

BUSINESS ANGELS:
ATTITUDES, BEHAVIORS AND CHARACTERISTICS

by

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Submitted to the Alfred P. Sloan School of Management and the School of Engineering
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ABSTRACT

Business angels are a diverse set of individuals who invest a portion of their assets in high-risk, high-return entrepreneurial ventures. Also known as private equity investors, solo or private venture capitalists, and informal investors, angels are illusive and difficult to locate. Nonetheless, the magnitude of aggregate angel resources are very substantial, ranging from \$25 billion to \$50 billion by some estimates. They may contribute anywhere from \$25K to \$500K to one venture.

In this thesis, critical aspects regarding the investment opportunity and characteristics of the entrepreneurial team are reviewed from the angel's perspective. Varied approaches to structuring and pricing private equity are profiled. Monitoring and mentoring their investments requires special considerations and care by informal investors. A large proportion of startup companies fail, even after a strong start. Turnover amongst founders is very high, for they often lack the insight necessary to perceive and then lead their company as it matures. Interviews with angels and those that work with them were conducted. This thesis addresses these issues and provides a descriptive study of the attitudes, characteristics and behaviors of business angels.

Thesis Supervisor: Professor Russell W. Olive
Title: Visiting Senior Lecturer

Dedications

To Mary: Thanks for your support during the past year in school, and throughout our marriage. Your encouragement kept me going when I doubted myself. Your loving motherhood ensured our daughters were well taken care of in my absence.

To Amy and Ciara: Girls, perhaps someday you will read this and understand why your father was never home during the 1995-96 school year. I can only hope you will some day find school as enjoyable as I did this year.

To Mom and Dad: Thanks for your advice on many subjects big and small. I was lucky to grow up with such supportive parents.

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I am indebted to Professor Russ Olive, my thesis advisor, for both suggesting this topic and managing my progress towards its completion. Many classmates, as well as myself, learned how to be both leaders and managers in his classroom.

Biography

Steven G. Franck received his Bachelor of Science in Mechanical Engineering from Cornell University in May 1979. His NROTC scholarship at Cornell subsequently resulted in lengthy service to his country as a naval officer and aviator. After flight school, he ultimately became qualified as a P-3C Aircraft Mission Commander, leading a 17 man crew to track high speed, maneuvering Soviet submarines in the North Atlantic. While working in Washington DC, he was assigned additional duties at the White House. Competitively selected for a transition to jet aircraft, he subsequently flew EA-6B tactical electronic warfare aircraft from the carriers USS Forrestal and USS Saratoga. Selection as a Aerospace Engineering Duty Officer led to a Masters of Science in Operations Research from the Naval Postgraduate School in Monterey, California in 1991. His last assignment was outside Tokyo as Director of Operations and Planning for a 165 person organization, directing the repair and overhaul of damaged Pacific Rim military aircraft using Asian aerospace firms. After completing his naval service, the author joined a small, venture capital backed wireless communications company in the Boston area as the Vice President of Programs. Following the completion of his degree at MIT, he plans to join the Morgan Stanley & Company Equity Research group in the summer of 1996.

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Chapter One:

Introduction

In 1979, the largest Fortune 500 industrial corporations in the United States employed 16 million people. In 1996, that figure has fallen to under 12 million. During the same period, our entrepreneurial economy has generated over 24 million positions.¹ Where does the patient capital necessary to generate this many new jobs come from? According to John Mumford of Crosspoint Venture Partners,²

"Few venture funds specialize in seed investments. It's the gap between \$100,000 and \$1 million that's still unfilled".

Ironically, as more money is raised, less goes to seed investments. Seed stage investments need relatively little capital, but demand time consuming management attention.

Unfortunately many successful venture funds have not added enough partners to deal with a multitude of seed and startup companies. If it is difficult to attract the attention of a professional venture capitalist, where else can the entrepreneur go?

Business angels are private individuals who contribute risk capital to young startup companies. Angels are also known as private equity investors, solo or private venture capitalists, and informal investors. The magnitude of their contribution is extremely difficult to quantify.

¹ Center for Venture Research, University of New Hampshire, "Innovation, Technology and the Information Revolution Creating New Capital Markets for Emerging Ventures", prepared for SEC Government Business Forum on Small Business Capital Formation in Providence, RI, September 1995, p. 4.; paper provided to author by William E. Wetzel, Jr.

² Ibid.

Many angels wish to remain invisible, and there are no public records or a "*Pratt's Guide*"³ to locate them. This market is typically regional, disorganized and highly fragmented. The "guardian angel" of business angel research is Professor Bill Wetzel. He believes the informal venture capital market revolves around 250,000 angels investing \$10-20 billion per year in over 30,000 ventures. Angel financings are generally in the \$100,000 - \$1,000,000 range for seed and startup companies.⁴

Because their substantial contributions thus far are not well understood or documented, this thesis will address the attitudes, behaviors and characteristics (ABC's) of angels. The author conducted 15 surveys with both angels and those who work with them. Presumably entrepreneurs wishing to solicit angels as potential investors will also appreciate the insights gleaned from this work.

Informal investors are a unique and sometimes competing subset of the venture capital community. Chapter Two will provide general background information describing the spectrum of venture financing. Historical investment by venture capital firms will provide some perspective for comparison with angels. Chapter Three will paint a portrait of angels, using both the limited research available and the author's explorations. Segmentation of the business angel market yields some interesting insight into angel behavior.

Chapter Four is focused on how angels evaluate, monitor and mentor their investments. Traits that angels look for in entrepreneurial teams, expectations prior to investing and common flaws seen after capital commitment are reviewed. Chapter Five discusses one of the "central mysteries" of venture capital ... pricing and structuring the deal. Several examples illustrate the different approaches to private equity valuation. The thesis closes with conclusions, recommendations and areas for future research.

³ *Pratt's Guide to Venture Capital Resources*, Ted Weissberg, editor-in-chief (New York, NY: Securities Data Publishing, 1995.). It provides profiles of over 600 venture capital firms, as well as relevant articles regarding the entrepreneurial process.

⁴ William Wetzel, 1995.

Chapter Two:

The Spectrum of Venture Financing

Business angels are generally early stage investors. In the interest of thoroughness however, this chapter will provide a review of the entire spectrum of financing available from various components of the venture community. The primary attributes of early stage, expansion and acquisition/buyout financing will be identified and explored. The role and impact of business angels will be discussed when known. Recent contributions of venture capital will be reviewed. The *Pratt's Guide* was the primary source of definitions in the subsequent paragraphs.⁵

2.A Early Stage Financing

2.A.1 Seed Financing

Perhaps the most active region for informal investors, “Seed Financing” is usually a relatively small amount of capital provided to an entrepreneur or inventor to investigate a business concept. This is the “idea stage” where the capital is used to “germinate the entrepreneur’s vision into a tangible reality”.⁶ It often occurs before the formality of incorporation. Sources of these funds include family, friends, angels, and occasionally venture capital funds that specialize in this arena. With these limited funds, the entrepreneur’s first task is to prove his concept, perhaps by building a prototype that shows technical feasibility. If the initial steps are successful, the recipient may next focus on product development, market research, building a management team and developing a business plan with his seed financing. It rarely includes initial marketing. Successful completion of this stage permits progression into startup financing.

⁵ *Pratt's Guide*, *ibid.*, p.12.

⁶ William R. Chandler, “PreStartup Seed Capital”, in Arthur Lipper III, *Venture's Guide to Investing in Private Companies* (Illinois: Dow Jones-Irwin, 1984.) p. 185.

Both Lipper⁷ and Chandler⁸ strongly recommend that informal investors are

“... best off sprinkling money on patches of talent in seed-capital investments. Doing this, he will get greater play for his dollar in terms of percentage interest [of the firm], even after all the subsequent dilution's that occur as the company acquires the funding necessary for its development ... In spite of their greater risk, very early stage speculations are frequently the most appealing [to angels].”

The author's research confirms this viewpoint is shared by many experienced business angels. The most sophisticated prefer a portfolio approach, starting with investments of \$25K+ in many different places as opposed to larger investments in fewer companies. They acknowledge the inevitability of dilution by later stage venture capitalists. Consequently, an important consideration is whether the venture will be appealing to later stage professional investors. Some angels believe it is “more fun” to invest in the seed stage because “their money goes farther ... they can buy more ownership for a lower price”. Lipper states that because seed capital investments are the most speculative, they should have a realistic potential for a 10 fold increase in a five year period. This equates to a 58% compounded annual growth rate. Chapter Five will provide further insight.

⁷ Arthur Lipper III, *Venture's Guide to Investing in Private Companies* (Illinois: Dow Jones-Irwin, 1984.)

⁸ *ibid.*, article by Chandler in Lipper, p. 185.

2.A.2 Research and Development Financing

R&D Financing is generally a tax-advantaged partnership that finances product development for startups and more mature companies. Apparently the Small Business Innovation Research Act of 1982 provided the impetus for this type of financing. Investors obtain tax write-offs but also can share in later profits should the product development be successful. The author did not encounter any angels who have invested using R&D partnerships. One disadvantage is that entrepreneurs will still require seed money for items which can not be expensed using an R&D partnership.⁹

2.A.3 Startup Financing

By this time, companies are completing product development and initial marketing. They may still be in the process of organizing, but may have not sold any products yet. The money is used for renting offices, hiring personnel, developing and maturing their products and services. They probably have been in business for one year or less. Normally they have assembled key management, developed a business plan and made market studies. Angel investors often continue their initial seed investments into this startup phase. They may have brought in other angel investors to join them, or perhaps they have enough risk capital to carry the company themselves. They find this a fruitful time to invest also, as valuations are still reasonable. Lipper believes a 300% improvement in projected returns over traded securities is warranted for informal investors because of risk and illiquidity.

2.A.4 First Stage Financing

First stage companies have expended their initial capital infusion, normally on developing and market testing a prototype. They will use first stage funds to initiate full scale manufacturing and sales. These financing rounds may become expensive, but angels continue to contribute both capital and time to assist their portfolio companies pass through this level. By this time they have had an opportunity to see the entrepreneur and

⁹ *Pratt's Guide*, *ibid.*, p. 10.

his team develop and mature. The product is also maturing, becoming refined and perhaps more complex. Angels continue to invest if they have confidence in the entrepreneur's team and the product they are backing. Timely infusion of capital for the sales effort is critical at this stage. This financing may also be contingent on making key management changes or achieving significant milestones.

2.B Expansion Financing

2.B.1 Second Stage Financing

These companies have made progress, although they may not be making a profit. The company is now expanding. It has increasing needs for working capital as it ships products, and deals with growing accounts receivable and inventory levels. A return of 200% over liquid investments is reasonable for informal investors according to Lipper. By this time, professional venture capitalists may be trying to "crowd out" the angel investors. Venture capitalists may extract more onerous terms than the relatively benign angel investor, who had perceived his role primarily as a mentor. Venture capitalists will likely receive board representation for instance. Failure of the company to achieve specific targets could result in the founders being pushed out of their venture. Depending on the relationship, the angel investor could be helping to transition the company to the venture capitalists, or be at loggerheads with them over company direction and management.

2.B.2 Third Stage or Mezzanine Financing¹⁰

By this time the company has overcome many of its early stage risks. Mezzanine financing is capital normally provided for a major expansion of a company whose sales volume is increasing. The enterprise is probably profitable or at least breaking even. Funds are used for marketing, plant expansion, working capital, or developing an improved product. Mezzanine financing falls in the region between straight common stock and senior debt

¹⁰ Jeffrey A. Timmons, *New Venture Creation; Entrepreneurship for the 21st Century (4th ed.)* (Boston: Irwin, 1994.) p.493.

financing. Timmons makes the following distinctions:

- Normally structured as subordinated debt with warrants or a conversion into common stock feature (known as an “equity kicker”). Occasionally it is redeemable preferred stock.
- This subordinated debt is generally unsecured with a fixed coupon and maturity of 5 to 10 years. Other variables include interest rate, maturity, call features, covenants, exercise/conversion price, sinking fund and put/call options.
- As debt, the interest must be paid on a regular basis. If not converted into equity, the principal must be repaid. Both payments could become problematic if expected growth or profitability does not materialize.
- Subordinated debt may contain covenants regarding net worth, debt and dividends.

