



Introducing Liquistat™: A Completely New Way Of Determining DLOM

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Introducing LiquiStat™: A Completely New Way Of Determining DLOM

By *Espen Robak, CFA**

The starting point for any analysis of the discount for lack of marketability (DLOM) should be the best available evidence—and this has traditionally been the restricted stock data, which provide contemporaneous prices for two otherwise-identical securities: liquid and illiquid. What could be a better measure of marketability discounts?

But financial theory teaches us that the price of a security depends on the form of its sales transaction. For the restricted stock studies, that form usually consists of private placements, which have certain weaknesses when providing data for developing the DLOM.

The well-known “restricted stock studies” actually comprise private placements called PIPEs (Private Investments in Public Equity),¹ which typically involve a small public company, worth about \$100 million, in financial distress. Most times, the company is losing money—either by having grown too fast or fallen on hard times, and is unable to continue operations without a significant cash infusion, usually around 15% of market capitalization.

In working with restricted stock data, these questions often arise:

1. Do any transactions not involve raising new capital for the issuing firm?
2. How can one filter PIPE deals from the data, to isolate “pure” arm’s-length investor-to-investor transactions?

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The answers have always been: there are none; you cannot. Yet the restricted stock studies have remained the best method for determining the DLOM, because private placements were the best available evidence.

Not any more: new database now available

A forthcoming article in *Valuation Strategies* will introduce new marketability discount data from arm’s-length investor-to-investor transactions in restricted shares.² Pluris Valuation Advisors has recently developed the LiquiStat™ database from the secondary market in restricted stock. The data provide a pure “apples-to-apples” comparison between the market-traded shares and restricted shares, with the discount reflecting the latter’s illiquidity.

Before discussing how the LiquiStat data differ from all previously published restricted stock samples, let’s briefly look at the liquidity of restricted securities.

There are two legal ways to sell securities in the U.S.: file a registration statement and sell the stock to the public; or find an exemption from the registration requirement. The “4 (1)” exemption allows public resale of privately-issued restricted stock, and is available to investors who comply with Rule 144 of the Securities Act of 1933.

In addition, Section 4(1) of the Securities Act provides an exemption for resale transactions “by any person other than an issuer, underwriter or dealer,” while Section 4(2) provides a private placement exemption for issuers. This so-called “4 (1-½)” hybrid exemption allows private resale of a restricted stock position. Associated “best practices” include: (i) placing a legend on the shares alerting the buyer to their restricted character; (ii) issuing a “stop transfer order” to prevent subsequent resale without an opinion by counsel that the resale is legal; (iii) inquiring into the identity of the buyer; and (iv) securing a representation

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that the buyer knows the shares are restricted and intends to hold the securities for investment.

Restricted Stock Partners³ are the creators and managers of the Restricted Securities Trading Network (RSTN), which facilitates transactions in restricted stock under the “4 (1-1/2)” exemption. Launched in May 2005, the RSTN has grown rapidly in transaction volume—which is still negligible compared with overall issued and outstanding restricted securities, a \$1.2 trillion asset class.

And of course, restricted stock is still highly illiquid. For this reason, restricted shares trade on the RSTN

at substantial discounts from their market reference prices. LiquiStat compiles its database from RSTN transactions, with Pluris Valuation Advisors performing additional analysis. Currently, the database comprises approximately 200 transactions, but with RSTN’s rapidly increasing transaction volume, the database should grow extremely quickly.

How LiquiStat is different

Two main points distinguish LiquiStat from all previously published restricted stock samples:

First, the quality of data in previously published restricted stock studies tends to be poorer. This is not the fault of the studies’ researchers; it merely reflects how impossible it is for anyone outside the PIPE process to understand all details of a PIPE deal, which are not published. Too many unknowns remain, such as the timing of the pricing. (Needless to say, if we do not know the correct market reference price at the exact time the PIPE was priced, we cannot accurately measure the discount.)

PIPE investors also frequently have access to non-public information as part of the due diligence process; e.g., registration rights, effective date of the registration statement, etc. While restricted stock studies attempt to find all such provisions, success is never guaranteed.

Secondly, because the nature of LiquiStat transactions differ from that of private placements in the restricted stock studies, they are much better suited for measuring differences in marketability, as pure investor-to-investor deals capture the essence of *fair market value*.

For example, when we value the restricted shares of an investor in company X, we try to imagine at what price he/she could sell the same shares to another investor. We do not try to imagine the price at which company X would issue another set of shares in a transaction that would radically alter its balance sheet, operations, and growth outlook.

Moreover, the forthcoming *Valuation Strategies* article provides a brief overview of the theoretical “lemons problem” (based on papers by Akerlof, Myers & Majluf, Hertzfel & Smith, and Bajaj). But the lemons

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problem is just one of many factors that affect PIPE prices, and that suggest the illiquidity of the shares may not be the only cause of the PIPE discount.

Restricted stock discount results

The restricted stock illiquidity discounts in the LiquiStat database are radically higher than those in comparable private placement studies with a median discount of 32 percent, even though the median expected period of illiquidity is only 150 days. The unexpected magnitude and direction of this difference may indicate that PIPE shares are registered by the issuer earlier than previously assumed. It may also indicate that private placements are qualitatively different from standard investor-to-investor transactions in a meaningful and significant way. Our cross-sectional analysis also indicates that the discount is positively related to the days of illiquidity period remaining, block size, and volatility; and is negatively related to the stock price.

Warrant discounts data also available

Until LiquiStat, there has never been a study of marketability discounts applicable to stock options or warrants.⁴ Likewise, there's been no evidence that options should have higher discounts than shares—until now. A significant proportion of the 200 LiquiStat transactions are warrants, and internal analysis by Pluris Valuation Advisors has found that warrant discounts (from the Black-Scholes formula value) are:

- as much as 10-20 percentage points higher than restricted stock discounts;
- greater the greater the volatility of the stock underlying the warrant;

- greater the greater the quantity of warrants sold;
- lower the higher the intrinsic value of the warrant;
- greater the higher the time value of the warrant;
- greater the longer the time to expiration; and,
- are lower the greater the market capitalization of the issuer company.

In sum, the LiquiStat database provides restricted stock pricing indicators that rise entirely from the shares' lack of liquidity, a great improvement over private placement studies. Analysis further indicates that discounts from PIPE studies are significantly lower than those from comparable investor-to-investor transactions. And for the first time, LiquiStat data proves that discounts for non-traded options and warrants should be higher than those for restricted stock, and offers an analytical framework for their measurement.

¹ PIPEs refer to all private investments in public companies. Restricted stock studies generally focus on private investments in plain-vanilla restricted shares of common stock, a subset of the PIPE universe.

² Robak, Espen, "Lemons or Lemonade? A Fresh Look at Restricted Stock Discounts," *Valuation Strategies* (January/February, 2007)

³ Restricted Stock Partners, an affiliate of Pluris Valuation Advisors, is a division of Green Drake Capital Corp., member NASD/SIPC; www.restrictedsecurities.net.

⁴ A significant proportion of the 200 transactions in the LiquiStat database are warrant transactions.

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