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Reading 1

The (Not So) Puzzling Behavior of Angel Investors

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* Assistant Professor, University of Wisconsin Law School. I am most grateful to Bobby Bartlett, Barbara Black, Brian Broughman, Bill Carney, Deborah DeMott, George Dent, Jill Fisch, Vic Fleischer, Jesse Fried, Dave Hoffman, Doug Moll, Larry Ribstein, Gordon Smith, Robert Summers, and Josh Wright for their helpful comments on this Article. I also benefited from conversations with several angel investors, including Knox Massey, Executive Director of the Atlanta Technology Angels, Bob Morrison, Executive Director of the Tucson Desert Angels, and especially Luis Villalobos, founder of the Tech Coast Angels, the largest angel group in the United States. This Article was presented at faculty workshops at Cornell and Wisconsin, a Law & Entrepreneurship Retreat at the University of Wisconsin, the 2007 Law & Society Association Annual Meeting in Berlin, Germany, and the inaugural session of the Arizona Entrepreneurship and Innovation Seminar, and I thank participants in all of these forums for their useful comments and suggestions. Finally, my thanks to Christine Hurt and everyone at Conglomerate for hosting a discussion of this Article as part of that blog's Third Annual Junior Scholars Workshop, and to all those who participated in that discussion.

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I. INTRODUCTION

Where do entrepreneurs turn for funding once their credit cards are maxed out, friends and family are no longer taking their calls, but it is still too early for venture capitalists to invest? They turn to “angel” investors. Angel investors are wealthy individuals who personally finance the same high-risk, high-growth start-ups as venture capitalists but at an earlier stage.¹ Well-known angels include Microsoft co-founder Paul Allen, EDS founder H. Ross Perot, and Dallas Mavericks’ owner Mark Cuban. But the prototypical angel may still be rich old Uncle Joe, the wealthy, distant relative or family acquaintance.² Angels come in many forms, yet together they constitute an essential source of entrepreneurial finance, providing some \$25 billion to new ventures each year.³ Not only are angels important for the amount they provide to new start-ups, but for *when* they provide it—at a crucial stage in the start-up’s growth that allows entrepreneurs to build the financial bridge from friends-and-family funding to venture capital.

Despite their importance, angels are surprisingly underappreciated in the popular press and academia, especially legal

1. There is no technical definition of an angel investor (sometimes referred to as a “private investor” or “informal venture capitalist”), although most descriptions of angels focus on two characteristics: wealth and the investment of personal funds. First, an angel typically qualifies as an “accredited investor” under the securities laws, which means she has over \$1 million in net worth, or income over \$200,000 in each of the last two years (or \$300,000 with spouse) and reasonably expects to reach the same income level in the current year. 17 C.F.R. § 230.501(a) (2008). Second, an angel invests her own funds, as compared to venture capitalists and other financial intermediaries, who invest the funds of others.

2. Drawing the line between the “friends and family” and “angel” categories can sometimes be difficult, as in the case of non-immediate family members like Uncle Joe. There is no precise definition of an angel investor, *see supra* note 1, but non-immediate family members are often counted in the angels category.

3. *See infra* note 57 (discussing the estimated size of the angels market).

academia. Venture capitalists are credited for Silicon Valley success stories such as Google, Amazon.com, and Apple Computer. But each of these companies first relied on angels and might never have attracted venture capital without them.⁴ By investing their own funds in start-ups with no operating history, angels take significant risks. Start-ups benefit from angel risk-taking, but so do venture capitalists, who rely on angel funding to help start-ups develop and use angel funding as a mechanism for sorting among the countless new start-ups that later seek venture capital. Without angels, the venture capital model could not exist in its current form. Even more importantly, without angels our entire innovation-based economy—which relies on start-ups' success and has produced over 12.5 million jobs and up to eleven percent of our gross domestic product in recent years—would be in jeopardy.⁵

One contribution of this Article is to reveal the importance of angel investors in entrepreneurial finance. Once people realize how important angels really are, they will want to know more about them. Although this Article begins broadly, it quickly hones in on **one of the many interesting aspects of angels yet to be explored: the angel investment contract.** Angel investment contracts have escaped academic attention, yet they present an extremely interesting study in contract design that informs financial contracting theory in important ways.

Start-up investments are rife with uncertainty, information asymmetry, and potential agency costs in the form of potential opportunism by entrepreneurs. Venture capitalists mitigate these problems by using their leverage over cash-strapped entrepreneurs to insist on comprehensive investment contracts. **These contracts allow venture capitalists to screen, monitor, and control their investments through a combination of staged financing, preferred stock, board seats, negative covenants, and specific exit rights. Angel investing as it has long been practiced, on the other hand, is strikingly informal. Despite investing at a time when levels of uncertainty, information**

4. See MARK VAN OSNABRUGGE & ROBERT J. ROBINSON, ANGEL INVESTING: MATCHING START-UP FUNDS WITH START-UP COMPANIES – THE GUIDE FOR ENTREPRENEURS, INDIVIDUAL INVESTORS, AND VENTURE CAPITALISTS 5 (2000) (“Venture capitalists get all the press, but the vast majority of entrepreneurial funds are actually funded by business angels, especially those firms in their earliest stages.”).

5. Robert E. Grady, Testimony before the U.S. House Committee on Education and the Work Force, 2 (Mar. 11, 2004) (explaining that venture-backed firms employed over 12.5 million people and in the year 2000 accounted for approximately 11% of the U.S. Gross Domestic Product). The current president of the Kauffman Foundation, Carl Schramm, contends that in a world of globalization and outsourcing, entrepreneurship is America's remaining comparative advantage. See generally CARL J. SCHRAMM, THE ENTREPRENEURIAL IMPERATIVE (2006).

asymmetry, and agency costs are even higher, “traditional” angels do not extract *any* of the venture capitalists’ common contract protections. Angels’ use of simple contracts appears to be a departure from what financial contracting theory would predict and, as a result, seems to be puzzling behavior. Indeed, the conventional wisdom is that angels use simple contracts because they lack the sophistication of venture capitalists.

This Article will show that the conventional wisdom is wrong; angels’ preference for simple contracts is quite rational from a financial perspective. First, an angel’s financial payoff comes from a small number of start-ups that go on to attract venture capital and then exit by an initial public offering (“IPO”) or private sale. Although venture capitalists recognize the importance of angels in entrepreneurial finance, they are hesitant to invest in start-ups when an overreaching angel’s preferences must be “unwound” for the venture capitalists to receive *their* standard preferences. Because venture capitalists have many potential start-ups to choose from, they may pass on those presenting complications. Therefore, overreaching angels reduce their chances for a large upside by making follow-on venture capital funding unlikely. The rational angel recognizes that she is the first, but not the last, source of outside investment and acts accordingly.

Second, angel investment contracts are financially rational because angels’ informal methods of screening and monitoring entrepreneurs substitute for venture capitalists’ formal, contract-based methods. Angels economize on screening through investments that are highly local and relationship-driven; they economize on monitoring through active participation in venture development.

Finally, the costly contracting literature supports the financial rationality of angel contracts. It is simply not cost-effective to design, write, monitor, and enforce detailed contracts when smaller dollar amounts are invested and when the duration of the detailed bargains will be short due to venture capital unwinding.

The venture capital story ends here. Venture capital is a purely financial endeavor because venture capitalists must produce returns for venture fund investors within a relatively short time frame. Angels, however, are not bound by such constraints because they invest *personal* funds, and therefore answer to no one for the investment. The use of personal funds gives angels the flexibility to invest for nonfinancial as well as financial reasons, and, in fact, many angels do have personal reasons for investment. Most angels are successful ex-entrepreneurs who miss the excitement of new venture development or wish to give back to the entrepreneurial community

through “for-profit philanthropy.”⁶ These nonfinancial motivations for angel investment also help to explain the use of informal contracts. Demanding comprehensive, protective terms would signal a lack of trust in entrepreneurs, and literature on the relationship between contract and trust suggests that an entrepreneur who receives this signal will be less likely to invite angel participation or receive the altruistic message that the angel hopes to send.

The informal model of angel investing described thus far comprises the bulk of angel investments, and the primary goal of this Article is to explain that model. In addition, this Article recognizes that a radical transformation in angel investing has begun. Angels increasingly are abandoning informal operation in favor of professional organization. Although angels are still investing personal funds, greater numbers of them are screening and pooling their investments through regional angel groups. Jeffrey Sohl, who has studied angels for over a decade, estimates that up to thirty percent of angel investments might now come from angel groups,⁷ although other sources suggest that angel group investments may in fact make up less than two percent of all angel investments.⁸ Whatever the precise figure, the trend toward the professionalization of angel investing is interesting in a number of respects. Keeping with the focus of this Article, I examine the effect of this trend on angel contract design and find that angel group contracts closely resemble early-stage venture capital contracts.

In light of the rationality of traditional angel contract design, this shift to the venture capital model presents the second puzzle that this Article attempts to solve: If traditional angels’ use of simple contracts is indeed rational, can angel groups’ use of comprehensive contracts also be rational? The answer to this second puzzle is also yes for several reasons, all of which stem from the fact that angel groups

6. See *infra* note 180 and accompanying text.

7. Hannah Clark, *Are Angel Investors Heaven-Sent?*, FORBES, May 4, 2006, http://www.forbes.com/entrepreneurs/2006/05/04/entrepreneurs-finance-angels_cx_hc_0504angel.html.

8. According to the Angel Capital Association (“ACA”), the professional alliance of angel groups in the U.S. and Canada, there were approximately 114 angel groups that were full members of the ACA in the U.S. in 2006. ACA data show an average total investment for each angel group at \$1.78 million for the year (including investments by individual angel group members, which is the most common form of angel group investment practice). ACA Angel Group Confidence Report, Mar. 27, 2007, available at http://southeastvc.blogspot.com/southeast_vc/files/angel_group_confidence_report_results.pdf (last visited Sept. 20, 2008). Multiplying that figure by the number of groups gives a total of \$202.9 million invested by all angel groups. The largest angel groups are all full members of the ACA, but even if we assumed an equivalent amount of investment outside of ACA-member groups, the total is no more than \$406 million, or 1.6% of the total \$25 billion angel market. See *infra* note 57 (discussing the total size of the angel market). I thank Luis Villalobos for this observation.

more closely resemble venture capitalists than traditional angels in a number of important ways. First, an angel group's more professional nature, higher investment amounts, and slightly later investments (all resembling early-stage venture capitalists) allow its members to be somewhat more aggressive than the traditional angel without fear of venture capital unwinding. Second, the angel group's opportunities for informal screening and monitoring are less than for traditional angels due to the more arms-length relationship between angel groups and entrepreneurs. This relational distance increases uncertainty, information asymmetry, and agency costs that must then be mitigated by contract. Third, the angel group's higher transaction costs are justified by higher investment amounts and a longer duration for angel preferences. Finally, from a nonfinancial perspective, angel groups derive private benefits that are not hindered by the use of detailed investment contracts.

This Article's explanations for the rationality of both traditional angel contracts and angel group contracts fill important gaps in both the entrepreneurial finance and financial contracting literatures. They also inform contract/trust and costly contracting theories. The remainder of the Article is organized as follows. Part II examines the typical venture capital investment contract and reviews its mechanisms for reducing extreme levels of uncertainty, information asymmetry, and agency costs in start-up investments. Part III reveals the unique nature of angel investing, which explains what otherwise appears to be a puzzling, simple contract design on the part of traditional angels. Part IV examines changes in angel contract design corresponding to the recent professionalization of the field and shows that it is rational for these contracts to include more comprehensive terms. Part V concludes.

II. THE VENTURE CAPITAL INVESTMENT MODEL

Venture capital has been the financial engine driving most successful start-up companies over the past several decades. Venture capital has had its greatest successes in internet investments in the mid- to late-1990s, including the funding of Google in 1999 by leading Silicon Valley firms Kleiner Perkins and Sequoia Capital,⁹ and the funding of Yahoo in 1995 by Sequoia Capital.¹⁰ Household-name companies Apple Computer, Genentech, Intel, and Microsoft are

9. Google Milestones, Google.com, <http://www.google.com/corporate/history.html#1999>.

10. Company History, Yahoo.com, <http://docs.yahoo.com/info/misc/history.html>.

likewise the products of venture capital.¹¹ It is almost axiomatic to observe that a start-up's chances for success will increase if it can attract venture capital. Paul Gompers and Josh Lerner attempted to quantify the venture capital effect. They found that ninety percent of start-ups that were unable to attract venture capital within the first three years failed, while the failure rate dropped to thirty-three percent for those that did attract venture capital.¹² In addition to financial capital, venture capitalists provide crucial value-added services. They use their networking skills to recruit professional managerial talent,¹³ and they can provide seasoned expertise for decisionmaking, such as determining the most profitable exit strategy.¹⁴

Infusions of venture capital are coupled with investment contracts that set forth the venture capitalists' rights and obligations in the start-up.¹⁵ Like angel investment contracts, venture capital investment contracts are necessarily incomplete, which gives rise to problems of uncertainty, information asymmetry, and agency costs in the form of potential opportunism by entrepreneurs.¹⁶ Start-up investments are particularly interesting to financial economists because they present extreme forms of these problems.¹⁷ Start-ups have little or no operating history or tangible assets with which to

11. PAUL A. GOMPERS & JOSH LERNER, *THE VENTURE CAPITAL CYCLE* 1 (2000).

12. PAUL A. GOMPERS & JOSH LERNER, *THE MONEY OF INVENTION: HOW VENTURE CAPITAL CREATES NEW WEALTH* 10–11 (2001).

13. Michael Klausner & Kate Litvak, *What Economists Have Taught Us About Venture Capital Contracting*, in *BRIDGING THE ENTREPRENEURIAL FINANCING GAP* 54, 58–59 (Michael J. Whincop ed., 2001). Value-added services can be as important as financial capital. eBay, for instance, was a profitable start-up that did not require outside funding. Yet it sought venture capital, which was provided by Benchmark Partners, in recognition that a venture capitalist's connections and expertise would be essential in securing a seasoned CEO and other executives. RANDALL E. STROSS, *EBOYS: THE TRUE STORY OF THE SIX TALL MEN WHO BACKED EBAY AND OTHER BILLION-DOLLAR START-UPS* 22 (2000).

