington said: "Had we used the spot yield-to-maturity of 2.6% as of mid-January, 2012, we would have arrived at an overall discount rate inappropriately low vis-a-vis the risks currently facing investors."[94] D&P's normalizing of the RFR has been criticized. Moore, Elrich & Neal, PA, *Thoughts on Duff & Phelps Normalizing Risk Free Rate*.[95] Current manipulation of the RFR does not send an accurate market signal and should not be allowed to have an untoward effect on the value of closely-held businesses, since the manipulation of interest rates is short term while potential buyers of a business would be considering the long term. For this reason, business valuators should consider using an historical average RFR, or a current RFR adjusted to remove government interference, in preference to the current long-term Treasury yield.

6. Selecting the Right Security. The valuator must select which instruments s/he will take as representing the RFR. U.S. Treasury securities are as free from risk as investments can be in the USA, but there are many Treasury securities to choose from, each with a different yield to maturity. The yield to maturity on the 3-month U.S. Treasury note is sometimes used by finance professors as the Risk Free Rate. This maturity is too short to serve as a basis for long-term investment decisions. Some writers use 5-year Treasury notes, and business valuators frequently use Treasury securities with a 10-yr. or 20-yr. or 30-yr. maturity for the RFR. Shorter term securities lower the RFR, since short term securities are usually on the low end of an upward sloping Yield Curve. Also, short term rates are more volatile and more subject to government manipulation. Ibbotson's SBBI uses the yield on existing Treasury securities with 20 years to maturity to construct his RFR. IBBOTSON, SBBI VALUATION YEARBOOK (2011), p. 55. Duff & Phelps also uses the 20-year yield on U.S. government bonds.[96] Another question is whether instead to use the TIPS (inflation-protected) yields, which do not reflect a premium for inflation risk. An RFR based on TIPS is a "real" yield, not a "nominal" one. As noted above, if a real yield is used for the RFR, related calculations should be based on real (i.e., inflation adjusted) numbers. Finally, a Treasury STRIP is a security that is purchased at a discount, pays no interest, and then pays the coupon amount on maturity. Ibbotson suggests that if the asset being measured will spin off cash periodically, the Treasury bond should be used, but if the investment will merely provide a single payoff at the end of the term, then the Treasury STRIP should be chosen. IBBOTSON, SBBI VALUATION

YEARBOOK (2011) p. 44.

7. Matching Horizons. The maturity date on the Treasury security (2, 3, 5, 7, 10, 20, or 30-yr.) used for the RFR should be matched to the period over which cash flows will be discounted in the business valuation at hand. IBBOTSON, SBBI VALUATION YEARBOOK (2011) p. 44.[97] Ibbotson suggests that, in valuing a business as a going concern, the appropriate yield is that of a long term Treasury Bond. *Id*. at 44. Ibbotson uses the yield on U.S. Treasury securities with 20 years to maturity. *Id.* For more precision, each future period being discounted should be matched to a risk-free security that has the same maturity date. *See* Skardziukas, p. 8.

8. Compounding. Another choice is whether to use compounded or simple interest in determining the RFR. Finance Professor Siegel of Wharton School published a paper reflecting the RFR since 1802.[98] His numbers show the differences between the real (inflation adjusted) returns on bonds and bills, with interest compounded and with simple interest:

	Compound		Simple	
	Bond	Bill	Bond	Bill
1926-2004	2.25%	0.69%	2.77%	0.75
1946-2004	1.44	0.56	2.04	0.62
1946-1965	-1.19	-0.84	-0.95	-0.75
1966–1981	-4.17	-0.15	-3.86	-0.13
1982-1999	8.40	2.91	9.28	2.92
1982-2004	8.01	2.31	8.74	2.33

Id. It is evident that the compounded RFR is lower than the arithmetic RFR. Since the return on equities is usually based on the assumption that all dividends received are reinvested in equities (i.e., compounded), an arithmetic-based RFR compared with a compounded return on equity is a mismatch.

9. Historical vs. Current. The question arises whether to use historical average yields or current yields on U.S. Treasuries. Finance Professor Jeremy J. Siegel, at Wharton School, found that the compound annual real (inflation-adjusted) return on U. S. Treasury bonds from 1802-1998 was 3.5%, while the real return from 1926-1998 was 2.2%, and the real return from 1946-1998 was only 1.3%. Jeremy J. Siegel. *The Shrinking Equity Premium: Historical Facts and Future Forecasts*, 26 THE JOURNAL OF PORTFOLIO MANAGEMENT 10 (Fall 1999).[99] Siegel surmises that "bursts of unanticipated inflation" after World War II and in the 1970's reduced the real return on long-term bonds. However, the yield on 10 and 20-year TIPS bonds was 4% in August of 1999. Siegel concluded:

> The market projects real returns on risk-free assets to be substantially higher in the future than they have been over most of the [Twentieth] [C]entury.

Id at 12. At the other end of the last inflationary period, persons who bought government bonds at those historically high interest rates had capital gains on their bonds as interest rates fell in the ensuing years. Thus, over the past 40 years, bond investors have enjoyed abundant returns. Peng Chen, *Will Bonds Outperform Stocks Over the Long Run? Not Likely*, RETHINKING THE EQUITY RISK PREMIUM p. 120.[100] Yields are so low now that this bonanza cannot be repeated. *Id.* at 120. In the present environment, the only returns on bonds will be the interest paid.

H. PROBLEMS WITH THE EQUITY RISK PREMIUM. The Equity Risk Premium (ERP) is an essential element of both the CAPM and the Build Up Method of arriving at a Discount Rate. One study found that estimating the ERP is the source of the highest rate of errors in valuing businesses (i.e., calculating the cost of capital). Wayne Ferson & Dennis Locke, *Estimating the Cost of Capital Through Time: An Analysis of the Sources of Error*, MANAGEMENT SCIENCE pp. 480-500 (April 1998). Another study estimated that different assessments of the ERP caused the cost of equity to vary from 2% to 4%. Seth Armitage, THE COST OF CAPITAL: INTERMEDIATE THEORY, pp. 319-20 (2005), cited in Skardziukas, p. 32, n. 28.

In theory, the ERP is the extra return-on-investment required to lure investors away from the risk free investment (i.e., U.S. gov't securities) and into corporate stock traded on the NYSE, AMEX, and NASDAQ exchanges. Under prevailing financial theory, the ERP is measured by the difference between the currently *expected* return on stocks and the currently *expected* return on government securities (the difference being called "excess return"). In most instances, business valuators use the *historical* excess return as a proxy for the *expected* future excess return. The attraction of this assumption is simplicity and low cost,

but not accuracy.

An ERP between 5% and 7% is widely used in the business valuation community.[101] However, there are concerns about the various ways that the ERP is determined for purposes of valuing closely-held businesses. Interested persons should express gratitude to the Research Foundation of the CFA Institute for publishing, on December 23, 2011, a 154-page grouping of papers called RETHINKING THE EQUITY RISK PREMIUM. The grouping includes papers from some of the brightest stars in the ERP constellation, including among others Roger G. Ibbotson, Clifford Asness, Jeremy J. Siegel, and Rajnish Merha.

1. The Equity Premium Puzzle. Much ink has been spilled over the "Equity Premium Puzzle," the anomaly noted in a 1985 article published in the JOURNAL OF MONETARY ECONMICS by Rajnish Mehra & E. C. Prescott, entitled *The Equity Premium: A Puzzle*,[102] which suggested that, in 20th Century America, the excess of returns of stocks against government securities exceeded any reasonable ex ante perception of risk. This suggests that investors in 20th Century America were just plain lucky (e.g., we won two World Wars and one Cold War) to experience high excess returns and that this history of excess returns overstates the historical ex ante premium that investors actually required at different points in the past to invest in equities. Many explanations have been suggested for the Equity Premium Puzzle. For example, Wharton Finance Professor Jeremy Siegel observed that, until the second half of the Twentieth Century, investors were probably ignorant of the true risks and returns from holding stocks and may have underestimated returns and overestimated the risk of investing in stocks. Jeremy J. Siegel, *Perspectives on the Equity Premium Puzzle*, 61 FINANCIAL ANALYSTS JOURNAL 61, 65 (2005).[103] Professor Siegel also suggests that the expansion of tax-sheltered plans over the past few decades has tremendously increased the demand for equities. *Id*. at 65. Professor Siegel also noted the unexpectedly poor return on bonds in the 35 years following World War II, including the period of extreme inflation in the 1980s, which caused the actual RFR to be lower than expected. This would have caused the ex post ERP to be higher than what was expected ex ante. *Id.* at 65. Professor Mehra himself recently attributed 2% of the excess ERP to his understating the Risk Free Rate (RFR) by using T-bills as the proxy for the RFR whereas he now thinks that 25-year TIPS are a better RFR proxy. Rajnish Mehra, *The Equity Premium Puzzle Revisited*, RETHINKING THE EQUITY RISK PREMIUM p. 150 (2011).[104] Making the substitution brings his ERP down from 6% to about 4%. *Id.*

An interesting explanation for the Equity Premium Puzzle was suggested by Lungu & Minford (2006),[105] who said that many equities are held in retirement plans, where investors have very long-term investment horizons. They also suggested that older people can only sell their stock to younger people. They acknowledged that Total Return on U.S. equities has been several multiples of Total Return on U.S. government securities for most periods in the past 110 yrs. This reflects a perception of high risk for stocks—higher than proved to be true—or the so-called Equity Premium Puzzle. They note that the stock market has had dramatic swings over the last 110 years. They suggest that the fear of low values at the time of retirement drives up the ERP, and explains at least part of the Equity Premium Puzzle.

2. Different Windows Into the Data. One troubling feature of the ex post approach to determining the ERP is that the historical ERP varies depending on the time frame (window) examined. Some studies of the historical ERP begin in the 1870s, others (e.g., Ibbotson) in 1926, others in the mid-1950s, or in the 1960s.

Jeremy J. Siegel, Professor of Finance at the Wharton School of the University of Pennsylvania, published a paper in 2005 entitled *Perspectives on the Equity Risk Premium*.[106] Professor Siegel studied historical asset returns since 1802. He found that "the compound annual real return on equity has averaged 6.82 percent over the past 203 years." *Id.* at 62. Here is a table of his results for the compounded ERP based on long-term government bonds, using different windows:

	ERP
1801-2004	3.31%
1871-2004	3.86%
1802-1870	2.24%
1871-1925	2.89%
1926-2004	4.53%

1946-2004	5.39%
1946-1965	11.21%
1966–1981	3.81%
1982-1999	5.22%
1982-2004	1.46%

Id. at 62. Professor Siegel's article reflects that real (inflation-adjusted) return on bonds was 2.25% from 1926-2004, but was -4.17 between 1966 and 1981, and was 8.4% from 1982-1999 and dropped to 8.01% from 1982-2004. *Id.* at 62. Professor Siegel also points out that investors could not obtain the indicated returns prior to the rise of automatic dividend reinvestment and of index funds, because brokerage commissions for buying and selling individual stocks were fixed by the stock exchanges at high levels. *Id.* at 64.

An article on the Internet commented: "If we do a little data picking, we can see that long-term Treasury bonds have outperformed stocks since the summer of 1987, and come in just behind stocks since late 1980. Reasonable people can disagree but that certainly sounds like the long-term to me. This means that you could have sat out the entire stock market over the last 28 years, parked your money in long-term T-bonds and done just as well as the stock market, which we know beats the vast majority of fund managers."[107] Thus, long term rates of return on stocks and government securities can be affected by the beginning and ending points of the historical time period (window) you select.

Another problem is that the length of the window affects the validity of the conclusion. Goetzmann and Ibbotson have written that "a very long time series of stationary returns is required to achieve a high degree of confidence in the estimate" of the Equity Risk Premium.[108] New York University Professor Aswath Damodaran (2010) wrote that shorter periods have a higher standard error, as follows:

5 years	8.94%
10 years	6.32%
25 years	4.00%
50 years	2.83%
80 years	2.23%

Aswath Damodaran Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2012 Edition p. 23 (March 2012).[109] The "Standard Error" is the estimated standard deviation of the sampling distributions of a statistic. The smaller the standard error, the more representative the sample is of the entire population. Some analysts prefer longer time periods which reduce "statistical noise."[110]

On the other hand, some analysts prefer a shorter, more recent time period because of fundamental changes that have occurred in the economy at various points in time, or because risk aversion fluctuates over time. Then again, some analysts believe that the ERP depends on the economy's spot in the business cycle. Some believe that recent returns are more reflective of current expectations than older returns. Roger Barad, at Ibbotson Associates, points out that there is zero correlation between the ERP from one year to the next. That means that the ERP is unpredictable based on the prior year's performance. Michael W. Barad, *Ibbotson's Answer*.[111]

3. Is Older Data Relevant? Some hold to the view that long look-back periods in determining the ERP are undesirable due to structural and market changes in the American economy. The worldwide management consulting firm Stern, Stewart & Co., in its *Equity Risk Measurement Handbook* (2001),[112] explained why it uses a 50-year history of the ERP in its analysis. It points to Steven Weber's 1997 article, *The End of the Business Cycle*, in FOREIGN AFFAIRS, which "makes a strong case for fundamental structural economic and capital market changes making observations of events in U.S. history less representative of responses in the future." *Id.* at 1. The *Handbook* notes changes in "globalization and growth," "labor mobility," "market sophistication" resulting from individuals investing through managed funds, "information and information technology," "agency costs," and "government regulation and policy." *Id.* at 2. The *Handbook* says that "the . . . risk of holding equities has generally declined" while, at the same time "the risk of investing in government bonds has increased," thus reducing the ERP. *Id.* at 1.

Roger J. Grabowski, of Duff &Phelps, has written that the 1926-to-today time period can be divided into two parts: up to the mid-1950s, and since the mid-1950s. Grabowski says that after that dividing line the stock market has been more stable but the bond market has been more volatile. His review of the data suggests that the lesser volatility of stocks and the greater volatility of bonds has reduced the relative risk of stocks versus

bonds, thus reducing the ERP. Grabowski therefore questions the validity of using "the arithmetic average of one-year returns since 1926 as the basis for estimating today's ERP."[113] Grabowski goes on to say that the actual return on equity investments exceeded the anticipated return on equity investments during the second half of the Twentieth Century, due to factors (such as an increase in the price-to-earnings ratio) that will not be repeated. *Id.* at 14-16. He cites studies that show a realized risk premium of 6.7% but an actual risk premium of 4.0 to 5.2%. *Id.* at 14-15.

Goetzman and Ibbotson noted that "part of total returns of the stock market have come from price-earnings ratio expansion. This expansion is not predicated to continue on indefinitely, and should logically be removed from the expected risk premium." William N. Goetzman and Roger G. Ibbotson, *History and the Equity Risk Premium* p. 11.[114] The same point was made by Robert D. Arnott, in *Equity Risk Premium Myths*, CFA Institute's RETHINKING THE EQUITY RISK PREMIUM 81-82 (2011).[115] In the 85 years of Ibbotson data from 1926 to 2011, stocks delivered a real (after factoring out inflation) return of 6.6% against a real return of 2.1% for bonds, or excess earnings of 4.5%. *Id.* at 81. Much of that gain can be attributed to the 1980s and 1990s, which experienced "soaring valuation multiples" and "tumbling yields." *Id. at 75.* Ignoring these soaring multiples and tumbling yields reduces the ERP to 2% to 3%, according to Arnott. *Id.* at 78.

Grinold, Kroner and Siegel wrote that from 1926 to 2010, the U.S. Treasury bond market delivered nominal (including inflation) compound annual returns of 5.4%, compared to 9.87% for the U.S. stock market, resulting in average historical excess earnings of 4.5%. Richard C. Grinold, Kenneth F. Kroner, & Laurence B. Siegel, *A Supply Model of the Equity Premium*, CFA Institute's RETHINKING THE EQUITY RISK PREMIUM 56 (2011) ("Grinold").[116] This calculation was based on the arithmetic difference between geometric means. The geometric difference between geometric means was 4.27%. Id. at 56 n. 6. Earnings per share grew at about 4.9% per year (or 1.9% after subtracting inflation). *Id.* at 56. Grinold wrote that, from year-end 1925 to year-end 2010, the price/earnings ratio of the stock market rose from 11.3 to 18.5. *Id.* at 57. He mentions a common view that this increase can be explained by technological and financial innovations during the latter Twentieth Century. *Id.* at 57. Financial innovations include mutual funds that give inexperience investors access to active portfolio management, and the creation of index funds that allow more investors to diversify more cheaply. *Id.* at 57. Grinold finds that the current P/E ratio of 18.5 is modestly higher than the 1900-2010 average P/E ratio of 15.7, and is lower than the average 1970-2010 P/E ratio of 18.9. *Id.* at 66. He projects neither an increase nor a decrease in the U.S. stock market's P/E ratio over the next ten years. *Id.* at 66.

4. Geometric Versus Arithmetic Mean. The outcome of the ex post analysis is affected by whether you use the geometric or the arithmetic mean of returns. A geometric mean is the compounded annual return over the estimated period (i.e., assuming dividend reinvestment), while the arithmetic mean is the simple average of annual returns over each period. Professor Siegel of Wharton School published a paper reflecting the ERP since 1802.[117] His numbers show the differences between the EPR using Geometric versus Arithmetic averages:

The Equity Risk Premium

	Geometric		Arithmetic	
	Bond	Bill	Bond	Bill
	%	%	%	%
1926-2004	4.53	6.09	6.01	8.02
1946-2004	5.39	6.27	6.35	7.77
1946-1965	11.21	10.86	12.34	12.14
1966–1981	3.81	-0.21	5.24	1.51
1982-1999	5.22	10.71	5.03	1.38
1982-2004	1.46	7.16	1.90	8.32

Id. Professor Siegel's data show that the highest ERP is achieved by using the arithmetic mean of stock returns less the simple interest yield on short term T-bills. *Id.* at 63.

Professor Damodoran made the following comparison of the ERP viewed through shorter look-back periods:

Time Period	geometric	arithmetic
1928-2008	4.29%	5.56%
1967-2008	2.74%	4.09%
1997-2008	-7.22%	-3.68%

Professor Damadoran believes that the geometric mean better reflects long-term returns, while the arithmetic mean better reflects the next period's returns. Ibbotson's tables use the arithmetic mean.

Professor Pablo Fernández, in *Market Risk Premium: Required, Historical & Expected* (Oct. 2004), wrote:

> ▸The geometric average is always equal to or smaller than the arithmetic average.
> ▸The more variable (volatile) the returns, the greater the difference between the arithmetic average and the geometric average.
> ▸The geometric average depends only on the price level at the beginning and end of the period studied. The arithmetic average, however, tends to rise as the period used shortens. For example, the arithmetic average calculated using monthly returns is usually greater than the arithmetic average obtained using annual returns.
> ▸The difference between the geometric averages of two series is not equal to the geometric average of the difference. However, the arithmetic average of the difference between two series is equal to the difference between the arithmetic averages.[118]

Another cautionary consideration is that the total return calculated for investments in equities assumes that all dividends are reinvested in more equities (as with a dividend reinvestment program). In actuality, portfolio managers who constantly rebalance their portfolios are moving in and out of equities and elderly widows are often living off of their dividends instead of reinvesting them. Both factors skew the actual experience of investors away from the assumptions underlying our models that assume total dividend reinvestment. A business valuator could reasonably ask whether a buyer of a closely-held business would reinvest all of the profits in the business. If so, a geometric mean of historical market returns would be more suitable. If not, then the arithmetic mean would be preferred.

Michael W. Barad, of Ibbotson Associates, states Ibbotson's veiw that the ERP "to be used in discounting future cash flows should be calculated using arithmetic computations. The arithmetic mean takes into account uncertainty of period-to-period returns." He explains: "The greater the standard deviation for a return series, the higher the arithmetic mean will be compared to the geometric mean. This type of period- to-period riskiness must be accounted for when forecasting." Michael W. Barad, *Ibbotson's Answer*.[119]

5. Matching Maturities. The ERP calculation should be matched to the government security that is used to determine the RFR. For example, if the current yield to maturity of 10-year bills is used for the RFR, then the ERP should be determined by historical market returns in excess of 10-year Treasury bills. Ibbotson's SBBI VALUATION YEARBOOK uses Treasury bonds with 20-year maturities as the indicator of the RFR. IBBOTSON SBBI VALUATION HANDBOOK (2011) p. 8. So the current RFR that should be paired with Ibbotson's historical ERP is the current yield on T-bonds with 20 years to maturity. Skardziukas, p. 8. A valuator who prefers to use a 10-year T-bill as the RFR will need to develop his/her own historical ERP as opposed to using the Ibbotson SBBI VALUATION YEARBOOK ERP.

6. Mismatched Time Frames. Professor Damodaran says:

> (1) If you combine the current RFR with the Ibbotson historical ERP, you are combining a crisis-driven RFR with a "good times" ERP, thus overvaluing businesses.
> (2) If you combine the historical RFR with the current crisis-driven ERP, your DR is too high and you undervalue companies.
> (3) If you use historical numbers for both the RFR and the ERP, you are betting that things will return to the historical average. But when? And will you be forced to sell "low" in the meantime?
> (4) If you use the current depressed RFR and high ERP, your valuation will fluctuate as the RFR and the ERP fluctuate. (Think of the fluctuations resulting from the slow-moving drama of shoring up the Greek national debt).

Damodaran's Conclusion: 1 & 2 are internally inconsistent. 3 is better suited to long-term investors with staying power. 4 is better suited to short term investors. He asks: Is your willing buyer likely to be a #3 or a #4?

7. Survivor Bias. Ibbotson's historical returns are measured against the S&P 500, which tracks only surviving companies, not ones that failed. So investors' historical perceptions of equity risk may have included the risk of company failure, but companies that failed were dropped from the stock exchange so that their loss of capital does not show up in the S&P 500 data. This may explain part of the Equity Risk Puzzle.