Only a relatively few sophisticated angel investors remain at this stage. According to Lipper, those that do remain should expect a 50% return premium over traded securities. By this stage, the firm has almost always moved on to professional venture investors. They will expect to see a demonstrated performance record and sales approaching \$10 million or more. Venture firms segment themselves in the financing market also, so perhaps the firm also has a new set of venture capitalists. The author did not encounter any angels who had participated in mezzanine financing.

2.B.3 Bridge Financing¹¹

The *Pratt's Guide to Venture Capital Investing* describes “bridge financing” as that

¹¹ *Pratt's Guide*, *ibid.*, p.12.; a different viewpoint is provided by Timmons (1994, p. 756) which identifies bridge financing as “often employed to defray the essential expenses of a startup or development stage enterprise, while the lead venture capitalist completes the assembly of the investing syndicate or the preparation of definitive legal agreements” required for the investment.

needed when a company plans to go public within six months to a year. Proceeds from the underwriting are often used to repay bridge financing. Through secondary transactions, this round can also involve restructuring of major stockholder positions. This restructuring may take place if there are early investors who hope to reduce or liquidate their prior investment. Naturally these early investors may be business angels who desire to cash out their investment. Another impetus behind restructuring occurs when management has changed and their stockholdings, their relatives and associates are being purchased to remove a potential oversupply when the company goes public. Informal investors rarely provide the type of bridge financing described here, but may benefit from the restructuring required to prepare the company for a public offering.

2.C Acquisition/Buyout Financing¹²

2.C.1 Acquisition Financing

Acquisition financing is used for the purchase of another company. Informal investors could be involved in these opportunities, but only on a fairly small scale. In the most likely scenario, angels provide their own acquisition financing (or team with others), when interested in purchasing a company for themselves. The level of effort by informal investors in the acquisition financing arena is unknown and was not investigated.

2.C.2 Management/Leveraged Buyout (MBO/LBO)

MBO/LBO's often involve revitalizing an operation with entrepreneurial management acquiring a significant equity interest. These funds allow a management group to acquire a product line or business unit from a public or private company. It is surmised that angels do not significantly participate in this realm of finance.

¹² *Pratt's Guide*, *ibid.*; these paragraphs are expanded upon from the information located on page 12.

2.D Recent Contributions of Venture Capital

Perhaps venture capital started with the world's most famous entrepreneur, Christopher Columbus.

*"He didn't know where he was going, didn't know where he was when he got there, and was able to do it three times with other peoples money."*¹³

Venture capital encountered little trouble finding capital to back the next Christopher Columbus. The community raised a record \$4.4 billion in 1995, exceeding the previous record of \$4.1 billion in 1987. The following table provides some details.

Table 1: Recent VC Fund Raising¹⁴

Fund Raising Year	Capital Commitments by Year
1990	\$1.8 billion
1991	\$1.3 billion
1992	\$2.5 billion
1993	\$2.5 billion
1994	\$3.8 billion
1995	\$4.4 billion

¹³ Robyn Griggs, "Advice from the Trenches", *Colorado Business Magazine*, Jan 1, 1996.

¹⁴ R. Deger, "Special Report: Trading Places", *Venture Capital Journal*, February 1996, p. 36.

Not only was 1995 a record year, but the sources of the above funds are also changing. Currently, there is an overabundance of money chasing venture capitalists. “Improved industry returns, a hysterical IPO market and the media’s celebration of the entrepreneur”, as well as regulatory/legislative support have provided plenty of exposure to the venture industry as a viable institutional investment option. Co-incidentally, as the population ages, pension funds now have enormous funds to invest. Many institutional investors are clamoring to get top-tier venture funds to accept their money. Consequently, some venture firms can now pick and choose whom they desire as limited partners. These firms are “mobbed with investors”.¹⁵

Yet as a percentage of the total venture money raised, pension fund contributions have declined quite dramatically. For instance, it has moved from 59% of total fund raising in 1993 to only 38% in 1995. Pension funds often set minimum investment size policies and will limit how much of a venture partnership they can hold. This is often referred to as the “10/10” rule. Their minimum investment is \$10 million, and they can contribute no more than 10% of the venture funds total capital. This implies investing in at least a \$100 million dollar fund. But this conflicts with the current venture market, because fund sizes are also declining. Only 21 of 83 funds planned to raise greater than \$100 million in 1995. These issues together are constraining the number of venture funds that pension managers will even consider placing their money with.

While the contribution from pension funds has declined recently, wealthy families, individuals and banks/insurance companies have made up the difference. In 1995 these groups contributed 17% and 18% respectively, significant amounts that apparently were last seen nearly 15 years ago¹⁶. The following table provides a summary.

¹⁵ R. Deger, *ibid.*, p. 39.

¹⁶ R. Deger, *ibid.*, p. 39.

Table 2: Investment Sources for Venture Capital Funds¹⁷

Source of Capital Commitment	1994	1995
Pension Funds	46%	38%
Foreign Investors/Others	2%	3%
Corporations	9%	2%
Wealthy Families and Individuals	12%	17%
Banks/Insurance	9%	18%
Foundations/Endowments	21%	22%

Driven by the hot IPO market, immature companies have been able to bypass an additional round of venture capital and go directly to the public for their capital needs. As a result, valuations for later stage deals have climbed over the last two years. That has driven down venture capitalists return on investment in later stage companies. Consequently, venture firms are responding with smaller, niche and regionally focused funds. The following table reveals the venture industry's tremendous return to early stage financing, more recently a province of the business angel.

Table 3: Capital Commitment by Investment Stage by VC Firms¹⁸

Stage of Company	1994	1995
Early Stage	30%	45%
Balanced	44%	33%
Late Stage	26%	22%

In summary, venture capital raised a tremendous amount in 1995. This has changed the current dynamic within the industry. For example:

- More funds have started but fund size has decreased.

¹⁷ R. Deger, *ibid.*, p. 38; *Venture Capital Journal* cites *Venture Economics* as its source for this information.

¹⁸ R. Deger, *ibid.*, p. 38.

- There is increased competition within the venture industry for both hot investment opportunities and capital from institutional investors.
- Venture capitalists are moving back to early stage investments, where company valuations still permit an appreciable ROI.

Yet despite all this, there are still substantial capital needs that informal investors can fill, particularly for seed stage companies. For example, each year approximately 700,000+ businesses are started. Nearly 50,000 of those start-ups, as well as 300,000 ventures growing faster than 20% per year, need equity financing. Some informed estimates put the need for patient, high risk equity financing as high as \$60 billion per year.¹⁹

2.E Chapter Summary

This chapter has briefly explored both the spectrum of venture financing across all sizes of firms and recent activities within the venture capital industry. Fund raising is a critical strategic issue that must be contemplated by company leaders. Much time can be lost, and precious capital consumed if the entrepreneur pursues an unfocused or unwise approach. There are a number of factors which impact the raising of funds on acceptable terms. Timmons cites several, including²⁰:

- Accomplishments and performance to date.
- The investor's perceived risk and quality of the management team. This will drive the angel's subsequent required rate of return, terms and covenants.
- The industry and technology, and the ventures position within both. The ventures upside potential and potential exit strategies.
- The ventures age, stage of development and anticipated growth rate. The

¹⁹ Center for Venture Research, 1995, *ibid*.

²⁰ Timmons, (1994), *ibid*.

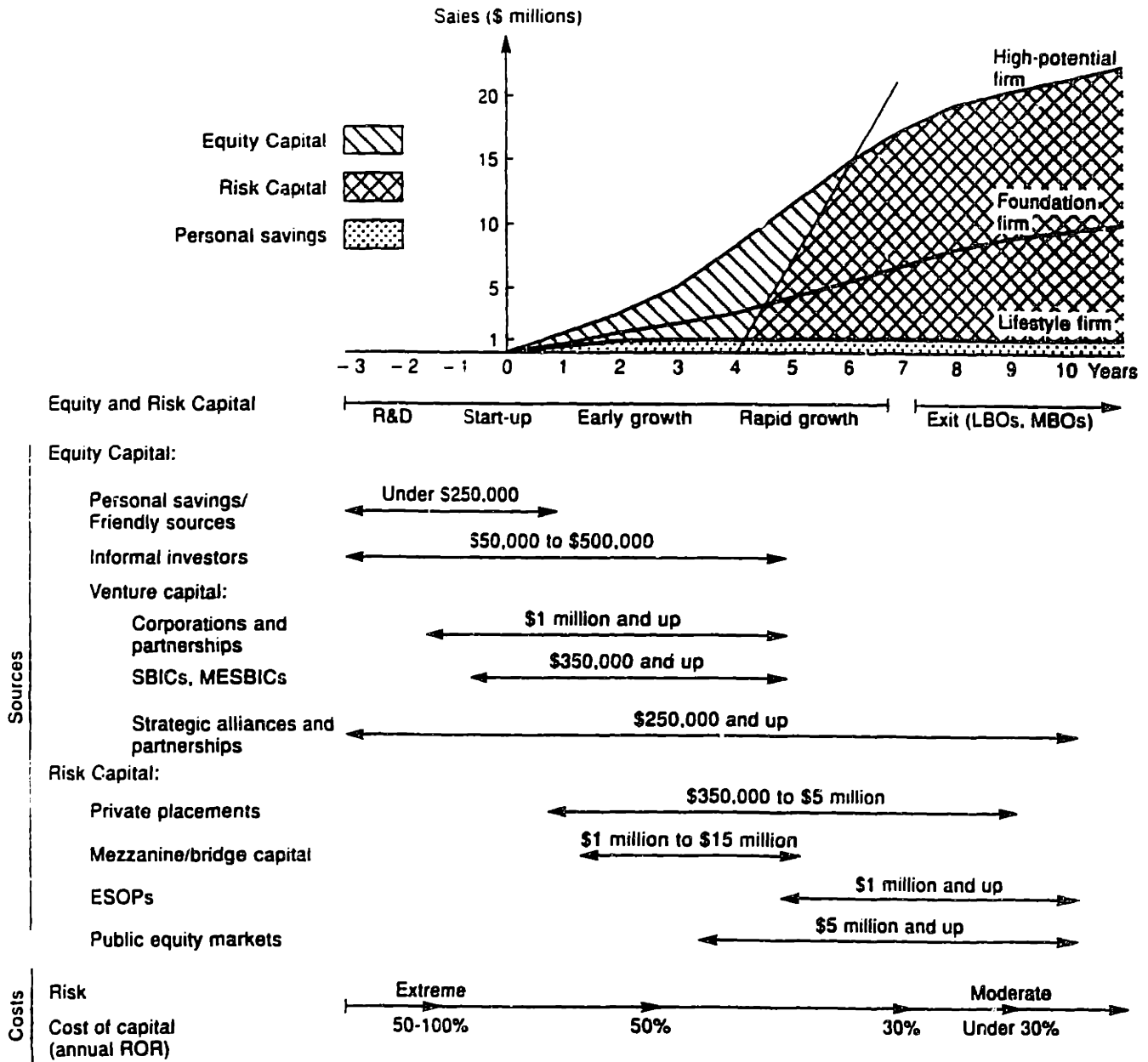
founders' goals regarding growth, control, liquidity and harvesting. The relative bargaining position of each party.

Figure 1 on the following page provides an overview of the sources and costs of equity and risk capital. Informal angels primarily contribute in the earliest stages of the enterprise. Their contribution could range from \$25K-\$500K and carry on from inception to 5 years past incorporation. This is where their limited capital and expertise can buy the most significant equity stake. They also believe that the younger the company, the riskier the investment. Timmons relates an old saying in the angel and venture community:

“The lemons ripen in two and a half years, but the plums take seven or eight.”

These issues and further details will be explored in subsequent chapters.

Figure 1: Financial Life Cycles



Source: copied from Timmons, 1994, page 455; adapted by the author from W.H. Wetzel, "The Cost of Availability of Credit and Risk Capital in New England", in *A Region's Struggling Savior: Small Business in New England*, ed. J.A. Timmons and D.E. Gumpert (Waltham, MA: Small Business Foundation of America, 1979), p. 175.

Chapter Three:

Profiles of Business Angels

Chapter Three will develop a business angel profile, using prior academic research and interviews conducted by the author. The chapter begins with a methodology for estimating the amount of potential investment money controlled by angels. Informal investor demographics developed by different researchers are reviewed and summarized. The chapter will close with the anecdotal description of angels that researchers (primarily Gaston) and the author have encountered and identified.

3.A How Vast are Angel Resources?

