

WHAT PERCENT OF A MEDICAL COMPANY SHOULD FOUNDERS SELL FOR SEED/START-UP VENTURE CAPITAL?

Presented by:

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Company founders frequently ask venture capitalists: "How much is my company worth, and what percent of it will the venture capital firm want for the first infusion of capital?" This article describes key variables that are critical to determining a company's valuation.

The valuation of a start-up company is usually negotiated by the founding team (sellers) and the venture capitalists (buyers). Eleven variables influence these negotiations. They include factors that can be controlled – the technology, target markets, management team and financial potential – as well as external factors that affect the return on investment. Companies should strive to complete milestones that will eliminate risks associated with these variables.

Definition of Terms

Before I discuss individual variables, it's useful to define several terms that are common in venture capital financing:

I. **Seed Venture Capital** – The earliest stage of funding, seed capital is a

relatively small amount of money often used to either prove the technical feasibility of a project or to determine the market need for a given product.

II. **Start-up Venture Capital** – This larger sum of money is provided by venture firms after the technical feasibility and market need have been established. Start-up venture capital usually is applied to research and development, patent filings, ongoing market research, management recruiting, and preparation for future financings.

III. **Risk and Return** – With any form of investment, if the risk appears to be high, the investor will demand a high rate of return on his/her money. In the case of a new company, many things are unknown and the risk is very high. The venture capitalist will therefore negotiate for a significant ownership (equity) position in the company in exchange for the cash provided. With seed funding, venture capital firms generally look for a 75-100% compounded rate of return on their investment within five to eight years. With start-up funding, they typically expect a 50-75% compounded rate of return within four to seven years.

IV. **Valuation** – The pre-financing or "pre-money" valuation equals the total number of shares outstanding prior to

the start-up venture capital financing, multiplied by the price per share of the financing. The post-money valuation adds to this figure the total money raised. A higher pre-money valuation results in a higher percentage ownership for the founders. In this article, valuation refers to pre-money valuation.

Factors Affecting Valuation

I. **Stage of Technology** – From an investor's perspective, high risk is assumed when the technology has been described on paper but has not been reduced to practice. To offset this high risk, a venture capitalist will require a higher rate of return on the money invested. This translates to a lower pre-money valuation and a higher percentage owned by the investors. As the technology is developed and its workability is established or proven, the risk is lower and the potential value is increased. If the technology has been reduced to practice and the product is working, even in prototype form, a higher valuation will be offered.

II. **Patent Status** – Patents add value. Furthermore, the entire spectrum between the filing and the issuance of a patent is important. This includes any response from the patent office and the negotiation of claims with patent

examiners. Valuation increases as the company gets closer to receiving patents and is highest when the company owns issued patents that indicate dominance over competitors.

III. Time to Market – The sooner a company can market a product and achieve its sales forecast, the greater will be the perceived value to investors. With a medical product, the company must accomplish three major milestones before commercialization. First, it must not only develop the product but also begin manufacturing (either in-house or through suppliers). Second, it must test the product in both animals and humans. Third, it must obtain regulatory approval from the U.S. Food and Drug Administration (FDA). Venture capitalists prefer to invest in companies that can develop products and obtain FDA approval within a reasonable time period.

IV. Demonstrable Market Need – Before venture capitalists will invest in a company, they must be convinced that potential customers will need or want the company's product. Patients, providers and/or payors must see the benefits of using the product. Providers include physicians, hospitals, surgery centers and others. Payors include Medicare and Medicaid, HMOs, PPOs, indemnity insurers, and ultimately employers and employees (through insurance premiums and taxes).

A number of product benefits might accrue to patients, providers or payors. Among them are a decrease in mortality or morbidity; quicker patient recovery; more complete recovery and better quality of life; savings of money; savings of time; easier use (convenience, space saving, portability); or an increase in revenue. Some products benefit all three constituents or offer several benefits to a combination of constituents.