8. The ERP is Cyclical. Some say that the ERP

cycles inversely with the business cycle, so where you are in the business cycle affects the ERP. When the economy is in or near recession, the ERP is high. When the economy improves the ERP moves downward. When the economy is at the peak of the business cycle, the ERP is low.[120] Roger J. Grabowski estimates that the upper and lower boundary of the point-in-time ERP varies from 3.5% to 6.0% over the entire business cycle.[121]

To reflect this cyclicality, the investment advisory firm of Duff & Phelps ("D&P") distinguishes between the unconditional ERP and the conditional ERP. The unconditional ERP is the long-term average ERP that disregards current market conditions. The conditional ERP reflects current economic conditions. *Duff & Phelps Client Alert* (October 17, 2011).[122] The objective of D&P's unconditional ERP is to develop a range for the ERP that can be expected for the entire business cycle. *Id.* at 4. As of October 17, 2011, D&P's range for the unconditional ERP in the U.S.A. was 3.5% to 6.0%. *Id.* at 4-5. As of that same date, D&P's conditional ERP for the U.S.A. was 6.0%. *Id.* As of January 14, 2012, D&P reduced its assessment of the U.S.A. conditional ERP to 5.5%.[123]

According to Professors Graham and Harvey, based on a limited number of interviews conducted in connection with the Duke CFO Survey, "the CFO's believe that the 'risk premium' is a longer-term measure of expected excess returns and best covered by our question on the expected excess return over the next ten years-rather than the one-year question." Graham & Harvey, *The Equity Risk Premium in 2010* p. 6 (August 9, 2010).[124]

9. Ex Post Is Not Ex Ante. Shannon Pratt notes that research by Roger Grabowski and David King suggests that the historical realized ERP may overestimate the forward-looking ERP. Pratt, VALUING A BUSINESS 210 (5th ed. 2008).

Goetzman and Ibbotson commented:

> A major conceptual problem with equating the *ex post* historical realization of the equity premium with its *ex ante* expectation is that history could simply have turned out better than people expected.[125]

In an interview given October 10, 2011, Professor Roger Ibbotson said that he had "often dismissed the historical way" of estimating the ERP. This was particularly so in the early 2000s. However, after the drop in stock prices as a result of the 2–8-2009 financial crisis, the Professor believed that the historical ERP from 1929 to 2010, of 4.4% is" not an unreasonable estimate of the premium in today's market."[126]

10. Increased Systemic Risk. In Modern Portfolio Theory, Specific Company Risk is diversified away, leaving the ERP as the measure of overall risk to investments in equities. This risk is called "Systematic Risk." The events of 2008-2009 have demonstrated the increased importance of another type of risk, called "Systemic Risk." Systemic Risk is the risk that a shock to one part of the economy, or to one category of investments, will spread across the entire economy, or all investment classes. Securitization of individual debts into investment vehicles sold worldwide, the development of derivatives that subject supply-and-demand markets to the pressures of speculation, the widespread use of leverage to amplify the swings in investment values, banks that are too big and that have become more like investment vehicles than financial intermediaries, the increased ownership of stocks and commodities through funds that aggregate thousands of investors, increased investment in index funds that move in tandem with the market, the U.S.A.'s increased dependence on foreign oil, the size of the U.S. government's annual deficit and national debt, the actuarial insolvency of U.S. government programs like Social Security and Medicare–the list could go on–all greatly increase systemic risk of the financial system beyond the levels of the past. This suggests that the prices of investments may be subjected to more frequent and more extreme swings than in the past, which could lower the RFR and raise the ERP in the future.

11. Other Problems. Other problems with the ERP as it is frequently determined on an ex post basis:

- Volatility—Expected rates of return change over time. When times are bad and fear is high, the rate of return required to induce an investment in equities is higher than when times are good.[127] However, value investors like to buy in bad times because P/E ratios are lower and they like sell when P/E ratios are at a historical high.
- Current expectations are based on recent history, not distant history. People act on their own

experiences, not that of their parents or grandparents. Ibbotson's Long-Horizon ERP from 2000 to 2010 was -2.4, meaning equities lost value during that decade. That is what today's investors have personally experienced.

- Some studies indicate that the Beta for individual stocks changes over time. The Beta for portfolios of stocks are more stable but still fluctuate over time. Wayne Ferson & Dennis Locke, *Estimating the Cost of Capital Through Time: An Analysis of the Sources of Error*, MANAGEMENT SCIENCE pp. 411 (April 1998).[128]
- Retiring baby boomers are wanting to convert equities to cash, but young workers will not have the earnings to absorb all the equities being brought to market. This could cause equity prices to fall.

12. Recap of Problems with Estimating the ERP.

- The ERP is not an observable quantity.
- The ERP is not the same for all investors.
- The surveys that have been done are not statistically valid (not truly random samples). Also, the surveys are unclear about which RFR respondents are using.
- Historical ERP may not equal either past or current expected rates of return.
- Historical ERP depends on the "window."
- Historical ERP depends on arithmetic vs. geometric mean.
- The ERP fluctuates. Fluctuations are leveled by long term averages. But it is unclear that the present circumstances match the long-term historical average.
- Historical data ignores companies that failed (survivor basis).
- Ibbotson vs. Duff & Phelps—these two providers of the historical ERP use differing assumptions.
- Analysts' predictive ability is unproven (or disproven).

13. What Would Warren Buffett Do? Warren Buffett, America's most successful living investor, does not use the CAPM or Build Up Method. In his 2008 letter to the shareholders of Berkshire Hathaway, Buffett wrote:

> Investors should be skeptical of history-based models. Constructed by a nerdy-sounding priesthood using esoteric terms such as beta, gamma, sigma and the like, these models tend to look impressive. Too often, though, investors forget to examine the assumptions behind the symbols. Our advice: Beware of geeks bearing formulas.

Warren E. Buffett, *Letter to Shareholders of Berkshire Hathaway, Inc.* (2008).[129] Instead, Buffett evaluates his investment opportunities in this way:

> We don't discount the future cash flows at 9% or 10%; we use the U.S. treasury rate. We try to deal with things about which we are quite certain. *You can't compensate for risk by using a high discount rate*. [Emphasis added.][130]

Mr. Buffett's view that you can't compensate for risk using a high discount rate contravenes the CAPM and

even MPT generally. What did he mean by that? This author thinks Mr. Buffett meant that justifying a risky investment on the ground that it has a higher rate of return doesn't count for much when the business goes bust and you lose your money. A classic "value investor," Mr. Buffett never undertakes an investment where there is a significant risk he will lose money, no matter how high the projected rate of return might be. Mr. Buffett also is reported to have said:

> Shareholder: Following up on that other question – if you don't adjust for risk by using higher discount rates, how do you adjust for risk – or do you?
>
> Buffett: Well, we adjust by simply trying to buy it at a big discount from the present value calculated using the risk-free interest rate. So if interest rates are 7% and we discount it back at 7% (which Charlie says I never do anyway — which is correct), then we'd require a substantial discount from that present value figure in order to warrant buying it.[131]

In his 2000 Chairman's Letter, Mr. Buffett wrote:

> The oracle was Aesop and his enduring, though somewhat incomplete, investment insight was "a bird in the hand is worth two in the bush." To flesh out this principle, you must answer only three questions. How certain are you that there are indeed birds in the bush? When will they emerge and how many will there be? What is the risk-free interest rate (which we consider to be the yield on long-term U.S. bonds)? If you can answer these three questions, you will know the maximum value of the bush – and the maximum number of the birds you now possess that should be offered for it. And, of course, don't literally think birds. Think dollars.[132]

What Mr. Buffett is saying is that he doesn't fret over calculating a precise discount rate based on the risk of the investment. He ignores the ERP. He discounts projected future benefits at the RFR, in order to determine the maximum he would pay for an investment. If the risk is manageable, and the price is sufficiently below the maximum, he'll buy. To Mr. Buffett, the arguable precision associated with the Betas, and the ERP, and the other risk premia, are not important. Mr. Buffet's approach would probably not be admissible under either the *Frye* general acceptance test or under the *Daubert* reliability test. Does that indicate a flaw in Mr. Buffett's approach or a problem with our standards of admissibility?

14. Is the Game Worth the Candle? In 2000, Professors Sougiannis and Yaekura published a study of 36,532 firm-observations over a 19-year period, attempting to measure the accuracy of analysts' earnings projections over one to four-year periods. They compared projections (i) using the relevant RFR plus an ERP of 6% or (ii) using the CAPM with the same RFR and firm-Beta-adjusted ERP, or (iii) using industry-specific discount rates, or (iv) using a discount rate of 12% for all firms. Interestingly, the study found that using the fixed 12% discount rate had the best performance. Theodore Sougiannis and Takashi Yaekura, *The Accuracy and Bias of Equity Values Inferred From Analysts' Earnings Forecasts*, p. 5 (2000).[133] In second place was the RFR plus an ERP of 6%; in third place was the industry-specific rates; and in last place were firm specific discount rates. *Id*. at 11. Valuations of privately-owned companies fall in this last category.

I. PROBLEMS WITH BETA. The mathematics of calculating the Beta coefficient of a publicly-traded company involves performing a linear regression on historical total returns of the company compared to historical total returns of the market as a whole. *See* Domantas Skardziukas, *Practical Approach to Estimating Cost of Capital* p. 9 (Munich Personal RePEc Archive, October 1, 2010) ("Skardziukas").[134] However, the Betas published by different investment information services vary. One reason for this is that these services use different inputs to construct Betas. Another is that these services make different adjustments to their Beta calculations, in pursuit of differing conceptions of accuracy.

1. Differing Market Indexes. Some Beta reporting services use as their market proxy the S&P 500; others use the Value Line Index, or the Russell 1000, or Russell 2000, or Russell 3000. Pratt, VALUING A BUSINESS 211 (5th ed. 2008) ("Pratt"). Ibbotson says that the choice of the market index to use as a market proxy does not affect the CAPM result very much, because of a high correlation between different market indexes. IBBOTSON SBBI VALUATION YEARBOOK (2011), p. 71.

2. Estimation Period. The length of the estimation periods used to determine Beta varies among Beta-providing services. For example Bloomberg uses a 2-year estimation period, while Standard & Poor's, Ibbotson, Merrill Lynch, and Value Line use a 5-year period. Skardziukas, pp. 10 & 74. Using a longer estimation period provides more information and thus reduces the standard error in the regression analysis (thereby increasing statistical validity), but may bias the results if the risk characteristics of the company have changed (e.g., changes in business mix or capital structure) over time or if the market has significantly repriced since the start of the period. Skardziukas, pp. 10-11. The effects of September 11, 2001 on the airlines, or the deregulation of the electrical industry, are examples of events that might require a shortening of the estimation period so as to start the window after such game-changing events occurred. IBBOTSON SBBI VALUATION YEARBOOK (2011), p. 71-72.

3. Return Interval. Another factor that can affect the determination of Beta is the return interval. Information can be retrieved from the market on an annual, monthly, weekly, or daily basis, or even throughout the day. Using shorter return intervals increases the number of observations available to use in the linear regression, but it introduces statistical noise in the data, and for companies whose stock does not trade frequently it introduces a downward bias in the company's Beta. Damadoran, APPLIED CORPORATE FINANCE: A USER'S MANUAL, ch. 4, *Beta*, p. 4.[135] Pratt notes that Betas of some companies are measured infrequently, perhaps only a few times a year. The reported Betas are often several months older than the publication date. Pratt, at 211. Additionally, some Beta providers make their observations on the last trading day of each week, while others use the last Friday of the month, etc. *Id.* at 211. *See generally* IBBOTSON SBBI 2011 VALUATION YEARBOOK , p. 72.

4. Adjustments to Beta. Another cause of variations is that various services make different adjustments to their Beta figures. Some reporting services make the same adjustment to all Betas, while others adjust Betas using a variety of aspects particular to the subject company. Grabowski points out that Bloomberg's adjustments to Beta are not based on specific industry or company factors, but instead are somewhat arbitrarily adjusted toward 1 on the assumption that all companies' Betas ultimately converge on market Beta. Roger J. Grabowski, *Problems with Cost of Capital Estimation in the Current Environment Update* p. 13 (Feb. 4, 2009).[136]

5. Unrelated Market Pricing. The Betas of companies can be skewed by unusual events elsewhere in the stock market. For example, the inordinate rise in tech stock prices during the dot-com bubble reduced the Betas of mature industries until the bubble burst. The effect continued after the collapse because of the look-back period used in determining Betas. Skardziukas, p. 11; Grabowski, pp. 1 & 10-11.[137] In the 2007-2008 financial crisis, the severe drop in value of highly-leveraged companies and financial companies reduced the Betas of companies with low leverage (low debt ratios). Skardziukas, p. 11; Grabowski, p. 33. Another complicating factor is that almost one-third of the money invested in the stock market today is invested through index funds that are designed to move and down with the market as a whole. Since the mid-1990's, the correlation of stocks moving up and down in tandem has quadrupled. Jason Zweig, *Simple Index Funds May be Complicating the Markets,* THE WALL STREET JOURNAL (Feb. 18-19, 2012), p. B-1.[138]

6. High Betas Can Be Good. If a company or industry is hit by a downturn, and their stock prices drop dramatically, their Betas will be large and perceived risk under the CAPM will increase. A value investor, however, would see the lower price-to-earnings ratios as an indicator of reduced risk and a greater prospect of growth, which is a signal to buy. This points out the fact that, while larger Betas accentuate the lows, larger Betas also accentuate the highs, and buying a volatile stock at a low suggests that your potential profit will be higher on the upside (if you don't lose all your money in the meantime.) For people who see stock prices as being cyclical rather than straight line, high Beta stocks that are at their cyclical low offer more opportunity for profit than stocks with a Beta of less than 1.

7. Conservatism. Measuring risk by variability from the mean of all investments is an inherently conservative approach, since the goal of investing from this perspective is to do no worse than the mean. The flip side is that you do no better than the mean. If you do no better than the mean, then you never "make a killing." Most portfolio managers investing other people's money don't strive to "make a killing." They expect to keep their jobs and not get sued by never

doing much worse than the stock market as a whole. This does not suit everyone's risk profile, and it especially probably doesn't match the risk profile of people who might invest in small, privately-owned companies.

8. Comparability to Privately-Owned Businesses. A more fundamental question exists as to whether the risk captured by Beta can be carried over to a privately-owned business operating on a much smaller scale than companies in the S&P 500 Index. Shannon Pratt notes that the use of the CAPM in valuing a privately-owned business involves two important assessments with regard to Beta: (i) what is the correct Beta for the guideline companies used in the valuation; and (ii) what is the correct Beta for the subject company? Pratt at 211. The foregoing discussion suggests, that these two issues can be problematic. Additionally, the main attraction of the CAPM is the mathematical verifiability of company Betas, which vanishes when it is applied by analogy to companies with no observable Betas.

9. Admissibility in Court. The use of Beta in connection with asset pricing models in determining the price to pay for acquiring stock is generally accepted, both for portfolio management and for small business valuation. This approach would seem to meet the *Frye* test of admissibility. See Section III.A. With regard to *Daubert* reliability, at first blush parts of Beta determination seem to meet the five non-exclusive *Daubert* factors. See Section III.B. However, some aspects of Beta determination are subject to variant approaches, which demonstrates some degree of subjectivity. The larger concerns about Beta go beyond the determination of Beta to the underlying validity of using Beta to quantify the risk of investing. The CAPM is nothing with Beta, so problems with Beta effect the validity of the CAPM in the valuation process.

J. PROBLEMS WITH THE CAPM.

1. Statistical. Because the Capital Asset Pricing Model, proposed by Sharpe and later Lintner, is mathematically and statistically-based, both its assumptions and its accuracy can be tested against market data. In the 1972 article by Fischer Black, Michael C. Jensen, and Myron Scholes, *The Capital Asset Pricing Model: Some Empirical Tests*,[139] the authors announced their testing of the CAPM against historical data. Their focus was the usual form of the CAPM, which they described as saying "that the expected excess return on a security is equal to its level of systematic risk, β, times the expected excess return on the market portfolio." *Id*. at 42. They concluded: "These results indicate that the usual form of the asset pricing model . . . does not provide an accurate description of the structure of security returns. The tests indicate that the expected excess returns on high-beta assets are lower than [the usual form] suggests and that the expected excess returns on low-beta assets are higher than [the usual form] suggests." *Id*. at pp. 3-4. The authors go on to say that "the expected return on an asset is not strictly proportional to its β, and we believe that this evidence, coupled with that given in Section IV, is sufficiently strong to warrant rejection of the traditional form of the model given by [the usual formula]." *Id*. at 4.

Eugene F. Fama, Professor of Finance at the Chicago Graduate School of Business, and Kenneth R. French, Professor of Finance at Dartmouth College School of Business, issued a paper in 2004 examining how well the CAPM held up to empirical testing. The paper is entitled *The Capital Asset Pricing Model: Theory and Evidence*.[140] They report that early empirical tests of the CAPM focused on three things: (i) whether an asset's expected return correlated with its Beta and not some other variable; (ii) whether the Beta premium is positive, meaning that the market portfolio's returns exceeded the expected returns on assets with zero Beta (i.e., had no correlation with the market); and (iii) whether the return on uncorrelated assets equaled the RFR (as the Sharp-Lintner model predicted). *Id.* at 8. Early tests revealed that estimated Betas for individual investments are imprecise, creating problems with measurement. *Id.* at 9. So researchers shifted to testing portfolios of stocks that they constructed rather than individual investments. *Id.* at 9. These tests reflected that the returns on the low Beta portfolios were too high and the returns on the high Beta portfolios were too low. *Id.* at 12. Early tests on the second and third prongs were favorable. *Id.* at 15. However, tests in the 1970s began to show that the variation of expected return on market investments is unrelated to market Beta. *Id.* at 15. Basu showed in 1977 that future returns on companies with high earnings-to-price ratios were higher than the CAPM predicted. *Id.* at 16. Banz showed in 1981 a size effect, that average returns on small cap stock were higher than predicted by the CAPM. *Id.* at 16. Bhandari in 1988 showed that highly-

leveraged companies (high debt-to-equity ratios) had returns higher than the CAPM predicted. In 1980 Statman, and then in 1985 Rosenberg, Reid, and Lanstein, showed that stocks with high book-to-market equity ratios (the ratio of book value of common stock to its market value) have high returns not predicted by their Betas. *Id.* at 16. These studies showed that size, as well as earnings-to-price, debt-to-equity, and book-to-market ratios, correlate to returns in a way that is different from market Betas. *Id.* at 16. According to Fama and French, later research showed that Betas do not suffice to explain expected returns. *Id.* at 16. This meant that differences in expected returns are "not completely explained by differences in beta," and that there must be "undiversifiable risks (covariances) in returns that are not captured by the market return and are priced separately from market betas."*Id.* at 19-20. Fama and French reacted to these problems in 1993 and again in 1996 by offering a three-factor model for projecting expected returns: adding to the RFR (i) the beta-adjusted ERP, (ii) plus the beta-adjusted difference between returns of small versus large market cap companies, (iii) plus the beta-adjusted difference between returns of companies with high versus low book-to-market ratios. *Id.* at 20. Fama and French assert that "the model captures much of the variation in average return for portfolios formed on size, book-to-market equity, and other price ratios that cause problems for the CAPM." *Id.* at 21. Fama and French conclude their 2004 paper: "despite its seductive simplicity, the CAPM's empirical problems probably invalidate its use in applications." *Id.* at 28. Fama and French's three-factor model commands a chapter in IBBOTSON SBBI VALUATION YEARBOOK (2011), p. 107-111. Ibbotson does not go so far as to declare the CAPM dead, but he suggests that "Practitioners are encouraged to use multiple models in estimating cost of equity to triangulate a more precise result and add significance to the analysis," and he goes on to explain how Ibbotson data can be applied to the three-factor model to estimate a cost of equity. *Id.* at 109.

Arnott, Hsu and Moore[141] have considered problems with using as a market proxy an index that assigns weight to individual stocks, based on the stock's market capitalization divided by the total market cap of all stocks in the index. They believe that a market cap-based index has an unintended bias of emphasizing past winners and deemphasizing past losers, in what amounts to a "buy high and sell low" strategy that violates the principles of "value investing," made prominent by Graham and Dodd in 1934,[142] where the investor uses Fundamental Analysis[143] to identify and buy undervalued stocks while identifying and selling overvalued stocks. *See* Warren E. Buffett's *Letter To the Shareholders of Berkshire Hathaway Inc.* pp. 5-6 (2011),[144] in which he describes why he is happiest when stock prices are down.

William Sharpe himself believes the CAPM is still valid.[145] He defends his equilibrium analysis, and holds to the view that expected return is *proportionate* to Beta of a company's stock relative to the market portfolio.[146] He points out that in his original paper he allowed that there could be more than one adjusting factor–five, or twenty, or as many as there are securities in the market.[147] Sharpe says that the theory holds true then and now, in its key insight:

> The key insight of the Capital Asset Pricing Model is that higher expected returns go with greater risk of doing badly in bad times. Beta is a measure of that. Securities or asset classes with high betas tend to do worse in bad times than those with low betas.[148]

All told, the attractive simplicity of the original CAPM equation has not withstood the test of time, but after all it was admittedly an oversimplification of the complexities of investing in an uncertain world. However, the validity of the studies that have discredited the original version of the CAPM have themselves been challenged. Competing models have usually just substituted more or different measures for the role of simple company Beta in the original CAPM formula, rather than suggesting a new approach to quantifying risk. Two fundamental limitations may keep us from resolving the disputes any time soon: Betas may change over time, and the proxies we use to determine the return of the market (i.e., S&P 500, etc.) may not accurately reflect true market return. We may be in a situation where the predictive ability of the CAPM has been discredited, but the model cannot be disproved. In the absence of a credible alternative model, the CAPM continues to be used by those who wish to employ a statistical approach to assessing investment risk. Despite all the criticism, the underlying belief--that meaningful information about an investment can be gleaned from a close study of how the investment has varied from some base line norm--continues to be generally accepted as a

way to quantify the risk of various investments.

2. The Need to Adjust Inputs. The progenitor of Modern Portfolio Theory, Harry Markowitz, co-authored a 2002 article entitled *The Legacy of Modern Portfolio Theory*,[149] on the 50th anniversary of his break-through article on portfolio selection. In the 2002 article, Markowitz and his co-authors noted that people using Modern Portfolio Theory for asset allocation begin by selecting a set of asset classes (such as "domestic large-cap and small-cap stocks, long-term bonds, international stocks"), and then "obtain estimates of the returns and volatilities and correlations" of these asset classes using "the historical performance of the indexes representing these asset classes." *Id*. at 9. They then use these inputs in some sort of "mean-variance optimization" process, like the CAPM or its modifications, to pick an optimal portfolio. *Id.* at 9. Markowitz noted that a number of different approaches could be used to get the inputs for the optimization process, of which historical performance is one. *Id.* The problem with using historical performance is that there is no assurance that the upcoming investment period will be like the last. Markowitz observes:

> The truth is that there is no right answer because we are dealing with the world of uncertainty. This is also true for the cases of obtaining estimates for the variances and correlations.