14. See Joshua Lerner, *Venture Capitalists and the Decision to Go Public*, 35 *J. FIN. ECON.* 293, 314 (1994) (observing that experienced venture capitalists appear better able to time IPOs than their less experienced counterparts).

15. The investment contracts might include an amendment to the start-up's corporate charter (to create and designate preferred stock), a stock purchase agreement, and an investor's rights agreement.

16. See, e.g., Philippe Aghion & Patrick Bolton, *An Incomplete Contracts Approach to Financial Contracting*, 59 *AM. REV. ECON. STUD.* 473, 479 (1992).

17. See Ronald J. Gilson, *Engineering a Venture Capital Market: Lessons from the American Experience*, 55 *STAN. L. REV.* 1067, 1076 (2003) ("The special character of venture capital contracting is shaped by the fact that investing in early stage, high technology companies presents [uncertainty, information asymmetry, and opportunism] in extreme form."); George G. Triantis, *Financial Contract Design in the World of Venture Capital*, 68 *U. CHI. L. REV.* 305, 311–12 (2001) (observing that financial contracting is more difficult in venture capital than in bank lending).

predict future performance, and scientific or technological novelty like that found in the typical Silicon Valley start-up adds another layer of uncertainty.¹⁸ This uncertainty provides entrepreneurs with significant informational advantages over venture capitalists and increases agency costs by making it more difficult for venture capitalists to sort between good and bad entrepreneurs and monitor investments.¹⁹

Although it is impossible for venture capitalists to eliminate these problems, they mitigate them by syndicating their investments with other venture capitalists and investing in a portfolio of start-ups.²⁰ Venture capitalists also use incentive-aligning compensation arrangements with entrepreneurs, such as stock options and stock grants that vest over time.²¹ And, most pertinent to this Article, **venture capitalists mitigate unforeseeable problems by designing comprehensive investment contracts that give venture capitalists far more control than their percentage ownership warrants, which, under the conventional wisdom, cash-strapped entrepreneurs are forced to accept.**²²

18. Gilson, *supra* note 17, at 1077.

19. While most academics have focused on the potential conflicts between venture capitalists and entrepreneurs, there are other notable conflicts present in this setting. See Robert P. Bartlett, III, *Venture Capital, Agency Costs, and the False Dichotomy of the Corporation*, 54 UCLA L. REV. 37 (2006) (discussing conflicts between different venture capitalists investing in the same start-up); Jeffrey N. Leavitt, *Burned Angels: The Coming Wave of Minority Shareholder Oppression Claims in Venture Capital Start-up Companies*, 6 N.C. J.L. & TECH. 223 (2005) (discussing conflicts between angels and venture capitalists); Kate Litvak, *Venture Capital Limited Partnership Agreements: Understanding Compensation Arrangements*, (Columbia Law & Econ. Research Paper No. 254, 2004), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=555626 (discussing conflicts between venture capitalists and venture fund investors).

20. See GOMPERS & LERNER, *supra* note 11, at 134 (explaining that syndication “allows the venture capital firm to diversify its portfolio, thereby reducing the exposure to any single investment. . . . By syndicating investments, the venture capitalist can invest in more projects and diversify away some of the firm-specific risk.”).

21. See *id.* at 131; Klausner & Litvak, *supra* note 13, at 62–63.

22. Venture capitalists typically enjoy bargaining power over entrepreneurs, although bargaining power can shift over competition to fund the most desirable start-ups or in times of flush times for private equity, when more cash is available to spend. See STROSS, *supra* note 13, at 25 (explaining that in competitions to fund the most attractive start-ups, the bargaining power shifts in favor of the entrepreneur); William W. Bratton, *Venture Capital on the Downside: Preferred Stock and Corporate Control*, 100 MICH. L. REV. 891, 897–98 (2002) (reciting the “once-prevailing story about venture capital transactions [that] entrepreneurs so need venture capital that they cede both a majority of stock and control of the boardroom,” but calling the once-prevailing story “incomplete”); Theresa Sullivan Barger, *How to Dance with Angels*, CFO.com (Apr. 30, 2007), available at http://www.cfo.com/article.cfm/9097739/c_9098309?f=home_todayinfinance (discussing that in the current market where large amounts of both venture capital and angel finance are available, bargaining power shifts to start-ups to decide whose funding to accept).

The typical venture capital investment contract employs five protective measures. First, the contract provides for the disbursement of funds to the entrepreneur in stages. Staged financing reduces uncertainty by delaying funding until the entrepreneur proves herself by achieving performance milestones set by the venture capitalist.²³ Venture capitalists can cut their losses by refusing to fund entrepreneurs who do not reach these milestones. Staging reduces information asymmetry and agency costs by allowing venture capitalists to more effectively screen their investments and spend less time monitoring in between financings. Screening of potential investments is facilitated through signaling. The theory is that good entrepreneurs will signal their quality by agreeing to condition funds upon entrepreneurial performance while bad entrepreneurs will not.²⁴ Venture capitalists also have less need to monitor entrepreneurs because staging strongly aligns entrepreneurs' interests with venture capitalists' interests. The entrepreneur who needs the next cash infusion to survive has a strong performance incentive and is unlikely to shirk or seek private benefits at the expense of the venture capitalist, which reduces agency costs.²⁵ Indeed, for all of these reasons, staged financing is thought to work so well that Gompers and Lerner describe it as "the most potent control mechanism a venture capitalist can employ."²⁶

Second, venture capitalists take convertible preferred stock in exchange for their cash infusions, in contrast to the common stock taken by entrepreneurs and friend-and-family investors.²⁷ The use of

23. See Steven N. Kaplan & Per Strömberg, *Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts*, 70 REV. ECON. STUD. 281, 304 (2003) (discussing staged financing).

24. Gilson, *supra* note 17, at 1080. As Klausner and Litvak observe, however, this signal only works if the entrepreneur can accurately gauge the value of his business. Klausner & Litvak, *supra* note 13, at 56.

25. Gilson, *supra* note 17, at 1079; Darwin V. Neher, *Staged Financing: An Agency Perspective*, 66 REV. ECON. STUD. 255, 255–56 (1999) (observing that staged financing mitigates the entrepreneur's holdup potential).

26. GOMPERS & LERNER, *supra* note 11, at 139; see also Klausner & Litvak, *supra* note 13, at 56 ("Most important among these contract terms is the staged nature of venture capital investment.").

27. Kaplan and Strömberg's survey of 213 venture capital investments in 119 portfolio companies during the late 1990s found that 95.8% of all rounds used convertible preferred stock, with convertible preferred stock being the sole security in 79.8% of all rounds. Kaplan & Strömberg, *supra* note 23, at 284 tbl.1. 38.5% of the rounds used participating preferred stock, which entitles the holder not only to its preferential return, but also to share in the proceeds of the common stockholders on an as-if-converted basis. *Id.*

preferred stock offers several advantages for venture capitalists.²⁸ For starters, it provides downside protection: the preferred stock is paid first in the event of a liquidation or sale of the start-up—a common end result for new start-ups.²⁹ The liquidation preference also facilitates entrepreneurial signaling on the theory that entrepreneurs who are willing to grant a venture capitalist the first payout signal their belief that the start-up will be worth more than the venture capitalist's preference.³⁰ Preferred stock is also allowed a higher valuation, and in turn common stock and stock options can receive a lower valuation. The lower valuation provides tax advantages that can be helpful to the entrepreneur in recruiting new employees.³¹

The third and fourth common features of investment contracts are intended to allocate decisionmaking control to venture capitalists, which reduces the potential for opportunistic behavior by entrepreneurs (who otherwise would have such opportunities due to their majority ownership).³² Venture capitalists secure board seats in increasing numbers with each round of investment.³³ Control of the board entitles a venture capitalist to significant control of the start-up because of the board's broad authority under corporate law.³⁴ Although academics have found that venture capitalists control the board (i.e., they have a majority of board seats) less often than is

28. On the other hand, preferred stock receives disfavored treatment in litigation. See Bartlett, *supra* note 19, at 101–07 (discussing Delaware's narrow approach to construing preferred stock rights).

29. A sale is commonly counted as a liquidating event for purposes of triggering the venture capitalist's preference. Preferred stock also carries a dividend preference, but since start-ups rarely pay dividends during their life, the dividend preference is only valuable if it is cumulative, thereby entitling the venture capitalist to a greater payout upon liquidation or sale. Klausner & Litvak, *supra* note 13, at 64.

30. *Id.*

31. See Ronald J. Gilson & David M. Schizer, *Understanding Venture Capital Structure: A Tax Explanation for Convertible Preferred Stock*, 116 HARV. L. REV. 874, 893–901 (2003) (suggesting that preferred stock can be used to transform current ordinary income into deferred capital gains, creating management incentives).

32. See William A. Sahlman, *The Structure and Governance of Venture-Capital Organizations*, 27 J. FIN. ECON. 473, 506–14 (1990) (explaining that venture capitalist control rights minimize agency costs).

33. See D. Gordon Smith, *The Exit Structure of Venture Capital*, 53 UCLA L. REV. 315, 326 (2005) (“Because venture capitalists typically gain additional board seats with each round of investment, over time the board composition provisions of venture-backed companies tend to move from ‘entrepreneur control’ or ‘contingent control’ to ‘investor control.’”).

34. DEL. CODE ANN. tit. 8, § 141(a) (2006) (“The business and affairs of every corporation organized under this chapter shall be managed by or under the direction of a board of directors . . .”); Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. L. REV. 547 (2003) (arguing in favor of “director primacy”).

commonly assumed,³⁵ Jesse Fried and Mira Ganor contend that the numbers are deceiving—that “independent” directors chosen by the venture capitalist are likely to side with the venture capitalist in any contested board vote, giving the venture capitalist effective control of the board in more cases.³⁶ Another allocation of control comes from **negative covenants**. Negative covenants require venture capitalist approval for major decisions.³⁷ These covenants are complementary when venture capitalists control a board but are more important when they do not. For instance, the venture capitalist probably has only a minority of board seats after its first round of investment, but negative covenants prevent the entrepreneur from acting opportunistically during that time (e.g., by issuing additional preferred stock that dilutes the venture capitalist’s share).

Finally, investment contracts provide venture capitalists with **specific exit rights, which are important in private corporations with illiquid shares**. These exit rights include redemption (or put) rights, demand registration rights, and conversion rights.³⁸ Agency costs may be high when it comes to timing an exit because the preferences of venture capitalists and entrepreneurs can differ. As a general rule, venture capitalists require earlier exits due to the short life of venture funds and the need to make distributions to fund investors,³⁹ while entrepreneurs wish to delay exit in order to extend private benefits such as a steady salary.⁴⁰ Redemption and other specific exit rights address these potential conflicts by allocating the exit decision to venture capitalists. Again, these rights are complementary when the

35. See Kaplan & Strömberg, *supra* note 23, at 289–90 (documenting that venture capitalists control start-up boards only 25% of the time, with contingent or shared control in 62% of the cases); see also Bratton, *supra* note 22, at 891–98 (using the Kaplan and Stromberg findings to theorize that the parties prefer shared control to effectuate low-cost transfers of control).

36. Jesse M. Fried & Mira Ganor, *Agency Costs of Venture Capitalist Control in Startups*, 81 N.Y.U. L. REV. 967, 988–89 (2006).

37. Gordon Smith’s recent empirical study found that the vast majority of venture capital investment contracts contained negative covenants against engaging in business combinations (81.47%), amending the charter in ways adverse to the venture capitalist (91.01%), redeeming or paying dividends to the common stock (70.84%), and issuing more preferred stock (80.38%) without the venture capitalist’s approval. Smith, *supra* note 33, at 346.

38. *Id.* at 348–55.

39. See *infra* note 164 and accompanying text. The push for an early exit may be even more pronounced with inexperienced venture firms looking to “grandstand” to establish a reputation. See generally Paul A. Gompers, *Grandstanding in the Venture Capital Industry*, 42 J. FIN. ECON. 133 (1996).

