SCORECARD VALUATION METHODOLOGY
Establishing the Valuation of Pre-revenue, Start-up Companies
by Bill Payne

This article was originally written in May 2001 and extensively revised in January 2011. The valuation method described herein was also detailed in my book, the ***Definitive Guide to Raising Money from Angels*** *(2006). The Ohio TechAngels adapted this valuation methodology in 2008 to meet their needs and named it the Bill Payne Method. I expanded the method in 2010 for use in Valuation of Early Stage Companies, a ½ day workshop of the Angel Capital Education Foundation, and renamed it the Scorecard Method. Others have referred to this and similar methods as the Benchmark Method.*

Background

Individual accredited investors in typical angel deals put personal capital at risk for an equity share of growth-oriented, start-up companies. These angel investors generally invest $25,000 to $100,000 in a round totaling $250,000 to $1,000,000. In 2011, the valuation of pre-revenue, start-up companies is typically in the range of $1–$2 million and is established by negotiations between the entrepreneur and the angel investors. For this round of investment, the angels collectively purchase 20-40% of the equity of the company and are seeking a return on investment of 20-30X in a period of five to eight years.

Active angels invest in a diversified portfolio of 10 or more companies, usually spreading their investments over a few years. Experience proves that half of these companies will fail (returning nothing or less than capital invested), another 3-4 will provide a modest return on investment of 1X to 5X and one or hopefully two of the ten companies will return 10X to 30X on the initial investment over a five to eight year period of time. In the end, such a portfolio might yield the angel investor a total return on investment of 25% per year or more. These anticipated outcomes were validated by "Returns to Angels in Groups" by Professor Rob Wiltbank in November 2007.

Angels typically invest in companies operating in industry sectors with which they are familiar. Diversification across industry sectors is not as easily achieved for angels as could be accomplished in public markets, but can be achieved by co-investing with trusted angel colleagues in a broader set of businesses. A local network of angels is critical to achieving a diversified portfolio. Working within a network of angel investors also expands the pool of expert resources and helps divide the work of screening companies and investment due diligence. Furthermore, angel groups frequently syndicate (co-invest) with neighboring angel organizations in an effort to help fill round of investment for local companies and assist members in diversifying their portfolios with investments in nearby regions.

To achieve a satisfactory return on investment, the angel's portfolio must contain one or two companies which return 20–30X on the initial investment. It is, of course, impossible to predict at the outset which of these portfolio companies will be successful and which will fail. It is necessary, then, that each investment in the angel portfolio demonstrates the potential to scale sufficiently to provide a 20-

30X return on investment. Including a substantial number of investments with smaller opportunities only reduces the possible return on the entire portfolio.

Scorecard Valuation Methodology

This method compares the target company to typical angel-funded startup ventures and adjusts the average valuation of recently funded companies in the region to establish a pre-money valuation of the target. Such comparisons can only be made for companies at the same stage of development, in this case, for pre-revenue startup ventures.

The **first step** in using the Scorecard Method is to determine the average pre-money valuation of pre-revenue companies in the region and business sector of the target company. Pre-money valuation varies with the economy and with the competitive environment for startup ventures within a region. In most regions, the pre-money valuation does not vary significantly from one business sector to another. The following is an informal survey of angel groups taken by the author in the summer of 2010 for pre-revenue companies in several regions of North America:

2010 Angel Valuation Survey

(Pre-money Valuation of Pre-revenue Companies)

Angel Group	**Pre-money Valuation***
Tech Coast Angels	$1.25
Phenomenelle Angels	$1.30
New York Angels	$1.30
Frontier Angel Fund	$1.40
DC Dinner Clubs	$1.50
Vancouver Angel Network	$1.50
Midwest Groups (Okabe)	$1.50
RAIN Funds	$1.65
Ohio TechAngels	$1.75
Band of Angels	$1.75
Life Science Angels	$2.00
Alliance of Angels	$2.10
CommonAngels	$2.70
mean	**$1.67**
mode	**$1.50**