Id. at 10. Markowitz goes on:

> In reality, as mentioned earlier, if portfolio managers believe that the inputs based on the historical performance of an asset class are not a good reflection of the future expected performance of that asset class, they may objectively or subjectively alter the inputs. Different portfolio managers may have different beliefs, in which case the alterations will be different.5 The important thing here is that all alterations have theoretical justifications, which, in turn, ultimately leads to an optimal portfolio that closely aligns to the future expectations of the portfolio manager.

Id. at 11. It appears that Markowitz generally considers historical inputs to be a reliable starting point, but that portfolio managers must exercise judgment in using historical inputs to make projections of future returns.

Many studies suggest that historical returns exceeded the rates of return that investors in the past actually required as a condition to buying equities–this is the Equity Premium Puzzle.[150] Some say that the actual excess returns that came to pass do not really reflect the historical ex ante expected or required rates of return. Also, historical excess returns of equities over government bonds have not occurred in the past decade and there are many reasons to believe that the level of excess returns in the 1970's and 1980's cannot be expected recur in the future.

3. The CAPM Assumes Stable Inputs. The CAPM formula is considered to be a "single period"estimate, with a fixed RFR, a fixed ERP, and a fixed Beta, and thus a fixed Discount Rate. In actuality, all three inputs can change over time. To calculate an accurate present value of future cash flows over multiple periods, you would need to use the appropriate Discount Rate that applies to each future period.

4. What Market Proxy to Use. Under Modern Portfolio Theory, the diversification that eliminates Specific Company Risk requires great diversity in the choices of investments. Under the CAPM, the ERP derives from, in theory, the entire world of equity investments. In practice, however, a proxy is used in the CAPM to represent the available equity investments. The most common proxy is the S&P 500 Composite Index. Before 1957, the Index consisted of 90 companies; since March of 1957, the Index has covered 500 companies. Ravi Jagannathan, Ellen McGratten, and Anna Scherbina, *The Declining U.S. Equity Premium*, 27 FEDERAL RESERVE BOOK OF MINNEAPOLIS QUARTERLY REVIEW 3, 5 (2000) ("Jagannathan").[151]

As of year 2000, the market cap for the S&P 500 stocks constitutes 75% of the market cap of all stocks traded on major U.S. stock exchanges. *Id*. at 5. A broader index can be drawn from data maintained by the Center for Research and Security Prices (CRSP Index). The CRSP Index included only NYSE stocks from 1926 to 1972; in 1972, the AMEX was added; and in 1973 the NASDAQ was added. *Id*. at 5. In 2000, the CRSP Index contained over 8,000 stocks. *Id*. at 5. These stock exchanges include only publicly-traded stocks, whereas many corporate stocks are not publicly-traded. The FED's Board of Governors (BOG) publishes information on all stocks held by U.S. residents. This information dates back to 1946. *Id*. at 5. According to

Jagannathan, the yields on the BOG stocks ran about 1.5% higher than the S&P 500 or the CRSP until the 1980s, when the BOG stock yield was 2.5% higher (12.27% vs. 9.8%); in the 1990s the BOG stock yield was 3% higher (10.84% vs. 7.84%). *Id*. at Table 2.

The Jagannathan study suggests that the S&P 500 Index and the CRSP data have only a small difference in yields, but when you include non-publicly traded stock the overall yield climbs substantially. The extent to which the higher yield is associated with smaller size (market cap) or less liquidity is debatable, and is being debated. *See* Sections V.K and V.M below. The Jagannathan study suggests that the need to add a size or liquidity premium to the CAPM calculation may be a consequence of using a market proxy that excludes non-publicly-traded stocks.

5. Admissibility in Court. The CAPM is dependent on its inputs: the RFR, the ERP, and company or industry Beta. The problems with each become problems with the CAPM. Then there is the issue of whether the CAPM can validly be applied to privately-owned companies that are smaller and significantly less liquid than publicly-owned companies. The main thing the CAPM has going for it is general acceptance. General acceptance is *the* test under *Frye*, and is one of the *Daubert* factors. Markowitz's view expressed above, that portfolio managers might want to "objectively or subjectively" alter the inputs to the standard investment model, is no doubt a wise investment strategy, but the impact of making subjective alterations to the standard inputs, on the admissibility of expert opinions, is not part of Markowitz's calculus. The problem is that the greatest acceptance of the CAPM is for portfolio management, and financial research, not valuing small privately-owned companies. The U.S. Tax Court has been hostile to the use of CAPM for valuing small, privately-owned businesses. In *Furman v. Commissioner*, the Tax Court said:

> We do not believe that CAPM and WACC are the proper analytical tools to value a small, closely held corporation with little possibility of going public. CAPM is a financial model intended to explain the behavior of publicly traded securities that has been subjected to empirical validation using only historical data of the two largest U.S. stock markets. Raabe & Whittenburg, "Is the Capital Asset Pricing Model Appropriate in Tax Litigation?", Valuation Strategies 12–15, 36 (Jan./Feb. 1998); *see* Brealey & Myers, supra at 166 (citing Fama & MacBeth, "Risk, Return and Equilibrium: Empirical Tests," 81 Journal of Political Economy 607–636 (1973)). Contrary to the assumptions of CAPM, the market for stock in a closely held corporation like FIC is not efficient, is subject to substantial transaction costs, and does not offer liquidity. Mr. Shelton did not increase our confidence in his choice of method when he computed the cost of equity using an unsubstantiated risk-free rate and risk premium that were not in conformance with the amounts stipulated, and when he arbitrarily assigned a beta to FIC's common stock. Beta, a measure of systematic risk,FN10 is a function of the relationship between the return on an individual security and the return on the market as a whole. Pratt et al., *supra* at 166. Betas of public companies are frequently published, or can be calculated based on price and earnings data. Because the calculation of beta requires historical pricing data, beta can not be calculated for stock in a closely held corporation. The inability to calculate beta is a significant shortcoming in the use of CAPM to value a closely held corporation; this shortcoming is most accurately resolved by using the betas of comparable public companies. *Id.* at 175. Mr. Shelton's unsubstantiated statement regarding the standing of BKC in the fast food industry is hardly a sufficient basis for arriving at a beta of 1.0 for FIC. Mr. Shelton did not provide any evidence that he had researched or calculated the betas of BKC or any other public company. He seems to have assumed, without further explanation, that FIC and BKC were comparable companies for this purpose. Finally, we reject Mr. Shelton's methodology for estimating FIC's beta, since it was based on BKC's industry standing and not on references to the volatility of stock in FIC in comparison to the market as a whole.FN11 See Brealey & Myers, supra at G2 (defining beta as a "measure of market risk").

Furman v. Commissioner, T.C. Memo.1998–157, 1998 WL 209265, *11 (U.S. Tax Ct. 1998).

In *Estate of Gallagher v. C.I.R.*, T.C. Memo. 2011-148, 2011 WL 2559847, * 14 (U.S. Tax Ct. 2011), the Court said:

> Mr. May used the capital asset pricing model formula (CAPM)[FN14] to derive a 13.5–percent cost of equity capital for PMG; Mr. Thomson, in contrast, calculated a 20–percent cost of equity capital under the buildup method.[FN15] We agree with Mr. Thomson that the buildup method is the appropriate method by which to compute PMG's cost of equity capital. The special characteristics associated generally with closely held corporate stock make CAPM an inappropriate formula to use in this case.

Accord, *Hoffman v. C.I.R.*, T.C. Memo. 2001-109, 2001 WL 490399, *13 (U.S. Tax Ct. 2001) ("The use of CAPM is questionable when valuing small, closely held companies"); *Estate of Klauss v. C.I.R.*, T.C. Memo. 2000-191, 2000 WL 823377, *4 (U.S. Tax Ct. 2000); *Estate of Hendrickson v. C.I.R.*, T.C. Memo. 1999-278, 1999 WL 637089, *16 (U.S. Tax Ct. 1999).

It should be noted that the using the Weighted Average Cost of Capital (WACC) to determine a Discount Rate has also been dismissed by virtue of its association with the CAPM. In *Estate of Maggos v. C.I.R.*, T.C. Memo. 2000-129, 2000 WL 366265, *12 (U.S. Tax Ct. 2000), the Tax Court said:

> In closely held small companies, the use of a DCF analysis is also suspect when the discount rate is calculated by a weighted average cost of capital (WACC) determination. Such determinations often include a determination of the cost of capital using the "capital asset pricing model" (CAPM). This Court has recently observed:
>
> > We do not believe that CAPM and WACC are the proper analytical tools to value a small, closely held corporation with little possibility of going public. CAPM is a financial model intended to explain the behavior of publicly traded securities that has been subjected to empirical validation using only historical data of the two largest U.S. stock markets. * * *
>
> [Furman v. Commissioner, T .C. Memo. 1998-157.]

While the viability of a financial technique does not rise and fall on one court case, or even several court cases, the trial court's disapproval of the CAPM and WACC in the foregoing cases is a danger sign.

6. Uncharacteristic Market Behavior. The CAPM assumes that stock prices reflect the true values of different investments. We all know this is not true in instances where the stock market as a whole undergoes substantial drops or rises that are based on immediate reactions to unexpected developments or reflect decisions based on emotions and not reasoning or analysis. But we also know that the stock market can be inaccurate because in hindsight we sometimes see that certain stocks were previously undervalued or overvalued. Analyst Mark Kritzman has been studying financial turbulence, which he defines to be "a condition in which asset prices, given their historical patterns of behavior, behave in an uncharacteristic fashion, including extreme price moves, decoupling of correlated assets, and convergence of uncorrelated assets." Mark Kritzman & Yuanzhan Li, *Skulls, Financial Turbulence, and Risk Management*, 67 FINANCIAL ANALYSTS JOURNAL 30-41 (2010).[152] Kritzman suggests that, in periods of financial turbulence, returns poorly compensate for risks, and that such periods arrive unexpectedly and can persist for long periods of time.

K. PROBLEMS WITH THE SIZE PREMIUM. The idea of a Size Premium developed from observations that the rates of return on small companies were higher than their Betas predicted under the CAPM. IBBOTSON SBBI 2011 VALUATION YEARBOOK 87 ("IBBOTSON SBBI"). The problem with using Ibbotson's Size Premia in valuing privately-owned businesses is that, while size premia for public companies can be determined on an ex post (backward looking) basis, the size premium for a particular privately-owned company cannot. Here are other concerns about the Size Premium.

1. Using Market Cap to Measure Size. Using market cap (market value of equity) as a measure of size, which Ibbotson does, may be a problem. Market value is a function not only of size but also of the Discount Rate. Some companies are small because they are risky, not risky because they are small. Duff & Phelps, LLC, *Risk Premium Report 2010* (excerpt) pp. 4-5, 28.[153] Also, Duff & Phelps ("D&P") points out that even companies with large sales or operating income

can have a small market value of equity if they are highly-leveraged. *Id.* at 5. D&P, in its Size Premium data, uses eight alternate measures of company size, including fundamental accounting data like sales and book value. *Id.* at 4-5.

2. The Smallest Public Companies are not Comparable. The market cap of companies in Ibbotson's Decile 10z range from a high of $85,670,000 to a low of $1,222,000. IBBOTSON SBBI p. 89 & 196. The bulk of companies in Decile 10z are still far bigger than the typical privately-owned company.

3. Beta Reversal. Shannon Pratt notes that research by Roger Grabowski indicates that the Beta of 10b is *less than* the Beta of 10a, which is an anomaly. Shannon Pratt, VALUING A BUSINESS 212-13 (5th ed. 2008).

4. Small Caps in Financial Trouble. Another problem with the Size Premium is that some publicly-owned companies with small market caps are in financial trouble, so that their shares are trading more like options. Shannon Pratt, VALUING A BUSINESS 212-13 (5th ed. 2008). Ibbotson's does not "cleanse" its data to remove financially distressed firms. IBBOTSON SBBI p. 99. Ibbotson says it has tested the difference and that the outcomes from cleansed and uncleansed data is "small, and arguably negligible." *Id.* at 99. Duff & Phelps separates its data presentation into two portfolios, one with a track record of profitable performance and one of companies that are losing money, have high debt, or are in bankruptcy. Duff & Phelps, LLC, *Risk Premium Report 2010* (excerpt) pp. 4-5, 28.[154]

5. Does the Size Premium Double Count? Another issue, to be considered when using a modified CAPM (i.e., the CAPM with additional risk premia added) to value of business, is that the risk associated with small size is to some extent built into the company's Beta. Shannon Pratt, VALUING A BUSINESS 212-13 (5th ed. 2008). Ibbotson says that his size premia are adjusted to exclude the portion of excess returns that is attributable to company Betas. IBBOTSON SBBI p. 27.

6. Excess Returns are Cyclical. The excess returns of small cap stocks over their CAPM expected target is variable, and large cap stocks have outperformed small cap stock in four out of the last ten years. IBBOTSON SBBI, p. 100. There is no way to tell whether we are in a period that favors large size or small size companies.

7. The January Effect. The returns on small cap stocks reflect a so-called "January effect." The excess returns of small cap stocks during the other months of the year are mostly negative, but in January the rates of return have regularly been high enough to affect the entire annual return. IBBOTSON SBBI p. 96. The January effect has not been satisfactorily explained, but for Ibbotson the inability to explain it does not itself negate the Size Premium. IBBOTSON SBBI p. 96-97. Professor Aswath Damodaron points out that the January effect cannot be explained by size because companies that are small in January are small the rest of the year as well. Aswath Damodaran, *Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2011 Edition* p. 33 (Feb. 2011).[155]

8. Circularity. Determining the appropriate Size Premium for a privately-owned company requires that you know the value of outstanding equity of the company, which is a number you can't determine until after you complete the Build Up of the Discount Rate using the very Size Premium you are trying to determine. Ibbotson charitably calls this the "circular challenge." IBBOTSON SBBI p. 91. Duff & Phelps says that its use of fundamental accounting measures, such as assets or net income, to measure size reduces the circularity problem.[156]

9. The Breakpoints Between Deciles. Ibbotson's Size Premia range from negative 0.38% for Decile 1 to 6.36% for Decile 10. The Size Premia for Decile 10 range from 3.99% for Category 10w to 12.06% for Category 10z. In moving from Decile 9 to Decile 10, the Size Premium jumps from 2.94% to 6.36%. IBBOTSON SBBI p. 196. However, within Decile 10 the Size Premia are: Category 10w=3.99%; Category 10x=4.96%; Category 10y=9.15%; Category 10z=12.06%. *Id.* Thus, the Discount Rate can change dramatically when you cross some Decile or category "breakpoints." And yet changes in the overall stock market can change the market cap of stocks near a breakpoint enough to change Deciles or categories, even when the economics of the company do not meaningfully change. Ibbotson recognizes the potential impact of crossing breakpoints, and says there are two decision paths for the business valuator. The "improper

path" is "to choose the size premium that achieves the self-serving goal of influencing the enterprise value in the direction most desired." IBBOTSON SBBI p. 90. The "proper path" is "to choose the size premium that is most statistically relevant for your application." *Id.* Ibbotson says that choosing the right Size Premium depends on two factors: how close to a size category boundary the subject company falls, and how confident the valuator is in his/her estimate of equity value. *Id.* Ibbotson gives as an example a company near the breakpoint of the 10b category, which is in the middle of the 10th Decile and toward the bottom of the Micro-Cap (9th and 10th Deciles combined). Ibbotson would reject the Micro-cap category as too broad since the subject firm falls in the lower range of the Micro-cap category. He would reject the 10b category as being too narrow because the subject company would barely fall within that category. So Ibbotson prefers the 10th Decile, because "[w]e can say with confidence that the 10th decile puts our company among the most peers of similar size." *Id.* at 90.

10. Size Premia are Historical. The Size Premia are based on the historical returns of companies. For Ibbotson, they date back to 1926. The concerns regarding the advisability of using long-range historical figures to determine the ERP, see Sections V.H.2 & 3, resurface in connection with the Size Premium.

11. Size Versus Liquidity Premium? Professor Ibbotson writes: "Captialization is not necessarily the underlying cause of the higher returns for small companies." IBBOTSON SBBI p.83. Ibbotson suggests that size is correlated to liquidity, but that liquidity is a much stronger effect. *Id.* at 101. See Section V.M. below. If the Size Premium reflects a lack of liquidity, then to what extent is an additional liquidity discount (Discount for Lack of Marketability) appropriate?

12. Are There Better Measures of Risk Than Size? Duff and Phelps suggests that size is not a very good measure of risk. For example, a large but highly-leveraged company may have a small market cap because of the amount of its debt, but still be a low risk company. Duff & Phelps, LLC, *Risk Premium Report 2010* (excerpt) p. 30.[157] On the other hand, some small cap companies operate in a geographic area or market niche that gives it less risk than other companies of similar size. *Id.* at 30. Likewise, sales is not a good measure of risk because companies with similar sales can have divergent profits. *Id.* at 30. Perhaps size, whether based on market cap or otherwise, masks underlying risks that have not yet been recognized.

L. PROBLEMS WITH THE INDUSTRY RISK PREMIUM. There are some problems with the Industry Risk Premium (IRP) published by Ibbotson. First, it is based on the CAPM, which has conceptual, statistical, and legal problems of its own. See Section V.J. Also, the industry categories (SIC codes) contain varying numbers of companies; some categories have a small number of companies. Having more companies makes better data. Also, some companies in the same SIC code category may not be comparable, and the question arises whether they should be excluded from the calculation. Also, most IRPs are negative, and can be used selectively to lower the Discount Rate which increases the value of the company being valued. Also, Ibbotson's proxy for the RFR used in calculating the industry ERP is the yield on 30-day T-bills,[158] which is at the low end of the Yield Curve, resulting in a mismatch when used as part of a Build Up Method for a long term investment.

M. SHOULD THERE BE A LIQUIDITY PREMIUM? Zhiwu Chen and Roger Ibbotson have written that liquidity impacts the value of a company. IBBOTSON SBBI 2011 VALUATION YEARBOOK. p. 101. Ibbotson defines the "liquidity premium" as '[t]he excess valuation that a liquid security has relative to an illiquid security. In other words, illiquid securities are valued at an illiquidity discount relative to liquid securities, and consequently illiquid securities have higher expected returns." IBBOTSON SBBI 2011 VALUATION YEARBOOK, p. 200. While the customary approach is to reduce the value of the entire business by a liquidity discount, Chen and Ibbotson suggest a liquidity adjustment can also be made by adding a premium to the Build Up Method. *Id*. Ibbotson has written that "(t)he liquidity premium is perhaps as important as any of the risk premiums." Roger G. Ibbotson, *The Equity Risk Premium*, p. 23.[159] *See* Interview with Roger Ibbotson on August 17, 2010 regarding a liquidity premium.[160]

In Table 7-16 of the 2011 VALUATION YEARBOOK, Ibbotson presents a 4x4 table correlating compound annual returns based on company size versus liquidity. *Id*. at 102. The small companies with lowest liquidity show an 18.17% return compared to the return on the

large companies with highest liquidity which is 9.87%. *Id.* at 201. However, the fourth column, which ranks highly liquid companies based on company size, shows that the larger highly-liquid companies have a higher rate of return than the smaller highly-liquid companies–a result that is contrary to the expectation that return on smaller companies is higher than the return on larger companies (which underpins the Size Premium). Author Robert Comment concludes that the Ibbotson data evidence a liquidity effect, but that it is confounded by a reverse size effect, which robs a liquidity premium of reliability sufficient to meet *Daubert* standards. Robert Comment, *Business Valuation, DLOM and Daubert: The Issue of Redundancy*, 29 BUSINESS VALUATION REVIEW pp. 20-21 (2011).[161]

N. PROBLEMS WITH THE SPECIFIC COMPANY RISK PREMIUM. The Specific Company Risk Premium (SCRP) is supposed to reflect risks of the privately-owned company being valued that exceed risks associated with publicly-owned companies. Because these risks are by nature unique to the company being valued, there is no way to "calculate" this component of risk. And yet it must be quantified in order to arrive at an appropriate Discount Rate. The SCRP is the epitome of a subjective opinion that would seem to be anathema to a *Daubert* analysis.

Judges are sometimes skeptical about the Specific Company Risk Premium, as the following passage indicates:

> In an appraisal action, "the proponent of a company specific premium bears the burden of convincing the Court of the premium's appropriateness."41 Defendants accept this burden and point the Court to cases in which the Court has deemed a company-specific risk premium to be appropriate.42 Yet as Vice Chancellor Strine explained in one of the cases defendants cited, even though courts may approve the use of these premiums, "[t]o judges, the company specific risk premium often seems like the device experts employ to bring their final results in line with their clients' objectives, when other valuation inputs fail to do the trick."43 Proponents of a company-specific risk premium thus not only bear a burden of proof but also must overcome some level of baseline skepticism founded upon judges' observations over time of how parties have employed the quantitative tool of a company-specific risk premium.
>
> 42 See, e.g., Delaware Open MRI Radiology Assoc. P.A. v. Kessler, 898 A.2d 290, 340-41 (Del. Ch. 2006) (declining to "quibble" with including a company-specific risk premium, and ultimately selecting the more conservative of the two premiums the parties presented); Henke v. Trilithic Inc., 2005 WL 2899677, at *10 (Del. Ch. Oct. 28, 2005) (agreeing that an upwards adjustment to account for company-specific risk was appropriate); Lane v. Cancer Treatment Ctrs. Of Am., Inc., 2004 WL 1752847, at *30-31 (Del. Ch. July 30, 2004) (accepting adjustments for company-specific risk); ONTI, Inc. v. Integra Bank, 751 A.2d. 904, 919-20 (Del. Ch. 1999) (applying a company-specific risk premium yet reducing the suggested value thereof after finding that not all risks outlined by valuation experts were risks specific only to the company).
>
> 43 Delaware Open MRI, 898 A.2d at 339.

Consol. C.A. No. 16089-CC, In the Court of Chancery of the State of Delaware, *In re Sunbelt Beverage Corp. Shareholder Litigation*, MEMORANDUM OPINION, Date Submitted: November 20, 2009, Date Decided: January 5, 2010, Date Revised: February 15, 2010.[162]

Ignoring Specific Company Risk is not a good solution to the problem of subjectivity because the consequence is that, without the SCRP, the small privately-owned company is treated as having no greater risk than the smallest-sized publicly-traded companies, which we intuitively know is wrong. Since complete objectivity is not achievable in valuing privately-owned companies, the subjectivity of a SCRP is unavoidable and it is better to receive it into evidence and let the fact finder synthesize into an opinion of value than it is to reject a SCRP altogether.