In many parts of the developing world, venture capital does not exist. It is quite common in developing market economies to raise capital from private groups or individuals. In 1903 for instance, Henry Ford started his empire with \$40,000 from five angels. This informal market still exists in the United States today, and plays a very substantial role. Yet despite all the ensuing years, angels and the amount of capital they control is still very difficult to quantify. Experts who have studied this subject for many years are at best only able to estimate the extent of angel resources. One assessment commonly used is anywhere from five to ten times that invested by formal venture capital firms. The following methodology used by Wetzel (1987)²¹, combined with updated information from the *Forbes 400* list, provides a rough figure:

²¹ William E. Wetzel, Jr., "The Informal Venture Capital Market: Aspects of Scale and Market Efficiency", in *Frontiers of Entrepreneurship Research 1987*, Neil C. Churchill, et. al., editors (Wellesley, MA: Center for Entrepreneurial Studies, Babson College, 1987.), p. 412.

Table 4: Estimating the Size of the Informal Venture Capital Pool

① Estimated Number of Millionaires in USA		② Average Net Worth of Millionaires in USA		③ Estimate of Total Wealth Controlled by Millionaires in USA
1 Million	x	\$1-\$2 Million	=	\$1-\$2 Trillion
④ Estimate of Total Wealth Controlled by Millionaires in USA		⑤ Assume average millionaire commits 10% of his wealth to venture investing		⑥ Possible Total Informal Venture Capital Pool
\$1-\$2 Trillion	x	10%	=	\$100-\$200 Billion
⑦ Possible Total Informal Venture Capital Pool		⑧ Assume only 25% of millionaires have any interest in venture investing (i.e. 250,000 individuals)		⑨ Pool of Informal Venture Capital controlled by Business Angels
\$100-\$200 Billion	x	25%	=	\$25-\$50 Billion

Even if these numbers are off by 100%, business angels control a substantial pool of money that is unspoken for. According to Professor Wetzel, these 250,000 angels invest nearly \$10 billion per year in 30,000 to 40,000 companies nationwide²². That equates to approximately \$40,000 per active informal investor per year. He believes angels back 20-30 times as many companies as venture capitalists do, but also that many good deals still go unfunded.

3.B Portrait of an Angel

Angels are exceedingly hard to find and quantify. Research on this subject has grown substantially in the 1980's and 1990's. During that time, it has even taken on a regional or international perspective, sometimes comparing angel investors in the US to those in Sweden or the United Kingdom. A survey by Freear and Wetzel (1989) interviewed 38 informal investors who had made 162 investments over the preceding five years. Aram (1989) based his study on the responses to a mail survey from 55 individual investors. Harr, Starr and MacMillan (1988) had originally planned to focus on informal investors in

²² *The Pratt's Guide*, 1995, *ibid.*, p.106.

the New York metropolitan market. They widened their cachement area after encountering difficulties gathering a statistically significant sample, eventually analyzing responses from 121 US east coast angels who had made investments within the last three years. Harrison and Mason (1992) presented the first study of informal venture capital in the United Kingdom. They obtained useable data from 86 subjects through postal surveys and “snowball” interview techniques, and compared the results with American angels.

Robert J. Gaston and S.E. Bell, under a contract to the US Small Business Administration Office of Economic Research, conducted comprehensive surveys with 435 business angels. These angels had made over 900 investments valued at \$60 million over a five year period. Gaston (1989)²³ later used these results in a book published by Wiley. Much of the following paragraphs originate from that source and interviews by the author.

3.B.1 Education

Perhaps not surprisingly, informal investors are fairly well educated. According to Gaston and Bell, only 12% have high school or less, and another 16% attended college but did not matriculate. However, nearly 44% have a bachelor’s degree, an additional 28% have a graduate degree, resulting in a total of 72% who have completed college. Of this group, Gaston provides the following breakdown by subject area:

- Business 44%
- Engineering 19%
- Law and medicine 10%
- Natural Sciences 7%
- All Others 20%

3.B.2 Age, Gender and Ethnic Group

Both Gaston (1989) and Freear/Wetzel (1989) found that angels had a typical median age of 47-48 years old (half older, half younger). Angels were particularly active between the ages of 35-65. Gaston surmises that they had been successful business people who were

²³ R.J. Gaston, *Finding Private Venture Capital for Your Firm: A Complete Guide* (New York: Wiley 1989.)

willing to help others and perhaps relive some of their past successes. An age group break down for Gaston's data includes:

- Less than 35 11%
- 35-44 33%
- 45-54 31%
- 55-64 19%
- Over 65 6%

The vast majority (nearly 84%) of the active angels in Gaston's sample were white males. Their gender and ethnic groupings include:

- White male 84%
- White females 5%
- Minority males 11%
- Minority females 0.3%

3.B.3 Occupation and Entrepreneurial Experience

"Finance folklore" states that raising money from doctors and lawyers to be an efficient approach, because "that's where the money is". While it appears they do occasionally serve as angels (only 8% of Gaston's sample), business owners and managers were much more prolific backers. A stunning 83% of these latter angels offered the added advantage of substantial start-up business experience as owners or managers. Aram (1989) found that his angel's prior start-up experience resulted in a greater commitment to financing other start-ups.

- Business Owner 44%
- Business Manager 25%
- Science and Engineering Professionals 5%
- Physicians, lawyers, accountants and other professionals 8%
- All other occupations 18%

In summary, angels are normally business people helping business people.

3.B.4 Wealth and Family Income

It comes as no surprise that angels are relatively highly paid, although the research diverges somewhat on this matter. For instance, Harr, Starr and MacMillan (1988) reported that 51% had annual incomes between \$100,000 to \$249,000²⁴. Conversely, Gaston and Bell reported that 64% of their sample had an income below \$100,000. Freear and Wetzel (1989) reported that 32% of their respondent fell within the \$100,000 to \$199,000 range. Gaston's median income was \$90,000, and the additional data follows:

- Under \$40,000 10%
- \$40,000-\$99,999 54%
- \$100,000-\$199,999 23%
- \$200,000 or more 13%

The number of millionaires becomes more confused. 58% of Wetzel's sample had a net worth in excess of \$1 million. On the contrary, Gaston reveals that "another myth evaporates because Angels are *not* often millionaires". He only encountered 37%, while Harr, et al reported "very few".

3.B.5 Sources of Information

Angels congregate in many places typical of high net worth individuals. These include investment clubs, civic organizations, country clubs, and private foundations.²⁵

²⁴ A large majority of the respondents were from the NYC metro region, where salaries are typically higher.

²⁵ *Pratt's Guide*, 1995, *ibid*.

*"The fraternity of individual backers of small businesses appears to be rather close knit, at least on a local level. A good deal of information is passed about by word of mouth. If one investor who enjoys considerable prestige among his associates, believes a situation to be promising and recommends it to others, his friends may participate merely on the basis of his recommendation ..."*²⁶

The dominant source for opportunities is trusted friends and business associates passing information via word of mouth. This information is considered more valuable and reliable than that contained in a business plan. Many researchers have essentially come to similar conclusions, but an important distinction is the efficiency of the information provided. That is, how many of the actual leads or sources actually turn into investments later? Wetzel's (1987) study of informal investors reported the following sources:

- 52% of opportunities came from business associates.
- 50% came from friends, and they were the "most efficient source ... highest % of deals closed to deals presented".
- 41% conducted an active personal search, resulting in "many opportunities but few deals".
- 15% found opportunities from investment bankers.
- A relatively small contribution from business brokers, commercial bankers, attorneys and accountants.

Angel's perceived as "Lead Investors" have a significant impact because their recommendation is often accepted and acted upon by others. These lead investors would often approach supporters, friends and business associates that made up their informal

²⁶ A.H. Rubenstein, "Problems of Financing and Managing New Research-Based Enterprises in New England", Federal Reserve Bank of Boston, Boston, MA 1958.

initial meetings and a firm capital commitment from them can be less than one-half that required by a venture capital fund. On one extreme, a principal of the “New Hampshire Breakfast Club” related that he and his group committed as much as \$100,000 after only one meeting with an entrepreneur.²⁹ In December 1995, two wealthy Silicon Valley angels beat out the long standing Mayfield Fund for a seed deal. They had amassed their fortunes from a 1970s communication company. Experienced in both starting and building companies, they recognized a compelling investment case. In fact, the recent IPO market has created numerous wealthy individuals who are becoming a competitive force to venture firms considering seed and early stage financing. In some cases, angels view themselves as the “farm system” for subsequent rounds of venture capital. However, Kevin Fong, general partner of the Mayfield Fund, believes “there’s no such thing as a part-time venture capitalist”.³⁰

Newly minted angels are typically cashed out entrepreneurs. They often want to stay active with new companies, without making the same time consuming commitments that a founder must. Consequently, they prefer to invest close to home, within a one hour drive (or plane ride) if possible. This allows frequent meetings, a possible role in running the company and the psychic rewards of mentoring to a budding entrepreneur. Once an opportunity is uncovered, angels rarely will invest alone. Gaston relates only 1 in 12 is a loner ... they typically will band together to “share information, accumulate the needed capital and spread the risk”.

3.B.9 Reasons for Rejecting Deals

There are numerous reason for angels to reject investment opportunities. Often they revolve around the personal characteristics of the lead entrepreneur or management team. Sometimes unfairly, first impressions count. One or more of the management team may not be able to sell their ideas to the financial community (i.e. they fail the “short socks

²⁹ The “New Hampshire Breakfast Club” is an informal group of four successful entrepreneurs who meet periodically for breakfast in Nashua, NH. They consider investing in seed stage companies.

³⁰ R. Deger, “Silicon’s Valley of the Angels”, *Venture Capital Journal*, March 1996, p. 40.

test”). C. Gordon Bell (1991) describes this as the inability to be a persuasive advocate for the company, whether convincing investors to provide financing or a recalcitrant vendor to extend credit. Eventually this shortcoming will manifest itself as a lack of support for the CEO, belief in his abilities or financing problems for the firm. Gaston’s survey of 435 angels provides a particularly fruitful study of why informal investors reject deals. In order of importance, the reasons most often revolve around:

1. Limited market potential for the proposed venture.
2. The angel lacks personal knowledge of the principals and key personnel. The informal investor must be comfortable with the character and motivation of the team he will be backing.
3. Management lacks the experience or necessary talent for success.
4. Proposed equity valuation was unrealistic.
5. Venture did not coincide with angel’s long term investment objectives.
6. Venture concept needed further development.
7. Not enough time for adequate appraisal.
8. Insufficient information provided.
9. Unable to assess technological aspects of the project.

Essentially, the top four major items boil down to ... does a sufficient market exist, is the team up to the job and is the price right?

3.C Investment Patterns

These definitions are based on Postma and Sullivan (1990). They identified four levels of aggressiveness seen from angel investors.

3.C.1 Lead Investor

Someone who actively searches for investment opportunities, decides independently to invest and will often suggest investments to others. He or she will provide comfort to fellow investors.

3.C.2 Independent Investor

Not influenced by others. Welcomes investment leads but relies on his/her own investigation and due diligence to quantify the merits of the investment.

3.C.3 Referred Investor

Asks questions and reads material but is primarily influenced by a recommendation from another knowledgeable person.

3.C.4 Group Investor

This person invests along with a group of associates. He is likely to invest if there is a group consensus, but he would not rely on a single individual.

3.D Types of Angels

From his extensive study of 435 informal investors, Gaston has developed the most detailed description thusfar of the angel universe. The author has used many of the same names that Gaston identified for his “cast of angels”. Chapter Four of Gaston’s book is the source of much of the subsequent paragraphs. The table below provides a profile of Gaston’s generic or composite business angel. Subsequent paragraphs in the “cast of angels” will frequently be compared to this profile.

Table 5 Profile of Composite Business Angel

Composite Gaston Profile

(NOTE: these are 1987 figures unless otherwise noted)

- Business owner/manager as principal occupation
- Personal entrepreneurial experience (83%)
- White male, 47 years old
- College degree (72%) primarily in business (44%) or engineering (19%)
- \$90,000 annual salary and \$750,000 net worth (author's note: This equates to \$117,000 and \$975,000 respectively @ 3% inflation after 9 years)
- Friends and associates are primary information source
- Accepts 3 of 10 investment opportunities
- Rejects deals mostly due to insufficient growth potential
- Invests about every 18 months and has 3.5 portfolio companies
- Satisfied with past investments (72%)
- Two other co-investors per deal
- Total of \$131,000 of informal equity invested in his personal investment portfolio (author's note: equates to \$170,000 in 1996 dollars)
- Has committed another \$75,000 more to portfolio firms as loans/guarantees (author's note: equates to \$98,000 in 1996 dollars)
- Prefers investing in service or finance, insurance and real estate firms (35%)
- Minimum ROI target is 22% per year. (author's note: This appears relatively low compared to the authors research).
- Takes an active role in portfolio company as consultant, board member or employee (81%)
- Does not seek active voting control (85%)
- Seeking additional angel investment opportunities; could invest another 35% more if good opportunities presented themselves.

