

VALUATION

New Product Review: ValuSource Pluris DLOM Database



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Users of business valuation reports are often dismayed by the level of professional judgment required at every step of the valuation process. Many times, this user dismay is brought to the surface through court decisions involving business valuations. Over the last two decades, numerous judicial decisions have led to a general impression that the determination of discounts for lack of marketability (DLOM),

based on averages of the initial public offering studies and a series of restricted stock studies, are no longer acceptable or valid. The more relevant issue at hand when using such benchmark data, however, is the propriety of the data and the data source's level of comparability to the subject company under valuation.

The valuation community has struggled, as well, over many years to move various aspects of the business valuation process to a more scientific endeavor, evidencing as many aspects of the conclusion of value with third-party empirical data as possible. The primary problems with this injection of more empirical third-party data has generally been the lack of quality information and the sufficiency of that information.

Now, more than ever, the business valuation community is being held to a higher standard of scientific and/or third-party evidence to confirm positions taken in the development of valuation conclusions. Nowhere is this evolution more prevalent than in determining discounts for lack of marketability.

Database sophistication related to summarizing restricted stock transactions has evolved over the last decade, with providers of this data striving to improve quality. The

result of this increased quality is to arm the business valuator with more directly correlated data points. In addition, the improved database quality provides the ability to draw stronger relationships and comparability between the company under valuation and the restricted stock transaction information used in determining the discount.

THE PLURIS DLOM DATABASE

Until recently, the most substantial database and study of restricted stock activity was that prepared by FMV Opinions, Inc. The primary benefit generally awarded the FMV Opinions study is the quantity of transactions (nearly 600 according to the *Companion Guide to the FMV Restricted Stock Study*) including transactions occurring from 1980 to 2008. In addition, this study includes as many as 60 distinct transaction and company characteristics from which the business valuator can draw the comparisons to the company under valuation. This information has led to wide use of the FMV database in the determination of discounts for lack of marketability.

However, past restricted stock studies have sometimes lacked sufficient detail and precision in their results. Additionally, the size of the transaction population can play

a key role in the confidence a valuator has in the discount determined; the higher the number of comparable transactions, the more confidence you can have in the resulting discount data. Studies that exclude transactions in which restricted stock was sold with attached warrants may eliminate a large population of transactions unnecessarily. Enter the Pluris DLOM database, the newest empirical study on the market.

On May 11, 2010, ValuSource released the Pluris Discount for Lack of Marketability Database. The Pluris DLOM database is unique in that its sheer size surpasses any other information source currently available for use in the determination of the DLOM. The Pluris DLOM database contains information on more than 1,950 transactions from 2004 through 2009, and over 700 transactions from just the last several years. These transactions are spread across 284 four-digit SIC codes and 65 two-digit SIC codes. Each transaction includes an impressive 80 data points, including closing and announcement dates, market prices for the underlying stock on each date and at set intervals before and after each date, industry descriptions and classifications, and a significant amount of detail on the operating performance and financial position of each restricted stock issuer. The Pluris DLOM database is updated quarterly. ValuSource says that the database will be expanded backward in time, as well as forward.

With so much information available, the Pluris DLOM database might seem unwieldy and difficult to navigate. In fact, you will find the database well organized and

easy to use (one drawback with respect to use of this database will be addressed in the practical example below). The database contains 18 search filter options, including:

- SIC code
- Volatility
- Market cap
- Revenue
- Assets
- Block size
- Include low Volume stocks
- Include penny stocks
- Include pink sheet stocks
- Include deals with warrants
- Stock price
- Sector
- Book value
- EBITDA
- Market-to-book ratio
- Issue date
- Registration rights
- Block size (volume)

The Pluris DLOM database draws on a foundation of information gathered from the observation of investor trades in illiquid securities in secondary trading markets. This information was compiled by Pluris in an earlier database called LiquiStat, which is the subject of a 2007 white paper titled “Discounts for Illiquid Shares and Warrants: The LiquiStat Database of Transactions on the Restricted Securities Trading Network,” by Espen Robak, CFA, who is president of Pluris Valuation Advisors in New York.