VI. THE MARKET APPROACH. Wikipedia gives a serviceable definition of the market approach to business valuation:

> The market approach to business valuation is rooted in the economic principle of competition: that in a free market the supply and demand forces

will drive the price of business assets to a certain equilibrium. Buyers would not pay more for the business, and the sellers will not accept less, than the price of a comparable business enterprise. It is similar in many respects to the "comparable sales" method that is commonly used in real estate appraisal. The market price of the stocks of publicly traded companies engaged in the same or a similar line of business, whose shares are actively traded in a free and open market, can be a valid indicator of value when the transactions in which stocks are traded are sufficiently similar to permit meaningful comparison.[163]

Yale School of Management Professor Roger Ibbotson's publication SBBI VALUATION YEARBOOK says this about the market approach:

> Implementation of the market approach using publicly traded companies typically relies on the use of financial ratios that compare the stock price of a company to its various accounting measures of fundamental data. Many ratios contain stock price or market value of equity and work well in the market approach to determining value:
>
> •Price to Earnings
> •Price to Cash Flow
> •Price to Shareholders' Equity

IBBOTSON SBBI 2011 VALUATION YEARBOOK, p. 18. Professors John Koeplin and Alan C. Shapiro wrote:

> Despite the appeal and widespread use of the comparables approach, its reliability depends on the ability to identify transactions that display "value characteristics" that are similar to those of the company we are interested in valuing. Such value characteristics include risk, growth rate, capital structure, the size and timing of cash flows, and liquidity. In most cases, only the data for transactions of public firms are available and the value characteristics of the public firms are often quite different than those of the private firms. Thus, a discount may be applied to account for these differences in characteristics. The most obvious difference is the lack of liquidity for stock in private companies as compared to stock in public companies. Specifically, stockholders in public companies typically have a ready market in which to sell their shares, whereas stockholders in private companies lack that outlet.

John Koeplin & Alan C. Shapiro, *The Private Company Discount*, 12 JOURNAL OF APPLIED FINANCE 94 (2007) ("Koeplin").[164]

Shannon Pratt recognizes two types of market approach: one involving guideline publicly-traded companies, and the other involving guideline merged-and-acquired companies. Shannon Pratt, VALUING A BUSINESS 950 (5th ed. 2008). To that can be added two more categories: transactions involving comparable privately-owned companies and prior transactions involving the subject company.

A. THE GUIDELINE PUBLIC COMPANY METHOD. Under the guideline publicly-traded company method, the business valuator develops "valuation multiples" based on the prices at which stock representing minority interests in stock exchange-listed comparable companies are trading. These multiples might compare stock price to net sales, gross cash flow, net cash flow, net income before taxes, net income after taxes, EBIT, EBITDA, book value, etc. Shannon Pratt, VALUING A BUSINESS 265 (5th ed. 2008). A popular multiple is price-to-earnings ratio, which is share price divided by net earnings per share after taxes. Many times valuators will compare companies based on EBIT and EBITDA, to permit a more standardized comparison between different companies.

Generally business valuators will derive multiples from publicly-owned companies in the same industry as the subject company, because companies in the same industry are subject to similar macroeconomic forces. Generally it is safer to use several multipliers as points of comparison so as to capture different contributions to value. The amount of debt that a publicly-traded company has can affect value. A high level of debt entails interest expense that reduces net income. Additionally, companies with high debt are riskier, independently from their lower net income, because they are more easily stressed by adverse events. A debt-to-equity ratio can be used to focus on the effect of different debt levels on value. There will usually be a significant difference in size between the guideline companies and the privately-owned company being valued, making the comparisons difficult to maintain.

In *Estate of Gallagher v. C.I.R.*, T.C. Memo. 2011-148, 2011 WL 2559847, *8 (2011), the Tax Court said:

> We find that Mr. Thomson improperly relied on the guideline company method because the four guideline companies alone were not similar enough to PMG to warrant its application. *See*, e.g., *Estate of Hall v. Commissioner*, 92 T.C. at 325, 341 (finding that the taxpayer's experts "acted reasonably in selecting" six comparable companies where those companies were involved in similar businesses as, and occupied similar positions within those industries as, the subject company); *Estate of Zaiger v. Commissioner*, 64 T.C. 927, 935, 945, 1975 WL 3192 (1975) (finding that the comparable companies the Commissioner's expert used were not sufficiently comparable because of differences in product mix and size operations). Although the McClatchy Co. is arguably of sufficient similarity to PMG, a single comparable company is insufficient on which to base the valuation method. *See Estate of Hall v. Commissioner*, *supra* at 339.

See Heck v. C.I.R., T.C. Memo. 2002-34, 2002 WL 180879, *9 (U.S. Tax Ct. 2002) ("As similarity to the company to be valued decreases, the number of required comparables increases in order to minimize the risk that the results will be distorted by attributes unique to each of the guideline companies. In this case, we find that Mondavi and Canandaigua were not sufficiently similar to Korbel to permit the use of a market approach based upon those two companies alone.").

There is a large dispute over the so-called Implicit Minority Discount and the Control "Adjustment" associated with it. Some business valuators note that take-overs of publicly-owned companies often occur at a higher price than prevailed in the market prior to the take-over attempt was announced. These business valuators have called this price differential a "control premium." From this they reason that ordinary transactions in the stock exchange, which involve marketable minority interests in the company, are trading at a discount from what a controlling interest is worth. Accordingly, when determining an enterprise value or valuing a controlling interest of a privately-owned business based on the Guideline Company Method, they add to the values indicated by market multiples a "premium" in order to bring the marketably minority interest up to control level. Delaware courts have accepted this adjustment (sometimes misnamed a "control premium") for purposes of minority dissent cases. *See Doft & Co. v. Travelocity.com, Inc.*, 2004 WL 1152338, at *5 (Del. Ch. 2004) ("Delaware law recognizes that there is an inherent minority trading discount in a comparable company analysis because 'the [valuation] method depends on comparisons to market multiples derived from trading information for minority blocks of the comparable companies.' . . . [T]he court, in appraising the fair value of the equity, 'must correct this minority trading discount by adding back a premium designed to correct it.'"). Many business valuators dispute whether this "control premium" exists, and do not believe that a "control adjustment" is appropriate. See Section VIII.D below.

B. THE MERGED-AND-ACQUIRED COMPANY METHOD. Under the guideline merged-and-acquired company method, the valuator develops "valuation multiples" based on the transfers of controlling interests in publicly traded companies. These multiples are evidence of perceptions of value of comparable investments traded in a liquid market. *See* John Koeplin & Alan C. Shapiro, *The Private Company Discount*, 12 JOURNAL OF APPLIED FINANCE 94 (2007) ("Koeplin").[165] These multiples are then adjusted to reflect the differences between the comparables and the privately-owned company being valued. As with any market approach, the key to this version of the market approach is the comparability of the selected exchange-listed companies to the company being valued. The valuator must assess the comparability of the companies in terms of risk, industry, growth rate, capital structure, debt, size, timing of cash flows, liquidity, etc. *See* Koeplin. p. 94. Caution is warranted. In many instances the price paid in a merger/acquisition reflects the synergistic value realized by the acquiring company when it absorbs the company being acquired.[166] This synergistic value may not exist for other buyers, and the price paid may exceed the price that would be paid by a different acquiring company or by a hypothetical willing buyer. Thus, merged-and-acquired transactions may reflect Investment Value, not Fair Market Value. *See Kleinwort Benson Ltd. v. Silgan Corp.*, 1995 WL 376911, at *3-4 (Del. Ch. June 15, 1995) (a minority fair value appraisal action) ("The acquiror may value the target corporation above its going concern value because of potential synergies or because the acquiror believes it will manage the target better. This portion of

a control premium cannot be included in the appraisal value of a corporation because it reflects value arising from the accomplishment or expectation of the merger."). This issue is discussed further in Section VIII.C. below.

C. COMPARABLE PRIVATELY-OWNED COMPANIES. In some instances, there may be sales of other privately-owned companies that are sufficiently comparable to the subject company to provide useful multiples. This could include the sale of franchise operations, professional practices, and other businesses that belong to a kind of local, regional, or national market. Unlike publicly-owned companies, privately-owned companies may require significant effort to normalize their financial information, and comparability may be impaired by circumstances peculiar to the comparable or its sale. Another problem with privately-owned company transactions is that reliable information about such companies and the terms of their sale may be absent for many or most transactions, which reduces the representativeness of the private transactions that can be identified and used as comparables. *See* Carl Lloyd Sheeler, *Business Valuation*, pp. 735-36.[167]

D. PRIOR TRANSACTIONS INVOLVING THE SUBJECT COMPANY. If there have been prior transactions involving the sale or purchase of ownership interests in the subject business, they may be considered as suitable comparables for the purpose of developing multiples. These transactions must be recent enough to still be relevant, and they must reflect arm's-length transactions, and if not for cash they must be adjusted to a cash sales price. Determining the true sales price may be complicated by negotiated allocations of part of the sales price to covenants not to compete and consulting agreements with the departing owner that may represent part of the sale price. Also, buy-sell provisions may cause the transfer price to be not reflective of the true value of the business interest being sold.

E. CHALLENGES IN USING THE MARKET APPROACH. Chris Mercer (in private conversation) identifies the following key factors in using comparables under the market approach:

- Normalization
- Identifying multiples
- Selecting which multiples to use
- Reconciling disparate indicators of value.

F. PROBLEMS WITH THE MARKET APPROACH. The challenges posed by the guideline public company method are demonstrated in the case of *In re Marriage of Lotz*, 120 Cal.App.3d 379, 383-84, 174 Cal.Rptr. 618, 620-21 (Cal. App. 2nd Dist. 1981):

> Husband also argues that the partner's closely held corporation was evaluated by multiplying its pretax earnings by seven, and that this particular formula is properly used in evaluating public rather than private corporations. The wife's expert, Mr. Weaver, testified that he inspected figures published by Standard & Poors for some 5100 public corporations. This witness stated that the price earnings ratio for publicly traded companies who manufactured only women's clothing ranged from 7.5 to 9.4. The witness also testified that he made no concerted effort to find prices for closely held corporations, claiming that this information is not usually available.
>
> We agree that the price earnings ratio of publicly traded corporations have little relevance in valuing a closely held corporation. There are enormous differences between the two types of corporations. The sales volume of publicly traded corporations are much higher than the volume of closely held corporations. The stock in a publicly traded corporation has liquidity value because its owners can sell stock and get money in a matter of days, whereas the stock in "Your Own Things" has no liquidity value. There is less risk in owning stock in public corporations because they can "miss on two or three lines" without being hurt too much. Finally, the cost "to go public" is between $150,000 and $200,000 for legal and accounting fees. Therefore, there is no substantial support for the use of the above formula in evaluating a closely held corporation, even considering the attempts to adjust the formula.

The concerns stated in *Lotz* were echoed in the case of *In re Marriage of Hewitson*, 142 Cal.App.3d 874, 885-86, 191 Cal.Rptr. 392, 398-400 (Cal. App. 2nd Dist. 1983):

> In determining the value of shares of a closely held corporation, it is error for a trial court to rely solely on the opinion of an expert regarding the value of closely held corporate shares where such

opinion is based on the "price earnings ratio of publicly traded corporations," the so-called comparable company method. . . . The reason for such a rule is the unreliability of this method to determine the value of close corporation shares. First, it is extremely difficult, if not impossible, to find sufficiently comparable companies. . . . Second, closely held corporations possess characteristics which make them inherently different from publicly held corporations, with the primary difference being the lack of marketability, i.e., liquidity of close corporation stock. . . . FN12 These differences undermine the basic assumption of the comparable company method that where a price-earnings ratio of a publicly held corporation is applied to a supposedly similar close corporation, it represents a valid determination of the market value of closely held corporate stock. [Citations omitted.]

Lotz was cited favorably in *Wallace v. Wallace*, 733 S.W.2d 102, 107 (Tenn. App. 1987), where the Tennessee Court of Appeals said:

> A public corporation's value is most reliably determined using the market value method. *Blasingame v. American Materials, Inc.*, 654 S.W.2d 659, 666 (Tenn.1983). This method presumes that there is an established market for the corporation's stock which will enable the court to arrive at the price a willing buyer would pay for the stock. The stock in closely held corporations is rarely traded. Thus, it is improper to attempt to place a value of a closely held corporation using the method generally used to place a value on a public corporation. *Lotz v. Lotz*, 120 Cal.App.3d 379, 384, 174 Cal.Rptr. 618, 621 (1981).

VII. NET ASSET APPROACH. The Net Asset Approach involves calculating the value of a business based upon the fair market value of the assets of the business. The net asset approach to valuing a privately-owned business is most suitable when the business merely holds assets, and does not actively engage in profitable activities. Revenue Ruling 59-60 says that "adjusted net worth should be accorded greater weight in valuing the stock of a closely held investment or real estate holding company . . . than any of the other customary yardsticks of appraisal, such as earnings and dividend paying capacity." Rev. Rul. 59–60, § 5(b). The U.S. Tax Court said: "[P]rimary consideration is generally given to earnings in valuing the stock of an operating company, while asset values are generally accorded the greatest weight in valuing the stock of a holding company." *Estate of Ford v. C.I.R.*, T.C. Memo. 1993-580, 1993 WL 501917, *5 (U.S. Tax Court 1993).

In *Sfreddo v. Sfreddo,*720 S.E.2d 145, 155-56 (Va. App. 2012), the court said:

> "In Virginia, the courts look to the intrinsic value of the property to the parties to measure value for equitable distribution purposes." . . . Since "intrinsic value must depend on the facts of the case, we give great weight to the findings of the trial court." . . . This Court will "affirm if the evidence supports the findings and if the trial court finds a reasonable evaluation based on proven methodology and on the application of it to the particular facts of the case." Id. "The intrinsic value principle applies to stock in a family owned company." . . . [Citations omitted.]
>
> We find the trial court properly valued APS Investments. The evidence before the trial court was that APS owned a single piece of property and nothing else besides a bank account. Under these circumstances, the trial court acted within its discretion in holding the value of the property and the bank account constituted the value of APS.

Using a net asset approach to value a construction business was affirmed in *Caveney v. Caveney*, 960 N.E.2d 331, 338 (Mass. App. 2012).

Even when the primary valuation method is based on the Income Approach, net asset value can set a floor on the value of a business on the belief that a business is never worth less than what the assets can be sold for in an orderly liquidation of the business's assets.

1. Adjustments to the Balance Sheet. In using the Net Asset Approach, the business valuator will make adjustments to the balance sheet of a business such as: adjusting assets from depreciated historical cost to market value; removing assets that do not contribute to the cash flow (e.g., a corporate aircraft, season tickets, hunting lease, vacation condominium); removing excess cash; adding back the accounts receivable if they are missing, or reducing accounts receivable for non-collectability; adjusting inventory value from LIFO to FIFO by adding back the LIFO reserve; adding

intangible assets that are separately recognizable (e.g., assembled workforce) or legally enforceable (e.g., contracts, confidentiality agreements, covenants not to compete, trademarks, trade names, etc.); adjusting debt accruing interest at a rate that is above or below market rate; subtracting contingent liabilities; etc.

VIII. DISCOUNT FOR LACK OF MARKETABILITY, ADJUSTMENT FOR CONTROL, AND CONTROL PREMIUM/MINORITY DISCOUNT. In conventional business appraisal practice, once an enterprise value is determined many business valuators will apply a marketability discount to reflect difficulties in selling a privately-owned business. If partial ownership interests are to be valued, then a premium is sometimes added to the controlling interest's pro-rata share of enterprise value and a discount is subtracted from each minority owner's pro-rata share of enterprise value. Some valuators find an "implied minority discount" in publicly-traded stock and add a "control premium" to the market prices of comparable guideline companies when valuing a privately-owned company, or a controlling interest in a privately-owned company. There are controversies surrounding these discounts and premium.

A. DISCOUNT FOR LACK OF MARKETABILITY. It is common knowledge, supported by studies of the data, that investors value liquidity, and that where two investments are equal in all respects except that one can more readily be sold than the other, investors will pay more for the investment that is easy to sell. This ease in selling is called "marketability" or "liquidity." Liquidity can be viewed as the ability to sell an asset for its fair market value quickly, easily, and at low cost. Mukesh Bajaj, David J. Denis, Stephen P. Ferris, & Atulya Sarin, *Firm Value and Marketability Discounts* 1 (2002) ("Bajaj").[168] Stocks in companies that are traded on a national exchange are the epitome of liquidity. Stock in a privately-owned company is not. Where a fair-market-value valuation of a privately-owned business is premised on information pertaining to a company's stock that can easily be sold in a liquid market at little cost, at some point in the valuation process an adjustment should be considered for the lesser liquidity of the privately-held company.

In the courts, marketability arises in two settings: disputes over whether a marketability discount is allowable, and if is, the how it is to be determined. Bajaj, p. 2. Section II.C above examines dissenting minority shareholder cases, where the prevailing but not universal view is to exclude a marketability discount when determining the value of minority owners' shares in a business. Section VIII.E below examines the varied approaches different states take regarding the application of a marketability discount in divorce valuations.

On the question of the size of the marketability discount, author Robert Comment quotes David Laro, a Senior Judge on the United States Tax Court, as saying:

> The discount for lack of marketability is the largest single issue in most disputes regarding the valuation of businesses and business interests, especially in tax matters. This is true both in the number of cases in which the issue arises and the magnitude of the differential dollars involved in the disputes.

Laro and Pratt, BUSINESS VALUATION AND TAXES 283 (2005) (cited in Robert Comment, *Business Valuation, DLOM and Daubert: The Issue of Redundancy*, 29 BUSINESS VALUATION REVIEW p. 6 (2011)[169] ("R. Comment"). Bajaj et al. list five factors that affect marketability: (1) uncertain asset value; (2) difficulty for an outsider to appraise value; (3) the availability of close substitutes; (4) the duration of restrictions on transferability; and (5) the quantity of shares being sold. Bajaj, p. 4.

The traditional way to account for the lesser liquidity of a privately-owned business is to reduce the calculated value of a company by a certain percentage that is called the "Discount for Lack of Marketablity." The reader who wishes to embark of a close study of the Discount for Lack of Marketability (DLOM) is advised to start by reading the IRS publication, *Discount for Lack of Marketability: Job Aid for IRS Valuation Professionals* (Sept. 25, 2009) <http://www.irs.gov/pub/irs-utl/dlom.pdf>. The Job Aid is a 115-page overview of the many issues surrounding the DLOM. A case that evaluated three different approaches to a DLOM is *Litman v. U.S.*, 78 Fed. Cl. 90, 137-38 (Fed. Cl. 2007).

1. Benchmark Studies. Business valuators striving for greater objectivity in determining a DLOM or

Liquidity Discount often rely on so-called benchmark studies. The benchmark studies fall into two main categories: restricted stock studies and studies of initial public offering (IPO) pricing. Some work has been done on a third method, where acquisitions of private companies were compared to acquisitions of similar publicly-owned companies, in order to derive a measure of the effect of liquidity.

a. Restricted Stock Studies. Federal Regulations (presently SEC Rule 144) impose temporary restrictions on the sale, through the open market, of certain stock in certain companies for specified periods of time. The restricted stock of a public company is identical to its normal stock except for these transfer restrictions. Restricted shares trade at a discount compared to their unrestricted counterparts. Revenue Ruling 77-287 attributed this discount to four factors: earnings patterns, sales (low sales mean largest discounts), trading market (discounts were greatest where unrestricted counterparts traded over-the-counter, and less for those traded on the NYSE), and resale agreements (that affect risk and liquidity). Since the Specific Company Risk for restricted and unrestricted shares in the same company is the same, and the only distinction is being unable to sell the restricted security prior to the end of the holding period, many view the discount for restricted stock as a measure of lack of marketability. Studies have been done that claim to have measured that difference. However, those studies have been challenged on the ground that restricted stock sales often involved large blocks of stock sold to large institutional investors who are not representative of the average market participant. Koeplin, Sarin, and Shapiro, *The Private Company Discount*, 12 JOURNAL OF APPLIED CORPORATE FINANCE 94, n. 3 (2000) ("Koeplin").[170] And use of restricted stock studies to evidence the value of liquidity has been criticized on the ground that a variety of other factors could contribute to the price differential between restricted and unrestricted shares, including a reward for the due diligence of the informed investor buying stock in a private offering, and the fact that investors who buy restricted stock often commit to providing advisory services to the company, so that part of the below-market price of privately-placed stock may include a component of compensation. See Koeplin, p. 95. Other criticisms include: the limited number of transactions observed in the studies; the data is too old to be relevant; the range of values in the studies is too large to provide guidance; the companies studied didn't pay dividends. *See* Z. Christopher Mercer and Travis W. Harms, BUSINESS VALUATION: AN INTEGRATED THEORY 186-188 (2nd ed. 2008) ("Mercer & Harms"). Additionally, the purchasers at private offerings are often institutions like life insurance companies and pension funds, who likely would not demand a discount just because stock had a 2-year holding period.[171] Many of the restricted stock studies were done at a time when SEC regulations required a 2-year holding period for privately-placed stock. In 1997, the SEC reduced the holding period to one year,[172] and in 2008 it reduced the holding period to six months.[173] As a consequence, the holding period is now so short that current price differentials are not held up as a measure of illiquidity. Barklay, Holderness, and Sheehan argue that the claim that private placement discounts represent compensation for monitoring management (the "monitoring hypothesis") or for certifying management's claim that the firm is undervalued (the "certification hypothesis"), hold only for a minority of private placement transactions. Barclay, Holderness, & Sheehan, *Private Placements and Managerial Entrenchment*, 13 JOURNAL OF CORPORATE FINANCE 461, 463 (2007).[174] They propose instead an "entrenchment hypothesis," where "management places stock with friendly investors who will not 'rock the boat'." *Id.* at 462. The authors also state:

> Over the years many have claimed that the pervasive discounts on private placements reflect, in large part at least, the apparent unregistered status and the consequent illiquidity of private placements (for example, Silber, 1991). Our analysis of the law and a variety of empirical regularities, some of which have not yet been reported in the literature, suggests that this is unlikely to be the case.

Id. at 482. Bajaj et al. note that one of the studies, the SEC Study that found an average Liquidity Discount of 23%, had discounts ranging from -15% to 80%, which is too varied to be useful. Bajaj, p. 9. Bajaj also reviews the Silber study and finds that the discount varies from company to company based on different characteristics of each firm. Bajaj, pp. 9-10.