EFFECT OF ELEVEN FACTORS ON COMPANY VALUATION

Variables	Lower Valuation	Higher Valuation
Technology/Product		
Stage of Development	Concept	Product
Patent Status	None Filed	Issued
Time to Market	Long	Short
Market		
Demonstrable Need	No	Yes
Size and Growth	Small	Large
Market Penetration	Slow	Rapid
Management Team	None	Complete
Financial		
Profit Margins	Low	High
Total Capital Required	High	Low
Return on Investment		
Potential Value in Future	Low	High
Time to Liquidity	Long	Short

For example, if a technological advance decreases patient morbidity, promotes a quicker recovery and saves money by shortening the patient's hospital stay, all parties benefit.

During the concept or development stage, market research with prospective customers can substantiate a product's need. Company founders can either perform this research themselves or they can engage a consultant. At a minimum, potential customers should be interviewed to determine their level of need and their reaction to the company's product.

Before investing, venture capitalists will conduct their own research to confirm the market need. Their degree of interest in the company will be influenced by whether the product will offer one or more key benefits to constituents.

V. Market Size and Growth – Products that address large markets hold the promise of high sales and earnings, as well as a high return to investors. As a result, products that have large market potential will increase the company's

valuation. The valuation will increase further with market verification.

Founders should estimate the total number of potential buyers and describe the portion who are expected to actually purchase the product. A sales forecast that shows revenues increasing in future years is essential, along with a description of why demand will increase over time. Investors need to see that projections of market size are based on fact.

VI. Market Penetration – Venture capitalists prefer to invest in companies that have little competition. In today's cost-constrained healthcare environment, they also want the products to be cost-effective to ensure rapid market acceptance. Venture capital investors are concerned about the potential difficulty a company will face in convincing reimbursement agencies – both government payors (Medicare and Medicaid) and private payors (the Blue's, HMO's, PPOs and indemnity carriers) – about the need for the product. Unless these agencies are willing to provide reimbursement, hospitals and physicians will be hesitant to use the product. From a

venture investor's perspective, when a product is approved for reimbursement, the company's valuation will be higher.

The availability of a cost-effective method for selling products is important, too. Options include utilizing distributors, dealers and/or manufacturer's reps; direct selling; and selling through another company (original equipment manufacturer or OEM). The selling approach should be selected after analyzing the number of potential accounts, potential annual sales per account, and the projected sales cycle or time to convince prospects to buy.

For example, a \$500 single-use product that has a 70% profit margin and is needed by urologists on every procedure will probably be sold profitably by a direct sales force. There are 8,000 urologists in practice, and the annual purchase per physician is significant relative to the cost of selling. On the other hand, selling options are limited for a \$500 instrument that has a 50% profit margin, is sold to 35,000 surgeons but has no follow-on sales potential. In fact, the profit may not be sufficient to fund the development and selling costs.

VII. Management Team – Shares of a start-up company are usually allocated three ways: to the founders, to venture investors and to a stock option pool used to entice key future employees.

Since the management team must be acceptable to venture capitalists, it is usually wise to allow investors to participate in recruiting and hiring senior personnel – especially the chief executive officer. If all management team members are in place, and if all are satisfactory to the venture investors, the company is likely to have a higher valuation because the risk of attracting key executives has been reduced.

VIII. Profit Margins – Companies that have products with high profit margins will provide a better return to investors and will usually receive a higher valuation than companies with low margin products. Typically, single-use devices and pharmaceuticals have higher margins than instruments and equipment.

IX. Total Capital Required – Most medical start-ups require two to four financings, depending on the difficulty of developing their technology and competing in their industry segment. As a company makes progress, successive financings will be completed at a higher valuation or price per share. However, with each increase in the amount of capital raised, early investors experience increased dilution. As a result, investors usually want a greater percentage of a company if it requires a large infusion of cash before reaching profitability.

X. Potential Future Value – To calculate a future value for the company, venture investors look at the price to earnings (PE) ratios of comparable companies and multiply this PE by the start-up's projected earnings in a future year (the fifth year, for example). If the industry segment carries a high PE ratio, investors will be prepared to offer the start-up company a higher valuation.

Venture capitalists also look at the buy-out prices of comparable companies that have been acquired. As the prices received for comparable companies increase, so does the start-up's valuation.

XI. Time to Liquidity – The time required for an investment to turn into liquid securities or cash is important. The sooner cash is realized, the higher the rate of return. Liquidity is usually achieved in one of two ways: either the company makes an initial public stock offering, or it is acquired by another

company. The ability to raise money through a public offering is determined by the company's performance and the willingness of public investors to buy the securities. Prior to going public, most companies are profitable.

