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INTRODUCTION TO "ANGEL" FINANCING

There is no standard definition of an angel investor. The most widely accepted one is that angels are financially sophisticated, wealthy individuals, with net worths exceeding $1 million, who invest their funds on a part-time basis in startup or early-stage ventures. Surveys of angels have shown that they are middle-aged (average age of 47), experienced entrepreneurs with advanced education whose wealth is partly derived from one or more successful entrepreneurial ventures. Angels typically invest in companies that are in an industry the angel is familiar with, are located near the angel's home (one hour's driving time is the standard radius), and appear to have high growth potential, proven management, and sufficient available information for the angel to assess the company's value. The primary screening criterion for angel investments is whether the angel or an associate of the angel knows and trusts the entrepreneur.

The typical angel invests between $25,000 and $250,000 in companies needing $50,000 to $1 million. The angel usually wants an expected return between 10 percent and 15 percent above the Standard & Poor's 500's return on equity. Angel investors are often less focused on returns than professional venture capitalists are, and sometimes angels make investments for nonfinancial, altruistic reasons. The typical holding period for an angel investment is five to seven years. Many angel investors make only one investment a year, though some may make four or more.

Besides their money, angel investors often provide active assistance to the companies they invest in. This assistance can include technical and marketing help, advice on strategy, financing, and recruiting, help with equity offerings and acquisitions, and an extensive external contact network including potential customers, vendors, and financing institutions.

The Different Types of Angels and Their Characteristics

Angels fall into several broad classifications based on their experience and motivation in making investments. They vary greatly in their experience, both in making early-stage investments and in managing businesses. Angel investors also vary greatly in their motivation. An angel's motivation can range from a primary focus on return on investment to a primary focus on fun and the attraction of a high-risk rush to a primary focus on helping others and giving back to society.

This technical note was prepared by Richard D. Crawford. Mr. Crawford acknowledges his debt in preparing this note to *Finding Your Wings* by Gerald A. Benjamin and Joel Margulis (New York, John Wiley & Sons, 1996). Although a number of research resources were used in the note's preparation, this book was particularly helpful. The reader desiring further background on this subject is referred to this book.

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There are five basic types of individual angel investors:

- value-oriented, deep-pocketed investors
- partner investors
- barter investors
- manager investors
- socially responsible investors

Value-oriented, deep-pocketed investors are the most focused on return on investment. Socially responsible investors are the type of angel least focused on return on investment. The socially responsible investor seeks the highest level of personal satisfaction and psychic rewards, which are least important to the value-oriented investor.

Value-oriented, deep-pocketed investors are the most frequent and most prominent type of angel investors, although most angels have a mixture of motivations that includes at least traces of all characteristics. These investors seek attractive investments offering returns in the 50 percent range. They usually bring both substantial capital and practical business experience to the investment process. The practical business experience often comes from successful careers as entrepreneurs who built and sold at least one company or from careers as investment bankers. These angels want to be involved in the business, to have fun in the business, but not to run the business because they often make investments in several companies. They are quite willing to have their equity diluted as necessary to finance rapid, profitable growth. They have little emotional hesitation about selling the company to capture their profits.

Partner investors are usually buyers in disguise. Partner investors would typically prefer to purchase a company but lack the financial resources to do so. Consequently, these investors usually have a very high need for control and often want to be president of the company they invest in. This investor will normally invest in only one company at a time and expect to be deeply involved in its operation. They will be willing to sell the company if the sale generates enough capital so they can buy another business. Partner angels may, however, become attached to the operation and be reluctant to give up their chief-executive position.

Barter investors want to provide their investment in kind rather than in cash, typically offering goods and services the company would otherwise use cash to purchase. These investors typically want to invest in early-stage ventures and to participate in the company and provide management assistance. A business incubator, which provides office or other types of space and a variety of associated business services in return for equity in an early-stage investment, is the classic barter investor.

Manager investors are affluent, senior-level executives or former business owners re-entering the workforce and buying their "last job." These investors want one long-term investment and seek a high level of involvement for an extended period. Because of their objectives, manager investors typically seek more developed ventures with less risk and take a very long time to accomplish a due diligence investigation. They may be less willing to sell the company than value-oriented angels.

Socially responsible investors want to be associated with individuals with high social and moral values in ventures addressing social needs. These investors seek a reasonable return on an investment that supports their social values. They often enjoy inherited as opposed to

earned wealth. They generally like to be involved in the venture but do not have the business experience and savvy that successful entrepreneurs provide. They are also likely to be distracted by many social obligations that make it difficult to devote extended periods to the investment's operation. They may, however, have an excellent network of contacts.