The more current FMV Restricted Stock Study Database[175] carries about 596 restricted study transactions as of December 31, 2010. One business

valuation group has criticized the database in that: (i) the companies are not representative of American businesses; (ii) the companies are mostly unprofitable, non-dividend-paying risky companies; (iii) data involving the 2-year holding period is limited and old; and (iv) the majority of transactions are subject to registration rights, which increases marketability. Moore, Elrich & Neal, P.A., *FMV Restricted Stock Study Not So Relevant* (Feb. 7, 2012).[176]

b. Pre-IPO Pricing. The pre-IPO studies compare the prices at which a company's stock is issued privately versus the price at the time the company offers shares to the public in an Initial Public Offering (IPO). *See* Pratt, VALUING A BUSINESS 434-439 (5th ed. 2008). Some theorists assume that the price differential is solely attributable to the greater liquidity of the stock after the IPO. There are several alternative explanations for the difference, however: new capital raised through the IPO may be taken by outside investors as a signal of an increase in rate of growth of future earnings; funds raised in the IPO may be used to pay off debt, or at least reduce the debt-to-equity ratio, thus improving cash flow and reducing risk; IPO pricing may be partly emotional and not based on business fundamentals; picking the date of the IPO as the date of measurement is somewhat arbitrary, as market prices shortly after issuance can be substantially higher or lower than on the date the stock is first offered publicly.[177] The pre-IPO study by John D. Emory, published in 2002 and which found an average discount of 45%,[178] generally did not involve arm's length sales for cash. Koeplin, p. 96. Also most of the transactions examined were for restricted options granted to management, not the exchange of shares for cash. *Id*. And part of the difference in prices reflect changes in the market price multiples between the time of the private transaction and the time of the IPO. *Id*. at 96.[179] Also, Emory's study made no adjustment for the length of time between private offerings and the IPO, thus ignoring the time value of money.[180] Additionally, there is some indication that private placement offerings are seen as an opportunity for a company to signal that their marketable securities are undervalued.[181] Bajaj et al. criticized the Emory study in that: (i) the discounts seem implausibly large; (ii) pre-IPO sales are to different kinds of people than IPO sales; (iii) sample bias, in that IPOs that failed to get to market are excluded from the study. Bajaj, p. 8. The Tax Court rejected an expert's reliance on pre-IPO studies in *McCord v. Commissioner*, 120 T.C. 358, P. 25 (2003).

c. Comparing Acquisitions. Koeplin, Sarin and Shapiro, in *The Private Company Discount*, 12 JOURNAL OF APPLIED CORPORATE FINANCE 94, 96 (2000),[182] studied 192 acquisitions of privately-owned companies between 1984 and 1998. Each privately-owned company was matched with a publicly-owned company in the same industry that was acquired in the same year in the same country. Eighty-four of the acquisitions were of American companies. Koeplin measured comparability based on ratios such as price-to-earnings, price-to-sales, and price-to-book-value. *Id.* at 98, Table 2. Bajaj et al. wrote that the private and public companies may be intrinsically different, and that private sales may have been complicated by disguising sales price as consulting arrangements. Bajaj, at 14-15.

2. Survey-Based Approaches. In the Pepperdine University Private Capital Markets Project Survey (PPCMP) for 2011, the business valuators who responded used the following DLOM, which varied according to company size as measured by EBITDA:

EBITDA	DLOM for Controlling Interest	DLOM for Minority Interest
$250M	13.98%	20.29%
$25m	16.61%	23.98%
$1m	20.7%	28.94%

PPCMP (Summer 2011) p. 33, Figure 27. The Business Appraiser Survey included 271 persons, of whom 39% were CPAs, 30% were ABV, and 35% were ASA certified, and 60 respondents had over 10 years in business appraising. PPCMP (Summer 2011) p. 29.

3. Does the Marketability Discount Apply to a Controlling Interest? Shannon Pratt suggests that there are five transactional considerations that controlling owners face in marketing a privately-owned business and that support applying a DLOM to a controlling interest: (i) the uncertain time horizon to complete the sale; (ii) the cost of preparing for sale and closing the sale; (iii) risk concerning the eventual sales price; (iv) noncash or deferred sales proceeds; and (v) the inability to borrow against the business. Pratt, VALUING A BUSINESS 441 (5th ed. 2008). Chris Mercer challenges each of these rationales. Mercer and Harms, pp. 94-98.

As to item (i), the time horizon until closing a sale, Mercer says that the passage of time would be detrimental to a controlling interest holder only if the expected cash flows during the holding period are less than the discount rate used to discount future cash flows, which would not occur if the discount rate is accurate. Mercer and Harms, p. 96. As to item (ii), the costs of sale, Mercer differentiates between net sales proceeds and the value of the company, the latter being the purpose of a business appraisal. *Id.* at 96. Mercer rejects item (iii), risk regarding the eventual sale price, because the discount rates and earnings multiples are taken from market data that reflect similar uncertainty. *Id.* at 96-97. As to item (iv), non-cash consideration, deferred payments, and special payment terms are just a reflection that the value being paid is in actuality different from the agreed-upon sales price. *Id*. at 97. As to item (v), the inability to hypothecate the business, Mercer ties that to the holding period already considered, which is detrimental only if cash flows during the holding period leading up to sale are less than the discount rate, which would not happen if the discount rate is appropriately chosen. *Id.* at 97.

Mercer believes that, if enterprise value is determined based on expected cash flow, expected growth in that cash flow, and the risk associated with that cash flow, then there is no justification for applying an additional adjustment for lack of liquidity to a controlling interest. When valuing partial interests, Mercer believes that controlling interests and minority interests should be valued based upon their respective shares of enterprise cash flow, and their respective risks and expected growth. *Id.* at 94-95. Mercer believes that the factors that affect liquidity are built into these assessments.

The **Connecticut** intermediate appellate court, in *Ferguson v. Ferguson*, 1998 WL 851426, *3 (Conn. Super. 1998), upheld the trial court in a divorce applying a marketability discount to a 100% ownership interest in a business, but the appellate court reduced the marketability discount from 35% to 15%.

4. Double-Counting With Size Premium. Author Robert Comment argues that "Both [liquidity and marketability] discounts presumptively fail the *Daubert* test for reliability due to redundancy with the commonplace practice of discounting for lack of size." Robert Comment, *Business Valuation, DLOM and Daubert: The Issue of Redundancy*, 29 BUSINESS VALUATION REVIEW p. 2 (2011)[183] Comment argues that "liquidity and marketability are highly correlated with company size," and that discounts for lack of liquidity or marketability are "just relabeled versions of the already ample discounting for lack of size that is inherent in the core methodologies [such as DCF]." *Id.* at 16. Comment concludes that the DLOM is "substantially redundant" although not "completely redundant." *Id.* at 16. Comment criticizes Shannon Pratt's rationale supporting a DLOM. Dr. Pratt countered with criticisms of Comment's criticisms. *See Pratt says Prof. Comment's DLOM paper has 'serious flaws'*.[184]

5. Is Cost of Later Sale Properly Considered? Some states allow the court to take into account the cost of later sale of a marital asset, and some do not. A typical example would be reducing the value of the marital home on the ground that a realtor's fee and closing costs will later have to be paid when the house is sold. If costs of later sale are allowed in a divorce valuation, then by extension the costs of a later sale of a privately-held business interest should also be considered. For states that do not permit consideration of the costs of a later sale, then some thought needs to be given to the marketability discount applied to a business, which often contains a component representing the cost of selling the business. In that situation, the hypothetical sale construct of the Fair Market Value concept, which is an *imagined* sale at the time of valuation, raises the question of whether the costs of an imagined sale can be subtracted from the value of a business even absent evidence that a real sale will occur at divorce or shortly after divorce. It would be inconsistent to say that the cost of selling the family home cannot be subtracted from value while the cost of selling the family business can. This raises the larger question that is not considered enough: in determining the Fair Market Value of a business for purposes of divorce, are we measuring the price a hypothetical buyer would pay, or are we measuring the net proceeds to the seller out of the sale? This question arises not only in connection with the cost of sale, but also in connection with tax that may be due upon sale of the business. See Section XII.A & D below.

B. DISCOUNT FOR LACK OF CONTROL (MINORITY DISCOUNT). Once the value of a private company is determined, if partial ownership interests are being valued then the valuator typically

considers a control premium and a discount for lack of control (DLOC), also called a minority discount. While these adjustments are widely used, they are subject to criticism both as to theory and as to application.

1. Comparability to a Marketable Minority Interest. The market data relied upon in many business valuations represents sales of minority interests in companies with thousands of shareholders. One might think that applying a DLOC to a privately-owned business might not be needed when using sales of marketable minority interests as market indicators for purposes of valuation. However, publicly-traded companies are subject to a myriad of constraints that curb potential abuses by management that might harm owners of marketable minority interests. Additionally, publicly-traded companies are run by employees who do not own a controlling interest and can be fired by the Board of Directors if there is sufficient dissatisfaction among shareholders (i.e., minority owners).[185] Finally, minority owners of public companies can "vote with their feet" by selling their shares. If enough minority owners do that, stock prices will drop, pressuring management to change its policies. Additionally, most publicly-owned companies have so many shareholders that abuses in compensation to top management and the like are spread so thin that the cost per share is too low to affect share price. The situation is different for owners of nonmarketable minority interests in a privately-owned business. They cannot fire the managers, they cannot easily sell their stock, and the effect of abuses by management can be significant at the individual minority shareholder level. Abuses can only be rectified by minority oppression lawsuits which are expensive, lengthy, and difficult to win. However, there is good reason not to assume that every controlling owner will abuse every minority owner, and that the vulnerability of minority status should be evaluated on a case-by-case basis. If minority owners are actually being taken advantage of by controlling owners in a company, a DLOC is easy to justify. In either event, it is difficult to find objective measures of the amount of the DLOC.

2. What Constitutes Control? Control of a business is the right to make significant decisions about the business. In a simple situation, owning more than 50% of the business gives one control. In some businesses (like for example limited partnerships), however, control is not determined by ownership percentages, but instead is governed by organizational documents, agreements pertaining to voting rights, or is affected by state law. In many states the powers of a controlling owner are circumscribed by legal limitations imposed by law, or by contractual duties owed by the controlling owners to minority owners. In many situations control is a matter of degree.

3. Is a 50% Interest a Minority Interest? An investor who owns a 50% interest in the company does not have control, but at the same time the other owners of the business do not have control either. So is a 50% interest a minority interest?

In *Owens v. Owens*, 589 S.E.2d 488, 494 (2003), the Virginia Supreme Court rejected a contention that a 50% ownership interest required a DLOC:

> When analyzed under the intrinsic value approach, husband's position as a 50% owner does not necessarily mandate the use of a minority discount. Though husband's brother serves as office manager, no evidence suggested the brother ever used this position to exercise authoritarian control of the company or in any way to imperil husband's equal share of the distributive profits. Nor did any evidence show that the brothers have ever disagreed about the strategic direction of the company or disputed among themselves the management of the finances.
>
> While the potential for disharmony always exists between co-owners, so too do legal and equitable remedies. . . .
> * * *
> In this case, given the absence of any suggestion of actual oppression relating to husband's alleged minority status coupled with the availability of judicial remedies for the most egregious forms of potential oppression, we reject husband's assertion that his position as an equal co-owner should entitle him as a matter of law to a minority discount for equitable distribution purposes.

4. What if There is No Controlling Interest? In some businesses there is no controlling ownership interest. This is true for nearly all publicly-traded companies and some businesses with two or more owners. If no single owner is controlling, then it would take an alignment of minority owners to create a control

group that could oppress the minority. Good relations between owners may make such factionalization so improbable that it can safely be ignored for business valuation purposes. On the other hand, if the business valuator chooses to assume, or is required by law to assume, a hypothetical sale to a stranger, then this assumption could lead to a concern that the nonselling owners might tend to create a faction that would oppress the new owner. This hypothesis is an artifact of the willing buyer/willing seller construct, and in a divorce it could convert a remote possibility into a real possibility that would diminish value even when no sale to an outsider will actually occur in connection with the divorce or soon thereafter.

5. Where Should Lack of Control be Reflected–In Projected Revenues, the Discount Rate, or an Ending Adjustment? The conventional approach is to treat the DLOC as a reduction in the minority owner's proportionate share of enterprise value. Some of the disadvantages of the lack of control could result from mismanagement that reduces profitability of the company, and from unfair practices like overcompensating management, employing noncontributing family members, and the like. If those adjustments are backed out, then some of the disadvantages to minority ownership will be included in a reduced enterprise value, and would not need to be included in a separate minority discount. Chris Mercer suggests constructing a Discounted Cash Flow analysis of the interim cash flows and terminal value that the owner of a nonmarketable minority interest can expect to receive, and using that value instead of making an adjustment to the minority owner's proportionate share of enterprise value. Mercer & Harms, p. 172-178. In instances where the cash flows to the minority owners are equal to the minority owners' proportionate share of enterprise cash flows, then no adjustment is needed to reflect minority status on account of reduced participation in company cash flows. Mercer cautions that the holding period until a minority owner can realize his terminal value is not subject to the minority owner's control, and may be longer than conventional assumptions; this could affect the accuracy of a discounted cash flow analysis that is based upon a terminal date that is unrealistic in the particular circumstance. *Id* at 181-83. Even if current company cash flows are being shared in proportion to ownership, there is always a risk that things could change. The controlling owner could reduce distributions of cash to all owners, or to minority owners disproportionately. This risk could be addressed by developing alternate cash flow projections, or it could be addressed by increasing the Discount Rate applied to the projected cash flows that will be realized by minority owners, to reflect increased risk.

C. CONTROL PREMIUM. In the context of business valuation, control of a business "means that, because of the interest owned, the shareholder can unilaterally direct corporate action, select management, decide the amount of distribution, rearrange the corporation's capital structure, and decide whether to liquidate, merge, or sell assets." *Theophilos v. C.I.R.*, 85 F.3d 440, 449 (9th Cir. 1996) (quoting *Estate of Newhouse v. Commissioner*, 94 T.C. 193, 251-52, 1990 WL 17251 (1990)). A control premium is an adjustment that is supposed to isolate the extra amount that an investor would pay to acquire control of a company. The control premium is the counterpart to the discount for lack of control (i.e., minority discount). Whatever the value the minority owners lose due to lack of control should be an enhancement to the controlling ownership. That assumes, however, that the controlling interest has the greater claim to the benefits of ownership. If the controlling interest does not own the greater part of the business's ownership rights, then the control premium is not the exact counterpart to the minority discount.

When an entire business is sold, and the proceeds must be allocated between the controlling interests and minority interests, a question arises as to whether the control premium applies just to 50.1% of the controlling owner's shares, and the balance of that person's ownership should be valued at a minority interest level.

Where ownership and control are separated, as in a limited partnership, percentage ownership interests do not have the attribute of control. In the typical limited partnership, the general partner (who has total control of the entity) typically will have 1% or less ownership interest, and sometimes no ownership interest. In such a situation, the controlling interest has such a small claim on the partnership's distributions that even a large control premium does not add much value to the general partner interest. In these situations, some thought should be given to whether the write-down of the collective value of minority interests should be many times larger than the write-up in value of the controlling interest. This is especially true when the minority owners suffer

no detriment from lack of control apart from the reduced marketability of their minority interests. The "wealth-destroying" features of isolating and segregating control from the other benefits of ownership, as in a family limited partnership, is an important technique for reducing estate and gift taxes that has been accepted by the IRS and the U.S. Tax Court. The policy considerations in divorce cases are entirely different, however, and contrived minority discounts that result from the fracturing of ownership and control for tax purposes may need to be evaluated differently if they impact a property division upon divorce. Special caution is required for partnerships generally, because the partnership agreement may allocate distributions differently from ownership percentages, and may impose constraints on the controlling interest that erode the advantages to control that might otherwise exist.

Author Robert Comment, in *Business Valuation, DLOM and Daubert: The Issue of Redundancy*, 29 BUSINESS VALUATION REVIEW p. 29 (2011),[186] defined a control premium as "a percentage adjustment thought to be applicable when the asset being valued is a controlling block of shares." Comment points out that, where evidence specific to the company being valued reflects that the controlling owner has actually captured a private benefit from control, the net cash flows in a Discounted Cash Flow analysis can be adjusted to reflect the respective claims of different owners to the future benefits, eliminating the need for a final adjustment based on control (or lack of control). *Id.* at 30. In some instances the control premium reflects a buyer's expectation of the degree to which profits can be increased by "implementing operating efficiencies, eliminating nepotism, and from prospective reductions in executive or owner/operator compensation." *Id.* at 30. Comments says: "Buyers (even hypothetical ones), pay control premiums because their information leads them to believe that they can deliver more cash flow to shareholders than what existing management has been delivering." *Id.* at 30. Comment notes that premiums are sometimes paid because of shared synergies and tax benefits, *Id.* at 30, but such a premium could reflect investment value and not Fair Market Value's hypothetical willing buyer and thus would be excluded from consideration when the standard of value is Fair Market Value. Thus, Comment divides control premiums into situations where company-specific evidence reflects private benefits to the controlling interest or inefficiencies from the exercise of control, and situations where no such evidence exists. *Id.* at 30. In the latter situation, absent company-specific evidence, Comment says that what he calls an *unconditional* takeover premium is appropriate, which one study suggests was 1.4%. *Id.* at 30.

Where a controlling interest in a business is being valued, and the company is being mismanaged, and a hypothetical buyer may be expected to improve profitability or cash flows, there could be a post-sale benefit to minority owners who will now own an interest in a more profitable business. To the extent that such increased value will be shared with minority owners, it may tend to reduce the control premium that a buyer who is buying a controlling interest that is less than 100% of the company would be willing to pay. Also, business valuators normalize earnings and cash flows in the process of conducting a Discounted Cash Flow analysis. If enterprise value is determined based on projections that have eliminated under-performance and irregular compensation practices, etc., then some care needs to be taken to align any control premium with adjustments that were made to revenue and cash flow projections.

D. IMPLIED MINORITY DISCOUNT; CONTROL ADJUSTMENT. Very few publicly-owned company transactions involve selling the whole company. Author Robert Comment suggests that, among the smallest public companies (with annual sales revenue of less than $10 million), only 0.8% to 1.0% of transactions per year are whole-company transactions.[187] When the business valuator is determining the enterprise value of a privately-owned company, and uses stock market transactions to develop ratios or multipliers, these ratios or multipliers are based on a marketable minority interest. Some argue that the ratios or multipliers should be adjusted upward when used to value a controlling interest in a closely-held company. This rationale was accepted by the Vermont Supreme Court in the case of *In re 75,629 Shares of Common Stock of Trapp Family Lodge, Inc.,* 725 A.2d 927, 934-35 (Vt. 1999). The Delaware Supreme Court pointed out, in *Rapid-American Corp. v. Harris*, 603 A.2d 796, 807 (Del. 1992), that the adjustment made to a marketable minority interest comparable, in order to make it fit a controlling interest in the subject company, is not a control premium in the traditional sense, but is rather an adjustment to make the appraisal more

accurate. However, this view assumes that shareholders in publicly-traded companies suffer some detriment due to their lack of control. This may not be the case. See Section VIII.C.1 below. *See Kleinwort Benson Ltd. v. Silgan Corp.*, 1995 WL 376911, *3 (Del. Ch. 1995) ("Paone premised his use of a control premium on the theory that the market price for publicly traded shares contains an inherent minority discount. Paone's decision to remove a minority discount imbedded in the market price does not violate Delaware law. . . . However, Petitioners cannot add a premium to the market price unless they prove that publicly traded shares include a minority discount."). In *Salomon Bros. Inc. v. Interstate Bakeries Corp.*, 1992 WL 94367, *5-6 (Del. Ch. 1992), the Chancery Court judge said:

> The experts' historical earnings valuations, likewise, present some problems. The most notable one is Hempstead's use of a 15% adjustment to compensate for what he called an "implicit minority discount." Hempstead explained that the adjustment was necessary because his historical earnings analysis used multipliers that were designed to reflect the market value of IBC on a minority interest basis. Therefore, according to Hempstead, the 15% adjustment factored out the minority discount inherent in a market value.
>
> I find that the 15% adjustment should not be considered in the determination of fair value. First, I am not satisfied from the record in this case that a market value adjustment to compensate for an implicit minority discount is a valuation method that is generally accepted in the financial community. *Weinberger v. UOP, Inc.*, Del.Supr., 457 A.2d 701, 713 (1983). Magro testified that he never heard of the expression "implicit minority discount" or the concept as articulated by Hempstead. Moreover, Magro does not agree with the underlying premise that market value is inevitably less than intrinsic value. Hempstead testified that the concept is widely recognized in the financial community. However, on cross-examination, he could not recall ever using an implicit minority discount in any of the many other cases for which he has provided expert testimony on appraisal. Thus, there is a real question whether an adjustment of the sort Hempstead advocates is recognized and accepted in the financial community.

Eric W. Nath, in his then-controversial but now respected article *Control Premiums and Minority Interest Discounts in Private Companies*, 9 BUSINESS VALUATION REVIEW 39 (1990),[188] presented several arguments against the use of a control adjustment. He pointed out that true control premiums, where the acquiring company paid more than market price to acquire another company, are infrequent. *Id.* at 40-41. He suggested that such premiums were offered when: the company being acquired was being mismanaged and could be operated more efficiently by the acquirer; the company was well-run but outside investors did not know this; and where the acquisition was a strategic acquisition with value to the acquirer that did not exist for other buyers. *Id.* at 40. Nath reached five conclusions: (i) that takeovers represent a "tiny portion" of the marketplace and are not representative of the "vast majority" of public companies that are used by appraisers as comparables; (ii) that most takeovers of public companies are driven by strategic considerations; (iii) that the range of high and low and even negative "control premiums" suggest that the data are unreliable; (iv) that minority interests are sometimes acquired at a premium; and (v) that takeover transactions are "unique and time-specific" and thus cannot be generalized. *Id.* at 41-43. Nath argues that prices on the stock exchanges are close to controlling interest values. *Id.* Also see the discussion of fundamental adjustments in Section IV.B.1 above. When market data is taken from mergers or acquisitions, involving the acquisition of controlling interests, a control adjustment would have no application.