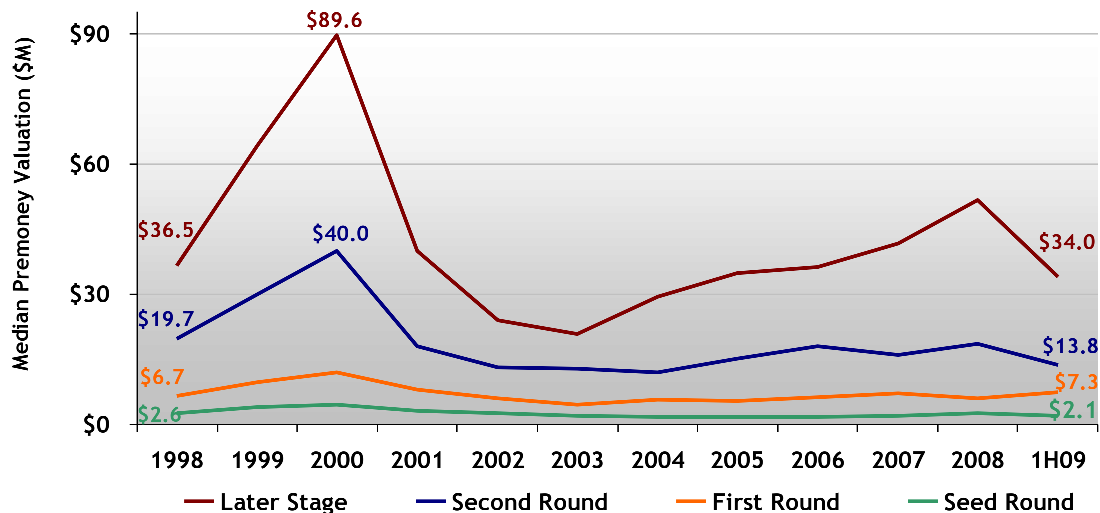
* in Millions of Dollars

As can be seen the average pre-money valuation for recent pre-revenue deals is $1.67 million but the mode (middle number) is $1.5 million, indicating some skewed data at the upper range of the data set. It appears that competition for deals in some regions of the country results in higher valuations there. The range of the data is from a low pre-money valuation of $1.25 million to a high of $2.7 million for pre-revenue companies.

We also have data points for VC investments in seed/startup companies (but not necessarily pre-revenue companies). The following chart from Dow Jones VentureSource shows very little variation in pre-money valuation of VC seed stage deals over the past decade. Average annual pre-money valuations have been just over $2 million during this period. Since VCs typically invest a bit later than do angels, we would expect VC seed valuations to be slightly higher than those of angels.

First Round Median Valuation Rises in 1H '09 vs. 2008

Median Premoney Valuations by Round Class (Annual)



Source: Dow Jones VentureSource

For purposes of this study, we will assume that the pre-money valuation of pre-revenue companies varies in the range of $1-2 million and that the average pre-money valuation for these firms is $1.5 million.

The **next step** in determining the pre-money valuation of pre-revenue companies using the Scorecard Method is to compare the target company to your perception of similar deals done in your region, considering the following factors:

Strength of the Management Team	0-30%
Size of the Opportunity	0-25%
Product/Technology	0-15%
Competitive Environment	0-10%
Marketing/Sales Channels/Partnerships	0-10%
Need for Additional Investment	0 - 5%
Other	0 - 5%

A Valuation Worksheet is provided in the appendix to this document to assist readers in judging the relative strength of target companies for the above categories.

The subjective ranking of factors (above) is typical for investor appraisal of startup ventures. Some are surprised to find that investor rankings of product and technology are below those of the management team and the size of the opportunity. In building a business, the quality of the team is paramount to success. A great team will fix early product flaws, but the reverse is not true. And, as has been discussed earlier, scalability is critical to investor returns. Good product and intellectual property are important, but the quality of the team is key.

Making the Valuation Calculation

To provide an example, assume a company with an average product and technology (100% of norm), a strong team (125% of norm) and a large market opportunity (150% of norm). The company can get to positive cash flow with a single angel round of investment (100% of norm). Looking at the strength of the competition in the market, the target is weaker (75% of norm) but early customer feedback on the product is excellent (Other = 100%). The company needs some additional work on building sales channels and partnerships (80% of norm). Using this data, we can complete the following calculation:

COMPARISON FACTOR	RANGE	TARGET COMPANY	FACTOR
Strength of Entrepreneur and Team	30% max	125%	0.3750
Size of the Opportunity	25% max	150%	0.3750
Product/Technology	15% max	100%	0.1500
Competitive Environment	10% max	75%	0.0750
Marketing/Sales/Partnerships	10% max	80%	0.0800
Need for Additional Investment	5% max	100%	0.0500
Other factors (great early customer feedback)	5% max	100%	0.0500
Sum			1.0750

Multiplying the Sum of Factors (1.075) times the average pre-money valuation of $1.5 million; we arrive at a pre-money valuation for the target company of about $1.6 million (rounding from the calculated $1.61 million).

