Data Mining the Venture-Backed Company Charter

An underutilized tool for ascertaining pre-money valuations and other key terms

By:Jonathan D. Gworek
February 19, 2007



The exact terms upon which venture capital investments are made are not typically announced or publicized. If available, the terms of prior venture transactions would be of interest to startups and venture capitalists alike. For a group of founders starting a company, knowing what a particular venture investor is willing to do based on what the investor has in fact done in prior deals could prove to be extremely valuable information. Likewise, a prospective venture investor could stand to gain an advantage relative to a competitor, especially in competitive bid situations, if the investor were aware of the competitor's deal terms inclinations based again on actual deals done in the past. Pre-money valuations for prior deals are of particular interest as valuation is often the starting point for in a venture capital negotiation. Also of interest are the other primary economic terms of the venture deal-liquidation preference, dividend rates and option pool size, to name a few-each of which can have a significant impact on the return to the common and preferred stockholders.

In fact, virtually all of this information, and more, can be extracted from the publicly available charter[1] of a venture backed company. While people in the trade are generally aware that a company's charter memorializes the key economic terms of any given venture transaction, this data is not widely published and is underutilized. Some of this data is easy for the trained eye to quickly identify, while other data must be deduced from other indicators and depends on certain key assumptions. This article focuses on how this data can be used to determine pre-money valuations for Series A venture transactions in particular,[2] and also describes some of the other uses of the data that can be readily extracted from charter documents.

Pre-Money Valuation

In order to determine the pre-money valuation at which a company raised a round of venture capital, it is necessary to have a basic understanding of how the price per share paid for preferred stock is determined in venture capital transactions. The conventional method for determining the preferred price per share is quite simple. The preferred price per share is equal to (1) the pre-money valuation (the "Pre-Money Valuation") divided by (2) the sum of (a) the total number of issued and outstanding shares of common stock prior to the venture financing (the "Common Stock Issued Pre-Funding"), and (b) the total number of shares of common stock to be reserved for issuance pursuant to the stock option pool after the venture financing (the "Option Pool Reserve Post-Funding")[3], or:

> Preferred Price Per Share = Pre-Money Valuation/(Common Stock Issued Pre-Funding + Option Pool Reserve Post-Funding)

Taking this simple formula and solving for the Pre-Money Valuation, the formula for Pre-Money Valuation is:

Pre-Money Valuation = Preferred Price Per Share X (Common Stock Issued Pre-Funding + Option Pool Reserve Post-Funding)

Therefore, it is a simple matter to solve for the Pre-Money Valuation if the other variables in the formula are known — Preferred Price Per Share and the sum of the Common Stock Issued Pre-Funding and Option Pool Reserve Post-Funding.

Preferred Price Per Share. The Preferred Price Per Share is almost always specified directly in the charter. It is necessary to specify the original price per share of the preferred stock for purposes of defining the liquidation preference rights of the preferred stockholders. This variable is therefore readily knowable from the charter. Let's assume for purposes of this discussion, and the example set forth below, that the price per share in the charter is $1.00, a number that would be very common for a Series A preferred stock round of financing.

Sum of Common Stock Issued Pre-Funding plus Option Pool Reserve Post-Funding

In order to determine the sum of the Common Stock Issued Pre-Funding and the Option Pool Reserve Post-Funding, it is important to have a basic understanding of how companies determine the number of authorized shares in the charter. Every venture backed company has a certain number of shares of common stock and preferred stock authorized for issuance, and these numbers are explicitly set forth in the charter. Of these authorized shares, some number will be issued to shareholders and therefore is considered outstanding.

At any given point in time, the number of shares of common stock set forth in the charter should be large enough to equal at least (1) the total number of shares of common stock issued and outstanding pre-funding,[4] plus (2) the total number of shares of common stock reserved for issuance pursuant to the option plan, plus (3) the total number of shares of common stock into which the preferred stock issued in the financing is convertible immediately after the financing. Using a hypothetical company by way of example, if there are 10,000,000 shares of common stock outstanding prior to the financing, there is an option pool of 5,000,000 shares, and 5,000,000 shares of preferred stock are being issued in the financing, then there should be at least 20,000,000 authorized shares of common stock — 10,000,000 to cover the shares of common stock issued and outstanding pre-funding (what is referred to in the above formula as Common Issued Pre-Funding), 5,000,000 shares to cover the number of shares of common stock that are reserved under the option pool (what is referred to in the above formula as Option Pool Reserve Post-Funding), and 5,000,000 to cover the number of shares of common stock that the preferred stock is convertible into.[5]

In addition, it is often the case, especially in earlier rounds of venture financing, that the number of shares of common stock is precisely enough to cover the number of shares needed as described above-no more and no less. It is also often the case that the number of shares of preferred stock is precisely enough to cover the number of shares of preferred stock issued in the financing. For companies in which there are "just enough" shares, it is possible to determine the exact number of shares that make up the sum of Common Stock Issued Pre-Funding and the Option Pool Reserved Post-Funding.[6] In the above hypothetical example, this number would be 15,000,000 shares.