The Appraisal Foundation (which issues USPAP) is examining the advisability of publishing a best practice standard for the use of control premiums in the merged-and-acquired valuation method. The Foundation solicited public comment on whether market prices of marketable minority interests do or do not reflect a control value, and if not, then how would an adjustment from minority to control value be measured. The Foundation suggested that arguments in support of a control premium include: (i) the fact that premiums are routinely paid in control acquisitions of public companies, (ii) something in excess of the current trading price is needed to acquire the shares necessary to have control; (iii) the authority to set policy and make decisions for the business has value, and (iv) American

and International accounting standards acknowledge control premiums. The Appraisal Foundation says that arguments against a control premium include: (i) most companies are operating optimally, which is why they are not takeover targets; (ii) empirical studies unavoidably include only successful takeovers; and (iii) companies that are not taken over have no incremental value to an acquirer sufficient to justify paying a control premium. In 2010, Duff & Phelps (D&P) took a public position that a control premium was appropriate, but that mergers and acquisitions involve not just one premium, but three premia: an optimization premium, an acquisition premium, and company-specific synergies, of which only the acquisition premium should be considered. Paul F. Barnes, Letter to The Appraisal Foundation, Working Group 3 – Control Premiums p. 2 (Jan. 15, 2010).[189] The "optimization premium" is " [t]he incremental value related to the improvement or optimization of the operations of a company on a stand-alone basis", that can result from improvements such as: "[i]ncreasing cash flows from assets in place; [i]ncreasing expected growth (higher reinvestment rate or a higher return on capital on new investments or both); [l]engthening the period of high growth; [r]educing the cost of financing; or [m]anaging non-operating assets more effectively. *Id.* at 2. The 'acquisition premium" results from "[m]arket participant synergies resulting from the expectation of cash flow enhancements achievable only through the combination with another company," which "may come in the form of cost reductions or revenue improvements that would generally be available to market participants." *Id.* at 2. "Company-specific (or buyer-specific) synergies are derived from the expectation of cash flow enhancements resulting from the combination of the specific buyer with the target company that are not generally available to other market participants, but are unique to the specific buyer" such as . . . : unique access to a key raw material; unique distribution network; unique access to a certain customer channel; unique technology platform; among others." *Id.* at 3. D&P says that "the Acquisition Premium is the only component of a control premium that should generally be considered." *Id.* at 3. Since there is no way to isolate this element other components of value, D&P suggests that "the only means of quantifying synergies is through an explicit analysis of expected cash flow savings (or revenue enhancements) that might be realized should the subject entity be sold and combined with the existing operations of a market participant." *Id.* at 3. Business valuator Eric Nath was strongly critical of a "control adjustment," arguing that public investors' ability to sell the stock at will eliminates virtually all risk associated with not having control. Eric Nath, Email to The Appraisal Institute (Jan. 14, 2009), p. 3.[190] Nath also believes that the ability of stockholders to diversify away specific company risks allows companies to trade close to their intrinsic value, which is at or near a control value. *Id.* at p. 4. Nath attributes the apparent "control premium" to the fact that an acquisition temporarily raises the demand for a company's stock above its equilibrium point prior to the takeover, and reflects nothing more than ordinary supply-and-demand. *Id.* at 3. The Chairman of the International Association of Consultants, Valuators and Analysts, headquartered in Ontario, Canada, supports a "control premium" where normal trading volumes are small in relation to total shares outstanding and an acquiring company must offer a bonus to "encourage reluctant sellers to act." Letter from James P. Catty to The Appraisal Foundation (Jan. 14, 2010).[191] However, most public companies are well-run, and a premium for control is not justified by any prospect of increasing cash flows to the new owner, which means a control premium is not justified. *Id.* at 2. Chris Mercer sent a comment that the supposed "control premium" reflected only two different prices for the company (before and after takeover), and suggested nothing about a control premium. Chris Mercer email to The Appraisal Foundation (Jan. 15, 2010), p. 1.[192] Based on a review of 29 banking transactions reported in Mergerstat Review 2009, Mercer argued that apparent "control premiums" vary so widely that their standard deviation is larger than the average of the premia, meaning they offer no value for companies not in the study. *Id.* pp. 2-3. He suggests that business appraisers confine themselves to the economics of the transaction, using conventional multiples. *Id.* at 2-3. Ryan A. Gandre, of Stout Risius Ross, Inc., submitted comments, as well. Letter from Ryan A. Gandre to The Appraisal Foundation (Jan. 15, 2010).[193] Speaking for himself only, he suggested that the value of control is the ability to benefit from higher cash flows that result from having control. *Id.* at 1. He says that an investor would not pay a premium to acquire control of a business unless the investor could receive higher cash flows than existed before the acquisition. Gandre also believes that market participants value control or minority cash flows using the same multiples or discount rates, and that a higher value exists for a controlling interest only when

a strategic buyer can "unlock" preferential cash flows due to control. *Id.* at 2. Gandre points out that minority shareholders of publicly-owned companies are not at a disadvantage against a controlling buyer since they have equal access to information, enjoy legal protections, and are equal beneficiaries of cash flow relative to their ownership interests. *Id*. at 2. Gandre concludes that financial control and minority cash flows may converge for well-run, efficient public companies. *Id.* at 2.

Shannon Pratt in 1996 endorsed the use of a control adjustment based on merger and acquisition data, in the third edition of VALUING A BUSINESS. Pratt announced a change in his view in 1999, and the fourth edition of VALUING A BUSINESS Pratt cautioned against making a control adjustment. In the fifth edition, published in 2008, Pratt wrote:

> In general, the only measure of a control premium is in the public market, when a public company is taken over. But this measurement includes the value of synergies as well as the value of control. Most analysts tend to draw conclusions from these data that exaggerate the value of control, as analyzed in this chapter.

VALUING A BUSINESS p. 393 (5th ed. 2008).

Gary Trugman, in UNDERSTANDING BUSINESS VALUATION, A PRACTICAL GUIDE TO VALUING SMALL TO MEDIUM SIZED BUSINESSES (3rd ed. 2008), wrote that "we cannot determine if there is a true premium being paid for control or if the acquiring company is paying for synergies that cannot be separately measured." *Id.* at 411. He noted the difficulty in determining what the cash equivalent price was for some takeovers. *Id.*

Roger Ibbotson, in IBBOTSON SBBI 2011 VALUATION YEARBOOK pp. 61-62, comes out strongly against making a Control Adjustment based on merger and acquisition data. He notes that most companies on the S&p 500 are minority held, but also that the returns generated on those companies are returns to all equity holders. He says "there is no evidence that higher rates of return could be earned if these companies were suddenly acquired by majority shareholders. . . . There is no distinction between minority owners and controlling owners." *Id.* at 61-62. He notes that "[m]ost public companies have no majority or controlling owner. There is thus no distinction between owners in this setting. One cannot assume that publicly held companies with no controlling owner have the same characteristics as privately held companies with both a controlling interest owner and a minority interest owner." *Id.* at 61-62. He suggests that adjustments for minority or controlling interests of privately-owned companies be made to projected cash flows and not the Discount Rate. *Id.*

The AICPA has published a draft of a WORKING DRAFT--PRACTICE AID–VALUATION OF PRIVATELY HELD COMPANY EQUITY SECURITIES ISSUED AS COMPENSATION (2011).[194] After discussion of the issues, Section 9.06 of the Draft Practice Aid concludes:

> 9.06 In short, the task force believes that it is not appropriate to include a control premium or acquisition premium in the enterprise value used in valuing the minority interest securities within the enterprise, except to the extent that such a premium reflects improvements to the business that a market participant would expect under current ownership.

Id. at 80.

A comprehensive treatment of the debate over an Implied Minority Discount and control premia is contained in Jim Hitchner, 35 FINANCIAL VALUATION AND LITIGATION EXPERT (Feb./Mar. 2012), pp. 1-14.[195] An extensive analysis of the case law and business valuation aspects of this question is contained in Gilbert E. Matthews, *Misuse of Control Premiums in Delaware Appraisals*, 27 BUSINESS VALUATION REVIEW 107 (2008).[196] Another review of the development of the Control Premium in Delaware law is William J. Carney & Mark Heimendinger, *Appraising the Nonexistent: The Delaware Courts' Struggle With Control Premiums*, 152 UNIV. OF PENNSYLVANIA LAW REVIEW 845 (2003).[197] A review of the law and financial theory that debunks an Implied Minority Discount is Lawrence A. Hamermesh & Michael L. Wachter, *The Short and Puzzling Life of the "Implicit Minority Discount" in Delaware Appraisal Law*, 156 UNIV. OF PENNSYLVANIA LAW REVIEW 1 (2007).[198]

E. APPLICABILITY OF DISCOUNTS TO DIVORCE VALUATIONS. Different states take different approaches to the use of the DLOC and DLOM in divorce valuations.

The **Alabama** Court of Appeals, in *Grelier v. Grelier*, 44 So.3d 1092, 1098 (Ala. App. 2009), reversed a trial court for applying a marketability and a minority discount to a closely-held business interest.

The **Alaska** Supreme Court ruled that a minority discount was allowed in a divorce, in *Hayes v. Hayes*, 756 P.2d 298, 300 (Alaska 1988).

The **Colorado** Supreme Court, in *In re Marriage of Thornhill*, 232 P.3d 782, 785 (Colo. 2010), held: "we decline to adopt a per se rule against marketability discounts and instead hold that trial courts may, in their discretion, choose to apply such discounts when valuing an ownership interest in a closely held corporation in a divorce proceeding."

The **Connecticut** intermediate appellate court, in *Ferguson v. Ferguson*, 1998 WL 851426, *3 (Conn. Super. 1998), held that it was not reversible error for the trial court to use a marketability discount for a 100% interest in a privately-owned business in a divorce, but the appellate court reduced the marketability discount from 35% to 15%.

The **Iowa** Supreme Court, in the case of *In re Marriage of Muelhaupt*, 439 N.W.2d 656 (Iowa 1989), upheld the application of minority and marketability discounts for purposes of divorce (both sides' experts applied such discounts). The court of appeals in *In re Marriage of Hogeland*, 448 N.W.2d 678, 681 (Iowa App. 1989), said: "Generally, stock should be valued at market value if the market value can be ascertained. . . . However, restrictions on marketability and legal restrictions on sale can justify a discount of the stock." [Citations omitted.]

The **Massachusetts** Supreme Court, in *Bernier v. Bernier*, 873 N.E.2d 216, 232 (2007), said that a marketability "discount was not warranted in light of the husband's testimony negating any possibility of a sale." In the later case of *Caveney v. Caveney*, 960 N.E.2d 331, 339-40 (Mass. App. 2012), the Massachusetts Court of Appeals held that it was error to subject the spouse's interest in a closely-held business to a minority discount:

> A "minority" or lack of control discount "recognizes that controlling shares are worth more in the market than are noncontrolling shares" and that "[m]arketability problems often affect shares of closely held corporations." . . . FN17 Although a minority discount was not specifically at issue in *Bernier*, the court, through dictum, made clear that such a discount "should not be applied absent extraordinary circumstances." . . . . Again, as a sale of the businesses is not presently anticipated, and in the absence of what we would perceive as extraordinary circumstances, it was error for the judge to adopt a valuation for the wife's interest in the businesses which utilizes a lack of control discount. [Citations omitted.]

The **Mississippi** Court of Appeals, in *Cox v. Cox*, 2011 WL 208312 (Miss. App. 2011), ruled that the trial court properly applied a 50% DLOM in a divorce.

The **Missouri** Court of Appeals, in *Short v. Short*, 2011 WL 5057209, *9 (Mo. App. E.D. 2011), held that it was not error to reject a 42.5% discount for lack of marketability and minority interest, in that while the large discount used by the wife's accountant was appropriate for estate planning interests, it was not appropriate for determining market value upon divorce, because the wife would sell her interest in the family company to a family member, not a third party.

The **Montana** Supreme Court, in *In re Marriage of Jorgensen*, 590 P.2d 606, 610 (1979), ruled that "it is proper to discount the value per share of stock held by a minority interest holder in closely held corporations because of the lack of ability of such minority holder to control salaries, dividends, distribution of profits and the day-to-day operations of the company."

The **New Jersey** Court of Appeals, in *Brown v. Brown*, 792 A.2d 463, 476-78 (N. J. App. 2002) held that it would be inequitable to apply a marketability discount to the husband's minority interest in a business, saying: "While 'there is no ready market for the shares and consequently no fair market value' of Florist, James's shares in the going concern have value to him and to his co-owners that does not depend upon a theoretical sale to an outsider and has not changed as a result of the divorce complaint or judgment." The court also rejected applying a minority discount.

The **New York** intermediate appellate court, in *Cohen v. Cohen*, 719 N.Y.S.2d 700, 701 (N.Y. App. Div. 2001), said: "The discount for lack of marketability

"should only be applied to the portion of the value of the corporation that is attributable to goodwill" (*Matter of Whalen v. Whalen's Moving & Stor. Co.*, 234 A.D.2d 552, 651 N.Y.S.2d 579; *see*, *Matter of Cinque v. Largo Enters.*, 212 A.D.2d 608, 622 N.Y.S.2d 735; *Matter of Blake v. Blake Agency*, 107 A.D.2d 139, 149, 486 N.Y.S.2d 341). Here, the subject real estate holdings consist solely of real property. Therefore, the Supreme Court properly determined not to apply a discount for lack of marketability as to that portion of the property subject to equitable distribution."

The **North Dakota** Supreme Court, in *Fisher v. Fisher*, 568 N.W.2d 728, 731 (N.D. 1997), upheld a trial court's refusal to apply a minority discount to a minority interest held by the wife in a corporation where her husband was the majority shareholder. In *Kaiser v. Kaiser*, 555 N.W.2d 585 (N.D.1996), the Supreme Court upheld an 11.3% discount of a minority interest in a family-held corporation in a divorce case against a claim that the discount should have been greater.

The **Oregon** Court of Appeals held, in *Barlow and Barlow*, 832 P.2d 455 (Or. App. 1992, rev. denied), that it was inappropriate for the court in a divorce to apply a marketability discount to the husband's minority interest in an entity that owned a small family farm, based on testimony that partial interests in such entities are not sold, coupled with testimony that no partial sale was contemplated. In *Matter of Marriage of Tofte*, 895 P.2d 1387, 1390-92 (Or. App. 1995), the Court of Appeals made it clear that a marketability and minority discounts could be used in a divorce, even absent evidence of an intended sale, in situations unlike those in *Barlowe*.

The **South Dakota** Supreme Court said, in *Fausch v. Fausch*, 697 N.W.2d 748, 752-53 (S.D. 2005), that "[w]e have not adopted a bright line rule prohibiting marketability discounting in a divorce case where a sale is not contemplated. Whether or not it is fair or appropriate to apply a discount in a divorce case where no immediate sale is contemplated is for the trial court to determine based upon the evidence of the case."

The **Tennessee** Court of Appeals, in *Anderson v. Anderson*, 2006 WL 2535393, *4 (Tenn. App. 2006), reversed a trial court for applying a minority discount to a privately-owned company when "no sale was ordered and there is no indication in the record that the husband has any intention of selling his minority stock."

The **Utah** Court of Appeals, in *Morgan v. Morgan*, 854 P.2d 559, 565-66 (Utah App. 1993), held that a trial court did not err by failing to apply a minority discount in a divorce, where the partnership agreement said that a withdrawing partner would receive fair market value for his interest. *Accord*, *Weston v. Weston*, 773 P.2d 408, 410 (Utah App. 1989) (not reversible error to reject minority discount when one appraiser applied the discount and the other did not).

The **Vermont** Supreme Court in *Drumheller v. Drumheller*, 972 A.2d 176, 190 (Vt. 2009), upheld the trial court's decision not to apply a minority discount to the husband's one-third ownership interest in a partnership that held land and a building rented to a captive business. The husband's partners were his two brothers. The Court said:

> While husband did not have a controlling interest in the Landrum partnership, he was certainly the most important of the three equal partners because he had effective control of the corporate tenant from which the income was derived. There was no evidence that any interest would be disposed of or that the partnership would cease to be the way the family derived income from Lane Press. Reducing the value of the partnership interest, while husband received full income from the partnership based on full valuation, would be unfair to wife.

Id. at 190. The Court distinguished two earlier cases where it had a affirmed the trial court's applying a minority discount, saying that to apply the discount was within the trial courts' discretion based on the facts of those cases.

The **Virginia** Supreme Court, in *Owens v. Owens*, 589 S.E.2d 488, 494 (2003), said that a minority discount would be appropriate in a divorce valuation only when actual suppression of the minority owner had been shown:

> [W]hen the controlling interests in a family company oppress a minority shareholder or use a "substantial amount of the corporation's assets" for their own personal benefit, the trial court may take that fact into consideration in determining the

> value, if any, of the minority interest. *Jacobs v. Jacobs*, 12 Va.App. 977, 979, 406 S.E.2d 669, 671 (1991). But when no evidence suggests that the stock should be "discounted because it represented a minority holding," *Bosserman*, 9 Va.App. at 9, 384 S.E.2d at 110, the trial court should give the stock its proportionate value.

The **Washington** Court of Appeals, in *Baltrusis v. Baltrusis*, 113 Wash. App. 1037, 2002 WL 31058365 (Wash. App. 2002) (unpublished opinion), held that the trial court did not err in refusing to apply a minority discount when ordering the wife to purchase the husband's shares in a company controlled by wife's family. The court analogized the husband's position to that of a dissenting shareholder.

The **Wisconsin** Court of Appeals, in *Arneson v. Arneson*, 355 N.W.2d 16 (Wis. App. 1984), upheld the trial court's application of a 25% combined minority and marketability discount to a husband's one-third interest in a family business.

The **Wyoming** Supreme Court, in *Cross v. Cross*, 586 P.2d 547, 549 (Wyo. 1978), held that it was proper to apply a minority discount to the valuation of a family owned corporate ranching business in a divorce.

IX. BUY-SELL AGREEMENTS AND TRANSFER RESTRICTIONS. Different states have different rules regarding the impact of buy-sell agreements and restrictions on transfer of ownership, when the issue arises in a divorce.

Arizona. In *Mitchell v. Mitchell*, 732 P.2d 208, 212-12 (Ariz. 1987), the Supreme Court said: "We believe the better approach is to consider the terms of the partnership agreement as one factor in the determination of the value of the community interest in goodwill without treating the agreement as conclusive. *In re Marriage of Slater*, 100 Cal.App.3d at 246-47, 160 Cal.Rptr. at 689; *In re Marriage of Fonstein*, 131 Cal.Rptr. at 877, 552 P.2d at 1173; *Weaver v. Weaver*, 72 N.C.App. 409, 324 S.E.2d 915 (N.C. App.1985). This approach recognizes that partnership agreements are designed to deal with particular aspects of the business, and simply do not address the considerations involved in valuation for a marital dissolution. Clauses which establish value of assets between partners may be only minimally relevant when a partner's business continues but the partner's marriage ends."

Arkansas. In *Cole v. Cole*, 110 S.W.3d 310, 316 (Ark. App. 2003), the court reversed a trial judge for setting the value of a business at the figure set in a buy-sell agreement, without independently determining a fair market value for the interest. The court noted that although the husband could sell his shares only at the buy-sell price, he was not required by the divorce court to sell his shares and he would continue to enjoy the benefits of ownership.

California. In the case of *In re Marriage of Nichols,* 27 Cal.App.4th 661, 672, 33 Cal. Rptr.2d 13, 19 (1994), the court of appeals said:

> Wife argues the court erred in using the stock purchase agreement to value husband's shareholder interest because the agreement merely measures a shareholder's contractual withdrawal rights and it was undisputed that husband was not withdrawing from McDonough. We disagree. Even though it was not valuing husband's contractual withdrawal rights, the trial court was not precluded from using the stock purchase agreement—which is an arm's length buy-out agreement—to determine the community interest in the business. In assessing whether to use a formula set forth in a buy-sell agreement, the trial court should consider (1) the proximity of the date of the agreement to the date of separation to ensure that the agreement was not entered into in contemplation of marital dissolution; (2) the existence of an independent motive for entering into the buy-sell agreement, such as a desire to protect all partners against the effect of a partnership dissolution; and (3) whether the value resulting from the agreement's purchase price formula is similar to the value produced by other approaches.

Colorado. In *In re Marriage of Keyser*, 820 P.2d 1194, 1196-97 (Colo. App. 1991), the court said:

> In a majority of jurisdictions, the price fixed in a partnership or corporate buy-sell agreement is not considered binding for equitable distribution purposes when the other spouse did not consent to or was not otherwise bound by its terms. . . . Instead, it is to be weighed along with other

> factors in evaluating the asset. See, e.g., Bettinger v. Bettinger, 183 W.Va. 528, 396 S.E.2d 709 (1990).
> * * *
> Some courts hold that buy-sell provisions presumptively control value, see, e.g., Stern v. Stern, 66 N.J. 340, 331 A.2d 257 (1975), while a small minority regard the value specified in the agreement as controlling. See, e.g., Hertz v. Hertz, 99 N.M. 320, 657 P.2d 1169 (1983).
>
> We believe that the majority rule provides the most reasonable approach. The price, or pricing formula, fixed in a buy-sell agreement is not facially dispositive, but must be considered in light of its provisions and all of the circumstances pertinent to the agreement. See Rev. Rul. 59–60, § 8, 1959–1 C.B. 237; see generally 2 J.P. McCahey, Valuation & Distribution of Marital Property, § 22.08[2][b] (1991).
>
> Accordingly, we hold that the trial court could independently value goodwill notwithstanding that it was excluded from the shareholders' buy-sell agreement. [Some citations omitted.]

Florida. In *Moebus v. Moebus*, 529 So.2d 1163, 1165 (Fla. App. 1988), the court of appeals said:

> Even if we were to consider goodwill of a professional business as an asset for purposes of dissolution, it would not be applicable in the case sub judice where the actual evidence introduced at trial shows that in this community goodwill is not taken into consideration in the sale of such a specialized practice. This position is buttressed by the stockholder's agreement covering the husband's business, which specifically states that goodwill is not to be considered in valuing the P.A. We recognize that the agreement is not binding upon the wife, but it is permissable evidence as to how the principals to the agreement treated goodwill and is properly considered in determining the question.