3.D.1 “Godfather” Angels

Godfathers are almost always semi-retired business owners who are looking to stay active and perhaps mentor a young entrepreneur. They are older (50+), previously experienced in business start-ups and have been highly successful in their investments with entrepreneurs. Approximately 25% of Gaston’s sample met his Godfather criteria of a net worth exceeding \$750,000 and an income greater than \$100,000. They are well positioned to provide loans or guarantees of \$300,000 (median value) to their investments (compared to only \$75,000 for composite angels). They most often reject investment opportunities because they do not know key personnel on the proposed venture. A comprehensive business plan is a necessary starting point before any investment with Godfathers. Trusted business associates, friends and a direct approach by the entrepreneur are their normal avenues for deal sourcing. Entrepreneurs would be well served to work with this group. Majority control of the company, and full time employment is often not a motivation for them. Godfathers bring a wealth of experience and a desire for a long standing relationship to the new venture.

3.D.2 Peers

The largest portion of angels (over 33%) are categorized by Gaston as “Peers”. Investing close to home (i.e. within 50 miles), they are always local business owners/managers (with entrepreneurial experience) helping other local entrepreneurs. They insist on a comprehensive business plan, and particularly focus on the entrepreneur’s management talent. They are younger (typically 39) than other angels (47), but 10 years older than the entrepreneurs they back. Peers often reject proposals based on the personal characteristics of the management team principals. They are sensitive to this aspect because they are entrepreneurs and business builders themselves. Once they make an investment, their capital is quite patient. Peers are prepared for a holding period of 7½ years before liquidation and payoff.

3.D.3 Cousin Randy

As described by Gaston, this is a highly unusual segment that encompasses 10% of the angel universe. They will only consider investing with other family members, but will reject an opportunity if the equity is over priced. This angel also has entrepreneurial experience, is relatively young, will accept a minority stock position, joins the firm as an employee and expects a lower than average ROI of 21%. He anticipates holding his investment for four years, but will resell his equity early to other insiders should the opportunity present itself.

3.D.4 Dr. Kildare

This group comprised 9% of Gaston's sample, perhaps less than many would initially believe. Dr. Kildare's work in the medicine, law, and accounting professions, but not science and engineering. Compared to the average angel investor, they:

- lack business and entrepreneurial experience
- rely on their friends for information
- pay a high price for equity when they find it
- prefer simple equity structuring
- rarely participate in the firms operations
- have low ROI expectations and a low success rate
- often make no plans for the liquidation of their investment.

White females are three times more prevalent here than the average angel. Dr. Kildare's are very highly educated, although not in the management sciences. Income level, number of deals, wealth, investment frequency and rejection reason are very comparable to the composite angel investor.

3.D.5 Corporate Achievers

Sometimes frustrated middle level managers desiring a career change to “run their own show” become angels. They comprise 13% of the angel population, have been successful in a large corporate setting and often take control of the business from the entrepreneur.

Gaston describes them as someone who

“wants to jump the large corporate ship and sign on near the top rank on a smaller vessel they think may be going somewhere more interesting ... It is apparent the Corporate Achievers want majority control, and they do not hesitate to say so. Perhaps they ought to be renamed Junior Corporate Raiders”.

These angels are not self employed, have little entrepreneurial insight to contribute to a struggling venture and often seek an employment position. Neither are they highly paid (contrast their annual income of \$50,000 with \$90,000 for composite angels) nor wealthy (\$400,000 versus \$750,000 net worth). They parlay their small equity contribution (an average of \$17,500 versus \$37,500) into majority control in 55% of their investments. They maximize their equity by leveraging it with notes and warrants, thereby compensating for their lack of wealth. One of their few benefits is patient capital, a willingness to wait to liquidate their investment. In summary, the Corporate Achiever is very expensive and brings many disadvantages with him. Gaston believes “there are better places to buy capital”.

3.D.6 Daddy Warbucks

Characterized as a benevolent business tycoon, this angel segment is generally male business owners and always millionaires. 39% of all angels fall in this category, but they contribute a disproportionate 68% of all risk capital. They often provide large loan guarantees and can frequently swallow a significant deal by themselves. They rarely seek majority control, but often attain it by the magnitude of their investment. They source

deals from business associates, friends and entrepreneurs. Partners at law firms and CEO's of major corporations looking to invest excess cash fall in this segment. Finally, compared with generic angels, they are highly successful investors.

3.D.7 High-Tech Angels

High-Tech angels invest only in firms that manufacture high-technology products. Apparently only 6% of Gaston's survey population falls into this category. This result may have since changed as Gaston's data collection ended in 1987. In the meantime, the 1994-1996 strength of Wall Street's initial public offering (IPO) market has undoubtedly added to this population. They typically are cashed out, white male business owners who discover investment opportunities through friends and entrepreneurs directly. They like to form large co-investor syndicates and actively participate in their portfolio firms. In addition to money, these angels bring relevant experience, advice, patience and nurturing to growing companies.

3.D.8 The Stockholder

The Stockholder invests relatively little money and rarely interferes in the enterprise. Comprising 11% of the total angel population in his sample, Gaston characterizes him as a mixed blessing. He is an infrequent investor in firms relatively far (greater than one hour) from home. Once trouble inevitably strikes, some entrepreneurs may welcome help from any quarter, but he will find little from this angel type. The Stockholder will read company reports and benignly vote his stock when required, but otherwise he plays little role in the firms operations. This angel prefers to join a larger group of co-investors. He considers his investment unusually risky, but does not demand a ROI premium for his capital contribution.

3.D.9 Very Hungry Angels

For entrepreneurs looking for equity investors, there is one subset of angels that is almost too good to be true. These "Very Hungry Angels" come from a variety of non-business

occupations, and would like to do twice as much investing than they have thus far. Approximately 15% of all investors fall within this category. Their deal flow originates from friends more than business contacts. Gaston reports that over 75% require a comprehensive business plan prior to the investment. They desire voting control but rarely attain it because they invest small sums in larger than average firms.

3.D.10 Business Devils

These informal investors approach entrepreneurs with “innocent disguises”, but often gain absolute majority control of the venture. While one of every five angels is a devil in Gaston’s sample, apparently they are hard to initially identify. They often are less educated, rely on their friends to find deals, and earn less than the average angel. Devils are very sensitive to the equity’s pricing and like to become employees within the portfolio firm. Comprehensive business plans are usually a requirement before an investment is consummated with unusual combinations of equity instruments. Gaston advises entrepreneurs to stay well clear of this segment of informal investors.

3.D.11 High Flying Angels

Generally the High Flying Angel’s only invest when they smell the opportunity for huge returns. This equates to 40% ROI or more, with an average of 79%. Typically millionaire businessmen with high salaries, they infrequently invest in larger industrial goods manufacturing firms, get little equity share for their money and report disappointment in their investment’s performance. Perhaps because these investments are relatively far from home, they have little interest in contributing to the firms daily operations. Their capital is quite patient, anticipating pay back 7½ years later.

3.D.12 Impatient Angels

Gaston defines impatient or quick-exit angels as those desiring investment liquidation in less than three years. Because searching for capital is so time consuming and detracts from management’s focus on building and selling products, these angels can be a detriment

to the venture. The capital base of the company would require an expensive restructuring, relatively soon after a financing round was completed. Nearly 21% of Gaston's sample falls within this category. Impatient angels do not distinguish themselves from others. Gaston recommends asking prospective investors what their expected holding period is before accepting their capital.

3.D.13 Green Angels

Green angels rarely have entrepreneurial experience. Consequently, in many cases they may not be able to provide sound business advice and guidance that the founding venture team may critically need. They are fairly passive investors, have little desire to wrestle control from the entrepreneur and tend to invest their limited funds in more mature ventures.

3.D.14 Nickel and Dime Angels

The "Nickel and Dime" angel has the shallowest pockets of all informal investors. They amount to 22% of the angel population but provide only 7% of the capital. An average equity investment for them is only \$10,000 in a company that is seriously undercapitalized. For this amount, they do not often get voting control. Gaston characterizes them as young, infrequent investors with little income or wealth. They may be "more harmful than helpful".

3.E Chapter Summary

The venture capital community raised nearly \$4.4 billion dollars in 1995, yet the capital needs by seed or start-up companies far exceeds what the venture community provides alone. Business angels provide a ready source and command truly substantial resources, perhaps as much as \$25-50 billion dollars. Despite this large figure, angels are extremely hard to locate. They typically are well educated, wealthy and relatively young white males. A large portion are business owners and managers, which makes the quality of their guidance to entrepreneurs quite valuable. They find deals from trusted friends and

business associates. Angels provide relatively patient capital and prefer to invest close to home. Their expected return on investment is above 40% for seed and start-up companies, although the literature is mixed in this arena. Investment opportunities are most often rejected because of a limited market potential or lack of personal knowledge of the principals and key personnel. Using Gaston's framework, 14 different types of business angels were profiled.

Chapter Four:

How Angels Evaluate, Monitor and Mentor Their Investments

Angels believe that their most important decision is initially backing the right team. Monitoring and mentoring this team is one area where they profess to add significant value. Have investors found consistent profiles of entrepreneurs that start and lead successful companies? Perhaps not, because turnover amongst founding entrepreneurs is very high. Entrepreneurs have the energy and courage to start with little, but they often lack the insight necessary to guide their company as it matures.

This chapter will provide insights into how informal investors evaluate investment opportunities. Factors that create high tech entrepreneurs, and the essential characteristics and necessary traits that angels look for are profiled. After committing their capital, angels monitor and mentor their investments with varying degrees of involvement. Often times their portfolio companies experience similar problems. Some common management flaws and warning signs of these problems are detailed, as well as angel responses. In summary, this chapter addresses which personality traits angels look for in a founding entrepreneur, and the extent that an informal investor will guide and watch over his investment.

4.A Background Factors that Create Entrepreneur's

Interviews with angels consistently revealed that personality traits of the founding team were critical when evaluating a potential investment. In this arena, the research and literature is replete. Roberts³¹ identifies four general areas that have the most impact on entrepreneurs creation, development and evolution. It is important to note that his research was primarily completed on male entrepreneurs. Many (but not all) were connected to MIT through either academic training or research labs. Although female high technology entrepreneurs are now becoming more common, the author did not review any literature that specifically addressed this segment. Factors which have a significant impact on entrepreneurs will now be discussed.

4.A.1 Education and Age

Roberts' studies indicates that technical entrepreneurs typically have a masters level education in engineering, rather than science or management. Doctoral level education naturally was predominant for faculty entrepreneurs, as well as biotechnology companies. At company founding, an age in the mid 30's predominates, with faculty members slightly older and technical laboratory spin-off's slightly younger. One very experienced angel reported he was unlikely to back Ph.D.'s and MBA's because "they tend to over analyze ... and believe that their analysis was synonymous for progress".

4.A.2 Goals and Motivation

Commonly accepted research by Dr. McClland of Harvard University and Dr. Atkinson of the University of Michigan suggest people are motivated by three principal needs:³²

- The need for achievement (n Ach): "a need to excel or do well in a particular

³¹ E. Roberts, *Entrepreneurs in High Technology* (New York: Oxford University Press, 1991.)

³² Following three bullet paragraphs extracted from notes titled *Understanding Entrepreneurial Motivation*, author unknown. A large portion probably comes from D. C. McClland, *The Achieving Society* (Princeton, NJ: D. VanNostrand Company, Inc., 1961).

task Some indicators include competition, surpassing a self-imposed standard of excellence, unique accomplishments, seeking out feedback in order to improve, yet worried this feedback will reveal a failure to meet his goals, and setting moderate risk goals”.

- The need for power (n Pow): this exists when “an individual’s goal is to influence or impact others. Some indicators include concern for reputation, status and position, taking powerful actions, outperforming the competition and arousing strong emotions in others”.
- The need for affiliation (n Aff): indicated by a “concern for being liked, accepted and having friends; an attraction to social situations; concern for people both at work and outside of work; it is a desire to have a warm, companionship relationship”.