40. See Klausner & Litvak, *supra* note 13, at 57 (identifying an entrepreneur’s private benefits from delaying exit as “salary and other compensation, social status, and psychic benefits of managing a business”).

venture capitalists already control the exit decision through board control but are more important when they do not.⁴¹

III. THE ANGEL INVESTMENT MODEL: A DEPARTURE FROM FINANCIAL CONTRACTING THEORY?

A. *The Need for Angels*

Venture capital is crucial to a start-up's success, but it is not immediately available to most start-ups. Most venture capitalists fund start-ups that have survived their earliest stages and are expanding, for instance by delivering products and services to customers, or are preparing for an IPO or private sale.⁴² Nor is venture capital readily available in the smaller amounts that might be appropriate for very young companies.⁴³ A typical venture round averages between \$2 million and \$10 million, although it can be much higher.⁴⁴ Therefore, venture capitalists leave a critical funding gap that has both time and capital components. The time gap is present during the earliest stage of a start-up's life, which commonly lasts at least one year.⁴⁵ The

41. It also should be noted that the venture capital investment contract may reduce uncertainty, information asymmetry, and agency costs in the form of opportunism by entrepreneurs, but in doing so it may allow opportunism by venture capitalists. Whether reputational constraints can serve as an adequate deterrent to a venture capitalist's opportunistic temptations is the subject of debate. *See infra* notes 150–53 and accompanying text.

42. For commonly used staging terminology, *see* Jeffrey Sohl, *The Early Stage Equity Market in the USA*, 1 VENTURE CAPITAL 101, 106 (1999).

43. *See* Joshua Lerner, "Angel" Financing and Public Policy: An Overview, 22 J. BANKING & FIN. 773, 778 (1998); Hans Severiens, *The Band of Angels: The Origins of Collaboration*, in STATE OF THE ART: AN EXECUTIVE BRIEFING ON CUTTING-EDGE PRACTICES IN AMERICAN ANGEL INVESTING 18, 21 (John May & Elizabeth F. O'Halloran eds., 2003) [hereinafter STATE OF THE ART] (observing that "while some hot companies could absorb these larger sums [provided by venture capitalists], the average unproven start-ups that needed \$1 million to build a prototype and hire a couple of people were left out of consideration").

44. *See* Sohl, *supra* note 42, at 109 (observing that the "handoff" from angel investors to venture capitalists typically occurs in the \$2–3 million range). The recent litigation between venture capitalist Benchmark Partners and start-up Juniper Financial reveals an instance of more substantial venture capital investment. Juniper received a first venture round of \$20 million, a second round of \$95.5 million, and a third round of \$145 million. Benchmark Capital Partners IV, L.P. v. Vauge, No. Civ. A. 19719, 2002 WL 1732423, at *2 (Del. Ch. July 15, 2002), *aff'd sub. nom.* Benchmark Capital Partners IV, L.P. v. Juniper Fin. Corp., 822 A.2d 396 (Del. 2003).

45. Paul A. Gompers, *Optimal Investment, Monitoring, and the Staging of Venture Capital*, 50 J. FIN. 1461, 1473 (1995) (noting that most venture capitalist investments are made after the first year).

capital gap exists for funding in amounts less than \$2 million. Of course, friends, family, and the entrepreneur's own efforts may provide some funding (up to \$100,000 or so), but this is hardly enough to sustain the rapid-growth start-up for very long.⁴⁶

Venture capitalists do not fill the funding gaps as to time or capital for several reasons.⁴⁷ First, because risk and uncertainty decrease as a start-up grows, venture capitalists sit out the early stages in favor of later ones. Second, venture funds attract large amounts of capital from fund investors, and spending this capital efficiently requires making large investments that may not be appropriate for very young companies. Finally, venture capitalists screen and monitor their investments closely, which imposes significant costs.⁴⁸ For instance, a partner from the venture capital firm typically sits on the board of each start-up that the firm funds.⁴⁹ This intensive use of human resources limits the number of start-ups that can be funded. The need for selectivity exacerbates the tendency to fund only start-ups with some operating history and supply them with large investments.

The funding gap poses a serious problem for start-ups. Without financial and nonfinancial assistance during their first year, many

46. See Jeffrey E. Sohl, *The U.S. Angel and Venture Capital Market: Recent Trends and Developments*, 6 J. PRIVATE EQUITY 7, 14 (2003) ("The [capital] gap ranges from \$100,000 at the low end, the point at which the money raised from friends and families and bootstrapping runs out, to the \$2 million range on the high end, the time when the venture would historically become attractive enough to catch the eye of venture fund investors.").

47. There are exceptions, such as specific venture funds devoted to early stage investments, but early stage investments are not the industry norm. To underscore this observation, Van Osnabrugge and Robinson found that in 1998, during the height of the dot.com era when venture capitalists were said to move into earlier stage investments, still only 28% of all venture capital was invested in early stage deals. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 49.

48. On the decision to invest, Gompers and Lerner write:

The typical venture organization receives many dozens of business plans for each one it funds. Although most proposals are swiftly discarded, serious candidates are extensively scrutinized through both formal studies of technology and market strategy and informal assessment of the management team. (It is not unusual for a venture team to complete 100 or more reference checks before deciding to invest in a firm.)

GOMPERS & LERNER, *supra* note 11, at 5; see also John L. Orcutt, *Improving the Efficiency of the Angel Finance Market: A Proposal to Expand the Intermediary Role of Finders in the Private Capital Raising Setting*, 37 ARIZ. ST. L.J. 861, 873-74 (2005) (explaining that it is more cost-effective to spread sizeable due diligence costs over a larger investment). On monitoring, see GOMPERS & LERNER, *supra* note 11, at 171 ("Venture capitalists' oversight of new firms involves substantial costs."); John Freear et al., *Angels on Angels: Financing Technology-Based Ventures - A Historical Perspective*, 4 VENTURE CAPITAL 275, 278 (2002).

49. GOMPERS & LERNER, *supra* note 11, at 171-84 (discussing how venture capital board membership varies with geographic proximity to the start-up and during times where greater oversight is needed).

start-ups fail to develop to the point of attractiveness for venture capitalists.⁵⁰ This early point is where angels are so critical. Angels fill the funding gap as to both time and capital, functioning as a “conveyor belt” that moves young start-ups toward waiting venture capitalists.⁵¹

First, angels fill the time gap by investing when venture capitalists will not. Jeffrey Sohl estimates that angels provide eighty percent of the early-stage capital to high-tech start-ups.⁵² Andrew Wong’s empirical study of angel investment found that, when angels invested in early rounds, seventy-three percent of the time they did so without venture capitalists as co-investors.⁵³ With venture capitalists moving toward even later-stage investments than before, the need for angels in the early rounds is even more pronounced.⁵⁴ Because they direct their investments at start-ups in different stages of development, angels and venture capitalists mostly serve complementary rather than competitive functions.⁵⁵

Second, angels fill the capital gap by providing appropriate amounts of funding to early-stage start-ups. A typical angel round ranges from \$100,000 to \$1 million or even \$2 million at the high end—the very size of the capital gap.⁵⁶ This financing allows early-stage companies to accomplish a variety of objectives that will make

50. Sohl, *supra* note 46, at 15 (observing that “without seed and start-up capital, many of these high-tech ventures do not even get past the initial stages of development”).

51. See Tony Stanco & Uto Akah, *The Relationship Between Angels and Venture Capitalists in the Venture Industry*, LAB2IPO, 2005, at 6, <http://lab2ipo.org/A2VCSurvey/VC%20Angel%20Survey%20v.final.pdf> (using the conveyor belt analogy).

52. Sohl, *supra* note 46.

53. Andrew Wong, *Angel Finance: The Other Venture Capital* at 12 & 43 tbl.2 (Working Paper Series 2002), available at <http://ssrn.com/abstract=941228>; *id.* at 11 (“Most firms that receive [angel] funding are less than 12 months old. In comparison, the average age of first funding for venture-backed firms is greater than one year.”) (citation omitted).

54. See *infra* notes 209–10 and accompanying text.

55. See John Freear & Jeffrey Sohl, *The Characteristics and Value-Added Contributions of Private Investors to Entrepreneurial Software Ventures*, 6 J. ENTREPRENEURIAL FIN. 84, 89 (2001) (asserting that “the research [on the funding of software ventures] provides added evidence to support the existence of a complementary relationship between private investors and venture capital funds”); cf. Brent Goldfarb et al., *Does Angel Participation Matter? An Analysis of Early Venture Financing* 27 (Working Paper Series 2008), available at <http://ssrn.com/abstract=1024186> (arguing that in those “Series A” financing rounds where angels and venture capitalists compete to fund, entrepreneurs will prefer angels for reasons suggested in this Article, creating an adverse selection or “lemons” problem for venture capitalists).

56. Sohl, *supra* note 46, at 13 (“The typical angel deal is an early-stage round (seed or start-up) in the \$100,000 to \$2 million range.”); Wong, *supra* note 53 (noting that angel rounds averaged \$1 million). Some accounts from the early to mid-1990s suggest that the transition from angel to venture capital financing occurred sooner, around \$500,000 to \$1 million. John Freear et al., *The Private Investor Market for Venture Capital*, 1 FINANCIER 7, 8 (1994); John Freear & William E. Wetzels, Jr., *Who Bankrolls High-Tech Entrepreneurs?*, 5 J. BUS. VENTURING 77, 87 (1990).

them attractive to venture capitalists including marketing, securing customers, and obtaining patent protection. The aggregate angel capital market is estimated to be as large as, or even larger than, the venture capital market.⁵⁷ But because each angel round is smaller, angels fund significantly more start-ups than venture capitalists—perhaps thirty to forty times more.⁵⁸ Therefore, while angels provide a filtering function for venture capitalists, they do not use too fine a filter, which reduces the chance that a promising start-up will fail prematurely.

Finally, angels provide value-added services to entrepreneurs. These are nonfinancial services of a different type than venture capitalists provide. While venture capitalists take a more formal role and offer benefits such as connections to professional managers, angels provide informal advice and counseling. Most angels are ex-entrepreneurs themselves, which allows them to offer seasoned advice on and empathy with the many difficulties faced in advancing an early-stage venture.⁵⁹ Angels typically invest in companies that are a short drive away to facilitate regular interactions with entrepreneurs and active participation in the venture's growth.⁶⁰ Many entrepreneurs believe that an angel's advice is as important as her financial capital.⁶¹

For all of these reasons, not only do angels help start-ups grow, but they also allow the venture capital model to work in its present

57. Although it is difficult to estimate the total size of the angel market due to its informality, studies suggest that during modern times it has ranged from an average of about \$25 billion per year to a peak of \$50–\$60 billion during the height of the dot.com era in 2000. See VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 69; Freear et al., *supra* note 56, at 7. The venture capital market also rose sharply during the dot.com era. Venture capitalists invested \$3.8 billion in start-ups in 1995, followed by \$10 billion in 1997, \$35.6 billion in 1999, and over \$100 billion in 2000. See Sohl, *supra* note 46, at 13. The years since the dot.com bust have seen a return to average venture capital investments of around \$20 billion per year. ANDREW METRICK, VENTURE CAPITAL AND THE FINANCE OF INNOVATION 13 (2007). In 2006, angels and venture capitalists each invested approximately \$25 billion. See CENTER FOR VENTURE RESEARCH, THE ANGEL INVESTOR MARKET IN 2006: THE ANGEL MARKET CONTINUES STEADY GROWTH, (2006) available at <http://unhinfo.unh.edu/news/docs/2006angelmarketanalysis.pdf> (citing total angel investments in 2006 at \$25.6 billion).

58. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 69.

59. *Id.* at 108 (stating that 75–83% of angels have prior start-up experience); see John Freear et al., *Angels and Non-Angels: Are There Differences?*, 9 J. BUS. VENTURING 109, 111 (1994) (citing studies for the proposition that a majority of angels “have entrepreneurial experience as owners or managers”).

60. See *infra* note 135 and accompanying text.

61. See Freear & Wetzel, *supra* note 56, at 96–97 (discussing that 70% of entrepreneurs considered the value-added services of angels to be very or moderately productive); Sohl, *supra* note 42, at 112 (explaining that entrepreneurs described the mentoring they received from angels “to be as valuable as the capital”).

form. The venture capital model relies on start-ups surviving their earliest stages; this survival requires angels. Without angels, venture capitalists would have to invest earlier and more often—earlier so start-ups would have the cash necessary for initial growth and more often because angels would not have provided an early-stage sorting or filtering function among the countless start-ups that seek funding.

Although the need for angels is clear from a theoretical perspective, the histories of leading companies such as Amazon.com and Google firmly illustrate the point as a practical matter. Amazon.com founder Jeff Bezos approached venture capitalists early on, but he was told that his company was not ready for venture funds. Instead, a dozen angels were willing to invest \$1.2 million, which was crucial in positioning the company for its later \$8 million venture round.⁶² Google similarly benefited from an early \$100,000 investment from angel Andy Bechtolsheim, one of the founders of Sun Microsystems. This cash infusion allowed Google co-founders Larry Page and Sergey Brin to “move out of their dorm rooms and into the marketplace.”⁶³

B. Traditional Angel Investment Contracts

Like venture capitalists, angels enter into investment contracts with entrepreneurs. For the reasons discussed earlier, extreme levels of uncertainty, information asymmetry, and agency costs in the form of potential entrepreneurial opportunism also plague angel investments.⁶⁴ In fact, because angels invest at an earlier stage than venture capitalists, when a start-up has no operating history whatsoever, these problems are even more acute than at the time venture capitalists invest. Therefore, financial contracting theory would seem to predict an angel contract modeled after the venture capital contract, perhaps with even *more* protections, including the use of a convertible, preferred security and significant control rights.⁶⁵

62. Sohl, *supra* note 42, at 102.

63. Michael V. Copeland, *How to Find Your Angel Investor*, BUS. 2.0 MAG., Feb. 28, 2006, <http://money.cnn.com/2006/02/28/magazines/business2/angelinvestor/index.htm>; see also Google Milestones, Google.com, <http://www.google.com/corporate/history.html#1998>.