Georgia. In *Barton v. Barton*, 639 S.E.2d 481, 482 (Ga. 2007), the Georgia Supreme Court said:

> We recognize that a minority of jurisdictions hold that in a divorce case the non-shareholder spouse should be bound by the shareholder spouse's valuation agreement. *Hertz v. Hertz*, *supra*. *See also McDiarmid v. McDiarmid*, 649 A.2d 810 (D.C. 994). However, a "clear majority of courts hold that the value established in the buy-sell agreement of a closely-held corporation, not signed by the non-shareholder spouse, is not binding on the non-shareholder spouse but is considered, along with other factors, in valuing the interest of the shareholder spouse." *Cole v. Cole*, 82 Ark.App. 47, 110 S.W.3d 310, 314 (2003). *See also Bettinger v. Bettinger*, 183 W.Va. 528, 396 S.E.2d 709, 714, 715 (1990), and cases cited therein. The rationale for the majority rule is simple-the buy-sell price in a closely-held corporation can be manipulated and does not necessarily reflect true market value. *Bettinger v. Bettinger*, *supra*; *Bosserman v. Bosserman*, 9 Va.App. 1, 384 S.E.2d 104, 108 (1989). In our view, the majority rule is more sound and it was applied properly in this case.

Indiana. The **Indiana** Superior Court, in *Bobrow v. Bobrow*, 2002 WL 32001420, *20 (Ind. Super. 2002), said: "There is no support in *Yoon* for the proposition that the inclusion of a business's enterprise goodwill in the marital estate is governed by the business's ownership documents. Indeed, the Indiana Court of Appeals in *Porter v. Porter*, 526 N.E.2d 219 (Ind. Ct. App.1998), disapproved on other grounds in *Yoon*, 711 N.E.2d at 1269, specifically confirmed that a partnership agreement's treatment of enterprise goodwill is not dispositive of the issue whether the enterprise goodwill is a marital asset for dissolution purposes. Id. at 223 (citing *Poore v. Poore*, 75 N.C.App. 414, 420; 331 S.E.2d 266, 270 (1985)) (rejecting minority rule from other jurisdictions that enterprise goodwill is not a marital asset)." In *Nill v. Nill*, 584 N.E.2d 602, 609 (Ind. App. 1992), the court of appeals endorsed the rule that a buy-sell agreement is not binding on the court, but it may be considered in light of all the circumstances and its provisions.

Iowa. In the divorce case of *In Re Marriage of Moffatt*, 279 N.W.2d 15, 18 (Iowa 1979), the court considered a buy-sell restriction that gave the company a right to purchase the wife's shares at a set price. However, that price had not been updated for three years. Also, the option was not exercised when wife's parents gifted the stock to wife and her sister. Also, wife and her sister

were equal owners, so that wife would have to concur for the option to be exercised. The Supreme Court said: "We conclude that the 1975 option price is merely one factor to be considered in determining the value of Lynn's 1978 interest in the Moffatt Corporation and is not determinative." In *In re Marriage of Hogeland*, 448 N.W.2d 678, 681, (Iowa App. 1989), the court said: "Generally, stock should be valued at market value if the market value can be ascertained. . . . However, restrictions on marketability and legal restrictions on sale can justify a discount of the stock. . . . The Iowa court has recognized the value of stock in a dissolution is not necessarily decided by a value fixed in a stock redemption agreement where there is a finding that as a practical matter, the spouse owning the stock is not limited to the option price. . . . In such a case, the stock option price is one factor to be considered in determining the value of the interest. . . . Unlike the stock in *Moffatt*, we find it is probable John will be required to sell the stock at the stock option price."

Minnesota. In *Rogers v. Rogers*, 296 N.W.2d 849, 854 (Minn. 1980), the Minnesota Supreme Court said:

> We also believe that the buy-sell agreement, while not dispositive as to value, should be considered in determining the form of the award. Although, as respondent points out, it is speculative that appellant might die or become disabled before he realizes the full value of his interest in RFA, it would seem unfair to award respondent a fixed amount based upon the most optimistic appraisal of the circumstances. It would be more appropriate, we believe, to make a present award to respondent of her share of the $254,000 purchase price set by the buy-sell agreement, which represents the minimum appellant will realize on his stock.[FN5] The decree could then provide for a future adjustment in the award to augment respondent's share if appellant lives out his expected working life, or if he sells RFA or modifies the buy-sell agreement.[FN6] Finally, the trial court is not precluded from reconsidering the award of alimony after re-evaluating the property settlement.

Missouri. The trial court was reversed for relying on a buy-sell formula in a divorce, in *Wood v. Wood*, 2011 WL 5926162 (Mo. App. E.D. 2011) (formula amount was higher than testimony of fair market value). In the case of *In re Marriage of Morris*, 588 S.W.2d 39, 43 (Mo. App. 1979), the court wrote in dicta that the parties had led the trial court into error by agreeing that the value of the husband's interest in a law firm was measured by a buy-sell agreement: "Here, the objective was to determine the true value of Harry's marital shares, and in arriving at this determination the court was not restricted to various valuation methods provided in the redemption agreement when obviously none of the methods contemplated the situation before the court".

Montana. The Montana Supreme Court, in *In re Marriage of Jorgensen*, 590 P.2d 606, 609 (1979), ruled that, where "all of the stockholders of the company entered into a written agreement whereby the price of each share of stock was fixed at $750.00 and the sale of such shares was restricted to the remaining shareholders or to the company," it was not error for the trial court to set the value of the stock at $750 per share for purposes of divorce. The court said: "As long as the agreement is operative no shareholder can go upon the market and obtain more for his shares. Each shareholder is restricted to the price and to the purchasers set forth in the agreement."

New Hampshire. The New Hampshire Supreme Court, in *In re Watterworth*, 821 A.2d 1107, 1114-15 (N.H. 2003), upheld the trial court's consideration of a buy-sell agreement as a preeminent factor in valuing the husband's interest in a business, saying: "[b]ecause the substantive rights of the shareholders consist only of those specified in the Agreement, the trial court committed no error by viewing it as the preeminent factor in estimating the fair market value of those rights."

New Mexico. The New Mexico Supreme Court held, in *Hertz v. Hertz*, 657 P.2d 1169, 1174 (1983), that "a non-shareholder spouse is bound to the same terms of a shareholder valuation agreement which affects the shareholder spouse. This insures that the non-shareholder spouse does not receive a greater value than that of the shareholder."

New Jersey. New Jersey presumptively adheres to the value in a buy-sell provision, when the books of the firm are well kept and the formula amount has been periodically and carefully reviewed. *Stern v. Stern*, 66 N.J. 340, 345, 331 A.2d 257, 260-1 (1975) (applying a

death-related buy out to the husband's interest in a law partnership for purposes of divorce).

The court in *Bowen v. Bowen*, 96 N.J. 36, 473 A.2d 73, 77-78 (1984), said:

> The buy-sell agreement among the three stockholders prohibited a transfer of the stock unless offered to the other stockholders or the corporation at a price computed in the agreement. The agreement provided that each partner's share would be determined on the basis of book value, provided that the minimum value of defendant's interest was $25,000. It provided that book value was to be established by the corporation's accountant. In the event of disagreement with a shareholder's accountant, "then a Certified Public Accountant shall be appointed by the presiding judge of the Somerset County Court * * * [who] shall determine the book value of the shares of corporate stock in accordance with this formula and the determination by said Accountant shall be binding upon all parties to this Agreement." The formula established by the agreement specifically excluded goodwill or other intangible assets but otherwise specified how accounts receivable, inventory, machinery, fixtures, taxes, and life insurance policies were to be valued. In addition, the agreement provided for installment payments over a period of years with stated interest. The agreement also provided that the parties would periodically fix a value in a Certificate of Agreed Value. No Certificate existed here.
>
> We agree with the trial court's conclusion that this buy-sell should not control because it did not contemplate the circumstances when the stockholder's status with the corporation and his fellow stockholders was to remain the same. Under these circumstances, Polycel's assets of goodwill and other intangibles (including considerable technical expertise) should have been included to reflect fair value.

New York. In the divorce case of *Amodio v. Amodio*, 509 N.E.2d 936, 937 (N.Y. 1987), the highest court in New York said: "If transfer of the stock of a closely held corporation is restricted by a bona fide buy-sell agreement which predates the marital discord, the price fixed by the agreement, although not conclusive, is a factor which should be considered . . . ."

Oklahoma. In *Mocnik v. Mocnik*, 838 P.2d 500, 506 (Okl. 1992), the Supreme Court held that ". . . the trial court erred in awarding the wife judgment based on an interest in the goodwill of her husband's medical practice because the value of the Husband's interest was determined by the stockholder's agreement."

Oregon. In the case of *In the Matter of the Marriage of Belt*, 672 P.2d 1205, 1208 (Or. App. 1983), the court held that a buy-sell agreement that was no more than a right of first refusal did not set the value of the stock, but also noted that "the existence of the right of first refusal, both in the corporation and in the other stockholders in proportion to their respective interests, probably would discourage a stranger from spending the time and money necessary to make a knowledgeable appraisal of the value of the stock to form the basis of an offer."

Pennsylvania. In *McCabe v. McCabe*, 575 A.2d 87, 88 (Pa. 1990), the Pennsylvania Supreme Court held that the formula in a buy-sell agreement was controlling as to the value of the interest in a divorce: "The substantive rights of a partner consist only of those specified in the partnership agreement, and, in appraising this bundle of rights, the agreement cannot be disregarded. Indeed, the agreement must be viewed as the preeminent factor in valuing a partner's rights. The present agreement sets forth a method for determining the realizable value of a partner's share, and the value determined in accordance with that method, $18,900, must be regarded as controlling." However, in *Butler v. Butler*, 663 A.2d 148, 152-53 (Pa. 1995), the Supreme Court drew a distinction that the agreement in *McCabe* provided a formula whereby the value could be calculated, whereas in *Butler* the agreement stated a fixed number as the value of the interest in the business. The Court then went on to undercut *McCabe*, by saying that the value established by the agreement was merely presumptive. *Id.* at 153-56.

South Dakota. In *Fausch v. Fausch*, 697 N.W.2d 748, 752-53 (S.D. 2005), The South Dakota Supreme Court held that it was not error for the trial court in a divorce to find a value of a business at variance with the formula in a buy-sell agreement, where the wife's expert reported the company's administrator as saying that the husband would likely get his capital investment back,

regardless of the agreement, and where the agreement would not apply if the entire business were to be sold.

Tennessee. In *Harmon v. Harmon*, 2000 WL 286718, *9 (Tenn. App. 2000), the court ruled that a buy-sell provision was not binding on the court in a divorce, saying: "In a majority of jurisdictions, the price set by a buy-out provision does not control the determination of value when the other spouse did not consent or was not otherwise bound by its terms. This is so even though the agreement was executed after the marriage. The reason for rejecting the value set by buy-out provisions is that they do not necessarily represent the intrinsic worth of the stock to the parties. . . . We find that the majority view is more consonant with the valuation approach outlined in Tennessee decisions such *York v. York*. The *York* court rejected the notion of 'mathematical formulas' for such a valuation and emphasized that valuation of a professional corporation, such as Husband's in this case, is 'a factually driven inquiry that requires the trial court to weigh and evaluate all relevant evidence regarding value.'"

Texas. Texas law on the effect of buy-sell provisions on divorce is unsettled. In *Finn v. Finn*, 658 S.W.2d 735, 742 (Tex. App.--Dallas 1983, writ ref'd n.r.e.) (en banc), a plurality of the court of appeals held that a law firm's commercial goodwill was not divisible upon divorce, because "[t]he [partnership] agreement does not provide any compensation for accrued goodwill to a partner who ceases to practice law with the firm, nor does it provide any mechanism to realize the value of the firm's goodwill." In *Keith v. Keith*, 763 S.W.2d 950, 953 (Tex. App.--Fort Worth 1989, no writ), the court specifically disagreed with *Finn* and held that "the formula set forth in the partnership agreement with respect to death or withdrawal of the partner is not necessarily determinative of the value of a spouse's interest in the ongoing partnership as of the time of divorce." The case of *Von Hohn v. Von Hohn*, 260 S.W.3d 631, 640–41 (Tex. App.--Tyler 2008, no pet.), involved the husband's minority interest in a law firm whose partnership agreement contained a buy-sell provision. The appellate court said that the law firm was an ongoing partnership as of the time of divorce, and the husband had not died or withdrawn from the partnership, and, thus, none of the triggering events specified in the partnership agreement had occurred: "[c]onsequently, the formula in the partnership agreement was not determinative of the value of [the husband's] interest in the . . . Law Firm." In *Mandell v. Mandell*, 310 S.W.3d 531, 540-41 (Tex. App.--Fort Worth 2010, pet. denied), the appellate court declined to follow *Von Hohn*, *Keith*, and *Finn*, because they were partnership cases, and ruled that a husband's interest in a professional association was controlled by the formula in a buy-sell agreement.

In *Beavers v. Beavers*, 675 S.W.2d 296, 299 (Tex. App.--Dallas 1984, no writ), the husband's shares representing a one-third interest in a corporation were "restricted by a requirement that they be offered first to other shareholders at book value. Experts from both parties testified that essentially because of this restriction, the market value of the stock was zero. " The court of appeals held that "[w]hile market value is usually the best evidence of the value of the personal property, in the absence of a market value, the actual value of the property to the owner may be shown." In *R.V.K. v. L.L.K.*, 103 S.W.3d 612, 619 (Tex. App.–San Antonio 2003, no pet.), three justices, constituting a plurality of the court sitting en banc, believed that the buy-sell agreement relating to the husband's medical practice did not set the value of the business for purposes of divorce. *Id.* at 618. However, those three justices voted to reverse the trial judge for failing to "consider the buy/sell agreements' significant restriction on the marketability of the stock." The dissenting Chief Justice, *Id.* at 619, and two dissenting Justices, *Id.* at 621, agreed that the buy-sell agreement did not control the value of the ownership interest upon divorce, but differed on whether the marketability discount used by the trial court was proper.

Utah. In *Argyle v. Argyle*, 688 P.2d 468 (Utah 1984), the Utah Supreme Court held that a buy-sell restriction giving other owners a "first option" to buy the spouse's interest in the company for $1 did not control the value of the interest for purposes of divorce.

Virginia. The Virginia Supreme Court, in *Howell v. Howell*, 523 S.E.2d 514, 517 (2000), held that buy-sell agreements are not conclusive on divorce valuation, but rather are a factor to consider:

> Closely held shares may be subject, for example, to mandatory buy-out provisions at artificially low prices. Such provisions "do not necessarily represent the intrinsic worth of the stock to the parties" and thus are "not conclusive as to the

> value of the stock." *Bosserman*, 9 Va.App. at 6, 7, 384 S.E.2d at 108. The marketability restriction should be viewed simply as one factor in the valuation model.

See Bosserman v. Bosserman, 384 S.E.2d 104, 108 (1989) ("When stock is subject to a restrictive transfer agreement or by-law the price fixed by such provisions will not control its value, but the restriction on transfer is a factor which affects the value of the stock for purposes of equitable distribution").

Washington. In *Suther v. Suther*, 627 P.2d 110, 114 (1981), the court followed out-of-state decisions that said a buy and sell agreement is a factor to be considered, but is not determinative of the stock's value.

West Virginia. The Supreme Court of West Virginia said, in *Bettinger v. Bettinger*, 396 S.E.2d 709, 714-15 (W. Va. 1990):

> [A] majority of courts which have considered a buy-sell agreement in a closely held corporation setting the stock value for equitable distribution purposes has determined that such agreement should not be considered as binding, but rather should be weighed along with other factors in making a determination as to the value of such stock. . . . It is apparent that buy-sell agreements in a closely held corporation can be manipulated by the shareholders to reflect an artificially low value. This is why caution should be exercised in accepting their value for equitable distribution purposes. [Citations omitted.]

X. ENTERPRISE VS. PERSONAL GOODWILL. The complex subject of enterprise goodwill and personal goodwill upon divorce is the focus of a separate paper included in the course materials. See:

<http://www.orsinger.com/PDFFiles/goodwill-up-on-divorce.pdf>.

XI. COVENANTS NOT TO COMPETE. An issue can arise as to whether a business should be valued upon divorce as if the spouse-owner was selling the business to a third party and signing a covenant not to compete. The court in *Slater and Slater*, 245 P.3d 676, 682-83 (2010), *rev. den.*, 256 P.3d 121 (Or. App. 2011), summarized the issue in this way:

> Did the trial court err in premising the value of husband's chiropractic business on the assumption that husband would be bound by a noncompetition covenant? Although no Oregon appellate decision has addressed that question, courts in other jurisdictions have. Among those courts, there is a split of authority, with most having concluded that, to the extent that a noncompetition covenant corresponds to the business's future earning capacity attributable to an individual's skills, qualities, reputation, or continued presence, the value of that covenant is not cognizable in a marital property division. . . .
>
> We agree with the majority approach. When executed incident to a sale of a business, a noncompetition covenant ensures that the former business owner will not take any customers or patients with him or her and will not compete against the new business owner in the same general area for a reasonable period of time. The value of that covenant depends, at least in part, on the ability of the covenantor to attract future business based on his or her personal services and personality or reputation, separate and apart from his or her association with the business.
>
> * * *
>
> The consequence of the foregoing is that the valuation of Slater Chiropractic as a marital asset could not properly be predicated on an assumption that, at the time of a putative sale, husband would be bound by a noncompetition covenant, thus enhancing the value of the business. Or, stated conversely, any valuation of Slater Chiropractic so predicated must concomitantly be reduced by the value of the putative noncompetition covenant, corresponding to the value of enhanced earnings above the business's tangible assets, which are attributable to husband's individual skills, qualities, reputation, or continuing presence.

Accord, *In re Marriage of Hanscam*, 247 Or.App. 207, 268 P.3d 715, 727 (Or. App. 2011).

The court in *Kricsfeld v. Kricsfeld*, 588 N.W.2d 210, 221 (Neb. App. 1999), cited cases on both sides of the issue:

> Many courts have held that the value of covenants not to compete are not marital property. *See*, e.g.,

> *Lowe v. Lowe*, 372 N.W.2d 65 (Minn. App .1985) (affirming trial court's conclusion that spouse should not benefit from valuation method that denies or restricts other spouse's future employment options); *Theilen v. Theilen*, 847 S.W.2d 116, 120 (Mo. App. 1992) (holding covenant not to compete should not be included in valuation of professional practice and observing, "Perhaps a reason for this rule is that no professional practitioner is required to give up his profession in order to be divorced"); *Ellerbe v. Ellerbe*, 323 S.C. 283, 473 S.E.2d 881 (1996) (holding covenant not to compete is not marital property); *Marriage of Monaghan*, 78 Wash.App. 918, 899 P.2d 841 (1995) (observing that covenant not to compete is separate property of covenantee because it restricts covenantee's future conduct). Courts which have included the value of covenants not to compete in the marital estate have generally done so on the theory that covenants not to compete are merely another form of goodwill which those courts, unlike *Taylor v. Taylor*, 222 Neb. 721, 386 N.W.2d 851 (1986), recognize as divisible marital property. *See*, e.g., *Carr v. Carr*, 108 Idaho 684, 701 P.2d 304 (Idaho App. 1985); *Reese v. Reese*, 671 N.E.2d 187 (Ind. App. 1996).

But see McReath v. McReath, 789 N.W.2d 89, 97-99 (Wis. App. 2010) (holding that salable professional goodwill represented by a covenant not to compete is a marital asset).

XII. TAX-EFFECTING THE VALUE OF THE BUSINESS. There are differing perspectives on whether latent or unrealized tax effects, not triggered by divorce, should be subtracted from divorce valuation. Additionally, there is an issue among valuation theorists whether Subchapter S businesses should be tax-effected in a valuation.

A. TAX-EFFECTING DIVORCE VALUATIONS. The following divorce cases held that the tax to be paid upon future sale of property to a third party are too speculative to warrant a reduction in the other spouse's share unless it could be ascertained that under the court's decree, such sale would actually occur: *In re Marriage of Goldstein*, 583 P.2d 1343 (1978); *Levan v. Levan*, 545 So.2d 892 (Fla. App.1989); *Burkhart v. Burkhart*, 349 N.E.2d 707 (Ind. 1976); *Nemitz v. Nemitz*, 376 N.W.2d 243 (Minn. App.1985); *In re Marriage of Beck*, 631 P.2d 282 (Mont. 1981); *Orgler v. Orgler*, 568 A.2d 67 (N. J. Super. 1989); *Sommers v. Sommers*, 660 N.W.2d 586, 590 (N.D. 2003) ("In *Kaiser v. Kaiser* . . . we held that in valuing a company that . . . potential taxes should be considered in valuing marital assets in only limited circumstances and theoretical tax liabilities that are not going to be incurred because there is not going to be a liquidation should not be deducted." *Lewis v. Lewis*, 2008 WL 2609462, *5-6 (Ohio App. 2008); *In re Marriage of Rodenbeck*, 266 P.3d 162 (Or. App. 2011) (error to reduce wife's award by the taxes husband must pay on the earnings he will use to pay her divorce judgment); *Hovis v. Hovis*, 541 A.2d 1378 (Pa. 1988); *Bettinger v. Bettinger*, 396 S.E.2d 709, 716 (W. Va. 1990). Pennsylvania has adopted a statute that says: "Factors which are relevant to the equitable division of marital property include the following: . . . [t]he Federal, State and local tax ramifications associated with each asset to be divided, distributed or assigned, which ramifications need not be immediate and certain." Pennsylvania Civil Statutes Annot. § 3502, Equitable division of marital property. In *Durnell v. Durnell*, 460 S.E.2d 710, 717 (W.Va. 1995), the court said: "Unpaid taxes are rather clearly a valid lien or encumbrance against accounts receivable, or will become such a lien or encumbrance as soon as the accounts receivable are collected, and the Court believes that if the trial court did fail to give Thomas A. Durnell credit for taxes ultimately payable on the receipt of the accounts receivable, the trial court erred."

In Texas, the issue of tax-effecting divorce valuations has been addressed by the Legislature, as follows:

> Tex. Fam. Code § 7.008. Consideration of Taxes
>
> In ordering the division of the estate of the parties to a suit for dissolution of a marriage, the court may consider:
>
> (1) whether a specific asset will be subject to taxation; and
>
> (2) if the asset will be subject to taxation, when the tax will be required to be paid.

Considering the later capital gain tax upon sale of the business is different from considering latent taxes associated with a business, as discussed below.

