



THE DLOM JOB AID FOR IRS VALUATION PROFESSIONALS

WHAT IT MEANS FOR ESTATE
PLANNERS AND TAXPAYERS



Valuation discounts are frequently challenged by the Internal Revenue Service and no discount is as contentious as the marketability discount. Usually the largest valuation adjustment in an appraisal and often poorly supported, it presents an inviting target. A recently published document presents research, analysis, and conclusions from professionals at the Service on this topic. The goal of this paper is to review the Service's main findings and add our own analysis and perspective. As we will explain further below, the document covers virtually every method or piece of research proposed to handle marketability discounts. And it makes in places sweeping conclusions regarding well-known and widely used methods. Read on to see how these findings may impact your clients.

BACKGROUND

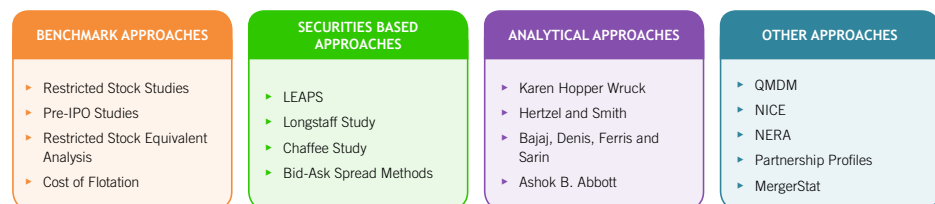
In June 2008, the IRS formed a special Engineering/Valuation Program DLOM Team to evaluate the various methods presented by academics and valuation practitioners for calculating the discount for lack of marketability ("DLOM"). On September 25, 2009, the IRS team produced a 107 page document titled *Discount for Lack of Marketability: Job Aid for IRS Valuation Professionals* ("Job Aid"). Recently, the Job Aid was made public and has caused quite a stir in the valuation community.

Any evaluation of the Job Aid must first place the document in the proper context. The Job Aid is not authoritative and does not provide any definitive guidance as to how IRS appraisers should calculate the DLOM. Instead, the Job Aid is primarily a primer on the various approaches to calculating the DLOM, and provides the program team's opinions on the perceived strengths and weaknesses of each approach, commentary on the perceived prevalence of each method, and a brief summary of case decisions where the methods were used.

Following a brief introductory section, the Job Aid provides general information regarding the DLOM, including a brief discussion on the difference between marketability and liquidity, the Mandelbaum Factors¹, the issue of considering the position of the willing seller, the marketability of minority vs. controlling interests, and a list of the information items that agents should request when considering the DLOM applied by the tax payer.

COVERED METHODOLOGIES

The Job Aid then begins addressing specific DLOM methodologies, which the Service categorizes into four buckets. The following graphic illustrates the specific methodologies addressed in the Job Aid.



¹ Factors influencing the DLOM, originally set forth by the Tax Court in *Mandelbaum v. Comm.*, TC Memo 1995-255 (1995).

BENCHMARK APPROACHES

The Job Aid's discussion on DLOM approaches begins with a discussion of restricted stock studies. The discussed restricted stock studies are published empirical studies that examine the difference between prices at which restricted stocks were issued relative to publicly traded stocks of the same company. The difference between these prices is utilized by many appraisers as a proxy for a DLOM for non-public stock.

In addressing the strengths and weaknesses of a methodology that relies on the published restricted stock studies, the Job Aid raises a number of points. In regards to strengths, the Job Aid notes that the restricted stock studies are based on market data, and that, historically, these studies were the ones most often accepted by the Tax Court. In regards to weaknesses, the Job Aid points out that all of the published restricted stock studies are quite dated, rely on averages without examination of the underlying data, and may not consider the holding period of the underlying securities. Additionally, the document underscores the increasing emphasis on analyzing the data itself (versus relying on average or median discounts) in recent Tax Court cases.

The Job Aid singles out the FMV Restricted Stock Study and the related FMV DLOM Model for criticism, both in the main body of the Job Aid and in an attached 9-page memo analyzing the data and supporting the critique. The Job Aid briefly describes the approach as a two step analysis, where the analyst first determines the discount required for a security if it was the restricted stock of a public company, and then adds an incremental discount to reflect the fact that the security being valued is an investment in a private company. The Job Aid notes that this approach has not been fully vetted in Tax Court. More importantly, the Job Aid finds several theoretical problems with the model and flaws in the statistical methods of analysis employed.² In a stinging 11-point critique, it notes "the last eight of these factors question FMV's model. The first three disprove it." It concludes "[n]either FMV's model nor multivariate regression analysis can be applied to FMV's database to confidently determine the DLOM on private equity." We will return to this in the analysis below.