Returning to the formula above for Pre-Money Valuation, this sum can then be multiplied by the Preferred Price Per Share, which is known for purposes of this article and has been set at $1.00, in order to determine the Pre-Money Valuation which in our example is $15,000,000. Based simply on information available in the charter of our hypothetical company, and making certain assumptions, we have arrived at the pre-money value upon which the company was funded.

Option Pool Size and Impact on Pre-Money Valuation Comparisons

While the calculation described above results in the number that is generally identified as the "premoney valuation" in the venture capital parlance, this number depends heavily on the number of shares in the Option Pool Reserve Post-Funding. This number can and does vary considerably from deal to deal, the net result of which is that this definition of pre-money valuation makes comparisons of pre-money valuations somewhat illusory. To illustrate the point, in the above example there could have been only 5,000,000 shares of Common Stock Issued Pre-Funding, and 10,000,000 shares of common shares in the Option Pool Reserve Post-Funding, and the Pre-Money Valuation would have been the same. In light of this, an arguably more important and accurate measure of pre-money valuation is the implied value of the founders' stock pre-funding-a measure that will be called the "true valuation" for purposes of this article. It is calculated by multiplying the Common Stock Pre-Funding by the Preferred Price Per Share. For purposes of our example, the "true valuation" is equal to the Common Stock Issued Pre-Funding (or 10,000,000) multiplied by the Preferred Price Per Share (or $1.00), and equals $10,000,000.

In order to calculate the true valuation prior to any venture funding, it is necessary to know the Option Pool Reserve Post-Funding. This number can then be subtracted from the sum of the Common Stock Issued Pre-Funding and the Option Pool Reserve Post-Funding to isolate the number of shares of common stock held by the founders. Here again there is good news to be found in the charter, as the typical venture charter often includes the number of shares reserved under the option plan. Most charters include an anti-dilution adjustment section that provides for an adjustment in the number of shares of common stock issuable upon the conversion of preferred stock in the event of future issuances at a price per share below the price paid by the venture investors. Certain issuances of common stock are excepted from this adjustment, including shares of common stock issued upon the exercise of stock options issued pursuant to the company's option pool. Often times this option pool exception is limited to a specific number of shares that corresponds to the number of shares in the pool at the time of the financing, and this number is specified in the charter.[7]

Other Key Terms

The charter document contains other key terms as well that are often of high interest to both the investors and the company and keenly negotiated prior to funding. Most notably, these terms include whether there is a dividend on the preferred stock and, if so, the rates and type of such dividend, whether the preferred stock issued to the venture capital investors is participating or non-participating preferred stock, if it is participating whether there is a multiple liquidation preference, or alternatively a cap on the return on investment above which the preferred stock ceases to participate, whether there is a pay-to-play provision, whether there is an anti-dilution feature and if so what type, whether the preferred stock is redeemable, and how many board seats the preferred stockholders are entitled to as a class. The charter also includes the number of shares of preferred stock that are authorized, and if this is "just enough" to cover the number of shares issued in the preferred stock financing, this number, when multiplied by the preferred price per share, yields the total amount of money raised in the round.[8]

Conclusion

While the process just described may seem daunting to the uninitiated, for the seasoned venture capitalist or venture lawyer, the exercise is reasonably straightforward. While certain assumptions are necessary, in many cases, especially for the fresh start company that has raised a Series A round of financing these assumptions are entirely reasonable and can result in very reliable data. Once the premoney valuation is known, it, together with the other information that is in the charter, can be used to re-create to a large degree the actual term sheet that was the basis of the underlying financing.

For more information on data mining, please contact **Jonathan D. Gworek**.

Footnotes:

1. “Charter” on this context refers to the certificate of incorporation for a Delaware company and its analog in other states, copies of which are public record and can be obtained for a nominal fee.

2. While this methodology could also be used in later stage financings, it is often more difficult to pull from later stage charters the necessary data, and similarly the assumptions necessary to perform the calculations become more speculative.

3. By including the option pool in the pre-money capitalization in this way, the venture investors are not diluted when the option shares are issued.

4. This number often, but not always, corresponds to the number of shares held by the founders prior to the Series A funding.

5. The conversion rate is almost always one-to-one at the outset so this number typically corresponds initially to the total number of shares of preferred stock issued in the financing. This is the first key assumption that underlies the calculation of pre-money valuation in this discussion.

6. The second key assumption is that the charter being examined has “just enough” shares as described.

7. Arriving at the “true valuation” requires the additional key assumption that the number of shares specified in the carve-out corresponds to the exact number of shares reserved under the pool.

8. This dollar amount raised can also be used, together with the liquidation preference provision, to determine the total liquidation preference that needs to be “cleared” before the common stockholders participate in a liquidity event scenario. This hurdle number is particularly relevant to common stockholders who are interested in better understanding the value of their shares of common stock.