Roberts’ research indicates that technology entrepreneurs typically have only a moderate need for achievement and power, and a low need for affiliation (i.e. friendship). These last two have strong implications on the management style used by the entrepreneur. Management style was rarely mentioned as an investment consideration by informal investors. However, management effectiveness was.

Many angel investors, were formerly successful entrepreneurs themselves. They are particularly sensitive to someone contemplating starting his own company. Greater independence, working for himself, “new and bolder challenges” are all drivers in the decision to begin a new venture. Surprisingly, financial rewards play a lesser role in the entrepreneurs initial decision.³³ In summary, perhaps Roberts describes the goals and motivations of entrepreneurs best:

³³ Roberts, *ibid.*, p. 47.

"A typical technical entrepreneur has some push to succeed, a willingness both to take charge and to share control with others, and little requirement for relationships with others."

4.A.3 Work Experience

Roberts reports that the "typical technical entrepreneur had 13 years of work experience". Two thirds of them originated their startups directly from their source "incubator technical organizations". While still working at these source organizations, they had generally risen to technical supervisory positions and outperformed their colleagues along the "conventional output measures of papers and patents".³⁴ Contrast this with one angel preference to back "someone working in his cellar at night and weekends with a good idea".

4.A.4 Family Background

Some 50 to 65% of technical entrepreneurs in Roberts' research had an "entrepreneurial heritage". He describes this as

"... a strong tendency to come from families in which the father was self employed, providing a role model that presumably stimulated his son's desire for independence".

A family's religious background also had an impact on entrepreneurs, particularly on those who were not exposed to entrepreneurship from father figures. The research is complex, originated with McClland, and may now be dated. At the very least it could be considered controversial when Roberts states that "relatively more Jews and fewer Catholics established technology oriented firms".

³⁴ Roberts, *ibid.*

4.B Traits Angels Look for in Entrepreneurial Teams

Most angels prefer to back complementary teams of entrepreneurs. Lipper believes that members of this team must have four essential characteristics. The author encountered little argument amongst angels and venture capitalists. Lipper summarizes them as:³⁵

- **Honesty** - the entrepreneur must exhibit integrity and trust; “if there are any games in this area, investors should quickly back away” according to one angel.
- **Intelligence** - not only conceptual ability, but also street smarts. Timmons characterizes it as a “nose for business ... rat-like cunning ... gut feel and instincts”.³⁶
- **Skillful** at daily business demands, yet still able to maintain a broad generalist thinking.
- **Well educated** in their chosen field - but formal education is not necessarily required.

Can someone change later in life if they do not already have these characteristics?

Entrepreneur turned industrialist Hank Rowan provided the following insight:

³⁵ A. Lipper III, *Venture's Guide to Investing in Private Companies* (Illinois: Dow Jones-Irwin, 1984.)

³⁶ J. A. Timmons, *New Venture Creation* (Boston: Irwin, 1994.)

“Don't think you can change someone over time. If they are lazy, they will stay lazy. If they are dishonest, they will stay dishonest. They will always stay that way, so don't waste your time trying or believing you can change them.”³⁷

Research and interviews with business angels focused heavily on which attributes were important to them. Inevitably they remarked that they were “primarily investing in people”. Compiled from Lipper, Williamson³⁸, Timmons, the *Pratt's Guide*, interviews with informal investors and venture capitalists alike, the following attributes of entrepreneurs are considered essential by the author.

4.B.1 Energy Level

Long hours of hard work will be required from the entrepreneur in a wide variety of tasks. He will probably not only be attempting to raise capital, but also concurrently hiring personnel, expanding sales and developing manufacturing capabilities. He must set a “brisk pace”, and expect the same from his subordinates. According to Lipper, “the vast majority rise before 7am ... they require less sleep than others ... and can't wait to start the day”. Before committing capital to a venture, some angels would call their potential investment at odd hours to see if anyone was working. They are very reluctant to invest in someone “only working from 9:00am to 4:30pm because they have to pick up the kids at daycare”.

4.B.2 Ego and Self-confidence

The entrepreneur must have confidence in his ability to excel. Many consider themselves at the “top of their chosen field”. If not, then it will be difficult to inspire subordinates, raise capital from investors and reassure creditors. If he is deficient in a particular area, he

³⁷ Address by Hank Rowan, CEO of Inductotherm Inc. on 4/23/96 to class at MIT Sloan School of Management.

³⁸ B. Williamson, Address to Seminar, Life Planning Center, Vail, CO: SMU School of Business, March 1974

must have the strength of character to hire people with complementary skills, encourage them, give them real responsibility, listen to their advice and reward them when appropriate. His ego can not be so overwhelming that the company's universe must revolve around him, subsequently driving key employees away. Neither must he feel threatened by smart or capable personnel that the company must attract. He must believe in himself, his abilities and self-determination of his own fate.

4.B.3 Courage

Whether in war or entrepreneurship, Lipper states that courage is "rare, elusive and hard to appraise." A growing business will inevitably face money problems, labor issues, competition, product difficulties, etc. Consequently, the entrepreneur must be tolerant of anxiety. Only under "trial by fire" will you find the successful entrepreneur who has the "confidence to forge ahead".³⁹ Donald Trump had become an icon in American real estate in the 1980's. In the early 1990's, he was \$900 million in debt, facing bankruptcy and written off by the national press as an "inconsequential has-been". His fortunes have since rebounded and he is once again one of the richest men in America. He reflected that:⁴⁰

"You will never know how tough you really are until you face the abyss. Some that many people thought were strong, will break down and reveal weakness at an inopportune moment ... while others perceived as weak will display surprising strength. Some of you in this room have that latter quality ... and some of you do not. You will never find out until things really get tough".

4.B.4 Enthusiasm

As Lipper describes it, "people like to back and follow a winner". Needless-to-say, a charismatic leader can inspire fellow partners, employees, investors and customers alike.

³⁹ Lipper, *ibid.*

⁴⁰ Lecture by Donald Trump to class at MIT Sloan School of Management on 4/22/96.

He must be viewed as an ardent buyer of his own product. Angels are hesitant to spend their money backing anyone who is not devoted to the venture. They often gain comfort if the entrepreneur has “something at risk” such as personal guarantees and a modest salary in return for “sweat equity”. This belief can also extend to the spouse. Investors will often want to meet the entrepreneur’s mate to gauge her commitment and support, and may even ask that she co-sign for loans.

4.B.5 Money as a Measure

Rightly or wrongly, capitalism’s scorecard is kept with money. Entrepreneurs should view salary, profits and capital gains as a measure of how well the company is doing.⁴¹ The “will to win, be successful and demonstrate business accomplishments” should be valid expectations from someone receiving significant capital from private investors. Venture capitalists and business angels believe they are perfectly justified in expecting entrepreneur’s to desire the accumulation of wealth.⁴²

4.B.6 Creativity

The entrepreneur must learn from his mistakes and quickly resolve complex technical and commercial problems.⁴³ However, this characteristic is not limited only to “inventive genius ... it should also encompass management, financing and merchandising skills”. He must have an intense desire and creative approach to solving problems. Lipper provides numerous examples of late entrants to an established market. Yet newcomers, such as McDonald’s, H&R Block and Revlon, were able to persevere through unique product offerings. Angels look to invest in technologies which will provide a unique jump, not just an incremental advantage. They are also willing to back creative genius, if it is properly complemented with other members of the founding team.

⁴¹ Timmons, *ibid.*

⁴² However, it would be misleading to imply that making money is the prime motivation for angel investments. More often it is to help and mentor a young business person.

⁴³ M. Martin, *Managing Innovation and Entrepreneurship in Technology Based Firms* (New York: Wiley, 1994.)

4.B.7 Resourcefulness

Much like a ship that goes out to sea, entrepreneurs must make proper use of the talent at hand. Numerous problems arise ... they must listen carefully, accept counsel from divergent sources, analyze quickly and dispatch problems promptly. Should a previous decision be mistaken, entrepreneurs must revisit the issue and find a new course. They must be able to accept (or perhaps tactfully deflect) guidance and mentoring from their financial backers.

4.B.8 Tenacity

Angels often reflected that seed stage fund raising was a rite of passage and test of tenacity. Tenacity should not be confused with stubbornness or inflexibility. Similar to courage, Lipper describes it as “a toughness which causes an individual to hang-on when circumstances are most difficult”. Most growing businesses will face some period when their challenges drive weaker individuals to quit. Naturally it is “difficult to test this trait, except under adversity”.

4.B.9 Leadership Qualities

Successful companies begin with great leadership. Top management must have the courage to make far reaching decisions which commit substantial resources. A portion of these decisions may not be easily reversed. Angels, venture capitalists and professional investors often consider the quality of leadership before ever conducting any due diligence. Demands on entrepreneurs and founders include:

- Bold, charismatic, visionary leadership with the courage to take moderate risk and commit to heroic goals.⁴⁴
- The knack of finding, mustering and motivating employees, directors,

⁴⁴ Timmons, *ibid.*

shareholders and resources. The ability to hire key assets and “close the deal”.

- The discipline to stay the course when some others counsel withdrawal ... the ability to “keep one’s cool” in a crisis.⁴⁵
- The strength to learn from failure and not let it become overwhelming. An acceptance of lessons learned and determination to avoid similar problems in the future. “A failure may be disappointing, but should not be discouraging.”⁴⁶
- Flexibility to change direction when required.
- A sensitivity to “other stakeholders needs, personal as well as economic”, yet an unwillingness to accept mediocrity.
- The ability to set the pace and standard in every capacity. A particular commitment to stand in front of employees and often communicate, providing vision, direction and reassurance.

4.C Expectations by Angels Prior to Investing

Research by the author was mixed in this area. Some angels would decline talking to potential investment groups without a complete business plan. They believed the mental discipline of writing the plan made them better prepared later, even if they were unable to meet their projections. Business plans written by professional writers were not acceptable. Lengthy plans were equally frowned upon. Brevity and succinct definition of the technology, market and customers was a necessity. A few angels essentially said that

“If a team wasn’t able to clearly frame the key issues and describe how my money would make a difference, they won’t get any.”

⁴⁵ Martin, *ibid.*

⁴⁶ Pratt’s *Guide*, *ibid.*

Some angels wished to become involved prior to a business plan ever being written. This group preferred not to be confronted with a high gloss private placement memorandum, or a large bound book filled with numbers with little analysis. At this point, they believed their ability to impact the entrepreneurial team and help direct its strategy would be diminished. Entering at the pre-business plan stage offered a better opportunity to help write and critique it. For some, a 20-page summary that addressed the highest level issues, such as marketing, technology, money, management and people, was sufficient.

Complicated capital structures were a detriment. Many angels preferred entry prior to incorporation. This allowed them to generally start as an “S” corporation, with significant tax advantages. Their investments would gravitate to a “C” corporation at later stages, if required. Due diligence was conducted in various forms and levels of effort. References were almost always contacted. Prior subordinates, superiors, customers and suppliers would also receive inquiries. Honesty, integrity, managerial and technical skills were often the lines of questioning.

4.D Monitoring and Mentoring by Angels

Many angels love the give and take they get from their portfolio companies. Universally convinced that they should bring more to the venture than just money, mentoring has an important role to play for them. Some have described it as “virtual racing”, reliving their own past glories. They revel in helping young people build and grow a business. Angels have a wealth of practical business experience. They view themselves as particularly valuable in avoiding common mistakes, because “they have already made them”.

The warning signs within troubled start-up companies are fairly common. Perhaps Winston Churchill’s description of a similar situation in *While England Slept* is appropriate.⁴⁷

⁴⁷ Timmons, *ibid.*

“... descending inconstantly, fecklessly, the stairway which leads to a dark gulf. It is a fine broad stairway at the beginning, but after a bit the carpet ends, a little farther on there are only flagstones, and a little farther on still these break beneath your feet.”

Timmons, Flamholtz and angel interviews provided valuable intelligence on problems within new companies. Timmons cites the following causes of such trouble: ⁴⁸

- **Inattention to Strategic Issues:**
 - Company does not understand their market niche.
 - A “lack of follow-up” which soon leads to mismanaged and poisoned relationships with suppliers and customers.
 - A diversification into unrelated business lines, cannibalizing cash flow from one profitable segment to pursue another without any semblance of symmetry.
 - Lack of contingency planning.
 - Start of a “big project” without evaluating cash flow implications.
- **General Management Problems:**
 - Lack of management skills, experience and know-how. As companies progress, managers need to transition from “doing to managing managers”.
 - Employees are always “putting out fires” ... they feel that “there are

⁴⁸ Following bullets originate primarily from Timmons (p.598), with contributions from Flamholtz and angel interviews.

not enough hours in the day Many are unaware of what other employees are doing Too few good managers”.