64. See *supra* notes 16–19 and accompanying text.

65. See Dirk Bergemann & Ulrich Hege, *Venture Capital Financing, Moral Hazard, and Learning*, 22 J. BANKING & FIN. 703, 703–11 (1998) (discussing the optimal shares for the entrepreneur and the venture capitalist in the context of common stock, debt, and convertible securities); Francesca Cornelli & Oved Yosha, *Stage Financing and the Role of Convertible Debt*, (Centre for Econ. Pol’y Res. Discussion Paper No. 1735, 1997), available at <http://www.cepr.org/pubs/new-dps/dplist.asp?dpno=1735>; Neher, *supra* note 25; Jeffrey J. Trester, *Venture*

Yet what we know reveals that the investment contracts used by traditional angels differ dramatically from those used by venture capitalists because they provide far *less* investor protection.

The research on angel contracts must be pieced together from various sources because angels are very difficult to study.⁶⁶ The angels market has long been reference-driven and informal—angels generate deal flow from trusted referrals and operate behind the scenes.⁶⁷ Angels have a penchant for secrecy to avoid being inundated with funding requests from the multitudes of new start-ups that require capital.⁶⁸ That angels prefer to operate through back channels makes finding them as difficult for academics as it is for entrepreneurs.⁶⁹ Therefore, there are few studies of angel contract design.⁷⁰

Andrew Wong offers the best study of angel contract design to date.⁷¹ Wong's sample consists of 215 angel investment rounds in 143 companies from across the United States during the period from 1994 to 2001.⁷² Although they are few in number, Wong's study, other

Capital Contracting Under Asymmetric Information, 22 J. BANKING & FIN. 675, 675–80 (1998) (considering the preferred versus debt choice under asymmetric information).

66. See Wong, *supra* note 53, at 2 (“Despite the importance of angel funding, much of what is known about angels is incomplete and not well understood. Very few academic studies have examined angels, in part because data on angel investment is difficult to obtain.”).

67. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 144 (noting that “studies have found that business angels usually learn of investment opportunities through a network of friends and family, business associates, accountants, and lawyers as referrals”); MIT ENTREPRENEURSHIP CENTER, VENTURE SUPPORT SYSTEMS PROJECT: ANGEL INVESTORS 28 (2000), <http://entrepreneurship.mit.edu/Downloads/AngelReport.pdf> [hereinafter MIT Study] (“The angels we interviewed said they received their highest quality deals from their network of trusted business associates.”). In what is credited as the earliest article on angels, William Wetzel observed that the angels market is “virtually invisible, inefficient, and often misunderstood.” William E. Wetzel, Jr., *Angels and Informal Risk Capital*, SLOAN MGMT. REV. 23, 24 (1983).

68. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 46 (“If it becomes widely known that an individual has money to invest, then he or she may be besieged with hundreds of proposals per year, when his or her desire may be only for three or four.”).

69. *Id.* at 84 (noting that in their attempts to interview angels, angels were often asked for an extensive explanation as to how they were found, with a number refusing to answer).

70. See Jeffrey E. Sohl, *The Private Equity Market in the USA*, 5 VENTURE CAPITAL 29, 42 (2003) (explaining that research on the “terms and conditions” of angel investment contracts is “acutely missing from the current knowledge base”). On the types of studies that comprise the existing literature on angels, see Freear et al., *supra* note 48, at 279 (“The majority of the research output . . . has been empirically based, seeking to learn more about the attitudes, behaviour and characteristics of the angel population (often known as the ‘ABCs’ of angels).”); Wong, *supra* note 53, at 8 (asserting that while most studies of angels “focus mainly on descriptive statistics of investment size [his] paper focuses on the control aspects of angel investment”). Much of what we currently know about angels comes from the University of New Hampshire’s Center for Venture Research and its affiliated academics, including John Freear, Jeffrey Sohl, and William Wetzel. The Center’s website address is <http://wsbe.unh.edu/cvr/>.

71. See generally Wong, *supra* note 53.

72. *Id.* at 4.

studies,⁷³ and anecdotal accounts present a fairly consistent picture of angel contract design. They reveal that traditional angels use simpler contracts that are comprised of more entrepreneur-friendly terms than do venture capitalists.⁷⁴ As a general rule, these contracts employ none of the five methods venture capitalists have devised to mitigate uncertainty, information asymmetry, and agency costs in start-up investments.

First, traditional angels do not stage their investments. Wong's survey found that when a venture capital round followed an angel round, angels were unlikely to participate.⁷⁵ Even when some angels did participate in future rounds, Wong found that it was less than half of the initial investors.⁷⁶ These findings track the conventional wisdom that angels provide early-stage funding to grow the start-up for the first year or so, after which venture capitalists take over. When an angel does follow on her own investment in a later round, she usually sees a lower return,⁷⁷ suggesting that the angel provided the subsequent funding as a last resort to keep a struggling venture afloat rather than to obtain a larger piece of a good investment.

Second, the traditional angel receives common instead of preferred stock in exchange for her investment. Wong's survey found that the greatest number of angels took straight common stock,⁷⁸ which tracks anecdotal accounts. For example, Stephen Prowse states that, "unlike in the organized private equity market, many angels are content to take common stock,"⁷⁹ and Jesse Fried and Mira Ganor observe that "angels frequently invest through common equity."⁸⁰

73. For example, Stephen Prowse offers a small study of Dallas-area angels. Stephen Prowse, *Angel Investors and the Market for Angel Investments*, 22 J. BANKING & FIN. 785 (1998).

74. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 175 ("Angels often use relatively simple investment contracts."); Sohl, *supra* note 42, at 112 (noting that angel "[d]eal structure, as stated in their terms and conditions, tend to be briefer and more informal than those of venture capital funds"); MIT Study, *supra* note 67, at 36 (explaining that angels who invest in a small number of deals, are new to angel investing, or who invest primarily for nonfinancial reasons "use informal or simple term sheets, or in some cases, there is no term sheet").

75. Wong, *supra* note 53, at 18 (observing that "staging is not a frequently used control mechanism by angels").

76. *Id.*

77. Robert Wiltbank & Warren Boeker, *Returns to Angel Investors in Groups* 8 (Working Paper Series, 2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1028592; see also Bob Goff, *The Sierra Angels: Broadening the Charter*, in STATE OF THE ART 70, *supra* note 43, at 83 (asserting that during tough times, angels "must be prepared to help fund subsequent rounds for portfolio companies").

78. Wong, *supra* note 53, at 19 ("Common equity is the most prevalent security, used in 34% of all [early stage] rounds and 39.5% of angel-only rounds.")

79. Prowse, *supra* note 73, at 790.

80. Fried & Ganor, *supra* note 36, at 1009.

Third, while board seats are commonly granted in venture capital rounds, they do not appear common in angel rounds. Wong's study found that less than half of all angel rounds involved granting the investor even a single board seat.⁸¹ Another study of angel investments in software ventures suggested the figure is even lower, at only twenty percent.⁸² On the other hand, one older study and some anecdotal accounts suggest that, in angel investments, board representation is more common than other venture capital protective devices.⁸³

Fourth, few angels contract for negative covenants. Wong's study found that negative covenants allowing investors to veto management decisions were included in only 5.1 percent of angel contracts.⁸⁴ In a study of Dallas-area angels, Stephen Prowse observed that "control mechanisms used in the organized private equity market, such as covenants preventing mergers, asset sales or entering into long-term contracts without outside investor approval, appear rare in the angel market."⁸⁵

Finally, like negative covenants, specific exit rights also may be used less frequently by angels than other venture capital protective devices. Wong's study found that a provision granting angels the right to force bankruptcy was included in only 4.6 percent of angel contracts.⁸⁶ This tracks the observation by Van Osnabrugge and Robinson that angels are unlikely to specify a method of liquidation at the time of investment.⁸⁷ Wong's study also revealed no contracts where the angel was allowed to put her shares to the entrepreneur for

81. Wong, *supra* note 53, at 15 (discussing the fact that a board seat is granted in only 42.5% of angel rounds).

82. See Freear & Sohl, *supra* note 55, at 96 (observing that only 20% of angels funding software ventures had representation on the board).

83. See John Freer et al., *Raising Venture Capital: Entrepreneurs' View of the Process*, 1990 FRONTIERS ENTREPRENEURSHIP RES. 223-37 (reporting that 71% of angels were on boards); Prowse, *supra* note 73, at 790 ("Angels are very often on the board."); Jeffrey E. Sohl & Jill Areson-Perkins, Current Trends in the Private Equity Financing of High Tech Ventures: An Analysis of Deal Structure 5 (2001) (unpublished manuscript, on file with the Vanderbilt Law Review) (noting that "for venture capitalists, as well as angels, board representation is an important consideration"). *But see* Fried & Ganor, *supra* note 36, at 1009 ("Unlike VCs, angels generally do not acquire control rights and board positions.").

84. Wong, *supra* note 53, at 53 tbl.6 panel D.

85. Prowse, *supra* note 73, at 790.

86. Wong, *supra* note 53, at 53 tbl.6 panel D.

87. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 199 ("Freear, Sohl, and Wetzel's finding that in the United States 'private individuals were more inclined to leave the method of liquidation undefined at the time of investment than were venture capital funds' still rings true.") (citation omitted).

redemption, but thirty-eight contracts allowed the *entrepreneur* to exercise a call option and redeem the angel's shares.⁸⁸

Traditional angels do, however, use at least one of the venture capitalists' noncontractual, risk-spreading devices: syndication of investments. Angels have long syndicated their investments with angel investment teams comprised of anywhere from six to twelve "active" and "passive" angels.⁸⁹ It is difficult to tell to what extent angels adopt the venture capitalist's portfolio theory of investment, however. Some studies and anecdotal accounts suggest that the typical angel invests in less than one deal per year, which would not permit much diversification,⁹⁰ while other commentators have suggested that angels do diversify.⁹¹ More empirical work is needed to answer this question. However, even if angels invest in a number of start-ups, their preference for start-ups in their field of expertise limits the diversification of industry.⁹²

Again, angels are very difficult to study, and the survey method most commonly used to study them has inherent flaws.⁹³ As two commentators wrote: "Angel research is a crude field in an early stage of development where convenience sampling is often a necessity and statistically valid generalization is nearly always impossible."⁹⁴

88. Wong, *supra* note 53, at 53 tbl.6 panel D. Unsurprisingly, I have not come across evidence of a traditional angel bargaining for registration rights.

89. Sohl, *supra* note 42, at 111 ("In many cases there is a lead investor that brings the investment opportunity to these co-investors as a means of risk sharing and pooling of capital to round out the financing requirements."); Sohl, *supra* note 46, at 13 (explaining that a typical angel round involves six to eight investors); Wong, *supra* note 53, at 23 ("On average, twelve angels co-invest in a round."). Syndication can be less attractive to active angels who invest to play a hands-on role in the entrepreneurial process if co-investors also wish to play that role. See VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 136 (citing one angel as stating: "Co-investors attract if I'm in it purely for the investment; if it's an investment where I have a hands-on role it doesn't attract – otherwise you have too many egos involved, and it leads to conflict."). Stephen Prowse observes that passive angels rarely exist in a syndicate without an active angel. Prowse, *supra* note 73, at 788.

90. See VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 109 (discussing studies by Freear and Wetzal, J.D. Aram, and R.J. Gaston); Prowse, *supra* note 73, at 788 ("Many angels do not make more than one investment per year, although there are a few full time angels that will make four or more per year.").

91. Freear et al., *supra* note 48, at 277 ("Angels will tend to invest in entrepreneurial ventures as part of a total portfolio that contains investments with differing risk characteristics.").

92. See *infra* notes 127–32 and accompanying text (detailing how angels select their investments).

93. Wong sought to reduce selection bias by sampling entrepreneurs that received angel funding rather than angels themselves. Wong, *supra* note 53, at 8–9.

94. Kevin Hindle & Susan Rushworth, *The Demography of Investor Heaven: International Research on the Attitudes, Behaviour and Characteristics of Business Angels*, in BRIDGING THE ENTREPRENEURIAL FINANCING GAP 10, 10 (Michael J. Whincop ed., 2001).