The LiquiStat database not only looks at restricted stocks, but also is the only database that attempts to address liquidity issues related to stock options or warrants that are the subject of a private placement. The LiquiStat database includes data on both types of restricted securities. One concern about the Pluris DLOM database is the computational methodologies employed in valuing the warrants. Observers have noted that Pluris uses a method to value the warrants that

cannot be, or is not, applied consistently across all warrants. If the resultant information is challenged, there appears no way to independently determine the value, leading to the need to simply “accept” the warrant valuations encompassed in the Pluris study.

The key finding in Robak’s white paper, referred to above, is that the restricted stock data leads to the conclusion that the discounts observed in private placements are very likely driven by a lack of marketability or liquidity. This conclusion is meaningful in the face of numerous attacks on this theory in recent years by Mukesh Bajaj, PhD (business professor at the Haas School of Business, University of California at Berkeley), and others.

The LiquiStat database is the first study of illiquidity discounts in transactions between individual shareholders. These transactions do not involve the issuer of the stock, so they are less subject to factors outside the inherent characteristics of the shares of stock sold. Because these other factors are essentially eliminated, the conclusions closely approximate true fair market value as the term is defined in the *International Glossary of Business Valuation Terms*. The difference between the restricted stock sold and the same security being traded in the financial markets is deemed to be primarily due to lack of liquidity.

The Pluris DLOM database calculates what they call a common stock discount (discount for lack of marketability) by taking the effective purchase price per share divided by the closing price on the issue date, and subtracting that amount from one. The Pluris DLOM database determined an average discount for lack of marketability of 22.7 percent, while the median discount is 21.1 percent.

FMV RESTRICTED STOCK STUDY

As of September 2010, the FMV Restricted Stock Study contained nearly 600 transactions dating from 1980 to 2008. The transactions included in the FMV Study

were found using a variety of sources, including 10K Wizard, Security Data Corporation, EDGAR and EDGAR Pro, Dow Jones News Retrieval, Disclosure CompactD, and S&P Corporate Transactions Records. Public transaction documents were reviewed to obtain data for each transaction, including but not limited to forms 8k, 10K, 10Q, S-1, S-3, S-4, stock purchase agreements, and registration rights agreements.

With incorporation of data over an extended period, the FMV Restricted Stock Study addresses several theoretical concerns that face valuers. First, the time period encompassed in the FMV study covers multiple Rule 144 restriction periods, with the earliest periods having a restriction period of two years. Modified downward over the intervening period—first to one year, and later to six months—the longer holding period is more akin to the holding period of privately held business interests (albeit, most privately held business interests are held significantly longer than two years).

Moreover, the holding period of a privately held business interest is primarily relevant to the determination of the discount for lack of marketability because longer holding periods more closely assimilate risk associated with volatility. Value volatility over the period the interest is marketed until the investment is converted to cash is critical to the discount determination.

Given these considerations, we see the expanded time frame of transaction inclusion in the FMV study as relevant in determining the appropriate discount for lack of marketability.

Using a process described as “cleaning,” the FMV Study eliminated approximately 95 percent of all restricted stock placements, due to reasons such as the stocks not being domestic, a warrant being attached to the stock in the private placement, the transaction not closing, or special contractual arrangements between the buyer and seller.

The FMV Study calculated the DLOM

by dividing the difference between the restricted stock price and the market reference price by the market reference price. The overall average discount for the 597 transactions in the FMV Study is 20.7 percent with a median discount of 17.1 percent (compared with 22.7 and 21.1, respectively, in the Pluris DLOM database as mentioned above).

There are 20 search filter options to choose from in the FMV Restricted Stock Study database including:

- SIC code
- Trading exchange
- Transaction date
- Registration rights
- Holding period
- Transaction month Discount
- Percent shares placed
- Market value
- Book value
- Market-to-book ratio
- Total assets
- Total revenues
- EBITDA
- Pretax income
- Net income before extraordinary items
- Operating profit margin
- Net profit margin
- Volatility
- Z-score
- Dividend yield

The FMV Study found that the discount for lack of marketability is negatively correlated with the issuing firm's market value of equity, revenues, total assets, book value of shareholders' equity, and net profit margin. However, the DLOM is positively correlated with the issuing firm's market-to-book ratio, stock price volatility, the block size of the placement, and the level of market volatility prevailing as of the transaction date.