In addition to these types of angel investors, there is the family-angel investor. The family pools its resources and selects an astute, trusted, skilled family member to coordinate the investment effort. A family-angel investor is very common in the Asian-American community.

The Significance of Angel Financing in the Private Capital Spectrum

Angel financing is the most significant form of financing for startup and early-stage companies other than funds provided by the founders and friends and families of the founders. The availability of angel investors stems from the general wealth of the U.S. economy. According to U.S. census data, in 1990 there were 2.6 million households with net worths over $500,000, totaling $4.5 trillion. The breakdown of these households is shown in Table 1.

Table 1
Households with Net Worth more than $500,00 in 1990

Household Net Worth	Number of Households
From $500,000 to $1,000,000	1,774,000
From $1,000,000 to $5,000,000	672,000
From $5,000,000 to $10,000,000	159,000
Above $10,000,000.	9,300

Source: Bureau of the Census, 1990 Census

These 2.6 million households provided the angel investors, with the bulk of them concentrated among households with a net worth between $1 and $10 million. Since 1990, the tremendous increase in the value of the stock market and substantially higher incomes among the highest-income Americans have dramatically increased the pool of potential angel investors. Although new census data on household net worth will not be available until after the 2000 census, *Forbes* magazine in July 1997 estimated there were over seven million millionaires in the United States, substantially up from the number in 1990. Much of this wealth has been created by the surge in value of technology companies.

Because angel investment is private and not publicly reported, the total size of the angel market is not easy to determine. A variety of studies has generated a wide range of estimates of the market's size. A study for the SBA by Robert Gaston estimated that individual private

investors annually put $55 billion in 720,000 companies. Freear, Sohl, and Wetzel estimated that 250,000 angels invested between $10 and $20 billion annually in 30,000 high-risk startup and early-stage firms. Their estimate is lower in total but implies a larger average investment per firm. The study also estimated that the total pool of angel capital invested in early-stage companies was $300 billion. Another study, by the Federal Reserve Board, had yet lower figures. This study estimated that angels invested about $3 billion annually in 10,000 firms. What is clear is that angels invest in more firms than venture capitalists, invest earlier in the firm's life cycle, and invest as much or substantially more than venture capitalists invest. The angels, however, invest substantially smaller amounts than venture capitalists invest.

What Angels Look for in an Investment

Even though angels invest early in a business's development, they look first and foremost to invest in a business, not an idea, and in a business with significant potential. In financial terms, this means the angel wants to invest in a business with a minimum return on investment of 30 percent or higher, depending on the firm's stage of development.

Angels also often want to have intangible rewards from their investment because they typically already have enough net worth to ensure their comfort. Thus, enjoyment of their involvement with the business and the investment process is often as important to them as the return on the money they invest. Intangible rewards for angel investors—in different proportions depending on their type—include being active and maintaining an involvement in businesses they know and are interested in, being intellectually stimulated by new ideas and new technology, and being socially responsible.

This means that their evaluation of the business includes a determination of whether the business's product or service is something they can identify with and get excited about. Angels therefore might invest in a business developing a new cure for cancer even though the expected return may be far in the future. Angels, however, are unlikely to invest in nursing homes or funeral homes although these may promise handsome profits much sooner than the cancer investment.

Part of the fun for most angel investors comes from the satisfaction of making smart investments, so they critically analyze a company looking for certain characteristics that indicate business success. These include:

- a proprietary advantage in a unique technology that can act as a barrier to entry
- presence in a fast-growing market
- absence of entrenched players
- a quality management team as shown by its competence and past track record, perseverance and desire to succeed, and financial commitment

Typically, angels fund the people, not the business plan. Thus, a lack of mutual respect, weak credentials, or a limited track record of the management team can kill an angel's interest. Similarly, angel investors are unlikely to invest if they cannot understand the company's technology or its market. Finally, if the entrepreneur unrealistically overvalues the venture, the angel might reject the investment.

How Angels Value a Company

Valuation is the central task to be completed before an angel makes an investment. Because there is no active secondary market in the stocks of early-stage companies, valuation is a major challenge for the angel and the entrepreneur. The lower the valuation, the lower the risk for the angel, and the greater likelihood that the angel will invest. The greater the valuation, the higher the risk for the angel investor. Obviously, angels will want the lowest valuation possible in making their investment. On the other hand, the greater the entrepreneur's valuation of the company, the lower the company's cost of capital and the higher the total ultimate reward to the company's entrepreneurial management. Consequently, the company's management will want the highest valuation possible for the company when determining the share of equity the angel will receive.

