Hardball with HITCHNER
Tough issues ... clear answers

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Discounts for Lack of Marketability

One Foot in the Boat and One Foot on the Dock

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Katherine E. Morris, MBA, ASA

The July 28, 2021, issue of *BVWire*,[1] published by BV Resources, addressed the industry application of DLOM models and databases. We were shocked that 45% of survey respondents are still using pre-IPO studies to quantify the discount for lack of marketability (DLOM). Surprisingly, the number of valuation analysts relying on this method is higher than the 2018 survey in which 38% of respondents reported relying on the pre-IPO studies.[2] How many times do we have to say, "Stop using this data." You can't have "One foot in the boat and one foot on the dock." You have to evolve with new viewpoints and better research.

We compared the results of the BVR study with poll questions conducted in our Valuation Products and Services[3] monthly webinars. The results corroborated what we found to be a continuing problem. See the results by webinar below:

May 16, 2019
Hitchner and Gregory – Supporting Your Business Valuation with the IRS
Jim Hitchner, CPA/ABV/CFF, ASA, and
Michael Gregory, ASA, CVA, NSA, MBA

Which resources do you use for the DLOM? (pick all that apply)

a) Restricted stock studies and/or databases – 91%
b) Pre-IPO studies and/or database – **59%**
c) VPS DLOM Guide and Toolkit – 26%
d) QMDM – 19%
e) Not applicable – 5%

May 11, 2017
Using New Resources to Determine and Defend Lack of Marketability Discounts
James Alerding, CPA/ABV, ASA, and
Josh Angell, CPA, CFA

Do you use one of the following pre-IPO studies or databases for a DLOM?

a) Emory studies – **6%**
b) Valuation Advisors – **12%**
c) Both – **26%**
d) Neither – 56%

September 22, 2015
Hardball with Hitchner, Pratt, and Fishman – They Tackle the Tough Issues and Present a Consensus View
Jim Hitchner, CPA/ABV/CFF, ASA, Shannon Pratt, DBA, CFA, ABAR, FASA, MCBA, ARM, CM&AA, and
Jay Fishman, FASA, CBA

Which of the following DLOM models or data do you use? (pick all that apply)

a) Restricted stock benchmark data – 81%
b) FMV Opinions detailed restricted stock data – 51%
c) IPO studies benchmark data – **50%**
d) Valuation Advisors detailed IPO data – **16%**
e) QMDM – 22%

In our book *Discount for Lack of Marketability Guide and Toolkit* (DLOM Guide),[4] we addressed comprehensively why this data should not be used to support a DLOM. We liberally quote this section below.

Four well-known studies and a database based on pre-IPO data are discussed in great detail in the DLOM Guide:[5]

- Emory studies
- Willamette studies
- Hitchner and Morris studies
- Valuation Advisor studies and database

The context for the application of these studies was presented and issues with reliance on these studies to support DLOM were noted.

> Since the 1970s, the pre-IPO studies have been utilized to estimate DLOM by comparing the price of an equity interest in a company prior to an initial public offering (IPO), as reported in SEC filings, to the trading price of common stock in the same company after the IPO. The theory assumes that stock sold prior to the IPO is nonmarketable and the same stock subsequent to the IPO is fully liquid and marketable. Therefore, the percentage difference in the two prices must reflect differences in marketability.[6]
>
> Although the underlying concept of pre-IPO studies is theoretically appealing, the studies rest upon the fundamental assumption that the change in price entirely reflects improvement in the marketability of the shares. Unlike restricted stock studies, pre-IPO studies suffer from the weakness that the price comparison of the two stocks is non-contemporaneous. As such, changes in pricing do relate to significant changes in company fundamentals and not just marketability. Also, recent analysis of the underlying data has generally shown that the measured discounts of the studies differ materially from the discounts contemplated by the parties entering the pre-IPO transaction.[7]

We spent significant time analyzing prospectuses and/or registration materials associated with numerous IPOs referenced in the studies. We were astounded by our findings. Based on available data, the aspects of the transactions that we considered included:[8]