- High turnover amongst key management personnel.
- Weak finance group.
- Poor Financial/Accounting Systems and Practices:
 - Cash burn and collection rates are misaligned. Cash budgets and forward projections are not completed.
 - Growth in sales but not profits.
 - Poor pricing, overextension of credit, excessive leverage.
 - Perhaps suitable financial reporting, but poor management reporting. Bills and important management reports are often produced late or not at all.
 - Lack of standard costs prevents variance reporting. Poorly understood cost behavior.

In some cases, the author's research found that only the original entrepreneurial team has real decision making responsibility, despite the titles they have bestowed upon their subordinates. Every significant decision (and many small ones too) must be elevated to a high level for adjudication. The founding team must recognize their warning signs early and realize that a change is inevitable. Sometimes these needed changes can be quite painful. For example, placing more emphasis on company roles and responsibilities can turn the atmosphere from "collegial" to "stilted" It may no longer be "as much fun" as during the early years. These transitions can not be accomplished overnight. Experienced angels and venture capitalists are often quite sensitive to these issues and will try to help the founding team through them.⁴⁹

4.E Common Management Flaws of Entrepreneurs

Inevitably, many entrepreneurial companies must go through a wrenching and very public leadership change. The entrepreneur may have some serious managerial flaws, many of which Flamholtz addresses. Perhaps the lead entrepreneur is enthusiastic about markets and products, but not very interested in cost control and the "nuts and bolts" of daily operations. He may have a requirement to be the dominant person in any business setting, a need to remain in control, manifested by an unwillingness to delegate. He may even go through the motions of hiring people into the organization, but then will turn these professional managers into "managerial eunuchs". This "entrepreneurs' disease" eventually strangles their own organization.^{50,51}

Most angels related that the board of directors' role was to both recognize these issues from afar, and then effectively deal with them. That could imply counseling, cajoling, threatening, or even dismissing the CEO if need be. Perceived at early stages by angel investors, they will often try to soften, ameliorate or work through these difficulties. As a last resort, angels can naturally decline to invest further of course.

⁴⁹ Flamholtz, *ibid.*

⁵⁰ J. Kao, *The Entrepreneurial Organization*. (New Jersey: Prentice Hall, 1991.)

⁵¹ Flamholtz, *ibid.*

4.F Transitions Required by the Entrepreneur to Survive⁵²

What options confront the entrepreneur in order to survive in his own organization? One response is do nothing and hope the problem resolves itself. Another is to sell the business and then start over. Some hire a professional management team and move up to chairman, much as Steven Jobs hired John Sculley. Of course, the entrepreneur could also change management styles and grow with the company ... easy to say but difficult to do. Should the entrepreneur do the latter, perhaps his role could evolve into:⁵³

- Setting future direction and long term objectives of the firm, much as Lou Gerstner has for IBM and Bill Gates for Microsoft, i.e. “Chief Strategist”.
- Strategic leader and role model for others.
- Focus on the enterprises culture, for here is where he could still have a great impact within the organization.

The simple reality is that entrepreneurs are rarely happy in these roles. The personality and skillset that drove them to build their company is substantially different than any these new roles will demand. Sadly, most are unable to make the transition and are pushed out of the company they founded.

4.G Chapter Summary

Angels evaluate their potential investments by focusing on the perceived technological advantage and the entrepreneurial team. Entrepreneurs are a special breed. They must have thick skins. They have often been embarrassed, told they have “dumb” ideas, routinely rejected and perhaps even fired. Typically, they experience several business failures before they become successful. Their upbringing and early life experiences directly

⁵² Flamholtz, *ibid.*

⁵³ Flamholtz, *ibid.*

impact their management style. Some successful entrepreneurs later become savvy informal investors. These angels are often high value-added partners, having lived through the demands of growing a new company. Growing companies inevitably have problems, and several warning signs and indications were provided. While entrepreneurs are often creators, few are able to manage and grow as the company matures. They may be holding the company back and must change their role, or inevitably be pushed aside. After committing their risk capital, angels monitor and mentor their investments in a variety of ways, often through board of director representation.

Chapter Five:

Structuring and Pricing the Deal

Make no mistake, the structure of a deal is an important element of setting the price. Business angels must ensure they understand the motivation of all parties in a deal. Is the entrepreneur motivated by money? Status? Position? Is he risk averse? Does he need control? What does he hope to achieve in the long-term? Does the angel himself need control? Is he looking for involvement in the company for himself or family? What is his risk profile? Will his other investments also need his time and money? Does he know the entrepreneur and business? Although not desirable from the outset, can he replace the entrepreneur with someone else if his talents are found lacking? Are the entrepreneur's skills available elsewhere? Does the investor want a board seat? What is his best expectation and minimum required return on investment (ROI)?⁵⁴

⁵⁴ A. Lipper III, *Venture's Guide to Investing in Private Companies* (Homewood, IL: Dow Jones-Irwin, 1984.)

These issues all contribute to the final terms and conditions of the investor committing his capital. This chapter will start with “lessons learned” from seasoned investors on working with new start-up management teams. Guarantees by startup principals, real dangers in early overcapitalization, and rewards for informal investors are reviewed. Important exit strategy concerns are discussed. Several methodologies for pricing the investors’ equity close the chapter. Much of the material in this chapter comes from Arthur Lipper’s book.⁵⁵

5.A Working with the Management Team

Although the investor may be contributing a substantial sum of money, only through working with a properly motivated management team will his investment become valuable.

5.A.1 Guarantees by the Entrepreneur

Lipper and angels interviewed by the author often desire to hold the entrepreneur at some risk, although the “quantity, timing and circumstances” should be flexible. Most angels will require entrepreneurs to prepare and provide market projections, normally in the form of a business plan. James Bergman of DSV Partners suggests:⁵⁶

“The investor largely has to force the entrepreneur to attach his signature to his representations. At this time, the investor may discover that the entrepreneur has not done all his homework; for example, he may not have completed a thorough search to ensure that his patent will be accepted and does not infringe on the rights of others. This is the time for the investor to make such discoveries. When something incorrect is discovered after a closing, the investor’s money is gone.”

⁵⁵ A. Lipper III, 1984, *ibid.*

⁵⁶ A. Lipper III, 1984, *ibid.*, p. 87

Some examples could be a “guarantee of revenues” or “investment by others”. Lipper even advocates trying to make the entrepreneur’s wife a co-signer, considering it a “relationship-strengthening indication of confidence and participation”. The entrepreneur should lose something tangible, such as a proportion of the investor’s loss, if the investor is unable to recover his full investment. However, a penalty for failure to achieve financial projections may not be appropriate when the entrepreneur is risking capital on the same level as the investor.

As discussed in prior chapters, entrepreneurs are motivated by recognition, and a “need to achieve” or prove something. Bonus plans devised for the entrepreneur should be cash or stock based, directed towards specific projects and include other key members of management. One suggestion cited in Lipper’s book includes:

“The investor puts up all the money and gets 100% of the equity; if the entrepreneur pays back all the money in one year, he gets 80% of the business; in two years, 60%; in three years or more, 40%”.

5.A.2 Voting Trusts and Proxies⁵⁷

Interviews have revealed that frequently, the entrepreneur becomes a serious impediment or hindrance to the business. He may become motivated differently than the investors during times of stress, perhaps even acting “irrationally”. A voting trust is a mechanism which may be appropriate, for it permits a non-confrontational approach to business decisions. The trustee could be someone “unaffiliated with either the entrepreneur or the investor”. Upon achievement of certain milestones, the trust could be terminated. A less formal method suggested by Lipper occurs when the investor holds a proxy on the entrepreneur’s shares to vote on all matters, or just specific ones such as liquidation, mergers or recapitalizations. A problem with a proxy versus a trust is the immortality of

⁵⁷ A. Lipper III, 1984, *ibid.*, p. 96.

the proxy holder. An investor could solve this problem by using an investment corporation to hold the entrepreneur's proxy. The corporation is immortal of course, but another complication may be tax issues.

5.B The Danger of Overcapitalization

The raising of capital can be arduous, and naturally entrepreneurs hope to raise the maximum possible all at once while giving up as little ownership as possible. Despite everyone's best efforts, additional financing rounds are often required, with the timing and amounts difficult but crucial to estimate. Lipper believes that "the scheduling of the investment, with appropriate go/no-go points, is a large part of the art" of building a business.

Later stage investors will hopefully pay higher valuations, assuming the company is hitting required milestones. Although time consuming, raising money in stages will help the entrepreneur retain more equity, and maintain control over his investors. Milestone investing also permits the investors to impart guidance, restraint and experience on the entrepreneur. Finally, it allows the abandonment of the venture by the angels when future efforts look bleak. New companies flush with someone else's cash often find extravagant ways to spend it. Informal investors should generally insist that their investment be spent prudently ... cheap spaces ... cheap phones ... low overhead if appropriate. Occasionally, a more lavish approach may be necessary, depending on the company's required image. A prudent entrepreneur would ensure his board of directors concur with his approach.

5.C Perks and Rewards for the Business Angel

Some angels desire employment with their portfolio companies. Others have absolutely no interest in joining the startup firm. If he does join the firm, the angel combines his money with his skills. If the angel has this as an ultimate goal, he should bring it forward early in the negotiations with the entrepreneur. It takes little imagination to see the levels of conflict that could emerge. Investor employment can lead to misunderstandings as well as tax issues with the IRS. Conversely, the angel can see how his money is used and

participate in the new company.

5.D Exit Formulas⁵⁸

Lipper describes exit formulas or “prearranged takeouts” as the angel’s equivalent to a pre-nuptial agreement. Most angels do not consider requiring them prior to making their investment. Prearranged takeouts permit the informal investor to retrieve his capital at particular time and progress gateways. Typically they are structured to allow the investor to tender a portion of his shares to the company. Metrics which set the redemption price could be a multiple of book value, revenue, cash flow or earnings. A portion of the company’s earnings could be used to redeem preferred stock. Lipper believes that exit formulas are not required if there is a buy/sell option (see paragraph below) in place.

5.D.1 Right of First Refusal

Lipper believes that private investors should insist on a “right of first refusal”. Often times the entrepreneur requires another round of equity financing. His present investors may be “tired out”, and reluctant to provide it. Subsequent potential investors may drive a harder bargain than the first round investors did and get a better price for their equity. With a “right of first refusal”, first round investors preserve their option to invest at a price equal to the latest negotiated round of new capital. Lipper’s suggestion is not supported by Professor Howard Stevenson of Harvard Business School. His opinion is that⁵⁹

“[this] very often prevents good negotiation with a new buyer. The buyer is ... spending his time and effort on what he knows may end up as another investors deal.”

Interviews with angels and entrepreneurs were not supporters of this policy, many retorting that “you negotiate your own deal”.

⁵⁸ A. Lipper III, 1984, *ibid.*, p. 107.

⁵⁹ Timmons, *ibid.*

5.D.2 Buy/Sell Option

The buy/sell option is a concept insisted upon by Lipper when his private investment results in equal proportions of equity held by other shareholders. He believes it keeps all players honest. The initiator can at any time (or an agreed upon time), propose the purchase of the other participant's stock "on any terms and at any price. The other participant then has the right to either accept the offer or compel the initiator to sell all the initiator's stock to the other participant at the same price and terms as the initiator originally proposed!" While he believes that this symmetry has a stabilizing affect of "what's fair for one is fair for another", he admits he has never used the buy/sell option.

5.E Earn-outs

Earn-outs are sometimes used by venture capitalists and sophisticated private equity investors. It allows management to "earn back" equity from the investors by reaching mutually agreeable projections. Determination of these projections are based upon the first public market price of a company. The timeframe for that price is normally in the third to fifth year after the investment. If a public market has not been established within five years, an internal measure is adopted, such as five times the fifth year earnings. The goal of earn-outs is to focus the company management on ultimately making the investors liquid. Stanley Golder's article in Lipper provides further details.⁶⁰

5.F Pricing and Profit Targets set by Investors

The value of a firm after a financing round is closed is relatively easy to calculate. For example, suppose an angel had agreed to provide \$150,000 to the new venture. For this price, he received a 45% equity stake in the firm. Consequently, the firm's total post-money valuation is:

$$\text{Value of Entire Firm} = \text{Purchase Price} \times \frac{100\%}{\text{PerCent of Firm Purchased}}$$

⁶⁰ Article by Stanley C. Golder, "Structuring and Pricing the Financing", in A. Lipper III, 1984, *ibid.*, p. 150.