Also, it is likely that differences among the individuals who fall into the “traditional angel” category translate to differences in contract design. For instance, more experienced and sophisticated angels in high-tech corridors may demand more venture capital-like terms.⁹⁵ On the other hand, obscenely wealthy angels may not ask for a contract at all, or they may ask for only a simple contract because the investment is not a meaningful sum of money for them. (This might have been the case with Andy Bechtolsheim’s \$100,000 investment in Google, where legend has it he simply handed the founders a check after they made a short presentation.) Furthermore, repeat angels “burned” by a lack of foresight in the past may contractually protect against risk in future investments. The impact of these differences among traditional angels has not been adequately considered, and it would be useful to conduct further empirical studies that employ a more refined taxonomy.⁹⁶ Still, despite the exceptions to the general rules described above and the need for further research and refinement, the available evidence does point to a unique investment model for traditional angels as a generalized group—a model that seems puzzling in its lack of contractual protections for angel investors.

C. Explaining Traditional Angel Investment Behavior

Why does the angel model differ so dramatically from the venture capital model and from what financial contracting theory would appear to predict given the risk inherent in start-up investments? It could be, as has been suggested, that angels lack bargaining power over entrepreneurs to extract the same contract

95. A 2000 MIT study of 26 experienced angels in the Silicon Valley and Route 128 areas found larger investments and greater use of venture capital-like terms among these investors. MIT Study, *supra* note 67, at 37; *see also* Peter Kelly & Michael Hay, *The Private Investor-Entrepreneur Contractual Relationship: Understanding the Influence of Context*, 2000 FRONTIERS ENTREPRENEURSHIP RES. 258, 264 (observing that “we found that more experienced investors incorporated more contractual safeguards up front than their less experienced colleagues”); Prowse, *supra* note 73, at 788 (“The more sophisticated angels tend to insist on investment contracts that resemble the ones written in the organized private equity market, which contain lots of mechanisms to overcome moral hazard problems and protect them in the case of poor performance, whereas unsophisticated angels omit even the most basic protections.”).

96. Broader taxonomies have been attempted, although none have matched the categories of angels with contracting behavior. *See* VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 85–90 (providing some of the taxonomies of angels that have been suggested over the years, including one taxonomy that includes ten types of traditional angels); MIT Study, *supra* note 67, at 17–21. *But see* Freear et al., *supra* note 48, at 281 (“Perhaps fortunately, the spate of new terms [for angels], once in full flood, is drying up.”).

protections as venture capitalists.⁹⁷ But this is unlikely considering that start-ups need angel funding and value-added services to advance beyond the initial stages of development. Accordingly, angels do, as a general rule, enjoy bargaining power over cash-strapped entrepreneurs. It is also unlikely that a competitive market among angels is driving contract design. First, there is excess demand for angels and, therefore, plenty of funding opportunities to go around.⁹⁸ Second, if angels do compete to fund the most attractive start-ups, then the competition is probably like that of venture capitalists—over valuation and reputation rather than contract terms.⁹⁹

A second possible explanation for the angel model is that angels do not need comprehensive contracts because they adequately diversify risk by syndicating their investments and investing in a portfolio of start-ups. In other words, they make efficient use of two of the three venture capitalist protective measures, which renders the third unnecessary. However, there are two problems with this explanation: 1) venture capitalists still consider comprehensive investment contracts necessary, despite their use of syndication and portfolio theory; and, 2) as discussed in the last Section, it is far from clear that angels invest in a sufficient number of start-ups or industries to allow for true diversification.¹⁰⁰

A third possible explanation is that angels are unsophisticated investors who are willing to settle for few protections because they do not know any better. Indeed, this is probably the conventional wisdom as to why angels invest as they do.¹⁰¹ However, while a lack of

97. MIT Study, *supra* note 67, at 37 (observing that “even experienced angels do not achieve all the stringent venture capitalist terms. They do not have the negotiating power of venture capitalists . . .”).

98. Despite a robust angel market, the funding gap still exists. See William K. Sjostrom, Jr., *Relaxing the Ban: It's Time to Allow General Solicitation and Advertising in Exempt Offerings*, 32 FLA. ST. L. REV. 1, 3–4 (2004) (suggesting that the funding gap could be filled if the SEC allowed general solicitation in exempt offerings); Sohl, *supra* note 46, at 14 (attributing the funding gap to capital and information inefficiencies); Colleen DeBaise, *On Angels' Wings*, WALL ST. J., Mar. 19, 2007, at R6 (discussing proposed “Access to Capital for Entrepreneurs Act of 2006,” which would have provided a 25% tax credit for angel investing).

99. It could be that angels as a group maintain their dominance over funding early stage start-ups by eschewing the venture capital model, but there is little evidence that venture capitalists wish to move into this space, and good reasons why this is so. See *supra* notes 47–49 and accompanying text.

100. See *supra* notes 90–92 and accompanying text.

101. See VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 172 (explaining that only 38% of angels in the UK seek assistance from lawyers and accountants); Fried & Ganor, *supra* note 36, at 1009 (“Because angels invest less than VCs and are generally less sophisticated, their financing agreements are much more informal.”); Orcutt, *supra* note 48, at 896 (“Why angels employ weaker screening and monitoring mechanisms is not entirely clear. It could be due to lack of sufficient resources or lack of knowledge on how to conduct such activities.”).

sophistication may partially explain angel contract design,¹⁰² it probably is not the primary explanation for two reasons. First, angels are high net-worth individuals, or “accredited investors,” not the sort of investors who are generally considered unsophisticated.¹⁰³ After all, securities laws use wealth as a proxy for sophistication and allow issuers to forego disclosures to accredited investors.¹⁰⁴ Second, angels are overwhelmingly ex-entrepreneurs,¹⁰⁵ which suggests that they not only understand investing as a general matter, but start-up investments in particular. Many angels made their fortunes after going through the very same funding process on the other side, when running their own start-ups.

The next two sections explore more likely reasons for the traditional angel investment model, all of which support the notion that angels are sophisticated investors who make smart investment choices. Here, I agree with Vic Fleischer that whenever possible we should look for rational over irrational explanations to describe the behavior of sophisticated parties.¹⁰⁶ The explanations that follow will confirm that. **The first set of explanations reveals that the angel investment model is rational from a financial perspective because of angels’ unique circumstances. The second set of explanations reveals that angel investing is more than a purely financial endeavor, with important nonfinancial goals that could be jeopardized if the venture capital model were adopted.**

Of course, for some angels, certain rationales from the following set will be more important than others in driving behavior. In that sense, the following rationales can be thought of as a “menu” of options, with different angels picking and choosing the rationales that best apply to their own situations. Given the wide variations within

102. See *supra* note 95 and accompanying text.

103. See Jill E. Fisch, *Can Internet Offerings Bridge the Small Business Capital Barrier?*, 2 J. SMALL & EMERGING BUS. L. 57, 74 (1998) (discussing the fact that the Small Business Association’s “ACE-Net” service, a matching service for small business issuers and angel investors, defines angels as accredited investors).

104. Interpretative Release on Regulation D, Exchange Act Release No. 33-6455, 48 Fed. Reg. 10,045, 10,045 (Mar. 10, 1983) (“[A]ccredited investors are not included in computing the number of purchasers in offerings conducted in reliance on Rules 505 and 506. Also, if accredited investors are the only purchasers in offerings under Rules 505 and 506, Regulation D does not require delivery of specific disclosure.”). Of course, it could also be that we do not think wealthy individuals are necessarily more sophisticated for purposes of making investment decisions, but that they are better able to absorb losses from poor decisions.

105. See *supra* note 59 and accompanying text.

106. See Victor Fleischer, *The Rational Exuberance of Structuring Venture Capital Start-ups*, 57 TAX L. REV. 137, 140 (2003) (asserting that “this Article calls attention to the value of seeking out rational explanations before accepting irrational ones—especially when analyzing the behavior of sophisticated experts”).

the category of traditional angels, there are many different reasons an angel might choose a simple investment contract. The following are five possible reasons for simple contracting by traditional angels.

1. Traditional Angel Contract Design as Financially Rational

a. The Need for Follow-On Venture Capital Funding

The first reason that angel contract design is financially rational is that angels are the first, but not the last, source of outside funding for start-ups.¹⁰⁷ As discussed earlier, angels build the financial bridge from friends-and-family money to venture capital.¹⁰⁸ Venture capital is needed for a start-up to have any realistic chance at an IPO or even a high-dollar sale to a larger company.¹⁰⁹ Because these are the very exits that make up angels' most lucrative returns¹¹⁰ and compensate angels for the far larger number of start-ups that fail, angels must entice venture capitalists to follow their investments to have any hope of profit.

This need for venture capital sets de facto limits on the terms of the angel investment contract. To understand why this is so, it is important to recognize that venture capitalists are flooded with funding proposals, and accept maybe one to three percent of them.¹¹¹ Funding proposals are rejected for a number of reasons, including a lack of preexisting knowledge about the entrepreneur.¹¹² While the presence of angels can generally attract (or at least not inhibit)

107. See Leavitt, *supra* note 19, at 224 (“Angels generally invest with the expectation that, should the company progress as planned, one or more venture capital (‘VC’) firms will subsequently invest.”).

108. See *supra* Section III.A. On the other hand, some angels may invest in companies that do not wish to go on to attract venture capital. See Sieverens, *supra* note 43, at 29 (noting that in the fallout years after the dot.com bust, the Band of Angels investment organization was “more willing to look at companies that are unlikely to go the venture capital route and can make do with less. While those types of opportunities are not likely to be IPO candidates, they can often be attractive acquisitions for larger concerns once their businesses are profitable and established.”).

109. See *supra* note 12 and accompanying text.

110. Wiltbank & Boeker, *supra* note 77, at 1 (finding that 7% of angel exits provided 75% of all investment returns through a study, albeit of angel groups).

111. See STROSS, *supra* note 13, at 24 (observing that well-known venture capitalist Benchmark Capital received 1,500 funding proposals in 1997 and funded only nine); VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 146 (noting that “venture capitalists invest in only about 1–3 percent of proposals received”).

112. See STROSS, *supra* note 13, at 25.

venture capital,¹¹³ a venture capitalist might reject a funding proposal because of an overreaching angel. A start-up marred by a complicated angel round is unattractive to venture capitalists because it requires them to “unwind” the non-standard angel preferences in order to strike the venture capitalists’ standard deal. In other words, venture capitalists obtain their usual number of board seats, control rights, and liquidation preferences in each investment. To the extent that angels have obtained such rights and preferences, they must be undone, or else venture capitalists must share with the angels and obtain less than their standard deal. Because this unwinding takes time, effort, and money—not to mention negotiations and a subsequent relationship with an unhappy angel suddenly removed from the board¹¹⁴—the venture capitalist faced with numerous investment candidates and limited resources may pass on the start-up attached to an overreaching angel.

The literature confirms this disadvantage of a preference-filled angel round. One survey found that ninety-four percent of venture capitalists consider angels beneficial to the venture capital industry,¹¹⁵ but forty-four percent also found angel-backed start-ups to be unattractive candidates for funding when angels took “unnecessarily complex terms.”¹¹⁶ (The most common complaint by venture capitalists, however, is that angels overvalue the company.¹¹⁷) As a result, early-stage venture capitalist John Callaghan cautions angels against taking “unclean” terms, such as convertible debt instead of common stock, because it may be seen as “extra ‘baggage’” by venture capitalists¹¹⁸ (although other venture capitalists appear to be more

113. See Wong, *supra* note 53, at 26 (asserting that “more angels leads to a faster time to venture financing. This is evidence that angels can play a networking role; a larger number of angels leads to a larger network of contacts and faster venture capital financing.”).

114. MIT Study, *supra* note 67, at 46 (“Active angels are often requested to leave the Board once professional investors participate in subsequent financing rounds They sometimes resent being removed from the Board.”).

115. Stanco & Akah, *supra* note 51, at 3; see also KAREN SOUTHWICK, THE KINGMAKERS: VENTURE CAPITAL AND THE MONEY BEHIND THE NET 224–25 (2001) (discussing the fact that some venture capitalists look down on angels as being amateurs or not on the venture capitalists’ level, although most venture capitalists still acknowledge the need for angels).

116. Stanco & Akah, *supra* note 51, at 11. Quotes from surveyed venture capitalists emphasized the point. For example, one venture capitalist stated that “there is a tendency to think a cram down and conversion [of an angel’s preferred stock] to common is ‘necessary’ for follow-on venture financing.” *Id.* at 12. Another had the following advice for angels: “Deal structuring so that terms don’t complicate a VC round that follows. Creating the structure, driving the company to key milestones, etc., to make follow-on VC rounds cleaner and more likely.” *Id.* at 15.

117. *Id.* at 11 (finding that 78% of venture capitalists registered this complaint).