As indicated in the *Companion Guide to the FMV Restricted Stock Study*, 2011 Edition, the FMV Study is planning to add

“expected holding period” as a variable for each transaction. This variable will incorporate the initial holding period and volume limitations under Rule 144 and market-based trading volume limitations. Another variable, “premium required return,” will also be added. This variable will provide empirical support for the premium return required for illiquid investments. Finally, data will be released with respect to private placements with short periods until registration and subsequent liquidation through public markets.

A PRACTICAL EXAMPLE

To illustrate the differences between the two databases, we ran a practical example using a revenue range search of \$5 to \$50 million; no further search criteria were used. The Pluris DLOM database search resulted in 602 transactions, including those with warrants, 343 of which did not have warrants attached. The FMV database search returned 245 transactions; remember that these do not include warrants.

Despite this difference, both databases contained very detailed transaction information. However, one difficulty we experienced with the Pluris DLOM database is that only 100 transactions can be exported from the database into Excel at one time. After a call to Pluris, we were advised that this is due to licensing restrictions. Although there are avenues around this restriction (performing multiple searches, sorting the data various ways, etc.), it makes the transaction search process more cumbersome.

Given this restriction, we narrowed our revenue search to a range of \$40 to \$50 million. The Pluris DLOM database resulted in 78 transactions, inclusive of those with warrants attached, while the FMV database search found 22 transactions. Between the two databases there were four overlapping transactions.

Table 1 illustrates the similarities and differences in the two databases. A number of

factors are compared to provide a perspective on the transactions contained in each database. As illustrated in the table, the way the discount for lack of marketability is presented (as an overall average/median versus broken down by holding period) and the number of transactions found in a given search are the primary ways in which the databases differ.

Both databases contain information on the size of the restricted stock blocks of stock in the event that the valuator wants to analyze the private company discount increment in order to make an adjustment to their base discount for lack of marketability.

Keep in mind that the Pluris DLOM database only contains recent transactions, from 2004 forward, while the FMV database considers those dating back to 1980; thus the distinction in holding period. Depending on the interest being valued and the subject company, one of these databases may be better suited than the other. For instance, if you are considering an interest with a valuation date prior to 2004, the FMV database may be more reliable.

CONCLUSION

Both the Pluris DLOM and FMV Opinions databases can serve as source information for discount determinations in business valuations. As noted, both databases include a broad search capability by virtue of a significant number of filtering options. This capability should prove extremely useful to the business valuation community in an attempt to drive comparability of source data to the specific attributes of the valuation subject.

Interestingly, both databases yield overall median and average discounts in the 17.0 to 23.0 percent range. Moreover, explanatory information of both databases embraces the concept of a restricted stock equivalent discount. Once determined, the restricted stock equivalent discount is combined with

TABLE 1: PRACTICAL EXAMPLE COMPARING PLURIS AND FMV DATABASES

	PLURIS DATABASE	FMV DATABASE
Total Revenues (in millions)		
Mean	\$44.6	\$45.9
Median	44.0	46.3
Total Assets (in millions)		
Mean	\$192.2	\$94.3
Median	53.5	46.6
Discount		
Mean	17.7%	N/A
Median	13.0%	N/A
2 Year Holding Period		
Mean	N/A	13.2%
Median	N/A	11.9%
1 Year Holding Period		
Mean	N/A	20.7%
Median	N/A	16.2%
Number of Transactions	78	22
Shares Outstanding (in millions)		
Mean	18.6	12.3
Median	15.3	9.5
Market Value (in millions)		
Mean	\$110.3	\$153.8
Median	80.9	124.4
Price Per Share		
Mean	\$10.02	\$12.65
Median	4.32	9.50

an additional private equity increment intended to compensate for risk associated with holding periods and volatility.

At first glance, the most significant difference between the Pluris DLOM database and the FMV Opinions database is the volume of transactions. However, it is critical to note that the difference is primarily attributable to the criteria by which the databases were constructed, including a decision by the FMV Opinions development authors to exclude thousands of transactions in 10 broad categories, as defined in the study's *Companion Guide to the FMV Restricted Stock Study*, 2011 Edition (many of those being restricted stock transactions issued with attached warrants). Whether the elimination of these transactions unduly affects the quality of the conclusion in one way or another is a professional judgment required of each valuator. However, the Pluris DLOM database, for the first time, provides the business valuation community with the most comprehensive database available, which should allow for the incorporation of the user-desired empirical evidence so sorely needed in business valuation. **VE**



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