In this case, the entire firm would be worth \$333,333. That is

$$\text{Value of Entire Firm} = \$150,000 \times \frac{100\%}{45\%} = \$333,333$$

Hopefully future valuations will continue to increase. Angels realize that their contribution will be diluted as the venture proceeds, and are consequently hesitant to contribute their capital at early stages when they are unable to purchase a significant share. Informal investors are similar to venture capitalists when determining required rate of return thresholds. The following tables provide some insight into the size and magnitude of their investment requirements.

Table 6: Rate of Return Profit Targets

Profit Targets	Compound Annual Rates of Returns (pre-tax)
"Triple their money in three years"	44%
"Triple their money in five years"	25%
"Four times their money in four years"	41%
"Five times their money in three years"	71%
"Five times their money in five years"	38%
"Seven times their money in three years"	91%
"Seven times their money in five years"	48%
"10 times their money in three years"	115%
"10 times their money in five years"	58%

Source: A. Lipper III, 1984, p155

While the above numbers may seem inordinately high, expected rates of return vary depending on the company's stage of development and the anticipated holding period. For instance, seed stage investors may expect to hold their portfolio for over 10 years, and consequently demand returns of 50-100%. Third stage financings (rarely done by angels) may only require 25-30% per year. Some recurring themes addressed by Lipper (1984) which drive pricing and rate of return thresholds in venture investing include:

1. Murphy's Law: What can go wrong, will go wrong. The investor must leave room for errors and these high prices reflect that.

2. How much money is the entrepreneur contributing at venture start-up? Is his money of greater value than the angels? Will he primarily contribute sweat equity?
3. How much equity financing will the venture ultimately need? It will probably take more money than both the investor and management team anticipate. Follow-on financings will dilute the investors' ownership.
4. Will the company and industry be attractive to the stock market? At what multiple? Selling securities of a venture investment is difficult. They are highly illiquid. Compliance with SEC Rule 144 stock sale requirements can be onerous. One option is the expensive, time consuming and unpredictable registration statement procedures prior to trading on the public market. Another alternative is selling the company to a larger publicly traded company.
5. What is the upside potential? Can earnings, schedule and product time tables be met?
6. What is the downside potential? Will the entire investment be lost or just a portion? Will the company actually be liquidated and a loss taken, or will it turn into a "lifestyle" company for the management, providing them high salaries and comfortable employment?

The following table from Timmons (1994) provides some insight into the returns required by investors for particular investment stages.

Table 7: Rates of Return Sought by Investors by Stages

Investment Stage	Annual Rate of Return %	Typical Expected Holding Period (years)
Seed and Start-up	50-100+%	More than 10
First Stage	40-60	5-10
Second Stage	30-40	4-7
Expansion	20-30	3-5
Bridge and Mezzanine	20-30	1-3
LBOs	30-50	3-5
Turnarounds	50+	3-5

Source: Timmons, (1994) p 512

Timmons also points out that these rates of return can vary regionally and with changing market conditions.

5.G The Traditional Method of Pricing Private Equity⁶¹

Assumptions:

1. Basic profit criterion is five times invested funds in four years. This equates to 50% compounded annual return on investment. Our angel contributes \$250,000 to the start-up in year 0.
2. No explicit adjustment for risk.
3. Assume price-earnings ratio of 15 in year 4. Lipper notes that a P/E = 15 is very conservative for a company with earnings growing at 50% per year.

Calculation:

1. Suppose the company's year 4 net after-tax earnings are \$700,000. Therefore, the total terminal value of ABC Corporation in year 4 is

$$TV = \$700,000 * 15 = \$10,500,000.$$

2. Because our angel investor had contributed \$250,000 in year 0, he expects it to

⁶¹ The following approach is detailed by A. Lipper III, *ibid.*, p. 160.

be worth 5 times that in year 4. That future value equates to

$$FV = \$250,000 * 5 = \$1,250,000.$$

3. Our final percentage of equity required is

$$FinalOwnership\ Required = \frac{RequiredFV(Investment)}{TotalTerminalValue} = \frac{\$1,250,000}{\$10,500,000} = 11.9\%$$

In summary, the angel would require a 11.9% stake in the company in exchange for his investment of \$250,000 in year 0.

5.H The Fundamental Method of Pricing Private Equity

This method is the present value of the company's future earnings stream in (a) Years 1-10 and (b) Years 11-infinity. Naturally the discount rate selected by angels from Tables 6&7 will have a large impact. Dividing the angels investment by the present value of the future earning stream provides the percentage ownership required by the angel. Lipper provides some insight into selecting an appropriate discount rate:⁶²

"To justify the investment you want me to make, I have to earn at a minimum three times the yield I could receive from a money market fund and therefore, such a return, paid in stock of the company is the least I will consider. Now, let's work together to see if we can structure an arrangement which will ensure that result."

⁶² A. Lipper III, 1984, *ibid.*, p 161.

5.1 First Chicago Method of Pricing Private Equity⁶³

There are three basic outcomes that a new venture could result in:

1. **Successful:** The venture is profitable to the point of going public, being sold to a profitable company or permitting the angel to extract “rents”. Lipper points out that the latter could encompass drawing income in fees, joint ventures with the company, borrowing money, etc. These are assuming other owners agree. There are more ways to profit from a successful company than going public.
2. **Sideways Survival:** The company is marginally profitable with limited growth. Not a viable public company, unable to sell the company but it can service debt over a period of years. Often known by angels and venture capitalists as the “Living Dead”. They typically become “lifestyle” companies for their management, with the investors unable to liquidate and declare a tax loss.
3. **Failure:** The company declares bankruptcy or reorganization.

Developed by First Chicago’s venture capital group, this methodology employs a lower discount rate but applies that rate to the expected cash flows. These expected cash flows are the weighted average of the three possible scenarios. In Table 8, the expected present value of the company (line 11) is the denominator for the equity percentage required calculation in line 12. Consult the following table for further details.

⁶³ Combined procedures from Timmons (1994; p. 514) and A. Lipper III (1984; p. 161). The First Chicago Method was utilized by Stanley C. Golder during his tenure as President of the Equity Group at First Chicago Corporation.

Table 8: Example of First Chicago Method

	Success	Sideways Survival	Failure
1. Revenue growth rate (from base of \$3 million; angels contribute \$1.5m)	60%	15%	0%
2. Revenue level after 3 years	\$12.29 m	\$4.56 m	\$3 m
3. Revenue level after 5 years	\$31.46 m (IPO)	\$6.03 m	none (bankrupt)
4. Revenue level after 7 years	none: investors previously liquidated in year 5 IPO	\$7.98 m (acquisition)	none (bankrupt)
5. After tax profit margin and earnings at cash-out	15% \$4.72 m	7% \$0.56 m	
6. Price-earnings ratio at cash-out	20	7	
7. Value of company at cash-out	\$94.40 m	\$3.92 m	\$1.05 m
8. PV(company @ 40% discount rate)	\$17.55 m (year 5)	\$0.37 m (year 7)	\$0.38 m (year 3)
9. Probability of each scenario	0.40	0.40	0.20
10. Expected present value of company under each scenario	\$7.02 m	\$0.15 m	\$0.08 m
11. Expected present value of company	\$7.02 + \$0.15 + \$0.08 m = \$7.25 m		
12. Percentage ownership required to invest original \$1.5 million	$\frac{\$1.5m}{\$7.25m} = 20.7\%$		

Using this methodology, the informal investor should seek a 20.7% equity stake for his contribution of \$1.5 million venture. Naturally this number will be sensitive to the revenue growth rate and price-earnings ratio at liquidity assumptions.

5.J Chapter Summary

Structuring and pricing an investment never has one correct answer. It is influenced by the needs and concerns of the angel and the entrepreneur. Considerations for both include.⁶⁴

- Will the angel receive a reasonable reward given the level of risk? Will the entrepreneur receive a financial payoff for creating the business?
- Will the angel have sufficient influence on the company's development, either through board representation or a good working relationship with the

⁶⁴ Adapted from Stanley C. Golder, "Structuring the Financing", *Pratt's Guide*, *ibid.*, p. 56.

entrepreneur?

- Is there a way for the angel to recover his capital if the company either stagnates or is successful?
- If the company is unsuccessful and dissolves, is there protection from splitting the remaining investor dollars with the entrepreneur? If not properly structured, the entrepreneur's equity position may entitle him to remaining investment proceeds, even though he did not actually contribute the money.
- Has management contributed a portion of the capital, to ensure they have something more at stake than their egos?
- Can key employees be retained through adequate equity incentives?
- Will the balance sheet be attractive to suppliers and debt financiers?
- Is there enough flexibility in the capital structure to ensure that later stage investments can be accommodated, while ensuring that management remains properly motivated?

Seasoned investors recommend obtaining entrepreneur guarantees about their representations and using a voting trust or proxy if possible. Early overcapitalization of a seed or startup business can have detrimental effects ... there is a natural tension between it and staged funding. Investors would be well advised to consider exit formulas prior to capital commitment. Rate of return profit targets for angel investors vary but are in line with venture capitalist expectations. Traditional, Fundamental and the First Chicago Methods of pricing private equity were reviewed with examples. Finally, some angels profess to be relatively unsophisticated regarding the pricing and structuring of private equity. The author hopes that this chapter has provided some insight in these matters.

Chapter Six:

Summary

6.A Conclusions

Although difficult to quantify with precision, the author's research finds that business angels make important and surprisingly substantial contributions to seed stage businesses in America. Notwithstanding controlling resources estimated as high as \$25-\$50 billion, their contribution in nurturing and mentoring growing companies may be even more important. Recent dynamics within the venture capital community has driven it to smaller niche and regionally focused funds. The recent hot IPO market is creating more cashed-out entrepreneurs who later become angels. In some cases the two communities are bumping into each other, but mostly they are complementary. Some general conclusions about angels include:

- **Portrait of an Angel:** Angels are difficult to locate, and generally like it that way. "If you're not smart enough to find me, you're not smart enough to spend my money". Although the number of deals they see is acceptable, more quality deals would be desirable. They typically are well educated, wealthy and relatively young white males. Usually business owners or managers, the quality of their guidance to entrepreneurs is quite valuable. They are particularly active between the ages of 35-65, and find deals from trusted friends and business associates. Angels provide relatively patient capital and prefer to invest close to home. Gaston (1989) segmented the angel market quite successfully, although his data is now relatively dated. Despite their name, not all angels are "good" ... in fact, some are really "devils" and detrimental to the new venture.
- **Motivation:** Angels often get started because they have a passion for the entrepreneurial process. Someone guided them once, and it was time for them to lend a hand too. They love helping a budding entrepreneur and his team

make that first sale, close a tough deal, get the big order. They are reliving what it was like to get started in business when they were younger and things “were simpler”. They are intrigued by the opportunity to work with interesting people. They often “run in packs” and know each other on a regional basis. They get “psychic rewards from virtually racing their portfolio companies”.

- **Angel Criteria for Investing:** Angels believe they should generally invest in the areas they know, i.e. “stick to their shoe size”. However, this does not prevent them from “straying off the reservation” if they see a compelling investment case. That case should include a novel way of attacking a problem, perhaps a leapfrogging technology with “home-run potential”, not a trivial incremental advantage. Angels want to enter a deal while they can still shape it, before the capital structure has become too complicated or problems develop. They tend to look for

“three smart guys in technology, marketing, and operations/finance ... a real basketball team, not a lone wolf ... or one star and several passers”.

Knowledge of the market, competitive forces, team interaction, integrity, trust, drive, energy level, passion, sacrifice, and spousal commitment all are considerations for a potential investment. Angels have little interest in policing the people they back. Investment opportunities are most often rejected because of limited upside market potential or lack of personal knowledge of the principals. Finally, they firmly believe in contributing more than just money to the venture.

- **Monitoring and Mentoring their Investments:** Angels like to remain relatively close to their investments, perhaps an hour or two away. This permits frequent meetings, and they may insist on board seats. Their portfolio companies often experience similar problems, particularly as they grow.