Valuation of an early-stage business is extremely difficult because the company typically has no or very limited operating history for revenues, expenses, and profits. Furthermore, early-stage businesses usually have limited assets, which puts them in a different position than a well-established, existing business with physical assets whose value can be determined by well-defined formulas. Valuation of an early stage business is thus a highly subjective process with many elements. The assessment must include:

- the experience, track record, commitment, and reliability of the business's management team
- the size and growth rate of the business's market and the amount of market development required
- the nature of the business (manufacturing, service, or retail)
- the competitive position of the business's product or service
- the nature of additional financing requirements and other investors' responses
- the likelihood of an easy exit

Valuation can be viewed very differently by the company's entrepreneurial management and the investor. Entrepreneurs typically put great weight on the "sweat" equity (unpaid time and effort) they have put into the business. This perspective focuses on past investment. Investors typically look to the future and the likelihood they can recover their investment together with an attractive financial return. This difference in viewpoint and the subjective nature of valuation in early-stage investments can make achieving a satisfactory agreement on valuation very difficult.

The reality of valuation in an angel investment is that the investors' viewpoint wins. The angels' wishes prevail because of the imbalance in the demand and supply of capital for early-stage ventures. Active angels normally enjoy a surfeit of early-stage investment opportunities, so they can make investments at valuations with which they are comfortable.

In valuation, the perceived degree of risk is the critical variable. The greater the perceived risk, the higher the expected rate of return investors will demand to compensate for it. Because the rate of return is used to discount the venture's projected income stream, the higher the perceived risk, the lower the valuation, and vice versa. The valuation in turn translates into the percentage of the business that must be surrendered for a given sum of money. Therefore, the higher the perceived risk, the greater the percentage share of the business the entrepreneur

must give up to get enough money. The one exception to this rule involves socially responsible investors. This type of investor might accept a smaller share of a business than justified by the investment, and thus a lower return on investment, to support a business the investor believes has substantial social value.

Reflecting the relationship between projected income streams and the discount rate applied and the relationship between estimated value and the percentage of a company that must be given up, three basic principals govern valuation. To raise a given amount of capital:

- the greater the expected value of a venture in the future, the smaller the percentage of a company required to be given up
- the longer the track record of a new venture, the lower the perceived investment risk and therefore the smaller the percentage of a company that must be given up
- the shorter the expected period until liquidation, the lower the perceived risk and the smaller the percentage of a company that must be given up

Table 2 shows the expected returns at different stages of a company's development and the likelihood of angel investment.

Table 2
Return on Investment Expected by Angels
at Various Stages in a Company's Lifecycle

Company Stage (Angel Risk)	Targeted Internal Rate of Return
Seed/start-up (high)	60 to 100%
Development+ (high)	50 to 60
Management team/revenues/expansion (medium)	40 to 50
Profitable but cash poor (medium)	30 to 40
Rapid growth (low)	25 to 35
Bridge to cash out (low)	25+

Source: *Finding Your Wings*, Benjamin and Margulis, p.87

These relationships suggest that negotiations about valuation will revolve around the projected future income of the company, the company's actual record, and the likely liquidation scenario for the company.

There are several truisms in the valuation process. First, investors usually do not share the enthusiasm for the enterprise that the entrepreneur has and must be convinced of the merits of the opportunity. Second, investors are risk-adverse. Third, investors always discount projections when evaluating an investment proposal. Fourth, most exits from early-stage investments come from the sale of the company, not from an IPO. And fifth, computation of future valuation of the company is irrelevant if the company does not survive.

Table 3 shows the experience of venture-capital investors with the survival of their portfolio companies and the returns on their investment. The time dimension is absent from those figures, however. A doubling of an investment over ten years is not a very attractive return to an angel.

Table 3
Distribution of Returns on Venture-Capital Portfolios

Investment Status	Percentage of Venture Capital Portfolios
Total loss	11.5%
Partial loss	23.0
Break even	30.0
2 to 5 times investment	19.8
5 to 10 times investment	8.9
10 or more times investment	6.8

Source: *Finding Your Wings*, Benjamin and Margulis, p. 177

As the experience of professional venture capitalists shows, even companies that are carefully screened by full-time investment professional have a high risk of failure. Consequently, in determining an acceptable valuation, rational angel investors always focus carefully on the likelihood of the venture's surviving. Smart angels also try to follow the venture capitalist's diversification approach to investment, making small investments in several companies. This technique does not preclude an attractive return on an angel's investment, even allowing for the failures. Achieving the results shown in Table 3 over a five-year period would provide a compound return of 15 to 20 percent on the portfolio.