The Job Aid also discusses the use of Pre-IPO studies in determining the DLOM. These studies analyze identical shares of the same company and compare their price before and after the shares are publicly traded. In analyzing this approach, the Job Aid notes that the approach is based on market data and has broad time period coverage. However, the Job Aid also notes that the use of this approach has fallen out of favor recently in the Tax Court, due to the wide time gap that often exists between private transactions and IPO, the inability to account for changes in evolving companies or external economic conditions, non-related influences on the IPO price, the prevalence of related party transactions, and other factors.

The Job Aid briefly discusses the cost of floatation approach which is a method that attempts to quantify the DLOM in terms of the costs required to achieve marketability by calculating the cost of underwriting as a percent of the estimated freely traded price that would result from such an offering. The Job Aid notes that this approach does not capture the risk inherent in uncertain holding periods, and may not be applicable to minority interests, which lack the ability to cause registration to happen.

² Among the issues discussed in this analysis are (1) lack of evidence that block size is a statistically reliable proxy for quantifying the discount increment, (2) lack of statistically significant relationship between important variables and the discount in the database, as measured by a 0.02 percent r-squared, (3) the subjective nature of picking variables for inclusion in the analysis, (4) the use of quintiles, (5) the use of median discounts, and (6) the selection of matching transactions for the analysis.

SECURITIES BASED APPROACHES

The Job Aid classifies DLOM methods based on options trading prices and theoretical option valuation models as securities based approaches. LEAPS are publicly traded long-term put options on the stocks of public companies. This approach calculates the DLOM by estimating the cost of a put option on the valued security. Additionally, the Job Aid notes that the LEAPS methodology still requires the use of a qualitative analysis to adjust the LEAPS conclusions for private company considerations, and LEAPS are not directly comparable to the liquidity of private interests since investors in closely held companies do not have the ability to hedge their shares.

The Job Aid also examines two other option pricing methodologies set forth in The Longstaff Study and the Chaffee Study. Both rely on option pricing theory to estimate the DLOM. The Job Aid's stated weaknesses for these approaches include the reliance on perfect market timing abilities of investors, the over-sensitivity of the model to volatility, the need to incorporate qualitative factors to determine a final DLOM, and the inability of the owners of private company stock to hedge their investments.

Finally, the Job Aid discusses the usage of bid-ask spreads in calculating the DLOM. The Job Aid notes that this approach provides an illiquidity discount only, and still requires consideration of other factors to determine a DLOM.

With respect to all of the securities based approaches, the Job Aid notes that they are rarely seen in valuation reports determining the DLOM for private companies, and that the approaches have not been vetted in any meaningful way by the Tax Court.

ANALYTICAL APPROACHES

The Job Aid highlights several analytical approaches to the DLOM. The Job Aid classifies empirical studies as analytical approaches, including many restricted stock studies, where the authors of the studies have analyzed their data using statistical methods – primarily regression analysis.

The first two analytical approaches presented in the Job Aid are restricted stock studies prepared by Karen Hopper Wruck in 1989 and Hertz and Smith in 1993. The Job Aid notes that these approaches suffer from similar weaknesses, including sample selection, uncertainty around registration status, and price measurement points. The Job Aid also noted that these studies have not been vetted by the Tax Court, and are rarely used by appraisers for determining the DLOM.

A study from Bajaj et. al., in 2002 sought to identify which factors, including the DLOM, contribute to private placement discounts. Through the use of statistical analysis Bajaj et al opined that only a small piece of the private placement discounts was due to lack of marketability. Interestingly, even though the IRS has relied on this study and its lead author in Court on several occasions, the Job Aid notes that the results of this model do not survive the application of a sanity check. Additionally, the Job Aid reiterates the criticisms from a number of pundits, including: data errors, the exclusion of certain transactions, and the lack of explicit consideration of the holding period. The Job Aid notes a somewhat favorable treatment of this approach by the Tax Court, but notes that no court has accepted the study's

estimate of the DLOM. The Job Aid also notes that many in the appraisal community feel that the success of this method in the Tax Court was assisted by unprepared opposition.

The final analytical approach examined by the Job Aid is the study put forth by Ashok B. Abbott in 2006. Abbott examines a number of studies and discount indications, and keys in on differences in liquidity and the resulting discounts. The Job Aid notes that Abbott's results have not been properly vetted by valuation practitioners or the Tax Court, and that it is doubtful that his work could serve as a primary approach to marketability quantification.

