



<p>Dilution:</p> <p>A Primer on Stock Volcabulary</p>	<p>This is a Reprint from the Monthly Column in Boston Business Journal</p>
	<p>STARTING UP: <i>Practical Advice for Entrepreneurs</i></p> <p>By: Joe Hadzima</p> <p>Joseph G. Hadzima, Jr. Senior Lecturer, MIT Sloan School of Management Chair, MIT Enterprise Forum, Inc. Managing Director, Main Street Partners LLC</p>   <p>jgh@mit.edu jgh@alum.mit.edu</p>

Dilution – A Primer on Stock Vocabulary

In the past I have had discussions with entrepreneurs and investors about the concepts of "Dilution" and "Valuation". Because there are often misconceptions about these terms, so here they are clarified.

Dilution connotes a decrease in something. As applied to stock there are at least two dilution concepts - a decrease in percentage ownership of a company (Percentage Dilution) or a decrease in the economic value of an investment (Economic Dilution).

Percentage Dilution

If Bill Gates owns 1,000 shares of Microsoft which represents 100% of the issued and outstanding stock and Microsoft issues 1,000 shares to Paul Allen, then Bill Gates' has experienced Percentage Dilution in his ownership from 100% to 50%.

Economic Dilution

Note that a Percentage Dilution in stock ownership has no direct relationship to the value of that stock ownership position. The Board of Directors of a company is supposed to determine that the company has received fair value for the stock it issues. Of course, the "value" of the stock can go up and down over time. So if Bill Gates paid \$1 per share for his 1,000 shares and Paul Allen comes along and buys 1,000 shares from Microsoft at a price of \$2 per share, then Bill Gates has experienced a Percentage Dilution but his economic position has been increased from his initial position. On the other hand, if Paul Allen buys his Microsoft stock at a price of \$.75 per share then Bill Gates has experienced both Percentage Dilution and an Economic Dilution from his initial \$1.00 purchase price. Dilution from an initial price is different than dilution from the current price. For example, a sale at \$.75 per share would not represent an Economic Dilution from current value if the fair market value of the stock was \$.50 per share at the time Paul Allen purchased and conversely, if Paul Allen paid \$2.00 per share there would be an Economic Dilution from current value if the fair market value at the time was \$2.50 a share. So, Dilution is really a matter of what perspective you take.

Antidilution Protection

So what does it mean when an Investor talks about receiving "Antidilution Protection"?

In some cases, usually rare, the Investor means that his or her percentage ownership will always remain the same as when the initial investment was made. What this really means is that the other stockholders will "take it on the chin" and experience more than their pro rata portion of dilution. This type of Antidilution Protection is most often used early on in a venture (e.g. until the first \$1 million in equity is raised) or if there are some real questions about the current valuation.

In other cases, mainly with publicly traded securities, the Investor means that he or she wants to be protected from issuances of securities by the company at prices below the then current fair

market value. So the Investor will be protected if he buys at \$2.00 per share and the company subsequently issues stock at \$10.00 per share at a time when the fair market value is \$12.00 per share.

For the private company with professional venture capital investors there is yet a third concept. Venture investors often choose convertible preferred stock, convertible debt or debt with warrants as their investment vehicle. This gives them a position which is senior to or "ahead of" the common stock if the company is sold or liquidated but also allows them to participate in the "upside" with the common stock if things take off. For example, assume the investors purchase Series A Convertible Preferred Stock at a price of \$1.00 per share, which is initially convertible at the option of the investor into one share of common stock, a 1:1 conversion ratio. If the company subsequently issues stock at a price less than the initial \$1.00 price paid by the investor then the conversion ratio is adjusted so that one share of Preferred Stock will be convertible to more than one share of common stock. The conversion formula adjustment is typically referred to as "antidilution protection" and there are two types: full ratchet adjustment and weighted average ratchet adjustment.

Full ratchet is the most onerous from the Founder's viewpoint. If the company issues even one share of stock at a price below the price paid by the investors then the conversion price drops fully to that price. For example, assume the Founder owns 1,000,000 shares of common stock and the Investor purchases 1,000,000 shares of Convertible Preferred Stock at a price of \$1.00 per share, which is convertible into common stock at that price (\$1,000,000 initial purchase price divided by \$1.00 conversion price equals 1,000,000 shares of common stock) so that each owns 50% of the company. Under a full ratchet if the company issues one share at a price of \$0.10 then the conversion price becomes \$0.10 and the Investor can then convert his 1,000,000 shares of Convertible Preferred Stock into 10,000,000 shares of common stock (\$1,000,000 initial purchase price divided by \$.10 conversion price) thereby resulting in the Founder owning 1/11th of the company and the Investor owning 10/11ths.

Weighted average ratchet antidilution adjustment is better from the Founder's viewpoint. Although the formulae used differ in some ways, the basic approach is to adjust the conversion price to the average price received by the company for stock issuances taking into account the amount of money raised at different prices. A typical formula is as follows:

$$\text{NCP} = \frac{[(\text{OB} * \text{OCP}) + \text{New\$}]}{\text{OA}}$$

where:

NCP = New Conversion Price

OB = Outstanding Shares Before Offering

OCP = Old Conversion Price

New\$ = Amount Raised in Offering

OA = Outstanding Shares After Offering

This formula is applied only if the price in the offering is less than the old conversion price.

Don't take definitions literally - different people mean different things by the same words. So don't be afraid to ask.

DISCLAIMER: This column is designed to give the reader an overview of a topic and is not intended to constitute legal advice as to any particular fact situation. In addition, laws and their interpretations change over time and the contents of this column may not reflect these changes. The reader is advised to consult competent legal counsel as to his or her particular situation.