

The Economics of Business Valuation Discounts and the Competitive Risk-Return Paradigm

more favorable Fair Market Value conclusion, which in turn could depend on his ability to make subjective adjustments. Therefore, in the absence of a more extensive and rigid guiding valuation structure, appraisers may have an excess leeway to rely more heavily on subjective valuation adjustments. The present author's basic discount theory, his interpretation of the FMVS, and his MAPM Analysis in Chapter 12 are just a few steps toward creating a more objective and well-defined valuation analytical framework. The reader may note that the present author does not suggest or imply that appraiser judgment, which underlies any subjective valuation adjustment, should be universally replaced with mechanical valuation steps. Rather, he proposes the development of a stronger and more well-defined valuation framework within which appraiser judgment, combined with reliable guiding analytical principles, can be applied.

Structure of this Text

The text is structured as follows. Chapter 2 asks the question Are the typical benchmark DLOMs that are often used in business valuation appraisals reliable? The present author considers potential reasons why the median (or average) restricted stock discount and IPO discount may not be reliable measures of a benchmark discount for lack of a market (DLOM) that would be applicable to minority closely-held company interests. The present author also considers potential reasons why median (or average) real estate investment trust (REIT) and real estate limited partnership (RELP) discounts may not be reliable benchmark measures of the discount applicable to minority FLP interests. The discussion in this chapter is not intended to be comprehensive, yet it may raise some legitimate concern about using restricted stock, IPO, REIT and RELP discounts in practice.

Chapter 3 discusses, in depth, how the Fair Market Value Standard (FMVS), based on accepted economic theory and principles as guideposts, can be objectively interpreted and may be accurately applied in practice. Non-systematic risk adjustments, in the context of performing appraisals under the FMVS, are shown to be invalid under what the present author believes is an accurate application of the FMVS in practice. The present author's discussion also raises doubt about the validity of applying any DLOM under the FMVS. The present author

suggests that the FMVS, when interpreted correctly and in adherence with accepted economic theory and principles, appears to establish a Hypothetical Market context that might, in itself, invalidate the application of valuation discounts in general. Nevertheless, the author proceeds with his analyses in this text under the assumption that a DLOM is a valid adjustment under the FMVS. This is because, since further rigorous inquiry into the validity of the DLOM may ensue in response to the present author's opinions and analyses before controversial issues are settled, business appraisers have a need for objective and reliable guidance now for their current appraisal engagements. Chapter 4 discusses the FMVS in more detail, with some relevant tangents that may be of interest to the practicing appraiser.

Chapter 5 considers the potential for hidden discounts in the form of SGLPTL adjustments, normalizing adjustments for the prerogatives of control, adjustments to the present value discount rate, and underlying adjustments that are built into the financial statement data (data that are used to estimate, or project, a subject company's representative earnings stream). Chapter 6 considers the present value discount rate. In addition to the present author's conclusion that non-systematic risk adjustments are not valid under a strictly accurate application of the FMVS, the present author asks Should the present value discount rate, in general, be risk-adjusted (or fully risk-adjusted)? Furthermore, Do the FMVS's required assumptions create an analytical context where the Hypothetical Investor considers a broader set of potential alternative assets than just similar assets with similar risk to the subject closely-held interest? The discussion suggests that the best alternative asset can have significantly lower risk—and a significantly lower expected rate of return—than a subject closely-held interest's fully risk-adjusted expected rate of return. The present author also considers the nature of risk, which is represented by the variation (or standard deviation) of a subject asset's rates of return around its mean value, with its potential up-side and down-side components, and asks Why would a rational, well-informed investor expect, or believe, that he would be one of the lucky few who might earn a risk-adjusted rate of return in the upper tail of a given subject asset's rate of return probability distribution? The present author points out that the objective of investing is to obtain the prospect, or potential, to earn a high rate of return, where obtaining a high rate of return is not a certain prospect.

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The present author suggests that, if risk-adjusting the present value discount rate is a valid practice, the adherence to a notion of the present value discount rate as the “required rate of return”, which the present author suggests is a demand-side concept, may lead people to mistakenly view a fully risk-adjusted present value discount rate as the correct competitive asset market result. When one considers the supply-side of a competitive asset market, one may see that the market risk-adjusted present value discount rate is probably less than that which would fully compensate the marginal (and hypothetical) investor for his required (additional increment in) rate of return. This fact is illustrated through the use of accepted economic theory in Chapter 7, where it is assumed that the Hypothetical Buyer is significantly concerned about the future illiquidity that could result from a subject closely-held interest’s relative lack of an extensive trading market.