OTHER APPROACHES

The QMDM is the first of the "other" approaches addressed by the Job Aid. The QMDM is a quantitative model that calculates a matrix of discounts for lack of marketability based on a range of multiples. The Job Aid notes that the QMDM substitutes the arbitrary selection of a DLOM with the potential for arbitrarily selected inputs. The Job Aid notes that this approach has seen minimal adoption by valuation professionals other than the firm that introduced the method, and that the Tax Court has not responded favorably to this approach.

The Job Aid also reviews the Nonmarketable Investment Company Evaluation (or NICE) method, an income based approach that does not use discounting, but essentially translates the DLOM into an additional required return. The Job Aid notes that, while the NICE method avoids subjective estimation of discounts for lack of control and lack of marketability, the method assumes that a hypothetical willing buyer can demand a higher required rate of return for lack of control and lack of marketability, and utilizes subjective increases to discount rates. Additionally, the Job Aid notes that the model has not been tested in Tax Court, and is not widely used by valuation practitioners.

The NERA approach is a theoretical model based on the CAPM that allows for a quantification of the illiquidity discount based on objective criteria. The Job Aid notes a number of perceived weaknesses with this model, including the necessity of selecting variables based on market activity or market comparables (a subjective process), the need to estimate holding period, and the inability to calibrate the results against the market. Additionally, the Job Aid notes that this method has not been widely accepted by valuation professionals or vetted in Tax Court.

ANALYSIS

Above all, the scope of the work and the huge effort involved makes the Job Aid a very interesting document – clearly, this is both one of the most challenging valuation topics the IRS encounters and an area of valuation adjustments that the Service is highly concerned with. That in and of itself is a warning to appraisers, taxpayers, and planners: do not take this topic lightly!

The analysis of available DLOM calculation methodologies is fairly thorough, although the Job Aid does exclude a number of recent breakthroughs in the industry, most notably the additional data, analysis, and methods discussed below. While we do not agree with all of the opinions presented in the Job Aid, we do agree with the overriding theme of the document: the DLOM must be determined based on an in depth analysis of the company being valued and a robust analysis of any data being used to quantify the DLOM. In particular, while we agree in part with the Service's analysis of the FMV data and the FMV DLOM model, we disagree with the Service's overall conclusion that their analysis "disproves" the method. In

fact, the Service's own analysis shows statistically significant relationships between some of the factors used in the FMV DLOM model and the discount.³ However, as with any valuation approach, the methodology may evolve and be refined over time. We certainly agree with the Service that robust statistical methods may be useful to the analysis. As discussed below, Pluris' own research provides solutions to at least some of the problems with earlier approaches, studies, and data.

THE PLURIS SOLUTION

At Pluris, our determination of the DLOM begins with data. Our approach relies on two separate and mutually-reinforcing analyses: an analysis of restricted stock data from the Pluris DLOM Database™ and an analysis of true "fair market value" investor-to-investor transactions in restricted stock in the secondary market from our proprietary LiquiStat™ database.

In the Pluris DLOM Database, Pluris has created the most extensive commercially available database of restricted stock private placement transactions on the market. Updated quarterly, it contains over 3,000 transactions since 2001, more than 10 times as many recent transactions as other commercial databases. The Pluris DLOM Database is intended to include every single qualifying transaction taking place in the capital markets – which eliminates many potential sources of bias in the selection process. In addition, care has been taken in finding the exact transaction date – which eliminates statistical "noise" and facilitates regression analysis. Another factor that improves the results of statistical analysis of the data is the sheer size of the database – this allows for regressions to be run for sub-samples of similar companies, rather than the entire data-set.⁴ The Pluris DLOM Database includes up to 80 data-points per transaction, permitting "close tailoring" of the selected discount and the selection of better comparables. Most importantly, a much larger number of large-block transactions provide better support for discount increments for private companies (over the restricted stock equivalent discounts). The database is licensed and used by most large valuation firms. A complete comparison of the Pluris DLOM Database to the other available databases can be viewed at the ValuSource website.⁵

LiquiStat is a continuously updated database that includes thousands of transactions dating from 2004 to the present and reflects transactions between investors in the secondary market for illiquid securities, including restricted stock. These are true "fair market value" transactions, NOT private placements. This is important because many of the criticisms of the restricted stock transactions approach (underlying many of the methods discussed in the Job Aid classified as both "benchmark" and "analytical" approaches) revolve around the circumstances of the private placement. Specifically, when management of a company decides to issue restricted shares to outsiders, is the price (and the discount) affected by factors other than marketability?⁶ It should be noted that all of the other restricted stock

³ For example, the IRS Engineer's analysis shows a statistically significant relationship between the discount and the block size – a key variable for valuing privately held shares.