118. Posting of John Callaghan to PEHUB (on file with the Vanderbilt Law Review).

comfortable with convertible debt¹¹⁹). Susan Preston, an experienced angel investor, also advises angels to keep the terms of their investment simple because “[n]othing can prevent follow-on funding faster than an overly complicated and burdensome first round, which a VC must try to unwind, often demanding a discounted value and other ‘cram-down’ requirements to offset onerous or overreaching first-round terms.”¹²⁰ Jeffrey Sohl and Jill Areson-Perkins observe that angels appear to understand their place in entrepreneurial finance and the need for venture capital: “Seed investors [i.e., angels] appear to make a concerted effort to not over burden the seed deal with onerous terms and conditions that may inhibit the firm’s ability to attract larger rounds of equity capital in the future.”¹²¹

Therefore, angel contract design is financially rational because angels are involved in a multiplayer game that involves both entrepreneurs and venture capitalists. Early-stage venture capitalists also face these de facto limitations on extracting preferences, albeit to a lesser degree, and as a result their contracts appear to be less comprehensive than later-stage venture capital contracts but more comprehensive than angel contracts.¹²² This is like a sliding scale where the extent of permissible preferences depends on when and how much is invested.¹²³ Later-stage venture capitalists who are at the very end of the sliding scale because they invest the most and the latest do not face contracting limitations due to the need to attract

119. Convertible debt presents an interesting dilemma for venture capitalists. It creates a more complicated angel round, but by deferring valuation until the next round, it allows venture capitalists to eliminate their biggest problem with angels—overvaluation. See MIT Study, *supra* note 67, at 38 (“Some high tech angels use convertible debt to avoid the battle over valuation with the entrepreneur. These securities allow the venture capitalist or other second round investors to set the value of the company in the next round . . . and provide the angel seed investors a discount to that round.”); see also D. GORDON SMITH & CYNTHIA A. WILLIAMS, BUSINESS ORGANIZATIONS: CASES, PROBLEMS, AND CASE STUDIES 160 (2004) (finding that angel investors in Madison, Wisconsin-based NeoClone Biotechnology International, LLC took convertible debt that allowed for conversion to equity on the upside, but offered debt’s superior protection on the downside).

120. SUSAN L. PRESTON, ANGEL INVESTMENT GROUPS, NETWORKS, AND FUNDS: A GUIDEBOOK TO DEVELOPING THE RIGHT ANGEL ORGANIZATION FOR YOUR COMMUNITY 57 (2004).

121. Sohl & Areson-Perkins, *supra* note 83, at 5.

122. See Brian J. Broughman & Jesse M. Fried, *Renegotiation of Cash Flow Rights in the Sale of VC-Backed Firms* 51 tbl.1 (UC Berkeley Pub. Law Research Paper No. 956243, 2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=956243 (documenting that venture capitalists take fewer liquidation preferences in the early stages than the later stages).

123. This may seem odd, that later-stage investors receive greater preferences given that earlier stage investors take more risks. However, “last-in, first-out” is standard practice in venture capital investing. See Bartlett, *supra* note 19, at 76 (“Later investors typically want to be the first in line to get their original investment (and hopefully their return on investment) out.”). Early stage investors are compensated for their extra risk by receiving a larger share of the company for less money.

follow-on investors, at least before an exit. In the case of an exit by IPO, investment bankers and public shareholders do “follow” the late-stage venture capitalists, but this is accounted for: an IPO automatically unwinds the venture capitalist’s preferences, most notably through the mandatory conversion of preferred stock to common stock.¹²⁴

While venture capitalists as a group do not face the same de facto limitations on contracting as angels, they do face significant pressure from venture fund investors to produce high returns within a relatively short timeframe.¹²⁵ This motivates them to go in the opposite direction of angel investors and demand terms that will allow them to meet fund investor expectations. Ron Gilson has observed that the venture capital investment contract is “braided” with the contract for fund investors for purposes of producing those returns.¹²⁶ While the angel investment contract is braided with the venture capital investment contract to produce high returns, this is accomplished in a different manner.

b. Informal Substitutes for Contract

The second reason that angel contract design is financially rational is that the unique nature of the relationship between angel and entrepreneur provides informal substitutes for the venture capitalist’s formal contract protections. The pre-investment nature of this relationship reduces uncertainty and information asymmetry in the way deals are sourced and selected, and the post-investment nature of the relationship reduces agency costs by imposing informal constraints on entrepreneurial opportunism.

Angel investing is highly localized, relationship-driven, and industry-specific. Angels like to invest in start-ups where they know either the entrepreneur or the substantive area (e.g., biotechnology or e-commerce), and preferably both.¹²⁷ This preexisting knowledge reduces uncertainty by allowing the angel to better gauge the start-up’s chances for success and reduces information asymmetry by

124. See Gilson & Schizer, *supra* note 31, at 885.

125. See *infra* notes 164–66 and accompanying text.

126. Gilson, *supra* note 17, at 1091.

127. See Prowse, *supra* note 73, at 789 (“The primary criterion that angels use to screen proposals is whether the entrepreneur is previously known and trusted by them or by an associate who they trust.”); Wong, *supra* note 53, at 28 (asserting that “angels have specialized information and have a high ability to screen for higher quality projects. Many investors have made their fortunes in the same industries that they subsequently invest in.”). In some cases passive angels invest outside of their geographic locality or area of expertise, but the active angel in the syndicate will either be local or an industry expert, or both.

minimizing the entrepreneur's advantage of private information.¹²⁸ The source of the angel's deal flow can also serve to reduce these problems. Investment opportunities come to angels from a network of trusted business associates (e.g., other angels) and, to a lesser degree, from accountants and lawyers.¹²⁹ This "network of trust" serves an important screening and sorting function by funneling high-quality deals to angels while excluding low-quality deals.¹³⁰ The intimate way in which angels learn of and select investments can also benefit start-ups by reducing the amount of due diligence required, thus shortening the length of time from approach to funding.¹³¹ The unsuccessful attempts to create electronic matching services for angels and entrepreneurs underscore the importance of familiarity and locality in angel investing.¹³²

Of course, venture capital is also localized, relationship-driven, and industry-specific when compared to many other forms of investment.¹³³ But venture capitalists must make more investments to generate timely returns for fund investors, and this pressure inevitably forces venture capitalists to sacrifice some of the intimacy and familiarity with start-ups that angels without downstream pressure enjoy. Furthermore, at least some venture capitalists might not have the same entrepreneurial experience as angels; instead they are relatively inexperienced MBAs.¹³⁴ All of these differences, however slight, mean that venture capitalists must rely on detailed contracts to

128. See Wong, *supra* note 53, at 4 ("Because the [venture capitalists] are not as familiar with the entrepreneur as the local [angel] investors, more formal control mechanisms need to be implemented to protect their investment.").

129. See Orcutt, *supra* note 48, at 895 (explaining that referrals from other angels are considered high quality, while referrals from accountants and attorneys are considered of lower quality).

130. Freear et al., *supra* note 56, at 11 (noting that localization produces efficiencies in the angel market); MIT Study, *supra* note 67, at 28 (discussing how angels build their "network of trust"); Jeffrey E. Sohl & Bruce Sommer, *Angel Investing: Changing Strategies During Volatile Times*, at 20 (working paper, on file with the Vanderbilt Law Review) (finding that angels use personal networks to overcome information asymmetry with entrepreneurs).

131. See SMITH & WILLIAMS, *supra* note 119, at 160 n.5 (explaining that entrepreneurs like angels because they tend to perform less due diligence than venture capitalists).

132. See Sohl, *supra* note 42, at 115 ("Electronic networks have been largely unsuccessful to date, less than 1% of equity capital raised in 1997 was harvested on-line.") (citation omitted).

133. See generally ANNALIE SAXENIAN, REGIONAL ADVANTAGE: CULTURE AND COMPETITION IN SILICON VALLEY AND ROUTE 128 (1994) (describing the intimate Silicon Valley culture).

134. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 109 (observing that "venture capitalists for the most part have little entrepreneurial experience" and are instead "financial MBA-types"); cf. SOUTHWICK, *supra* note 115, at 66-67 (noting that some venture capitalists prefer to hire individuals "who get an MBA and jump almost directly into the financial industry" while others emphasize prior entrepreneurial experience—the latter being currently in vogue due to increasing venture capitalist specialization).

a greater degree than angels to reduce uncertainty and information asymmetry.

In addition, the post-investment nature of the angel-entrepreneur relationship allows angels to use informal substitutes in lieu of the contractual monitoring rights and control mechanisms used by venture capitalists. Angels actively participate in venture development through regular visits to the start-up's facilities, which is made possible by investing locally (in start-ups within a one- to two-hour drive¹³⁵) and by establishing trust with entrepreneurs.¹³⁶ As Wong notes, a "localized bond of trust may exist between the entrepreneur and [angel] investor, making formal control mechanisms unnecessary."¹³⁷ Margaret Blair and Lynn Stout also observe that trust can reduce agency costs and substitute for complex contracts.¹³⁸ Of course, venture capitalists are also active investors in the sense that they sit on boards and participate in major decisions, but the angels' involvement is more intimate, routine, and hands-on. Participating daily in venture development is a better check on entrepreneurial opportunism than attending periodic board meetings.¹³⁹

c. Costly Contracting Theory

Yet another explanation for the financial rationality of angel contract design comes from costly contracting theory. Costly contracting theory, which has its origins in transaction cost

135. Sohl, *supra* note 42, at 112 (discussing how angels live close to their investments to facilitate interactions and provide value-added services); MIT Study, *supra* note 67, at 32 ("Most active angels will not invest in opportunities outside a 1-2 hour driving range.").

136. For more on the trust point, see *infra* Section III.C.2.b.

137. Wong, *supra* note 53, at 24.

138. Margaret M. Blair & Lynn A. Stout, *Trust, Trustworthiness, and the Behavioral Foundations of Corporate Law*, 149 U. PA. L. REV. 1735, 1757 (2001):

Where trust can be harnessed, it can substantially reduce the inefficiencies associated with both agency and team production relationships. Trust permits transactions to go forward on the basis of a handshake rather than a complex formal contract; it reduces the need to expend resources on constant monitoring of employees and business partners; and it avoids the uncertainty and expense associated with trying to enforce formal and informal agreements in court.

139. Wong suggests that the large residual claim held by entrepreneurs (angels take only about 20% of the company in exchange for their investment) better aligns the interests of angels and entrepreneurs than in venture capital (venture capitalists take 33-40%). Wong, *supra* note 53, at 22. Even if the difference in percentage ownership is not significant (Wong acknowledges the possibility), the fact that the angel's stock is common like the entrepreneur's, while the venture capitalist's stock is preferred, may lend some support to Wong's suggestion that angel-entrepreneur incentives are better aligned.

economics,¹⁴⁰ predicts that the level of contract complexity will depend on the costs of determining, negotiating, monitoring, enforcing, and even drafting a contract's provisions¹⁴¹ and, of course, the amount of funds at risk. Benjamin Klein observes that "complete contractual specification entails wasteful search and negotiation costs associated with discovering and negotiating prespecified contractual responses to all potential contingencies," and that "most future events can be accommodated at lower cost after the relevant information is revealed."¹⁴² For this reason, Gompers and Lerner tell us that "covenants are included only when the benefits of restricting activity are greater than its costs."¹⁴³ They advise venture capitalists to "balance the benefits of restricting activities with the cost of negotiating the provisions, writing the contractual clauses, and monitoring compliance."¹⁴⁴

Because its five protective devices add significant complexity to the relationship, the venture capital investment contract is costlier to design, write, monitor, and enforce than the angel investment contract.¹⁴⁵ This is rationally so: venture capitalists make larger investments, are in control of those investments for a longer period of time (until exit), and have significant downstream pressure from fund investors. Angels, on the other hand, rationally might choose to forego preference-laden contracts because the costs relative to the amount of the investment would be disproportionately high,¹⁴⁶ the duration of

140. Transaction cost economics dictates that both *ex ante* and *ex post* costs of contracting be considered. *Ex ante* costs are "the costs of drafting, negotiating, and safeguarding an agreement;" *ex post* costs are the costs of enforcement and enforcement mechanisms. OLIVER WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* 20–21 (1985). The recognition that *ex post* processes are not costless was a significant advancement of transaction cost economics over neoclassical economics. On the relationship between costly contracting theory and transaction cost economics, see GOMPERS & LERNER, *supra* note 11, at 31 (equating costly contracting theory with Williamson's arguments on contractual completeness); Alan Schwartz & Joel Watson, *The Law and Economics of Costly Contracting*, 20 J.L. ECON. & ORG. 1, 3 n.1 (2004).

141. See Luca Anderlini & Leonardo Felli, *Incomplete Contracts and Complexity Costs*, 46 THEORY & DECISION 23, 38 (1999) ("Complexity is not necessarily associated with devising the contract but rather with the writing and enforcement of such a contract.").

142. Benjamin Klein, *Why Hold-Ups Occur: The Self-Enforcing Range of Contractual Relationships*, 34 ECON. INQUIRY 444, 447 (1996).

143. GOMPERS & LERNER, *supra* note 11, at 31.

144. *Id.* at 33.

145. See Schwartz & Watson, *supra* note 140, at 16 ("Complex contracts – those having a greater number of clauses or requiring a court to evaluate information from many different sources – are assumed to be more expensive to write than are simpler contracts.").

146. See VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 174 (quoting an angel as saying that the "legals were disproportionate to the size of the investment"). There has been at least one attempt to create a model to predict the optimal level of contractual completeness in a given situation. See Ronald A. Dye, *Costly Contracting Contingencies*, 26 INT'L ECON. REV. 233 (1985).

the preferences would be short due to venture capital unwinding,¹⁴⁷ and angels lack the need for some provisions (e.g., terms regarding exit are less important because angels do not face the same downstream pressures as venture capitalists).¹⁴⁸ This is analogous to the situation of debt financing: only creditors extending large amounts of credit find it worthwhile to negotiate loan covenants.¹⁴⁹ For all of these reasons, costly contracting theory predicts detailed contracts for venture capitalists and simpler contracts for traditional angels, which is indeed the result.

d. Reputational and Court Sanctions?