Structuring an Angel Investment to Manage Risk

An angel investment may be structured in a variety of ways including common stock, preferred stock, convertible-preferred stock, debt, convertible debt, and royalty payments singly or in combination. Angel investors are often less focused on control and risk reduction than professional venture capitalists are. They thus make less use of control mechanisms such as board seats and voting rights in structuring an investment. However, they do use these control mechanisms on occasion.* The angels' goal in structuring an investment is to control their risk

* See *Legal Aspects of Financing the Emerging Company with Venture Capital and Public Issues* (UVA-F-1276), pp. 2-7, for a more complete discussion of risk-shifting techniques venture capitalists use.

in the investment and to enhance their chances of recovering the value that they paid for when investing.

Every investment has risks. The early-stage companies that angel investors specialize in have the same basic risks other investments have except these risks are magnified by the early-stage nature of the company. There are five basic risks that the angel must manage: management risk, product risk, market risk, operations risk, and financial risk.

Management risk revolves around the chance that a cohesive management team cannot be formed. *Product risk* relates to the possibility that the product will not work. *Market risk* is the chance that the market will not accept the product. *Operations risk* stems from the possibility that even if the market accepts the product, the company cannot produce the product in the volume and quality that the market requires. And, *financial risk* derives from the accuracy of the company's projected capital requirements and the chance that the amounts projected will not be sufficient for the company to survive.

Angel investors use a variety of techniques and strategies to manage the risk associated with their early-stage investments. These techniques and strategies fall into five categories:

- screening and analyzing individual deals carefully before investing
- spreading risk by diversifying investments across a range of companies and sharing investment in an individual company with other investors
- negotiating steep discounts from the company valuation offered by the entrepreneur
- negotiating terms and conditions coupled with a staged investment schedule to maintain an element of control after the investment is made
- monitoring the company continuously after the investment is made

Once an investment is made, it is difficult for angels to recover it, even if it is debt, unless the company is successful. Therefore, it is very important for angels to monitor their investments so they can exert pressure on management to take timely action to remedy problems. Angels use a variety of approaches to monitor a company and to ensure that timely action is taken. These include, first, tracking financial progress through tight controls and strict financial reporting requirements, including monthly financial statements, regular meetings with management, and regular tracking and comparison of performance against business plan objectives. The second approach is vigilant enforcement of the terms and conditions of the investment contract.

How Angel Financings Are Organized

An angel financing may be organized by an entrepreneur's directly contacting an individual angel whom the entrepreneur either knows through past association or through friends and acquaintances. The contact also may be found through a formal introduction channel such as angel clubs and funds, venture forums, venture fairs, broker dealers specializing in these types of investments, private-investor networks, and online matching services. Although formal introduction channels are growing, most angels appear to rely on informal networking through friends, family, and other investors and business associates to find potential deals. This practice limits typical angels to investments located near their homes, within reach of their informal

networks. The limitation may be unfortunate where there is a mismatch between angels and opportunities, but it is consistent with the desire of many angels to be conveniently involved with their investments.

Generating deal flow can require significant effort by new angel investors until they are well established. Productive activities include:

- offering to mentor local entrepreneurs
- contributing articles to venture-related publications
- teaching evening courses or participating in programs at local educational institutions
- joining venture-capital clubs and private-capital networks.

Once they are well-established as angel investors, angels usually have a steady deal flow through a referral process.

A recent development in angel financing has been the growth of *angel funds* or *structured angel investing*. These organizations offer a way to overcome the individual angel's limits in generating deal flow, in monitoring and advising companies they invest in, and in diversifying their investments over more companies. In angel funds, a group of angels, ranging in number from 10 to 75, join forces to pool their capital in a common investment fund. The fund provides investment cash, and the angels provide advice to portfolio companies. The angel investors in the fund sit on the company boards, allocating their time to selected portfolio companies. This division of labor puts angels on all boards without every angel's having to serve on all of them.

Because they represent a larger pool of funds than a single individual angel investor, angel funds find it much easier to attract a deal flow than a single investor does. Similarly, pooling the angels' expertise and focusing that expertise on selected portfolio companies where it will have the most impact improves the angels' monitoring and advising functions. Moreover, the arrangement makes it easy to call on non-board members of the angel group if their particular specialty is needed. Finally, by pooling their funds, the angels can diversify their portfolios by having smaller investments in more individual companies.

Although they are a type of early-stage venture fund, angel funds differ in two ways from the usual early-stage fund. First, the partners in the angel fund are seldom full-time investors. Second, the partners are investing their own funds and not funds they have raised from institutional investors. The larger angel funds often have a full-time professional manager who handles its administrative functions. The manager, however, does not make the investment decisions or monitor the portfolio companies.