- The significant factors, assumptions and methodologies used to determine the fair value of the underlying common stock
- Whether a contemporaneous valuation by an unrelated valuation specialist was performed
- The valuation range determined by various methodologies and the combination or weighting of those methods
- The significant factors contributing to the difference between the fair value as of the date of each grant and the estimated IPO price range
- Explanations of why or whether marketability discounts, illiquidity discounts, and common stock discounts (due to preferential rights of preferred stock) were used
- Determination of comparable companies used

We also found many valuation assumptions used by the management team and their valuation advisors as described in various registration materials:

- Cost of capital
- Perpetual growth rate
- Discount for lack of marketability
- Guideline public companies
- Guideline company transactions
- Media and investor speculation on the IPO
- The use of third-party valuation specialists
- Probabilities of different events
- Changes in the risk premium in the cost of capital
- Time frame to the IPO
- Growth in revenues and/or profits
- Profit margin changes
- Changes in valuation multiples[9]

As you can see, lack of marketability was only one factor that caused the IPO price to be higher than the pre-IPO transaction price.

The DLOM Guide presented three examples of the results of detailed analysis of public company information related to the differential in prices based on transactions of equity pre- and post-IPO for Lifelock, Inc., EPAM Systems, Inc., and Facebook. We present a summary of management's discussion of the calculation of fair market value of equity for Lifelock and EPAM Systems. We also present a comparison of the implied DLOM from the pre- and post-IPO equity prices to management's DLOM estimates contemporaneous with the transaction dates. We also show the results of a similar comparison for Facebook.

Lifelock, Inc.

Summary of the management discussion referencing the calculation of the fair market value of stock on March 29, 2012:[10]

> The present values calculated for our common stock … were weighted based on management's estimates of the probability of each scenario occurring (private company 10%, sale event 10%, initial public offering (high) 40%, and initial public offering (low) 40%).
>
> The discounted future cash flow method … utilized a sustainable long-term growth rate of 5%, a discount rate of 20.5%, and a capitalization rate of 15.5%. The change in the discount rate from our May 31, 2011, valuation was driven by a reduction in our risk premium included within our cost of capital calculation.
>
> Under the guideline public company method … selected multiples based on enterprise value were calculated for each of the guideline companies utilizing enterprise value, 2.6 times revenue, and 11.2 times EBITDA for the last twelve months and 2.4 times projected revenue and 9.8 times EBITDA for the next four and eight quarters based on analyst estimates. The initial public offering scenarios assumed that we would conduct an initial public offering in 18 months and were based on our projected EBITDA.
>
> We also applied a discount for lack of marketability of 20%, after considering a number of factors, including the probability and time to liquidity for an initial public offering of our common stock.
>
> The estimated fair value of our common stock was determined to be $5.20.[11]

In summary, the change in value was primarily due to the following factors:

- Several material events occurred just prior to the March valuation date, including a merger agreement, sales of preferred stock, and a new senior credit facility
- Management's conclusion of the value of the stock from May 31, 2011, to March 29, 2012, reflected a reduction in the discount rate based on management's assessment of a decline in the risk premium
- Management's conclusion of a 20% DLOM on March 29, 2012, was based on an IPO occurring in 18 months; it actually occurred around six months later on October 2, 2012

A comparison of management's estimate of DLOM contemporaneous with the equity transaction on March 29, 2012, compared to the implied DLOM of that same transaction compared to the IPO equity price on October 2, 2012, follows:

Lifelock, Inc.

Transaction date	March 29, 2012
Transaction price	$5.20 per share
IPO price	$9.00 per share
Implied DLOM	42.2%
DLOM used by management	20.0%

It is clear that something more than lack of marketability is reflected in the implied DLOM, including changes in assumptions about risk and the likelihood and date of a potential IPO.

EPAM Systems, Inc.

In its prospectus[12] management reported the following detail regarding the value of stock on December 31, 2009:

> The fair value of our common stock was determined with the assistance of an independent third-party valuation firm. The valuation reports have been used as part of our analysis in reaching our conclusion on stock values …[13]
>
> … with the assistance of our independent third-party valuation firm, we considered a variety of empirical studies as well as restrictions on the marketability of our common stock to determine an appropriate discount for lack of marketability.[14]

Based upon a table in the prospectus, management indicated that a 20% discount for lack of marketability applied "only in the 'Continue Private' scenario," suggesting an effective probability weighted DLOM of only 1%.[15]