Chapter 8 looks at the “portfolio discount”, and, in the present author’s opinion, he believes that he presents a sufficient basis to invalidate its use in practice under the FMVS. Chapter 9 considers whether a discount for lack of control (DLOC) is applicable to minority interests in managed asset portfolios (MAPs), such as FLPs. The present author believes that the typical investor actually pays a premium for lack of control, as evidenced by the fact that investors willingly purchase minority, non-controlling mutual fund shares while being fully aware that the typical mutual fund deducts an explicit management fee from the mutual fund’s income. Further, he believes that the typical closed end fund discount, which some business appraisers use as a benchmark DLOC to apply to minority FLP interests, is really a DLDM. Evidence from open-ending of closed end funds, and by comparing the typical open end fund with the typical closed end fund, is shown to demonstrate the fact that the typical CEF discount is a DLDM rather than a DLOC. The reader may find this chapter engaging and insightful.

In Chapter 10, the present author discusses the issue of advocacy in appraisals in some detail. In Chapter 11, the author discusses four common quantitative approaches to calculating a DLDM for a minority closely-held interest. He notes what he believes to be an obvious fact, that “*Subjective valuation steps are, by definition, not objective*” (p. 239). He then presents an overview of each of the four quantitative methods, with a focus on the input variables whose calculation often require subjective adjustments. To the extent that subjective adjustments

in the calculation of DLOMs under these four methods are made, these methods may exhibit a limited quantitative improvement over the Mandelbaum Benchmark Analysis. The present author considers a more objective way to calculate the DLOM because, in his view, in some appraisals there may be a problem of advocacy and an inherent arbitrariness of subjective valuation steps.

Chapter 12 presents the author's Managed Asset Portfolio Market (MAPM) Analysis, which is an objective, market-based DLOM calculation method, at least for the typical minority interest in a MAP, like a FLP. Although this text provides several sound reasons why a DLOM may not be appropriate within the required and predictable Hypothetical Market of the FMVS, the present author believes that, until appraisers and academics have had sufficient time to digest the content of this text, and to discuss and debate that content openly and in detail, it would be useful to have, in the meantime, a reliable, objective way to calculate the DLOM (at least for FLPs). The practicing appraiser may find the MAPM Analysis useful in his work.

Chapter 13 begins a switching of gears, so to speak. In the remainder of the text, it is not presumed that a DLOM, in any of its forms, is a valid valuation adjustment. In previous chapters, it was presumed that a DLOM is a valid adjustment. The present author then went on to consider reasons why a DLOM might be invalid under the FMVS, and why a DLOM might be smaller in magnitude than estimated by appraisers. In the remaining four chapters, the analysis of a potential DLOM under the FMVS is begun anew.

In Chapter 13, the present author includes a broad set of illiquidity costs that could be associated with a given subject Hypothetical Transaction, which covers both the Hypothetical Buyer's and Hypothetical Seller's illiquidity costs. The present author explicitly excludes illiquidity costs that are not directly consequent to, or associated with, the facilitation of the subject Hypothetical Transaction. Since the present author believes that an explicit, detailed underlying market supply and demand foundation for a DLOM is largely absent in the business valuation literature, he provides a detailed theoretical analysis of the DLOM that is founded on accepted economic theory and principles. Rather than adhering to the generally accepted assumption that an asset's marketability and its Fair Market discount are inversely related, the present author does not assume *a priori* that the relationship

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is necessarily inverse. He constructs an objective economic analysis, which is based upon the FMVS's required competitive asset market assumptions—and what he believes to be a strictly correct interpretation and application of them—to determine the marketability-Fair Market DLOM relationship. The intention is not to suggest that the FMVS is defined incorrectly, but rather it is to point out that the generally accepted interpretation of the FMVS may be too narrowly construed and perhaps logically inconsistent. Since the application of a DLOM has a significant impact on Fair Market Value conclusions, and thus a significant economic impact for the constituents of Fair Market Value appraisals, the present author asks Shouldn't the applicability of a DLOM first be determined based on accepted economic theory and principles before it becomes generally accepted and applied in practice? One might argue that it already has been determined to be applicable based on generally accepted financial theory and principles. The present author, however, is not convinced of this.