Common Pitfalls of Angel Investing

The investment-success ratios in Table 3 indicate that two-thirds of the angel investments are not successful. Despite the spectacular success of some startup companies in the 1990s, most startup companies experience serious problems. Planning for these eventualities in advance helps insure that mechanisms are in place should they be needed.

The Investor's Perspective

From the investor's perspective, angel investing—that is, direct investment in a startup or early stage company—is fraught with a variety of risks not associated with an investment in a public company. Even experienced angel investors sometimes find themselves tripped up by pitfalls that only apply to early-stage, private companies.

The most common pitfall for an angel investor is getting locked into a company with no attractive way out of the investment. An investment with this characteristic is called a member of the "living dead." From the investor's standpoint, this is a form of financial purgatory. The second most common pitfall for an angel is investing in a company whose management proves to be unable to handle the firm's growth, requiring the angel to act to save the company and the investment. This experience is often a painful one and sometimes costly as well.

Because of the high risk of being locked into a company, angel investors are very interested in creating a liquidity event. A *liquidity event* is an action that allows investors to recover their investment or in some way make it liquid so they can dispose of it. The most common liquidity events are selling stock back to the company, a merger or an acquisition by a public company, trading the illiquid stock to another investor for public securities, selling the company to other investors or entrepreneurs, and an initial public offering.

To increase the likelihood of a liquidity event, experienced angel investors insist on special provisions in their stock purchase agreement providing them with a variety of ways to exit the company. Because of the risk of failure by the company's management after the angel has invested, angel investors also seek provisions that allow them to change company management or takeover the company.*

The Company's Perspective

An angel investment can be a blessing or a curse for a company. From a financial standpoint, an angel's equity investment has the pluses and minuses of equity generally. The pluses for a company include the benefit of growth capital without the fixed expense of debt service, the maintenance of financial flexibility to allow borrowing for other opportunities, and access to capital earlier in the company's life cycle than would be otherwise possible. The minuses include a high cost of capital—the angel provides capital expecting a return greater than 30 percent—and the dilution of existing shareholders.

There also can be blessings or curses in the nonfinancial, personal relationship between the angel and the company. Much depends on the angel, the angel's background, and the angel's motivation. Besides cash, the blessings the angel can bestow on a company include valuable contacts and valuable advice, particularly if the angel is an experienced entrepreneur with a background in the company's industry. The angel's investment can be a curse if the angel's personality clashes with the company management's or if there are serious differences over the direction the company should take. This conflict can be particularly difficult if there

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* It is usually possible for an angel to exit somehow. If the alternative is not appealing, however, the exit will probably be at a significant loss by sale of the investment back to the entrepreneurs. See *Legal Aspects of Financing the Emerging Business with Venture Capital and Public Issues* (UVA-F-1276), pp. 5-6.

are differences over such issues as bringing in additional investors or the potential sale of the company.

Manager investor angels can be a particular problem. After a long and successful corporate career, a manager investor often faces a difficult adjustment to the reality of a truly entrepreneurial organization. In addition, because manager investors typically make only one angel investment—as a way to get the final job of their career—which may be a significant portion of their total net worth, they can be very sensitive to any financial difficulties the company experiences.

Another type of angel who can be a particular problem are angels who want to micro-manage the company they have invested in. Sometimes these micro-managers have gained their wealth through inheritance, but usually it has come through building a successful company. Through this experience, they have developed certain approaches to business. They may try to force these approaches on the company they have invested in even if these approaches are not appropriate. Partner investors have a very strong tendency to be micro-managers.

The Important and Unique Role of Angels

Angels are extremely important to the development of new businesses and the growth of the economy. By supporting the early development of new business ideas with both capital and management expertise, angels help generate a steady flow of improvements and new products and services to the economy that assures its constant renewal. Because venture capitalists normally fund businesses a bit later in their development than angels, usually after one or more angels have invested in the business, angels play a critical role in screening the one million startups annually in the economy. Their participation is critical in determining which businesses will evolve to the more exclusive realm of venture capital.

Because angels often decide to invest based on the perceived business opportunity, as opposed to purely family or friendship considerations, angels play a critical role in rational allocation of risk capital to early stage ventures. The old axiom, “Fools rush in where angels fear to tread,” illustrates the angels’ important role in rational evaluation of new business’s prospects and in supplying the early stage seed capital and management expertise necessary for the fledgling business’s success. A major hidden strength of the U.S. economy in the 1990s, which contributed to its dynamic growth and entrepreneurial strength compared to the European and Japanese economies, was the depth and breath of the U.S. angel community and its support of new entrepreneurial businesses.