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How Volatility Affects Our Valuation

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Once you are comfortable with what volatility is and how it is calculated, it is important to understand how it affects the valuation. Understanding how volatility relates to the valuation will help you make reasonable selections for each specific company. There are a few rules of thumb to keep in mind when considering volatility. While these won't always hold true, they do serve as a starting point and provide guidance when making determinations.

Higher volatility typically leads to higher value when running an OPM to derive an equity value. This method is also known as a backsolve. A backsolve uses the stock price of a recent transaction to solve for the value of the company using the OPM.

> This holds true due to the potential for a higher upside. In an option pricing model, volatility is good for the company value because it means there is a higher opportunity for variance on the stock price. Why is this good thing? When an investor puts in money, their loss is limited to their investment. However, the upside is infinite. Low volatility would indicate the company would not deviate much from its current stock price, lowering the opportunity for a significant gain.

Early stage companies typically rank at the high end of the spectrum whereas mature, late stage companies may rank at the middle of the spectrum.

> There is typically an inverse relationship between volatility and size when dealing with a private company. The larger the company the smaller the volatility and vice versa. This usually holds true because early stage companies tend to face periods of change and growth which results in more variance of their stock price. A well-established company may have much less volatility in their stock therefore ranking more towards the middle of the market when compared to public companies.

In allocation, higher volatility disperses more allocation to junior securities and common stock while low volatility tends to disperse more allocation to the senior securities.

> With low volatility, there is less likelihood that the distributable assets will vary. This means less potential upside for breakpoints above the current value. The higher the volatility, the more likely the value can vary and increase the potential upside for junior securities. This doesn't always hold true if the distributable assets are at a high value or preferences between common and preferred stock are minimal, but it is a good rule of thumb when looking at capital structures with multiple classes of preferred stock.

When applying a Discount for Lack of Marketability (DLOM), a higher volatility will tend to increase the discount.

> DLOM are often calculated using a Black Sholes model. There are various accepted models out there but it is common to see an Asian or European Option used to calculate volatility. In this calculation, the higher the volatility, the larger the risk. Therefore a higher discount is often recognized. Other factors are important to consider as well such as Risk Free Rate, time to exit and stock price. But, it is common that higher volatility leads to a higher discount for lack of marketability.

It is important to keep in mind that each company should be analyzed on a company-by-company basis. Understanding how volatility affects the valuation is a key factor in selecting and applying volatility to your valuation. Each private capital structure is unique and may contain exceptions to the above guidelines. Being able to apply volatility to your company and understand the results will not only help you understand how volatility correlates to the end result, but it will also help you gain comfort in the quality of your valuation. More details on acceptable industry comparables for volatility will be discussed in the next article as part of the volatility series.

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