⁴ For example, it only stands to reason that both the magnitude of the discount, and the firm characteristics that drive the discount, should be different for the financial sector versus sectors such as manufacturing or mining and agriculture. Running separate analyses of each is likely to improve the resulting analysis.

⁵ <http://www.valusource.com/Products/PlurisDLOM/CompareCompetition.aspx>

⁶ A thorough review of these factors is beyond the scope of this paper, but they involve the asymmetry of information between the seller (insiders) and buyer (outsiders), aka the "lemons problem"; compensation for advice and monitoring services rendered by large shareholders; and potentially extra discounts allowed by managers of businesses in financial distress (or to ward off financial distress). If these factors are present and contribute to the discount, then the discount taken in a restricted stock transaction no longer represents the DLOM. These factors are not present in the LiquiStat transactions, since the issuers of the shares are not involved.

studies in use today are vulnerable to this counter-argument because they rely on private placements by issuers. LiquiStat is completely different. Since the database relies on investor-to-investor transactions, the only reason for the observed discount is lack of marketability.⁷

As the Job Aid indicates, good data is only part of the equation. Pluris leverages our superior data with experienced valuation professionals and stringent quality control and review processes to deliver defensible DLOMs and, as a result, defensible valuations for all types of clients.

Please feel free to contact us to discuss the Job Aid, our valuation services, or any current valuation issues you or your clients are facing. Copies of the Job Aid are available on request at 212.248.4500.

⁷ Since the transactions in LiquiStat are between investors (typically, professional investors), buyers and sellers have the same level of information, so the "lemons problem" does not apply. Also, since the issuing firm is not involved in the transaction, no new money is raised by the firm and there is no impact on its financial position. Finally, the blocks of stock sold are small and cannot affect the control of the issuer. The transactions all take place at a discount, and the discounts are solely due to lack of marketability.

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PLURIS VALUATION ADVISORS

Pluris Valuation Advisors has 15 employees across offices in New York and California and specializes in business valuations and hard-to-value, illiquid, and distressed securities. Pluris is especially well-known for its empirical research and proprietary databases on valuation discounts. Our research and analyses have been covered by the *Wall Street Journal*, *Financial Times*, *The New York Times*, *Forbes*, *American Banker*, *CFO Magazine*, *Trusts & Estates*, *Estate Planning*, *Absolute Return*, *Wealth Strategies Journal*, *Hedge Fund Law Report*, *Journal of Alternative Investments*, and *Hedge Fund Manager Week*, among others.

Pluris clients include large institutions, investment funds, public and private companies and their shareholders and executives, as well as high-net-worth individuals and families that require estate tax, gift tax or income tax valuations. Finally, Pluris provides valuation testimony and has provided valuation services in a number of cases. Our institutional clients include global broker-dealers, investment banks, and asset management firms, including four of the top five banks in the United States. Our corporate clientele include more than 100 public companies. On the tax-planning side, Pluris personnel have worked for some of the largest estates and some of the richest families world-wide.

ESPEN ROBAK, CFA, PRESIDENT

Espen Robak is President and founder of Pluris Valuation Advisors LLC and a nationally recognized expert on intellectual property and business valuation, restricted and illiquid securities, securities design, levels of value, and discounts for lack of liquidity. Pluris' practice includes portfolio valuations for investment funds and financial institutions, as well as a broad range of financial reporting and tax opinions for public and private companies. Mr. Robak is a frequent contributor to books and professional journals on valuation, accounting and taxation topics. He is a columnist for *Wealth Strategies Journal*. Mr. Robak has earned the Chartered Financial Analyst designation and has a Masters in Business Administration and a Bachelor of Sciences degree from the University of Oregon.

DANIEL HOGANCAMP, MANAGER

Daniel Hogancamp, Manager, is responsible for overseeing and performing valuation projects for a number of different purposes, including for gift and estate purposes. In addition, Mr. Hogancamp is responsible for providing management oversight to Pluris' business valuation group, including managing individual assignments, developing firm-wide best practices and mentoring junior analysts. Mr. Hogancamp has experience valuing securities of all types, including common and preferred stock, carried interest, promissory notes and controlling/managing interests. Mr. Hogancamp's industry experience includes financial services providers, asset managers, manufacturing companies, real estate development and holding companies, consulting and importing/exporting. Mr. Hogancamp earned a bachelor's degree in finance from The College of New Jersey. He is currently pursuing his MBA at Villanova University.

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