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Empirical Method for Determining DLOM

By Baria Jaroudi, CPA, ABV, CBA, CVA

Marketability is defined in the *International Glossary of Business Valuation Terms* as “the ability to quickly convert property to cash at minimal cost.” How to best quantify and support a discount for lack of marketability (DLOM) for a non-controlling interest has been a controversial issue.

The lack of marketability results in an increased risk associated with ownership of a privately held interest. Therefore, an investor requires a greater return in comparison to a comparable, but publicly traded interest.

The DLOM can result in a significant value reduction and can be the subject of an IRS audit, specifically in gift and estate cases. The typical methods are to look at the restricted stock studies and the IPO studies; however, using the averages from these studies can be viewed critically in court when it is lacking analytical support for the discount. There is a gap in how to link these studies to the DLOM determined of the subject interest valued. A valuation analyst needs to bridge the gap between the studies and the DLOM.

In *Peracchio v. Commissioner*, the tax court was dissatisfied with all the experts’ DLOM and DLOC analyses and the inability to bridge the gap from the data to the application of the case at hand.

There are a few methods out there that have been developed to aid the valuation expert in accurately determining the appropriate DLOM. One of them is the Empirical Method for determining DLOM by Bruce Johnson. This method highlights the relation of the DLOM to the return on the investment. Johnson mentioned, “In other words, the discount for lack of marketability should raise the return on an investment to a level that is sufficient to compensate an investor for buying a nonmarketable interest.”

The Empirical Method is more objective in determining the DLOM, because it quantitatively measures the impact of the rate of return as a function of the DLOM. The question this method asks is “How much more return do we want to offset the risk of the lack of marketability of the interest?”

To summarize, Johnson performed the following three studies.

Study A – Compared private equity returns to public equity returns. The first study examined the increase in return required by investors in private equities versus public equities.

Study B – Compared the increase in return demanded by investors of restricted stocks to the same shares of stock traded on an active exchange.

Study C, Long-Term Versus Short-Term Bond Horizons – Examined horizon risk between short-term and long-term government.

In each of these studies, Johnson measured the increase in the rate of return required to compensate an investor for the lack of marketability. He concluded that the percentage increase in the rate of return to compensate for the risk of illiquidity has ranged from 30 percent to 45 percent historically, based on the three studies.

Johnson uses the following steps in determining the internal rate of return (IRR):

- Calculate the IRR or annual yield of the interest on a noncontrolling, marketable basis (before DLOM).
- Apply the DLOM to the value in 5 percent increments until the IRR or annual yield to the investor is increased by 30 percent to 40 percent.

The following table created by Johnson illustrates the steps mentioned above .

Value After			
DLOM	DLOM	ROB	% Increase
0%	\$125,000	17.0%	
15%	\$106,250	20.0%	17.6%
20%	\$100,000	21.3%	25.0%
25%	\$93,750	22.7%	33.3%
30%	\$87,500	24.3%	42.9%
35%	\$81,250	26.2%	53.8%
40%	\$75,000	28.3%	66.7%

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This method converts a noncontrolling marketable value to a noncontrolling, nonmarketable value by increasing the rate of return to the investor. The increase in the rate of return compensates an investor for the lack of marketability of an investment.

For example, if a limited partnership interest has an annual return of \$12 and a noncontrolling, marketable value of \$100, the return (as measured by yield) before the application of a discount for lack of marketability is 12 percent ($\$12/\$100 = 12\%$). If a discount for lack of marketability of 25 percent is applied, the value of the limited partnership interest declines to \$75 and the overall return increases to 16.0 percent ($\$12 / \$75 = 16.0\%$). This represents a 33.3 percent increase in the rate of return [$(16.0\% - 12.0\%) / 12.0\% = 33.3\%$]. This increase in return is consistent with the evidence shown above that investors require approximately a 30 percent to 45 percent increase in return to compensate for the additional risk associated with the longer holding period. Accordingly, a practitioner should apply a discount for lack of marketability to increase the effective rate of return of the limited partnership interest. The rate of return is the basis for quantifying the adjustment for lack of marketability.

Johnson has presented the Empirical Method at several conferences and

webinars. He is a co-author of the *Comprehensive Guide for the Valuation of Family Limited Partnerships*, now in its 4th edition. His emphasis focuses on the lack of objective rationale in supporting the DLOM. This method stresses the following two points:

- The discount for lack of marketability should be supported by an objective rate of return methodology.
- The discount occurs as a result of an investor's requirement for an increased return.

A valuation expert needs to justify the DLOM and tailor it to the empirical data, provide support to connect how any studies relate to the subject interest being valued and justify the reasonableness of the ultimate marketability discount.

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International Glossary of Business Valuation Terms, as adopted in 2001 by the American Institute of Certified Public Accountants, American Society of Appraisers, Canadian Institute of Chartered Business Valuators, National Association of Certified Valuation Analysts, and Institute of Business Appraisers.

BVR Webinar, *Using the Empirical Data Method for Determining DLOMs*, Presented by Bruce Johnson on April 24, 2014.

Partnership Profiles, Inc., *Comprehensive Guide for the Valuation of Family Limited Partnerships*, 4th edition, 132.

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