Causes include poor financial/accounting systems and practices, inattention to strategic issues and general management problems. Sadly, the entrepreneurs themselves may often be the root cause. Angels often intercede and provide guidance during growth transitions. However, the entrepreneurs may not have the ability, interest or inclination to change management styles as the company matures. The result is that founding entrepreneurs are often times pushed aside, typically by subsequent rounds of professional investors.

- **Pricing and Structuring their Investments:** Angels use relatively unsophisticated financial instruments. They may demand 50-100% annual returns on an opportunity with a 10 year investment horizon. Informal investors are comfortable with a staged investment approach. This permits them to evaluate their entrepreneurs over a long timeframe, and back out gracefully at later financing opportunities if uncomfortable. Angels remain sensitive to maintaining equity incentives for key employees. They have little interest in backing an entrepreneur that must maintain control, or brings an attorney with him to the negotiation table. Various methods are available for pricing private equity, but all are sensitive to the investor's required rate of return and subsequent discount rate. Exit strategies often evolve as the company matures, without a substantial amount of foresight.

6.B Recommendations

There are several recommendations that arise out of this study of informal investors. They include:

- Individuals who lack private equity investment experience, but are interested in becoming active angels should team up with others first. Active angels suggested that "virgin angels" see numerous opportunities before committing any capital the first time. An informal angel network should have complementary skills. The "New Hampshire Breakfast Club" is a good model.

- Quality deal flow is a complex issue. For instance, some angels would like to see more meetings with entrepreneurs with new ideas, but with less formality. Their concern was that entrepreneurs were being pushed past the angel stage into the venture capital realm by preparation requirements forced upon them as an entry barrier. Others recommended publishing a directory with names of angels and their investment interests. Naturally many experienced angels did not concur. These old-time angels retorted that plenty of angels were in the market, and there was even excess cash looking for investments.
- Angels should avoid family-related investments. They should take an analytical approach and invest with their head, not their heart. Angels should certainly be interested in building relationships with their entrepreneurs, but keep them at arms length to avoid downstream problems.
- Inexperienced angels usually use common stock as their investment vehicle. Informal investors should consider using more complex structuring and financial instruments. Terms similar to venture capitalists are entirely appropriate. For example, convertible preferred stock with dividend provisions, a liquidation preference, redeemable at a later date should the company fail to progress, voting rights and anti-dilution protection measures are a good start.

6.C Areas for Future Research

This thesis has primarily been a descriptive study of the informal network in New England. Angel attitudes, behaviors and characteristics are difficult to quantify without a more formal and far reaching study. Some suggested areas for further research include:

- Provide in one document a comprehensive overview of the methodologies for pricing equity in closely held private companies. Provide further insights into pricing and structuring deals for business angels. Develop a suggested term sheet specifically for angels that incorporates more of these sophisticated financing techniques.

- Much like Gaston (1989), conduct a comprehensive study of the breadth of angel resources and their investing characteristics. Quantify the number of high net worth individuals who are interested in possibly investing in seed stage companies, but remain largely an untapped resource.⁶⁵
- Investigate the level of angel activity in leveraged and management buyouts (LBO's/MBO's).
- Investigate the use of the internet as a vehicle for angels and entrepreneurs to communicate and exchange information. This could include the effect of an electronic prospectus, also known as a "hyperprospectus".⁶⁶
- Investigate what policy changes federal and state governments could change to improve the efficiency of the private equity market, and promote capital access for entrepreneurs.⁶⁷
- Research the transportability of the private equity market to other nations, economies, cultures and settings.

In summary, angels make very significant, yet difficult to quantify, contributions to seed stage businesses in America. While they control capital resources in the \$25-\$50 billion range, they also provided insightful mentoring to their portfolio companies. Informal investors enjoy the entrepreneurial process and prefer to back teams close to their home. "Virgin" angels are best advised to team with other investors. Pricing and structuring from an angel perspective is a critical aspect of the investment process. This arena in particular, requires additional exploration. This chapter closed with additional areas of research that could lead to greater understanding of business angel attitudes, behaviors and characteristics.

⁶⁵ Center for Venture Research, 1995, *ibid.*, p.4.

⁶⁶ *ibid.*

⁶⁷ *ibid.*

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Appendix

The following pages contain background material noted below.

App A: Standard Survey Administered to Informal Investors

This survey was administered in person or by telephone.

1. Administrative:

Date of Interview: _____ Follow-up: _____ Investor Code #: _____

2. Are you an "Accredited Investor"? Yes No

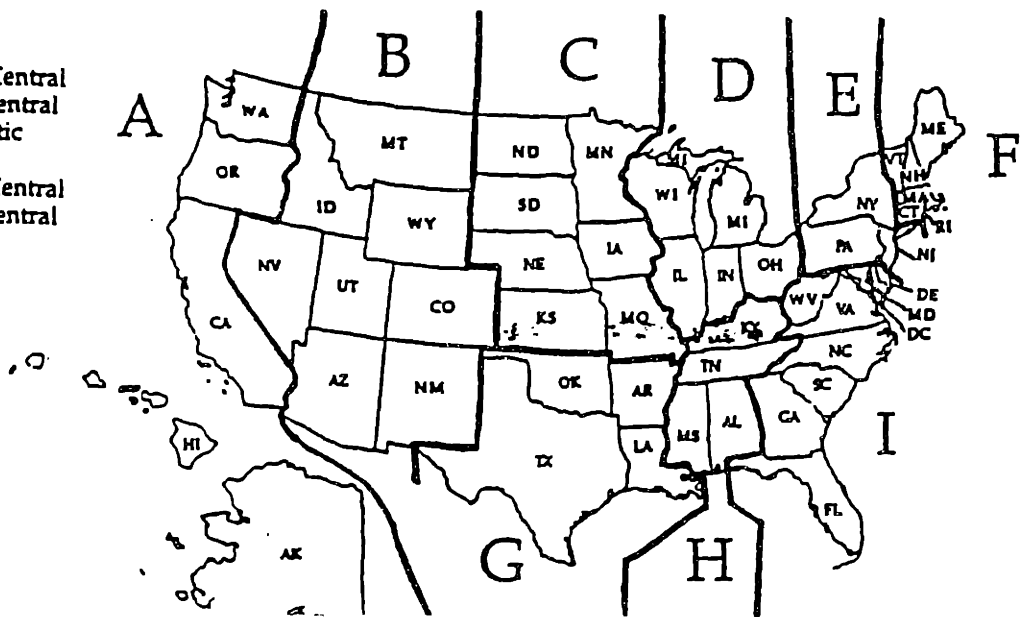
Any natural person whose net worth at the time of the investment exceeds \$1,000,000, or income exceeded \$200,000 in the last two years and expects to attain that level this year is an accredited investor under SEC Regulation D Rule 501(a).

3. Geographic Investing Regions:

How close do like your investments to be? One days drive (300 miles) _____ One hours drive (50 miles) _____

Check all the geographic regions in which you would consider investing, or indicate "all regions". Where do you live now? _____

- _____ A. Pacific
- _____ B. Mountain
- _____ C. West North Central
- _____ D. East North Central
- _____ E. Middle Atlantic
- _____ F. New England
- _____ G. West South Central
- _____ H. East South Central
- _____ I. South Atlantic
- _____ J. Canada
- _____ All regions



4. Investment History and Preferences

Financing Stage	Definition	Number of Events	Details
Seed	Venture in idea stage or in the process of being organized		
Startup	Venture completing product development and initial marketing; may be in process of being organized or in business < 1 year;		
First Stage	Initial capital expended; requires funds to initiate full scale manf. and sales		
Second Stage	Working capital for the initial expansion of a company that is producing and shipping, and has growing accounts receivables and inventories		
Third Stage	In existence for 2-5 years; needed for major expansion; increasing sales volume; breaking even or even profitable		
Established Firm #1	Over 5 years old and needs capital to maintain growth		
Established Firm #2	Over 5 years old and needs turnaround assistance		

5. Business Or Industry Categories

- | | |
|--|--|
| <input type="checkbox"/> A. Agriculture/Fishing/Forestry | <input type="checkbox"/> J. Medical/Health care |
| <input type="checkbox"/> B. Communications/Publishing | <input type="checkbox"/> K. Real Estate/Construction |
| <input type="checkbox"/> C. Computer Software | <input type="checkbox"/> L. Recreation/Tourism |
| <input type="checkbox"/> D. Education/Training | <input type="checkbox"/> M. Retail Trade |
| <input type="checkbox"/> E. Energy/Natural Resources | <input type="checkbox"/> N. Service - Technology Related |
| <input type="checkbox"/> F. Financial Services, Banking, Insurance | <input type="checkbox"/> O. Service - Other |
| <input type="checkbox"/> G. Manufacturing - High Tech Products | <input type="checkbox"/> P. Transportation |
| <input type="checkbox"/> H. Manufacturing - Industrial and Commercial Products | <input type="checkbox"/> Q. Wholesale Trade |
| <input type="checkbox"/> I. Manufacturing - Consumer Products | <input type="checkbox"/> R. Biotech/Pharmaceutical |
| | <input type="checkbox"/> S. Environment |

6. Maximum \$\$ Considered For Any One Investment

- | | |
|--|---|
| <input type="checkbox"/> A. Under \$10,000 | <input type="checkbox"/> E. \$100,000-\$250,000 |
| <input type="checkbox"/> B. \$10,000-\$25,000 | <input type="checkbox"/> F. \$250,000-\$500,000 |
| <input type="checkbox"/> C. \$25,000-\$50,000 | <input type="checkbox"/> G. \$500,000-\$1,000,000 |
| <input type="checkbox"/> D. \$50,000-\$100,000 | <input type="checkbox"/> H. More than \$1,000,000 |

7. Willing To Join With Other Investors in opportunities that exceed the maximum above?? **Yes** **No****8. Minimum Annual Sales Potential 5 Years After Investing?**

Check ONE only!

- | | |
|---|--|
| <input type="checkbox"/> A. \$100,000 | <input type="checkbox"/> E. \$10 million |
| <input type="checkbox"/> B. \$500,000 | <input type="checkbox"/> F. \$20 million |
| <input type="checkbox"/> C. \$1 million | <input type="checkbox"/> G. \$40 million |
| <input type="checkbox"/> D. \$2 million | <input type="checkbox"/> H. More than \$50 million |

9. Qualified and willing to provide management assistance? What areas?

- | | |
|--|--|
| <input type="checkbox"/> A. Marketing | <input type="checkbox"/> E. Personnel |
| <input type="checkbox"/> B. Production | <input type="checkbox"/> F. General Management |
| <input type="checkbox"/> C. Finance | <input type="checkbox"/> G. Other |
| <input type="checkbox"/> D. Research and Development | |

10. Extent of Involvement in risk capital portfolio companies?

- | | |
|--|--|
| <input type="checkbox"/> A. No involvement other than reviewing periodic reports and attending stockholder meetings. | <input type="checkbox"/> D. Work part-time with the firm |
| <input type="checkbox"/> B. Representation on the firm's Board of Directors | <input type="checkbox"/> E. Work full time with the firm |
| <input type="checkbox"/> C. Provide consulting help as needed and requested. | <input type="checkbox"/> F. Other |

11. What enticed you to make first risk capital investment?

17. How do you price and structure the deal?

18. What kind of value do you perceive adding? How do you monitor and mentor your investments?

A. What do you define as things going wrong? What action do you take?

19. What type of harvest or exit strategies do you use?

20. How do you spend your free time? What are your avocations? (aviation, sailing, power boating, etc.)

21. What would entice you (or others you know) to become angel investors? What would it take to keep you as an active investor?

22. Any specific results you care to share?

23. What you recommend to others just starting out as angels?

What mistakes have you made? What are the pitfalls? What would you do differently? Would you try it again?

24. Names of other "Business Angels" I can talk to? Other leads or sources of information on this subject?

25. How could we make the informal investor network function better?

26. Your Educational and Professional Background?

THESIS PROCESSING SLIP

FIXED FIELD: iii. _____ name _____

index _____ biblio _____

COPIES: Archives Aero Dewey Eng Hum

Lindgren Music Rotch Science

TITLE VARIES: See Degree Book

NAME VARIES: George

IMPRINT: (COPYRIGHT) _____

COLLATION: 812

ADD. DEGREE: _____ ▶ DEPT.: _____

SUPERVISORS: _____

NOTES:

cat'r: _____ date: _____

▶ DEPT: Mgt

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▶ <u>J178</u>

▶ YEAR: 1996 ▶ DEGREE: M. S.

▶ NAME: FRANCK, Steven G.