Management provided an explanation of events affecting the stock value that occurred between the calculation of stock price for the December option grant to the value of stock on September 15, 2011 (just prior to the February 2012 IPO), including:[16]

- Significant growth in revenues and profitability, i.e., 66.3% and 69.8%, respectively.
- A 30.6% increase in guideline public company multiples
- An increase in the probability of an 'IPO' event from 47.5% to 60% affecting the weighting of valuation methods under the market approach[17]

- The stock market impact of the ongoing Euro-zone debt crisis and the outlook for the global economy … which caused a decrease in multiples in September from a prior valuation in June 2011[18]

Adding further improbability regarding the comparison of pre- to post-IPO values to calculate DLOMs, we discovered that the DLOMs that management and their valuation advisors were using were significantly lower than that indicated by the difference between the IPO price of stock and the prior transaction stock price. See below.

EPAM Systems, Inc.[19]

Transaction date	December 31, 2009
Transaction price	$5.75 per share
IPO price	$12.00 per share
Implied DLOM	52.1%
DLOM used by management	20.0%, resulting in an effectively weighted probability DLOM of 1.0%

We identified similar results based on an analysis of management data presented regarding pre-IPO calculation of stock price.

Facebook, Inc.[20]

Transaction date	May 11, 2011
Transaction price	27.58 per share
IPO price	$38.00 per share
Implied DLOM	27.4%
DLOM used by management	6.5%

Further criticism of the pre-IPO approach to DLOMs is presented in the *Discount for Lack of Marketability Job Aid for IRS Valuation Professionals*, September 25, 2009, IRS Engineering/Valuation Program DLOM Team. A summary of the issues with the data follows:

- Not contemporaneous – too much time gap often exists between pre-IPO transaction and public offering. Private transactions studied were between five months and three years prior to the IPO, providing a strong argument that factors other than marketability alone led to the price increase.
- Pre-IPO companies rapidly evolving – significant changes (difference in pre and post company) as many transactions involved companies in early stage of development
- Pre-IPO companies affected by changes in economic conditions
- Data includes only firms with successfully completed IPO's. No information included on candidate companies where IPO doesn't eventually take place
- Pre-IPO transactions tend to be underpriced (most IPOs involve high-growth companies) to fully subscribe the offering
- Pre-IPO transactions almost always involve related-party transactions (employees and company, service providers and company, etc.) and do not reflect arms-length terms
- There are indications that the Willamette Management Associates Studies 1999 and 2000 data may be skewed due to the dot.com "bubble"
- Frequently viewed as inflating DLOM[21]

Conclusion

We do not believe that DLOMs based on pre-IPO studies are supportable. The bottom line is that timing matters in finance and equating transactions in a company before it goes public to the IPO price does not give you a DLOM. It includes the impact of many factors that caused the change in stock price, only one of which is a DLOM.

Endnotes:

1 Business Valuation Resources, LLC, BVWire, Issue #226-3. "DLOM survey reveals methods of choice."
2 The 2021 survey had twice as many respondents as the 2018 survey, so the comparison may not be completely reliable.
3 Valuation Products and Services, www.valuationproducts.com.
4 James R. Hitchner, R. James Alerding, Joshua B. Angell, and Katherine E. Morris, *Discount for Lack of Marketability Guide and Toolkit,* Valuation Products and Services, LLC, Chapter 15 Pre-IPO Studies, 2017, pp. 245-280, https://www.valuationproducts.com/dlom-toolkit/.
5 DLOM Guide, pp. 245–262.
6 DLOM Guide, p. 245.
7 DLOM Guide, p. 245.
8 DLOM Guide, p. 266, quoted from *Roadmap for an IPO: A guide to going public*, PricewaterhouseCoopers, November 2011, p. 25.
9 DLOM Guide, p. 267.
10 DLOM Guide, pp. 268–269.
11 DLOM Guide, pp. 268–269.
12 EPAM Systems, Amendment No. 1 to Form S-1 filed with the SEC on July 22, 2011.
14 DLOM Guide, p. 269.
15 DLOM Guide, p. 271.
16 DLOM Guide, p. 269.
17 DLOM Guide, pp. 270–272.
18 DLOM Guide, p. 271.
19 DLOM Guide, p. 271.
20 DLOM Guide, pp. 268–269.
21 DLOM Guide, pp. 267–268.

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