Questions About Valuation

Two other issues should be considered when talking with venture capitalists about valuation:

I. Should a company accept the highest pre-money valuation? Founders need to think in terms of what is necessary for long-term success. If a company has a strong probability of meeting all of its milestones, a high valuation may be justified. On the other hand, if the company's ultimate performance does not meet the expectations of investors who paid a high price, future financings may be difficult to obtain.

It's usually more profitable to select venture capitalists who can provide important business skills, in addition to funding, and are prepared to invest in future rounds of financing. Venture capitalists who have a proven track record of helping to build medical companies can help founders reach their business goals and achieve a higher valuation over time.

II. What if all offers to invest are too low? If all offers from venture capitalists are lower than the founders want, and if valuation is the most important issue, founders may be tempted to talk with other investors who are less sensitive to price, such as private individuals. Several problems may occur, however. First, these investors might not help increase the value of the company. Second, they may have limited financial resources and be unable to provide ongoing funds when needed by the company.

As an alternative, founders may use personal resources to finance initial product development or perform research that makes the opportunity more attractive to potential investors.

Issues to Consider Regarding Founder's Shares

I. **Control Limit** – Most venture capitalists will not invest in a company where one person controls more than 50% of the shares. The risk is too great that the whims of a single individual might harm their investment.

II. **Vesting** – All founders and management will be expected to vest their shares in the company over a period of time – usually four years – rather than receive full ownership of their shares from the start. While founders may object to vesting, believing that they already have full ownership, investors make this a requirement in order to insure that the individuals will stay with the company and contribute their skills until significant value is realized.

III. **Co-Sale Agreement** – Venture investors will usually allow founders to sell a portion of their founding shares, usually up to 10-15%, without restriction. Beyond this, the founders can sell shares only if the investors can also sell their shares. This prevents an outside investor, usually a corporation, from buying only the founding or management team's shares, leaving the investors with illiquid stock and no management to run the company.

Examples of Actual Valuations

I. **Medical Device Company** – A start-up company developed a prototype of an implantable device, placed the prototype in three animals, and filed a patent application. The CEO and vice

president of research and development were co-founders and had both held senior research positions in other device companies. A proposal was made by a group of venture capitalists to invest \$1,585,000 at a pre-money valuation of \$1,615,000, giving the company a post-money valuation of \$3,200,000. Twelve percent of the company stock was set aside for use in recruiting additional management team members; the two founders retained a total of 39% of the company; and the venture capital investors owned 49% of the equity.

II. **Biotechnology Company** – A molecular biologist conceived new technology for developing pharmaceuticals. No patents had been filed, and reduction to practice had not begun. A seed financing of \$550,000 was invested in his start-up company at a pre-money valuation of \$750,000, giving the company a post-money valuation of \$1,300,000. After carving out 21% for an incentive stock option plan to recruit management, the sole founder retained 37% of the company, and the venture investors owned 42%.

III. **Service Company** – A healthcare service company with minimal regulatory hurdles was founded by three

individuals. Each of the founders had been involved in other healthcare service companies, and one had started a business similar to the present company. Investors agreed to provide \$1,500,000 in financing at a pre-money valuation of \$1,782,000, resulting in a post-money valuation of \$3,282,000. After reserving an 8% option pool for additional management, the founders retained a total of 46%, and the venture capital investors held 46% of the equity. Within six months, the company began treating patients and generating revenues.

IV. **Nine Seed/Start-Up Investments** – The author is aware of nine venture capital investments for seed/start-up medical companies that have been made by three different venture capital partnerships during the past several years. The average amount invested in these nine companies was \$1,122,000, and the average pre-money valuation was \$1,200,000, resulting in an average post-money valuation of \$2,322,000. For these nine companies, an average of 37% of the equity was retained by the founders, 16% was set aside for incentive stock option plans to recruit management, and venture capital investors purchased an average of 47% of the company stock.

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V E N T U R E S

De Novo Ventures is a lead venture capital investor focusing on the early stage financings (the seed, start-up and first round) of medical companies in the western U.S., particularly in California.

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