Summary

Key to the Scorecard Method is a good understanding of the average (and range) of pre-money valuation of pre-revenue companies in a region. With this data in hand, the Scorecard Method gives angels subjective techniques to adjust the valuation of a target company for seed and startup rounds of investment. Savvy entrepreneurs can use these tools to prepare for negotiations of valuation with investors.

Appendix to Scorecard Valuation Methodology

Armed with average and range of pre-money valuations for pre-revenue, start-up companies in the region, what determines where in that range is a fair valuation for a specific company?

The attached spreadsheet is an empirical Valuation Worksheet. This spreadsheet will not provide the investor with a neat and tidy dollar valuation for a pre-revenue, start-up company! This worksheet provides the investor with a basis for deciding if a start-up company should be valued near the top or bottom of the range of values that might reasonably be applied to such an early stage venture.

The worksheet is a listing of issues and factors that should be considered in judging the value of a company. Note the following features of the worksheet:

1. The major factors are listed in order of importance in valuing start-up companies.
2. Each major factor has been assigned a weighted ranking. For example, the "Strength of the management team" is worth 30% of the valuation of the company, while the "Need for subsequent funding" is ranked as only 5% of the value of the company.
3. Within each major factor, the impact of each issue has been assigned a valuation ranking from +++ (very positive) to - - - (very negative), to assist the investor in deciding the overall weighted ranking to be assigned to the valuation of a start-up company.

No two angel investors will value a company (or business plan) the same, however, with some practice, this worksheet will allow investors to compare one company to the next and assist the angel in deciding if a company's valuation should be near the high end of a reasonable range in valuation or, on the other hand, near the bottom of the range of valuations.

(scroll down to Valuation Worksheets)

VALUATION WORKSHEET

Weighting	Factors and Issues
	IMPACT ON THE VALUATION OF PRE-REVENUE, STARTUP COMPANIES
0-30%	**Strength of the Entrepreneur and the Management Team**

Impact	Experience
+	Many years of business experience
++	Experience in this business sector
+++	Experience as a CEO
++	Experience as a COO, CFO, CTO
+	Experience as a product manager
-	Experience in sales or technology
---	No business experience

Impact	Willing to step aside, if necessary, for an experienced CEO
---	Unwilling
0	neutral
+++	Willing

Impact	Is the founder coachable?
+++	yes
---	No

Impact	How complete is the management team?
-	Entrepreneur only
0	One competent player in place
+	Team identified and on the sidelines
+++	Competent team in place

0-25% Size of the Opportunity

Impact	Size of the target market (total sales)
--	< $50 million
+	$100 million
++	> $100 million

Impact	Potential for revenues of target company in five years
--	< $20 million
++	$20 to $50 million
-	> $100 million (will require significant additional funding)

0-15% Strength of the Product and Intellectual Property

Impact	Is the product defined and developed?
---	Not well define, still looking a prototypes
0	Well defined, prototype looks interesting
++	Good feedback from potential customers
+++	Orders or early sales from customers

Weight	Factor	Impact	Description
		Impact	Is the product compelling to customers?
		---	This product is a vitamin pill
		++	This product is a pain killer
		+++	This product is a pain killer with no side effects
		Impact	Can this product be duplicated by the others?
		---	Easily copied, no intellectual property
		0	Duplication difficult
		++	Product unique and protected by trade secrets
		+++	Solid patent protections
0-10%	**Competitive Environment**		
		Impact	Strength of competitors in this marketplace
		--	Dominated by a single large player
		-	Dominated by several players
		++	Fractured, many small players
		Impact	Strength of competitive products
		--	Competitive products are excellent
		+++	Competitive products are weak
0-10%	**Marketing/Sales/Partners**		
		Impact	Sales channels, sales and marketing partners
		---	Haven't even discussed sales channels
		++	Key beta testers identified and contacted
		+++	Channels secure, customers placed trial orders
		--	No partners identified
		++	Key partners in place
0-5%	**Need for additional rounds of funding**		
		+++	None
		0	Another angel round
		--	Need venture capital
0-5%	**Other**		
		++	Positive other factors
		--	Negative other factors