Chapter 14 begins a look into Finance's positive risk-return conclusion, a conclusion that underlies, and is the primary foundation of, the generally accepted inverse marketability-Fair Market DLOM assumption. If Finance's positive risk-expected rate of return relationship were not valid, it would not be rational for a well-informed investor to expect to earn a higher rate of return on an investment in a higher-risk asset (i.e., on an asset with lower marketability, lower liquidity, or a relative lack of an extensive trading market). Rationally, he would not expect to receive a higher DLOM for investing in a higher-risk asset. Three important facts about the Traditional CAPM are noted, facts that the present author believes should not be overlooked. (1) The Traditional CAPM's positive risk-return relationship is applicable in a competitive asset market context where investors are risk-averse and the risk is systematic risk. Assuming, for the moment, that investors in general (or a relevant subset of investors) are risk-averse, the Traditional CAPM's positive risk-return relationship is a positive *systematic risk*-return relationship only. (2) According to Sharpe (1964), there is no predictable relationship between an individual undiversified investor's total risk and expected rate of return (p. 436). Total risk is what an appraiser captures in his application of the Adjusted CAPM (ACAPM) when he adds non-systematic risk premiums to a subject closely-held company's systematic risk premium when calculating the present value

discount rate. Therefore, if one is assuming that investors in general (or the relevant subset of investors) are not well-diversified, the relevant risk for that set of investors is total risk, which in turn means that—for a DLOM to be applicable—there must be a presumed positive *total risk*-return relationship. But, as noted by Sharpe (1964), there is no predictable relationship between an undiversified investor's total risk and rate of return. Finance's positive risk-return relationship can provide a foundation for an appraiser's inverse marketability-DLOM relationship only if he borrows Finance's positive *systematic risk*-return relationship. In other words, independent of the present author's view that non-systematic risk adjustments are inconsistent with the competitive asset market assumptions required by the FMVS, there is no predictable total risk-expected rate of return relationship. (3) The Traditional CAPM, in the present author's view, is a demand-side theory that assumes a vertical supply curve (or is silent with respect to the supply-side).

Assuming that Finance's positive *systematic risk*-return relationship is valid, it might be reasonable for an appraiser to assume that the rational investor in the Hypothetical Fair Market would expect to earn a higher market rate of return on higher systematic risk assets. Nevertheless, in Chapter 15 the present author questions the universality of Finance's positive systematic risk-return relationship. Is it reasonable for rational investors, who are well-informed, to expect to be one of the lucky or fortunate ones who would actually earn a rate of return in a risky asset's higher upside tail of its normal probability distribution? In addition to the fact that earning a rate of return in a higher-risk asset's higher upside tail is only an uncertain prospect, how does the inclusion of a broader set of investors that include risk-preferring investors (in addition to risk-averse investors) influence the risk-return relationship in a competitive asset market? If the trading activity of risk-preferring investors dominates that of risk-averse investors, the competitive asset market result could be a negative systematic risk-return relationship (at least in the short-run while risk-preferring investors' trading behavior dominates the market). Such conclusions might contradict Finance's long-standing doctrine that the competitive asset market risk-return relationship is positive. Further, should the present author's analysis in Chapter 15 be considered valid, it might also undermine the applicability of a Fair Market DLOM for lower marketability (i.e., higher systematic

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risk) assets. Chapter 16 provides the mathematics that underlay the present author's risk-return analysis in Chapter 15.

Daubert Challenge

A “Daubert Challenge” is when the opposing counsel challenges the admissibility of an expert's report and testimony. Expert testimony is admissible in court through the court's “gate-keeping” function. The gate-keeping function “is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field” (*Kumho Tire*⁵).

Before *Daubert*,⁶ federal judges ruling on the admissibility of expert testimony relied on the *Frye*⁷ test. The *Frye* test required the judge to determine whether or not the expert's methodology was generally accepted. However, in *Daubert*, the Supreme Court held that “The Federal Rules of Evidence, not *Frye*, provide the standard for admitting expert scientific testimony in a federal trial”, and that “Nothing in the Rules ... gives any indication that ‘general acceptance’ is a necessary precondition to the admissibility of scientific evidence.”

The Supreme Court in *Kumho Tire* “held that Federal Rule of Evidence 702 imposes a special obligation upon a trial judge to ‘ensure that any and all scientific testimony ... is not only relevant, but reliable’.” In other words, the *Daubert* standard assigns “to the trial judge the task of ensuring an expert's testimony both rests on a reliable foundation and is relevant to the task at hand.” In *Kumho Tire*, the Supreme Court held that the “*Daubert* ‘gatekeeping’ obligation applies not only to ‘scientific’ testimony, but to all expert testimony.”

In *Daubert*, the Supreme Court held that, with respect to the “preliminary assessment of whether the testimony's underlying reasoning or methodology is scientifically valid and properly can be applied to the facts at issue[,] Many considerations will bear on the inquiry, including ... whether it has been subjected to peer review and publication, ... and whether it has attracted widespread acceptance within a relevant scientific community.” The present author reads this to

⁵ *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 119 S. Ct. 1167 (1999).

⁶ *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993).

⁷ *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).