Finally, to what extent can reputational and court sanctions reduce an angel's agency costs in the absence of a comprehensive investment contract? Invoking costly contracting theory once more, contracts will be simpler when self-enforcement, in addition to court-enforcement, is available to an aggrieved party.¹⁵⁰ It is unclear, however, to what extent this is relevant to the design of angel contracts, or venture capital contracts for that matter. The conventional wisdom is that the tight-knit nature of communities such as Silicon Valley creates a reputation market among venture capitalists and entrepreneurs, which explains the lack of litigation between them.¹⁵¹ Some scholars contend that the fear of acquiring a bad reputation serves as an extra-legal constraint on the venture capitalists' ability to exploit entrepreneurs,¹⁵² while others are more skeptical of this explanation.¹⁵³

If a reputation market does exist between venture capitalists and entrepreneurs, it also must exist between angels and

147. See *supra* Section III.C.1.a.

148. See Goldfarb et al., *supra* note 55, at 2 ("Our results suggest that legal control in seed rounds is not cost-effective because these investments are generally small.").

149. I thank Jesse Fried for this observation.

150. See Klein, *supra* note 142, at 455 (discussing the complimentary relationship of self-enforcement and court-enforcement).

151. See D. Gordon Smith, *Venture Capital Contracting in the Information Age*, 2 J. SMALL & EMERGING BUS. L. 133, 153–54 (1998) (describing the conventional wisdom).

152. See Bernard S. Black & Ronald J. Gilson, *Venture Capital and the Structure of Capital Markets: Banks Versus Stock Markets*, 47 J. FIN. ECON. 243, 252–53 (1998) (arguing that reputational constraints imposed by geographic proximity between venture capitalists and entrepreneurs are an adequate check on venture capitalist opportunism); Sahlman, *supra* note 32, at 513.

153. See Smith, *supra* note 151, at 160–62 (observing that neither entrepreneurs nor venture capitalists have a vehicle for amalgamating or transmitting information about venture capitalist reputation, such as a stock exchange or required disclosures, and that entrepreneurs may have self-serving reasons not to pass along negative information about venture capitalists).

entrepreneurs because that relationship involves even greater localization, familiarity, and intimacy. Here, however, the extra-legal constraint is on entrepreneurs as the party with the contractual ability to exploit angels. The angels' self-enforcement mechanism—the reputational sanction—might prevent entrepreneurial opportunism even when the investment contract does not, much like the entrepreneurs' self-enforcement mechanism is thought to prevent venture capitalist opportunism. In other words, an angel's ability to complain about an entrepreneur could serve as a powerful deterrent, making venture capitalists leery of investing in the start-up. This is a double-edged sword, however: if venture capitalists do not invest, the start-up will not be a "home run" and angels will be denied a large return.¹⁵⁴ This means that angels have self-interested reasons *not* to expose entrepreneurs' opportunism, at least until after venture capitalists invest.¹⁵⁵ Therefore, it is unclear to what extent angels leverage self-enforcement, even if they have the opportunity to do so.

Another interesting question is whether it is possible that potential legal sanctions could be *bolstered* through a simple contract. Angels, as minority shareholders in what are then close corporations, could look to the judicial remedies that have been fashioned to address minority shareholder oppression.¹⁵⁶ It is unlikely, however, that angels will prevail on a minority oppression claim against entrepreneurs.¹⁵⁷ The classic "freeze-out" involves a minority shareholder who is removed from his posts as director, officer, and employee. Having no employment, dividend stream, or exit rights, he is convinced by the majority shareholder to sell his shares for a low price.¹⁵⁸ Courts that protect such minority shareholders through the oppression doctrine might be hesitant to extend the doctrine to angels, who are often only shareholders, not employees, and do not lose out on expected employment income. Also, courts might be less sympathetic to angels given their sophistication and bargaining power over

154. See *supra* note 109 and accompanying text.

155. Of course, allegations of unscrupulous behavior could haunt the entrepreneur in the future, although there is some question as to whether the typical entrepreneur is a "serial" entrepreneur who would be harmed by such allegations. Venture capitalists are obviously repeat players and therefore must be concerned about their reputations.

156. See generally F. HODGE O'NEAL & ROBERT B. THOMPSON, O'NEAL'S CLOSE CORPORATIONS (3d ed. 1998) (discussing the dynamics of close corporations and recent court decisions affecting them).

157. For a discussion of an angel's potential minority oppression claims against venture capitalists, see generally Leavitt, *supra* note 19.

158. See, e.g., Wilkes v. Springside Nursing Home, Inc., 353 N.E.2d 657, 658–62 (Mass. 1976).

entrepreneurs.¹⁵⁹ Up to seventy percent of IPO firms choose to incorporate in Delaware and be governed by Delaware corporate law,¹⁶⁰ which presents yet another hurdle because Delaware courts do not help minority shareholders who fail to help themselves through contract.¹⁶¹ On the other hand, it is possible that an angel's threat to bring a fiduciary duty suit against a cash-poor entrepreneur might have some deterrent effect on the entrepreneur's opportunistic behavior.

In sum, it is unclear to what extent the possibility of reputational and court sanctions are rational reasons for angels to forego protective investment contracts. Better reasons include the need for follow-on venture capital funding, informal substitutes for contract, and costly contracting theory.

2. Nonfinancial Motivations

a. Nonfinancial Reasons for Angel Investing

The previous Section revealed that traditional angel investment contracts are rational from a financial perspective. In venture capital, the story ends here. Venture capitalists invest for purely financial reasons mainly because venture capitalists are financial intermediaries; their capital comes almost entirely from fund investors who demand timely (and high) returns.¹⁶² Venture capitalists are the general partners in venture funds. The limited partners of these funds—including pension funds, endowments, and foundations—supply the fund with capital and take about eighty percent of the returns. For their efforts, the venture capitalists typically receive a management fee of two percent of the invested funds and twenty percent of the profits (the “carry”).¹⁶³

159. See *supra* notes 96, 100–04 and accompanying text.

160. See Robert Daines, *The Incorporation Choices of IPO Firms*, 77 N.Y.U. L. REV. 1559, 1563 tbl.1 (2002) (presenting empirical findings on the incorporation choices of IPO firms).

161. *Nixon v. Blackwell*, 626 A.2d 1366, 1379 (Del. 1993).

162. See STROSS, *supra* note 13, at 87 (observing that in the mid-1990s venture capitalist Benchmark Partners pledged to contribute 3% of a fund's capital, compared to the industry standard of 1%); Gilson, *supra* note 17, at 1071 (finding that a venture capitalist puts up only one percent of the capital).

163. Paul Gompers & Josh Lerner, *An Analysis of Compensation in the US Venture Capital Partnership*, 51 J. FIN. ECON. 3, 3–27 (1999) (conducting an empirical study that found management fees of 2–3% and a large concentration of carry at 20%); see also Victor Fleischer, *Two and Twenty: Taxing Partnership Profits in Private Equity Funds*, 83 N.Y.U. L. REV. 1, 23–24 (2008) (criticizing the tax treatment of the carry as capital gain instead of ordinary income). *But see* Litvak, *supra* note 19, at 3–4 (critiquing the Gompers and Lerner study on staleness and

Venture funds have a maximum life of ten to twelve years before they must liquidate and make final distributions to fund investors.¹⁶⁴ During a particular fund's life, the venture capitalist begins soliciting investments for its next fund, often from the same investors. Gompers and Lerner have described this process of recycling investments in venture funds and then redeploying those funds to new start-ups as the "venture capital cycle."¹⁶⁵ While a good return on start-up investments increases the venture capitalist's carry, it also has another function—to entice the limited partners to continue to invest in the venture capitalist's future funds. This downstream pressure results in highly motivated venture capitalists willing to use their bargaining power over entrepreneurs to secure the most protective investment contracts possible.¹⁶⁶

The financial story, however, is not the full story of angel investment. Unlike venture capital, **angel investing is not necessarily a purely financial exercise. Angels are not financial intermediaries who face downstream pressure to satisfy fund investors.¹⁶⁷ Instead, one of the defining characteristics of angel investment is the use of personal funds.¹⁶⁸ The use of personal funds has its disadvantages: it is always preferable to spend someone else's money rather than one's own where there is a risk of losing it, and too many losses will threaten the angel's ability to make future investments. On the other hand, investing one's own funds provides a measure of freedom not available to venture capitalists.¹⁶⁹ If an angel chooses to invest for personal reasons, she has that luxury.**

methodological grounds and concluding from an independent study that "the compensation of VCs varies significantly across venture firms").

164. GOMPERS & LERNER, *supra* note 11, at 19 ("Almost all venture and buyout funds are designed to be 'self-liquidating,' that is, to dissolve after ten or twelve years.").

165. *Id.* at 4.

166. The need to control the start-up's exit, in particular, is a product of the venture capital cycle. See Smith, *supra* note 33, at 316 (describing how the exit "allows fund investors to evaluate the quality of their venture capitalists and, if necessary, to reallocate their funds away from venture capital to other investment vehicles or from less successful venture capitalists to more successful venture capitalists").

167. See VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 99 (observing that the "agency relationship for the venture capitalist firm (with its fund providers) forces the venture capitalist to choose different investment practices from those of the less-restricted (and less-accountable) business angel").

168. See *supra* note 1.

169. Sohl, *supra* note 42, at 111 ("Angels typically have longer exit horizons than their venture fund counterparts and thus the capital they provide is termed patient capital.").

Although many, if not most, angels invest primarily for financial reasons,¹⁷⁰ angels also have nonfinancial reasons for investing. A distinguishing characteristic of angel investment is that angels “usually develop an emotional attachment to the business venture. In contrast, VCs have financial reward as their only incentive and therefore minimize emotional attachment.”¹⁷¹ First and foremost, angels relish the chance to participate in a new venture’s development. Many if not most angels are ex-entrepreneurs who miss the excitement of being part of a start-up but not necessarily the headaches and grueling schedule that come with full responsibility for one.¹⁷² The chance to become active in another entrepreneur’s venture can stave off the boredom of retirement. According to one angel, “it’s cheaper and more fun than buying a yacht.”¹⁷³ Indeed, the angel’s desire for participation is so strong that her choice between competing investment opportunities may be dictated by the opportunity for participation more than any other factor.¹⁷⁴

Geographic proximity facilitates participation and is, therefore, one of the two most important factors to angels when considering potential investments.¹⁷⁵ Angels typically invest in start-ups that are located within an hour or two of their residences or offices so that they can visit and consult with entrepreneurs on a regular basis.¹⁷⁶ Through these visits, angels offer value-added services to entrepreneurs in the form of seasoned advice on early-stage venture development. Angel participation usually happens informally,

170. See VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 116–17 (contending that financial gain is the primary motivation for angel investment, and citing one angel as disfavoring the term “angel” investor because it implies the precedence of altruism over financial reward).

171. MICHAEL STATHIS, *THE STARTUP COMPANY BIBLE FOR ENTREPRENEURS* 134 (2004) (emphasis removed).

172. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 117–18; MIT Study, *supra* note 67, at 14 (“Angels enjoy the adrenaline rush of emerging company volatility, but without the 80-hour workweeks and the burden of ultimate responsibility for the company.”).

173. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 117.

174. *Id.* at 139 (observing that “angels most often chose one investment over another primarily according to the opportunity to get actively involved in the investee firm”). Of course, syndication means that each start-up will have an active angel and several passive ones; those passive angels may be the active angels in other ventures.

175. MIT Study, *supra* note 67, at 31 (finding through a survey of experienced angels that geographic proximity to the angel was one of the two most important criteria when considering potential investments).

176. See *supra* note 135.

although sometimes the angel will enter into a formal employment or consulting relationship with the start-up.¹⁷⁷

In addition to the private benefits that angels obtain from participating in new venture development, some angels invest for altruistic reasons. Angels often express the desire to “give back” to the entrepreneurial community that made them wealthy doing what they loved. This altruism can take the form of helping emergent entrepreneurs become successful, investing in start-ups seeking to commercialize socially useful technology (e.g., green/clean technology), and investing in start-ups that will create jobs in the angel’s community.¹⁷⁸ These nonfinancial benefits are said to produce “psychic income”¹⁷⁹ and have led part-time angel investor Brad Feld to describe angel investing as “for-profit philanthropy.”¹⁸⁰

b. Contract, Trust, and Achieving Nonfinancial Goals

What do these nonfinancial goals of participation and altruism have to do with the use of simple investment contracts? The literature on the relationship between contract and trust reveals that requiring entrepreneurs to enter into venture-capital-like contracts, which could be seen by entrepreneurs as aggressive and self-serving, would jeopardize the angel’s nonfinancial goals by signaling a lack of trust in the entrepreneur. Most of the literature views contract and trust as substitutes—in other words, contract is necessary when trust is absent and unnecessary when trust is present.¹⁸¹ A particularly

177. See John Freear et al., *Angels: Personal Investors in the Venture Capital Market*, 7 ENTREPRENEURSHIP & REGIONAL DEV. 85, 92 (1995) (noting that nearly 25% of angels work in a full- or part-time capacity in their investment start-ups).

