Introduction to Valuation
Unit 5: VC math
Lesson 1: VC math

Many of you will use the knowledge you have gained in this course for engaging potential investors with greater confidence. Now that you can defend and support valuation in the context of negotiations, we'd like to provide you with some insight into one of the last related elements that frequently show up in term sheets.

A term sheet is a non-binding agreement setting forth the basic terms and conditions under which an investment might be made. Term sheets and the lexicon frequently used in them are complex and extensive. We'd like to look at one small element that is relevant to the subject of *this* course that may impact the true valuation ascribed to your company. That element relates to employee stock or share option plans, known as ESOPs.

We've already learned some of the valuation terminology, like pre-money valuation and post-money valuation. The portion of company equity, or ownership, that an investor acquires in exchange for their investment is defined as the amount of investment divided by the post-money valuation.

Let's look at a quick example. If an investor commits a $1 million investment to your company at a $3 million dollar pre-money valuation or the "present value," the math would work like this: **$1 million at a $3 million pre-money valuation provides for a $4 million post-money valuation.**

Recall that equity ownership is calculated as investment divided by post-money valuation. Thus in this example, the investor would own 25% of the company after the transaction was completed.

Continuing our example, if we assumed the company had one million shares issued at the time the term sheet was presented, each share would be valued at $3 per share.

So, after the investment**,** investors own 25% and the founders and existing shareholders own 75%. But let's say in our example that the investors built a condition into the term sheet for the company to implement an ESOP *before* the transaction takes place. This complicates things a little and impacts price per share and the implied valuation.

Let's say that the term sheet requires the establishment of an ESOP with an option pool representing 15% of the shares of the company. To accomplish this, you'd need to establish an ESOP pool of 20% *pre-funding*—because the pool gets diluted by 25% when the VC invests their money. So, the 100% ownership of the company by existing shareholders is down to 80%, even *before* the VC funding.

The VC's $1 million still buys them 25% of your company—it's the existing shareholders who have been diluted to 60% ownership rather than 75%.

The price/share might be seen as $2.40, not $3.00—that is, a $3,000,000 pre-money valuation divided by 1,250,000 shares—which incorporates the creation of a pool of 250,000 share options.

Thus, the *true* pre-money is only $2.4 million—not $3 million—because $2.40 per share × 1 million pre-money outstanding shares = $2.4 million.

Not all investors demand the creation of ESOPs and not all insist that they be created pre-investment, to the dilution of the existing shareholders.

But given the frequency of this treatment of options and its impact on implied valuation, it's important for you to be aware of it and to understand it.

Introduction to Valuation
Conclusion

To recap what we've covered in this course, we've looked at several methods for company valuation, as well as insights into the practical application of these methods. We've also provided tools to make the overall process a little easier.

We encourage you to download the spreadsheets and other materials that accompany these videos.

To return to **Introduction to Valuation**, or to find our other free courses, visit learn.marsdd.com.