B. TAX-EFFECTING S-CORPORATIONS.

Under Federal tax law, a C-corporation must pay corporate income tax on corporate income, and it gets no deduction for dividends paid to shareholders, who must pay a personal income tax on the dividends they receive. An S-corporation does not pay corporate income tax. Instead, the owners pay a personal tax on all S-corporation taxable income. In *Gross v. Commissioner*, T.C. Memo 1999-254, *aff'd* 272 F.3d 333 (6th Cir. 2001), the Tax Court held that it was improper, in valuing an S-corporation, to reduce the value of the company by subtracting the taxes that would be paid if the company were a C-corporation. In *Dallas v. Commissioner*, T.C. Memo 2006-212, the taxpayer tried to distinguish *Gross* on the ground that nearly all income earned by the company in *Gross* was distributed, whereas in *Dallas* the company distributed only enough income to pay the pass-through tax liability. The Tax Court rejected the argument. In essence, the Tax Court held that an S-corporation should be valued higher than an identical C-corporation solely based on the perspective of the after-tax benefits received by the owners of each type of entity. *Accord*, *Estate of Gallagher v. C.I.R.*, T.C. Memo. 2011-148, 2011 WL 2559847, *12 (2011).

In Denis and Sarin, *Taxes and Relative Valuation of S Corporations and C Corporations*, JOURNAL OF APPLIED FINANCE 7 (Fall/Winter 2002),[199] the authors argue that an S-corporation should be valued at a premium over an identical C-corporation. *Id.* at 8. The difference in value is the present value of the tax differentials between the two corporate forms. *Id.* at 11. The S-corporation premium would apply whenever the acquisition of the S-corporation is structuresd as a taxable acquisition or whenever the acquirer is able to maintain S-corporation status after the acquisition. *Id.* at 8. If the acquirer is a C-corporation, then S-corporation status can be maintained only if the C-corporation acquires a minority interest in the S-corporation. *Id.* at 8. The premium is highest when 100% of the S-corporation's earnings are paid out as dividends to shareholders. If the C-corporation retains earnings, and those retained earnings are ultimately taxed at capital gains rates when the investor sells the C-corporation stock, the tax advantage of the S-corporation is lessened. *Id.* at 9. This view holds if the corporation is valued based on the present value of after-tax dividends received by shareholders. *Id.* at 9. Tax treatment can be an issue when a market approach is used to value an S-corporation, using C-corporations as a benchmark. *Id.* at 9. Professors Denis and Sarin suggest that, in valuing an S-corporation based on C-corporation benchmarks, the valuator should adjust the C-corporation's values by adding a premium to reflect the S-corporation's ability to avoid double taxation. *Id.* at 14.

The opposite perspective is presented in an article by Mercer Capital, which points out that, for C-corporations (and real estate investment trusts and closed-end mutual funds), the taxable income to investors is identical to cash distributed to investors. Mercer Capital, *Converting Distributions From "S" Corporations and Partnerships to a "C" Corporation Dividend Equivalent Basis*, p. 192, p. 1.[200] For S-corporations and partnerships, however, taxable income can vary from distributions to investors. *Id.* at 1. When the pass-through entity distributes less than all of its taxable income, the owners must still pay the tax on the full amount of the entity's taxable income, meaning that the effective tax rate on the portion of the income that was distributed is higher than it would be for shareholders of an equivalent C-corporation. *Id.* at 1. Mercer Capital says that, given that distributions from an S-corporation may be worth considerably less than distributions from a C-corporation–

> it is clearly appropriate to adjust the "S" corporation or partnership distribution to a "C" corporation equivalent basis before making comparisons for valuation purposes. Such an equivalency is derived by "grossing up" the distribution by dividing the net, after-tax distribution by one minus the blended state and Federal personal income tax rate . . . ."

Id. at 2. The article goes on to say that dividends from C-corporations are usually quoted on a pre-personal-income-tax basis, so that grossing up the after-tax distribution yield for an investment in an S-corporation or partnership establishes a C-corporation equivalency. *Id.* at 2. The interim cash flows of each type of entity can then be compared. *Id.* at 2-3.

A consequence of ignoring all taxes in an S-corporation valuation is that the value shown for S-corporations can exceed the cost of converting the S-corporation to a C-corporation. In 2005, Franklin M. Fisher, Christopher F. Noe, and Evan Sue Schouten published an article entitled *The Sale of the Washington Redskins:*

Discounted Cash Flow Valuation of S-Corporations, Treatment of Personal Taxes, and Implication for Litigation, 2 STANFORD JOURNAL OF LAW, BUSINESS & FINANCE. (2005).[201] The authors said the following:

> This paper presents an economic argument for how a discounted cash flow (DCF) analysis should properly account for taxes when valuing an S corporation. Through a simple numerical example, we demonstrate that ignoring taxes in a DCF analysis when valuing an S corporation potentially leads to an overestimation of value. To produce more meaningful valuation estimates, we propose that any DCF analysis used to value an S corporation should adjust cash flows to reflect its owners' personal tax burdens. Our approach has the possibility to affect litigation outcomes irrespective of whether the valuation estimates are used independently or in comparison to market prices. The advantage of our approach is that it results in claimants being "made whole" nd nothing more.

Id. at 18.

In *Bernier v. Bernier*, 873 N.E.2d 216, 228 (Mass. 2007), the **Massachusetts** Supreme Court held that the trial court should not have applied the 35% tax rate of of a C-corporation in estimating the fair market value of an S corporation using the income approach, absent evidence that the S-corporation would convert to C-corporation status. In *Sieger v. Sieger*, 8 Misc.3d 1029(A), 806 N.Y.S.2d 448, 2005 WL 2031746, *18 (N.Y. Sup. 2005), the **New York** intermediate appellate court rejected a business valuator's downward adjustment of S-corporation income based on the possibility that the current owner might switch to C-corporation status or a potential buyer might not qualify for S-corporation status, saying that "[t]he court finds, however, that the more appropriate valuation to be placed on the facility is its value as currently operated by defendant." *Id*. at *18, n. 19.

C. CONSIDERING TAX ON THE LIFO RESERVE. Inventories are usually valued on a LIFO or FIFO basis. Under LIFO (last in-first out), the most recent inventory purchases are used to determine the cost of goods sold during the year. Under FIFO (first in-first out), the earliest inventory purchases are used to determine the cost of goods sold for the year. In an economy where the cost of inventory purchases is rising over time, LIFO increases the cost of goods sold which reduces profits, which reduces taxable income as newer, more expensive inventory items are used in production. GAPP requires companies to carry a LIFO reserve, which represents the difference between the LIFO calculation and the FIFO calculation. Adding the LIFO reserve to the value of the assets is a common adjustment made to the balance sheet when doing a business valuation. This adjusts the inventory value to be closer to market value. But when the old inventory items are actually sold, the cost of goods sold will be lower and profits will be higher and taxable income will be higher. So, a tax will eventually have to be paid on that LIFO reserve. If the company is sold, it can be argued that a potential buyer of the business will include the tax on the LIFO reserve as a latent liability of the business, and will take that into account in setting a purchase price. If the sale of the business is an asset sale, the selling company will "harvest" taxable income to the extent that the investment sells for more than its book value. Either way, an argument can be made that an adjustment for unrecognized tax on the LIFO reserve should be considered in a business valuation.

D. CONSIDERING CAPITAL GAINS.

1. Future Capital Gains on Sale of Ownership Interest. In *Adams v. Adams*, 945 N.E.2d 844, 869 (Mass. 2011), the Massachusetts Supreme Court said: "The special master was certainly correct to tax affect the transfer of the wife's portion of the present value of the partnership interest." The **Iowa** Supreme Court in *In re Marriage of Friedman*, 466 N.W.2d 689, 691 (Iowa 1991), held that it was improper to reduce the value of a business awarded to the husband in a divorce based on the tax that he would ultimately have to pay upon eventual sale. The **Nebraska** Court of Appeals in *Shuck v. Shuck*, 806 N.W.2d 580, 592-93 (Neb. App. 2011), held that a trial judge should not consider capital gains tax on the ultimate sale of a business (or built-in depreciation recapture) unless there is a reasonably certain sale of the business in the near future, or the property division requires the spouse to sell his interest in the business in order to meet his obligations imposed by the court. The **Tennessee** Court of Appeals ruled it was permissible to disregard tax that would come due upon sale of corporate stock when the stock was awarded to the husband/owner and offsetting value was awarded to the wife, and husband testified that he did

not intend to sell the stock. *Watson v. Watson*, 309 S.W.3d 483, 493 (Tenn. App. 2009). In the case of *In re the Marriage of Hay*, 907 P.2d 334, 335 (Wash. App. 1995), the **Washington** court of appeals held that it was improper for the trial court to consider a future capital gain tax on the partnership interest awarded to the husband when he testified he had no plan to sell his interest. At issue in these cases, however, were potential capital gain tax from later sale of the stock being awarded in the divorce, rather than built-in capital gains inside the business.

2. Embedded Capital Gains. In *Estate of Davis v. Comm'r*, 110 T.C. 530, 1998 WL 345523 (1998), the United States Tax Court held that, in valuing a privately-owned company, it was proper to discount the value of the company based upon trapped-in capital gains that the buyer would take into account in buying the company. The Tax Court said:

> We are convinced on the record in this case, and we find, that, even though no liquidation of [the corporation] or sale of its assets was planned or contemplated on the valuation date, a hypothetical willing seller and a hypothetical willing buyer would not have agreed on that date on a price for each of the blocks of stock in question that took no account of [the corporation's] built in capital gains tax. We are also persuaded on that record, and we find, that such a willing seller and such a willing buyer of each of the two blocks of [the corporation's] stock at issue would have agreed on a price on the valuation date at which each such block would have changed hands that was less than the price that they would have agreed upon if there had been no ... built-in capital gains tax as of that date .... We have found nothing in the ... cases on which respondent relies that requires us, as a matter of law, to alter our view ....

In two other cases, the Tax Court allowed a built-in capital gain adjustment to be included as part of the discount for lack of marketability. *See Estate of Borgatello v. Comm'r*, 80 T.C.M. (CCH) 260, 264 (2000) (the Tax Court allowed a 24% valuation discount for future corporate income taxes, but treated it as part of the aggregate 33% discount for lack of marketability); *Estate of Dailey v. Comm'r*, 82 T.C.M. (CCH) 710 (2001) (discount for unrealized capital gains was allowed as part of the lack of marketability discount). In the gift tax case of *Eisenberg v. Comm'r*, 155 F.3d 50, 57 (2nd Cir. 1998), the Second Circuit Court of Appeals allowed an adjustment for unrealized capital gains even though no liquidation of the corporation or sale of corporate assets was imminent or contemplated at the time of the gift. The Court said that a willing buyer would demand a discount in recognition of the fact that eventually the tax would have to be paid. The Court commented: "One might conclude from this example that the full amount of the potential capital gains tax should be subtracted from what would otherwise be the fair market value of the real estate. This would not be a correct conclusion." *Id.* at 58 n. 15. After Eisenberg, the IRS fought over the size of the discount for unrealized capital gains, but not the existence of it.

In *Estate of Jameson v. Comm'r*, 267 F.3d 366 (5th Cir. 2001), the Fifth Circuit Court of Appeals considered an appeal regarding the value of a company that held timber for harvesting and also served as an investment company. The Tax Court, using a net asset valuation approach, had allowed a partial discount for the net present value of the capital gains tax liability on the timber property that would be incurred as the timber was cut, over a nine-year period. However, the Tax Court refused to allow any capital gains discount for the investment property. *Id.* at 370-71. The Fifth Circuit reversed the Tax Court, saying that the lower court had envisioned a strategic buyer that would maintain the timber business, whereas the fair market value concept required a hypothetical buyer, and "this does not mean that the first, or economically rational, purchaser of Johnco stock would so operate or lease the property." *Id.* at 372. The Fifth Circuit also criticized the Tax Court's rationale for why a buyer would harvest the timber over time, saying:

> The Tax Court's internally inconsistent assumptions, that a hypothetical purchaser of Johnco stock would engage in long-range timber production even though the Timber Property's annual rate of return is substantially lower than the investor's required return, fatally flawed its decision to discount the future flow of capital gains taxes.

Id. at 372.

In *Estate of Dunn v. Comm'r*, 301 F.3d 339, 354 (5th

Cir. 2002), the Fifth Circuit Court of Appeals ruled that, when a company held assets such that a buyer would be buying the company for its assets, and was thus being valued using a net asset approach, in that situation it must be assumed that a hypothetical willing buyer would immediately liquidate the corporation, triggering a tax on the built-in gains. The Eleventh Circuit Court of Appeals, in *Estate of Jelke v. C.I.R.*, 507 F.3d 1317, 1331-32 (11th Cir. 2007), adopted the *Estate of Dunn* approach of assuming that all built-in capital gains taxes would be recognized on the date of sale. The court acknowledged that this approach was arbitrary; the virtue to this approach was that it substituted certainty for courts having to "gaze into a crystal ball, flip a coin, or, at the very least, split the difference between the present value calculation projections of the taxpayers on the one hand, and the present value calculation projections of the Commissioner, on the other." *Id.* at 1332.

The **Nebraska** Court of Appeals held, in *Shuck v. Shuck*, 806 N.W.2d 580, 592-93 (Neb. App. 2011), that a trial court should not reduce the value of a business for embedded capital gains, unless there is evidence that the business will have to be sold in the near future, or that the property division will force the business to be sold. In *Wechsler v. Wechsler*, 866 N.Y.S.2d 120, 125-26 (2008), *appeal dismissed,* 910 N.E.2d 1007 (2009), the **New York** appellate court ruled that the value of the husband's C-corporation, that held securities for investment, should be reduced to reflect the federal and state taxes embedded in the securities owned by the company due to the unrealized appreciation of those securities. The amount of the adjustment was the taxes the corporation would incur as a result of selling the assets. The **North Dakota** Supreme Court ruled in *Kaiser v. Kaiser*, 474 N.W.2d 63, 68-70 (N.D. 1991), that it was improper to subtract capital gains that would arise from liquidation of the company's assets, where these gains were not immediate.

ENDNOTES – The following URLs are web-enabled. Click the link to go to the cited authority.

1. Revenue Ruling 59-60 <http://www.aticg.com/Documents/Revenue/RevRule59-60.pdf> [3-30-2012].

2. <http://asc.fasb.org/imageRoot/00/7534500.pdf > [2-22-12].

3. <http://www.newyorkfed.org/banking/regrept/2q08002.pdf > [2-22-12].

4. <http://www.mercercapital.com/print/?id=214> [3-6-2012].

5. Mercer Capital, *Fair Value is Redefined by the Mississippi Legislature* (2008).<http://208.112.16.118/index.cfm?action=page&id=214> [3-27-2012].

6. <http://www.berkshirehathaway.com/ownman.pdf> [3-28-2012].

7. <http://www.chicagobooth.edu/faculty/selectedpapers/sp16.pdf> [3-30-12].

8. <www.businessdictionary.com/definition/fundamental-analysis.html> [2-22-12].

9. <http://www.investopedia.com/terms/l/liquidation-value.asp> [2-22-12].

10. <http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID1019977_code12696.pdf?abstractid=274973&mirid=1> [2-25-2012].

11. <http://www.financial-dictionary.thefreedictionary.com/going+concern+value> [2-22-12]

12. <http://www.naepc.org/journal/issue07f.pdf.> [3-27-2012].

13. Mercer Capital, *Conducting a Discounted Future Benefits Analysis* p. 1 <http://www.mercercapital.com/print/?id=218> [3-17-2012].

14. Depreciation and amortization, expense reflects the year's allocated portion of the cost of tangible and intangible assets.

15. Koeplin, Sarin and Shapiro, *The Private Company Discount*, 12 JOURNAL OF APPLIED CORPORATE FINANCE 96 (2000). <http://business.scu.edu/asarin/PublishedPapers/Discount.pdf> [3-26-2012].

16. Lawrence A. Hamermesh & Michael L. Wachter, *The Short and Puzzling Life of the "Implicit Minority Discount" in Delaware Appraisal Law*, 156 UNIV. OF PENNSYLVANIA LAW REVIEW 1 (2007) <http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID1372853_code711466.pdf?abstractid=961022&mirid=2> [4-1-2012].

17. Aswath Damodaran, *Chapter 12 derivations* p. 3 <http://pages.stern.nyu.edu/~adamodar/New_Home_Page/AppldCF/derivn/ch12deriv.html> [3-17-2012].

18. Mercer Capital, *A User's Guide to Understanding the Discounted Future Benefits (Cash Flow) Valuation Methods* p. 5 <http://www.mercercapital.com/print/?id=209> [3-17-2012].

19. Aswath Damodoran, APPLIED CORPORATE FINANCE: A USER'S MANUAL, ch. 12 <http://people.stern.nyu.edu/adamodar/New_Home_Page/AppldCF/derivn/ch12deriv.html> [3-23-2012].

20. Strategic control adjustments would be used in establishing investment value but arguably not fair market value based on an unknown hypothetical buyer.

21. Jesse A. Ultz , *The Reasonableness of Owners' Compensation: An Often Overlooked But Key Assumption in Valuing a Business* <http://www.srr.com/article/reasonableness-owners-compensation-often-overlooked-key-assumption-valuing-business> [3-23-2012].

22. Aswath Damodaran, *Chapter 12 derivations* <http://pages.stern.nyu.edu/~adamodar/New_Home_Page/AppldCF/derivn/ch12deriv.html> [3-17-2012].

23. <http://pages.stern.nyu.edu/~adamodar/pdfiles/valn2ed/ch13.pdf> [3-29-2012].

24. Robert D. Arnott, *Equity Risk Premium Myths* p. 84 (Dec. 2011) <http://www.cfapubs.org/doi/pdf/10.2470/rf.v2011.n4.3> [3-27-2012].

25. Mercer Capital, *A User's Guide to Understanding the Discounted Future Benefits (Cash Flow) Valuation Methods* p. 5 <http://www.mercercapital.com/print/?id=209> [3-17-2012].

26. Lawrence A. Hamermesh & Michael L. Wachter, *The Short and Puzzling Life of the "Implicit Minority Discount" in Delaware Appraisal Law*, 156 UNIV. OF PENNSYLVANIA LAW REVIEW 1 (2007) <http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID1372853_code711466.pdf?abstractid=961022&mirid=2> [4-1-2012].

27. *Dividend Discount Model* <http://en.wikipedia.org/wiki/Dividend_discount_model> [4-1-2012].

28. *Gordon Growth Model* <http://www.investopedia.com/terms/g/gordongrowthmodel.asp> [4-1-2012].

29. Harry Markowitz, Portfolio Selection, 7 The Journal of Finance 77 (1952) http://www.gacetafinanciera.com/TEORIARIESGO/MPS.pdf [3-29-2012].

30. Frank J. Fabozzi, Francis Gupta, & Harry Markowitz, The Legacy of Modern Portfolio Theory, 11 The Journal of Investing 7, 7-8 (Fall 2002)http://www.simonemariotti.com/downloads/Papers%20finanziari/Fabozzi-Gupta-Mar.pdf [3-29-2012].

31. <http://www.nobelprize.org/nobel_prizes/economics/laureates/1990/press.html> [2-27-2012].

32. <http://www.stanford.edu/~wfsharpe/art/djam/djam.htm> [2-27-2012].>.

33. <http://efinance.org.cn/cn/fm/Capital%20Asset%20Prices%20A%20Theory%20of%20Market%20Equilibrium%20under%20Conditions%20of%20Risk.pdf> [2-27-2012].

34. Sharpe says that Economist Eugene Fama gave his theory the name of Capital Asset Pricing Model. See <http://www.stanford.edu/~wfsharpe/art/djam/djam.htm> [2-27-2012].

35. <http://www.nobelprize.org/nobel_prizes/economics/laureates/1990/press.html> [2-27-2012].

36. In modern finance articles and texts, the rate of return is often on the Y-axis.

37. Sharpe defended these two assumptions on the grounds that "the proper test of a theory is not the realism of its assumptions but the acceptability of its implications" and a plea that criticism be tempered due to the "dearth of alternative models." *Id.* at 434.

38. Sharpe credits Markowitz with showing how to create an efficient frontier, and James Tobin's 1958 paper saying that, if you can borrow or lend at the risk free rate to invest, then the efficient frontier is a single portfolio of risky securities with borrowing or lending as an option. <http://www.stanford.edu/~wfsharpe/art/djam/djam.htm> p. 4 [2-27-2012].

39. André F. Perold, *The Capital Asset Pricing Model*, 18 JOURNAL OF ECONOMIC PERSPECTIVES 3 (2004) <http://www.faculty.fairfield.edu/NLAOPODIS/the%20capm.pdf> [4-1-2012].

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42. See <http://www.standardandpoors.com/ratings/articles/en/us/?assetID=1245316529563> [2-22-12]. Perhaps U.S. Treasury securities should be called the "least risky" alternative. *See* Robert S. Harris & Felicia C. Marston, *The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts* 11 JOURNAL OF APPLIED FINANCE 1, 4 n. 1 (2001) <http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID252671_code001205590.pdf?abstractid=252671&mirid=1> [3-27-2012].

43. The "yield curve" is a graphical line that plots the yield (i.e., the interest rate divided by value of the bond), at different points in time, of bonds having equal credit quality, but differing maturity dates. The most frequently-reported yield curve compares the 3-month, 2-year, 5-year and 30-year U.S. Treasury debt. The slope of the yield curve can be measured as the difference between the interest rates at two selected maturities. Long-term interest rates are influenced by expectations regarding future inflation. Thus, the shape of the yield reflects the market's expectation of future interest rate changes.

44. William N. Goetzmann & Roger G. Ibbotson, *History and the Equity Risk Premium* p. 2 (Oct. 18, 2005) ("Goetzmann") <http://www.econ.ucsb.edu/conferences/equity05/papers/Goetzmann.pdf> [3-28-2012].

45. Goetzmann, p. 3.

46. Goetzmann, p. 9.

47. Goetzmann, p. 5. Fisher suggested that "the safety of bonds is largely illusory since every bondholder runs the risk of a fall in the purchasing power of money and this risk does not attach to the same degree to common stock, while the risks that do attach to them may be reduced, or insured against, by diversification . . . ." Goetzmann, p. 5.

48. Goetzmann, p. 6.

49. Goetzmann, p. 7.

50. Goetzmann, p. 18.

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57. The 2010 Duke CFO survey showed "evidence of a strong positive correlation between market volatility and the long-term risk premium." p. 12.

58. The 2010 Duke CFO Survey showed a "highly significant correlation" between the CFO's estimated ERP and the credit spread between Moody's Baa rated bond yield less than 1-year T-bond yield. Graham-Harvey, *The Equity Risk Premium in 2010* p. 13 (8-9-2010) <http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID1656092_code16198.pdf?abstractid=1654026&mirid=1> [3-27-2012]].

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