178. Freear et al., *supra* note 56, at 11 (“The most influential non-financial factor was the satisfaction derived from assisting an entrepreneur build a successful business.”); Wetzel, *supra* note 67, at 31; MIT Study, *supra* note 67, at 14 (discussing the “empathy” that angels feel for entrepreneurs and the desire to help them avoid mistakes that angels themselves may have made as entrepreneurs).

179. Wetzel, *supra* note 67, at 31.

180. Feld Thoughts, *Is it Angel Investing or For-Profit Philanthropy?*, <http://www.feld.com/blog/archives/002013.html> (Oct. 23, 2006, 18:42 EST).

181. See, e.g., Frank B. Cross, *Law and Trust*, 93 GEO. L.J. 1457, 1487 (2005) (“Contracts may thus be viewed as the ‘antithesis of simple trust.’”); Lawrence E. Mitchell, *Trust. Contract. Process.*, in PROGRESSIVE CORPORATE LAW 185, 186 (Lawrence E. Mitchell ed., 1995) (arguing that “contract begins from a situation of distrust”); Larry E. Ribstein, *Law v. Trust*, 81 B.U. L. REV. 553 (2001) (explaining that law can undermine trust); cf. Deepak Malhotra & J. Keith Murnighan, *The Effect of Contracts on Interpersonal Trust*, 47 ADMIN. SCI. Q. 534, 556 (2002) (arguing that the relationship between trust and contract “appears to be far from clean and simple”). But see T.K. Das & Bing-Sheng Teng, *Between Trust and Control: Developing Confidence in Partner Cooperation in Alliances*, 23 ACAD. MGMT. REV. 491, 496 (1998) (finding that trust and control can function as parallel phenomena); Carol Rose, *Trust in the Mirror of*

interesting strain of this literature addresses the use of contract as a signaling device. It examines what the use or nonuse of a particular contract or contract provision implies about trust and the trustworthiness of the party who is asked to agree to it.

As Stewart Macaulay observed in his famous article on the importance of noncontractual relations in business, overly detailed contracts indicate a “lack of trust” in the other party and can turn “a cooperative venture into an antagonistic horse-trade.”¹⁸² In another important article on the role of trust in the law, Blair and Stout make the same point through the use of a hypothetical: “Suppose a potential business partner shows up armed with a lawyer and a ten-page contract loaded with fine print. What does that behavior suggest? Most obviously, a reluctance to trust.”¹⁸³ Likewise, Kathryn Spier observes that “an individual may refrain from including a particular clause in a contract in order to signal his type.”¹⁸⁴ For example, an athlete might forego asking for an injury clause, which would signal accident-proneness, and a spouse might forego a prenuptial agreement, which would signal the possibility of divorce.¹⁸⁵

Consider the signaling effect of a detailed, preference-laden contract in the context of angel investing. If an angel presents an entrepreneur with such a contract that must be signed before receiving funds, the entrepreneur may interpret it as a lack of trust, or that the relationship will be more combative than cooperative.¹⁸⁶ And if entrepreneurs think this, then angels’ nonfinancial goals are jeopardized.

How might the use of such complex contracts signal a lack of trust? First, angel participation in venture development must be welcomed by entrepreneurs if it is to occur informally. The trust angels hope to develop in order to invite participation is what Oliver

Betrayal, 75 B.U. L. REV. 531, 554 (1995) (observing that law can induce trust by allowing contracting in situations where it otherwise would not occur).

182. Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55, 64 (1963). Macaulay was focused on ongoing business relationships. It could be said that angel finance does not present the same situation because angels usually fund one round in a particular start-up and then make room for the venture capitalists. However, angel finance is a multi-period game in the sense that it is localized within small geographic communities where entrepreneurs may know one another, meaning that an angel’s reputation transcends any one relationship.

183. Blair & Stout, *supra* note 138, at 1806.

184. Kathryn E. Spier, *Incomplete Contracts and Signaling*, 23 RAND J. ECON. 432, 432 (1992).

185. *Id.* at 433.

186. This is especially true if *not* requiring such contracts is embedded in angel financing practice, as it appears to be. The classic article on embeddedness is Mark Granovetter, *Economic Action and Social Structure: The Problem of Embeddedness*, 91 AM. J. SOC. 481 (1985).

Williamson called “calculative” trust, or strategic behavior driven by external reward.¹⁸⁷ Angels attempt to secure this trust by being the opposite of venture capitalists—investors who do not demand onerous contracts. By the type of contract they choose, angels brand themselves as the good guys compared to venture capitalists.¹⁸⁸ Of course, angels could forego trust and attempt to secure participation rights formally through contract, but this might be difficult for several reasons: participation rights may be tricky to define and costly to contextualize, and they may create unwanted, concomitant duties for angels through a formal employment or consulting relationship.

Second, requiring a detailed, protective contract risks obscuring any altruistic signal the angel wishes to send. If angels are investing to help young entrepreneurs along, being seen as overly concerned with downside protection does not suggest that the angel has high hopes for the start-up. Instead, it signals doubt and a desire to limit financial losses (or, perhaps even worse, a desire to extract a disproportionate share of financial gains). On the other hand, use of a simple, entrepreneur-friendly contract sends precisely the opposite signal—it exhibits trust and therefore reinforces the angels’ altruistic message. This type of trust—“true” trust that exhibits an “other-regarding preference” (as opposed to trust secured for personal gain)—has been referred to as “internalized” trust.¹⁸⁹

In sum, all of these reasons I have explored—the need for follow-on venture capital funding, informal substitutes for contract, costly contracting theory, and nonfinancial goals of participation and altruism—might explain why angels rationally forego the venture capital model and instead invest in start-ups on simple, non-protective terms. The next Part looks at why this model might be changing.

187. Oliver E. Williamson, *Calculativeness, Trust, and Economic Organization*, 36 J.L. & ECON. 453, 453–72 (1993).

188. See generally Victor Fleischer, *Brand New Deal: the Branding Effect of Corporate Deal Structures*, 104 MICH. L. REV. 1581 (2006) (discussing the use of contracts and deal structure for branding purposes).

189. Blair & Stout, *supra* note 138, at 1750–51. Williamson, on the other hand, thought such non-calculative notions of trust were best reserved for “very special relations between family, friends, and lovers” and had no place in commercial exchange. Williamson, *supra* note 187, at 484.

IV. THE PROFESSIONALIZATION OF ANGEL INVESTING

A. *The Rise of Angel Groups*

Traditional angel investments still constitute the bulk of the angels market. They account for somewhere between seventy and ninety percent of all angel investments.¹⁹⁰ Traditional angel investments also present the most interesting (and misunderstood) story in investment contract design, as has been discussed. However, a marked shift in angel investing is underway that also must be explored.

In the mid- to late-1990s, angels began to depart from their longstanding mode of informal, secretive operation and moved into the open by creating regional angel groups.¹⁹¹ In 1994, Hans Severiens (now deceased) founded the first prominent and probably still best-known angel group—Silicon Valley’s “Band of Angels.”¹⁹² The Band of Angels began with twelve members, but by 1998 had grown to 110 members.¹⁹³ Not only did the Band of Angels’ membership grow—the idea of formally organizing regional angel groups caught on throughout the country. By 1997 there were fifty angel groups, and by 2002 there were 170.¹⁹⁴ The Angel Capital Association (“ACA”), which is the leading trade organization of angel groups in the United States, reported 114 “full ACA-member” angel groups in 2006.¹⁹⁵ Although the reasons for the trend toward angel groups are worthy of more exploration than I will offer here, some likely explanations include a steadier stream of deal flow, increased opportunities for interaction with other angels and venture capitalists, the chance to fund larger deals through the pooling of resources, and the ability to invest in amounts large enough to justify the transaction costs of preferred stock.¹⁹⁶

190. See *supra* notes 7–8 and accompanying text.

191. Angel groups are alternatively referred to as angel investment organizations, angel alliances, or angel syndicates.

192. Band of Angels, www.bandangels.com (last visited Aug. 18, 2008).

193. MIT Study, *supra* note 67, at 13. According to the Band of Angels website, membership is now above 120. Band of Angels, www.bandangels.com (last visited Aug. 18, 2008).

194. See James Geshwiler, *Common Angels: An Evolving Tradition*, in STATE OF THE ART 134, *supra* note 43, at 141 (citing research by Jeffrey Sohl).

195. See ACA Angel Group Confidence Report, *supra* note 8.

196. I thank Jesse Fried for suggesting the last reason as a possible explanation for the development of angel groups. As he has argued elsewhere, the investment in preferred stock can protect angels against venture capitalist opportunism. See generally Fried & Ganor, *supra* note 36; Leavitt, *supra* note 19.

Angel groups differ in their precise modes of operation, but they have common traits.¹⁹⁷ Unlike traditional angels, angel groups are not difficult to find; most have websites providing information about the organization for potential members and entrepreneurs. On the other hand, the members' identities may be guarded carefully.¹⁹⁸ In terms of membership, some angel groups require only that members be accredited investors. Others, including the Band of Angels, require technical expertise (e.g., in engineering) and therefore exclude the likes of lawyers and accountants.¹⁹⁹ Industry-specific angel groups, unsurprisingly, require substantial knowledge of the industry.²⁰⁰

In addition, while angel groups still rely on references to find investments, they also employ more formal mechanisms for bringing investment opportunities to members. First, there is a pre-screening process to determine whether an entrepreneur will be evaluated by the angel group's full membership, which can include review of an online application, a favorable recommendation from an angel group member, and even the satisfactory completion of initial due diligence. Next, the pre-screened entrepreneurs are invited to present to the full angel group membership.²⁰¹ The presentations usually run twenty to thirty minutes and are followed by a short question-and-answer session. These often occur over lunch or dinner meetings. If any angel in the group has an interest in moving forward on a particular start-up, the process progresses further with more meetings, more diligence, and finally an investment.

197. Jeffrey Sohl distinguishes angel groups from traditional angels by their "size, visibility, and entrance mechanism." Sohl, *supra* note 42, at 113.

198. See VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 44 ("To retain members' anonymity, many of these syndicates . . . establish a storefront (or façade) for the general public.").

199. Compare Carol Sands, *The Angels' Forum and The Halo Fund: The Rise of the Professional Angel*, in STATE OF THE ART 32, *supra* note 43, at 32 ("It was clear to [Silicon Valley's The Angels' Forum organization] that diversity was the key to successful development, so we set out to assemble a group of dedicated angel investors with different skill sets (operations, engineering, finance, sales, marketing, business development, legal, and human resources)."), with Severiens, *supra* note 43, at 22 (noting that the Band of Angels "organizing committee made it clear right from the start that membership in our group would be limited to those with high-tech credentials, and thus lawyers, bankers, real estate developers, and so on were not the kind of members we were seeking").

200. For example, all members of Silicon Valley's Tenex Medical Investors have "substantial life science expertise." Norm Sokoloff, *Tenex Medical Investors: Niche Investing*, in STATE OF THE ART 42, *supra* note 43, at 44.

201. See, e.g., MIT Study, *supra* note 67, at 61.

Most angel groups leave individual investment decisions to each member's discretion.²⁰² Interested members invest in their own names or together through a new investment vehicle (such as a limited liability company).²⁰³ Therefore, most angel groups do not invest as an entity—their members invest individually or through a separate company. However, a small number of angel groups pool all members' funds and finance selected start-ups from this pool.²⁰⁴

Angel group investments have become an important part of angel investing.²⁰⁵ Like traditional angels, angel groups primarily fund start-ups in their earliest stages. Angel group investments often fall within the same \$100,000 to one- to two-million dollar range as traditional angel investments with probably more investments on the lower end of that scale.²⁰⁶ However, the increased opportunities for pooling also may facilitate larger investments,²⁰⁷ and those larger investments may come at a slightly later stage of start-up development than traditional angel investments: either just before or in place of early-stage venture capital investments. With most venture capitalists today attracting more money from fund investors and moving to even later-stage investments, where larger sums can be put to more efficient use, a new capital gap from two million to five million dollars is emerging.²⁰⁸ Some angel groups able to invest larger sums may prove to be the “white knights” that are capable of filling this gap,²⁰⁹ although this is still on the high side for most angel groups.

202. See, e.g., VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 45 (describing the typical practice: “Each member can decide individually whether to participate in a particular deal that the syndicate decides to undertake and how much he or she wants to be involved in each investment they make.”); Severiens, *supra* note 43, at 23 (“Right from the start, it was decided that [Band of Angels] would not pool our funds. Not everyone is interested in the deals some of us invest in, so we leave it to the individual members to invest according to their tastes, interests, and risk profiles.”).

203. Severiens, *supra* note 43, at 23 (“[W]hen [Band of Angels] invest[s] in a single deal, a pool is formed, but we still act as individuals and the stock certificates are made out in our individual names.”).

204. See Sands, *supra* note 199, at 35–39.

205. See *supra* notes 7–8 and accompanying text (discussing estimates on the aggregate size of the angels market and breakdown between traditional angel investments and angel group investments).

206. See Goff, *supra* note 77, at 75 (“The Sierra Angels’ funding ‘sweet spot’ is \$200,000 to \$1,000,000.”); see also ACA Angel Group Confidence Report, *supra* note 8 (noting that the average amount of total funding provided by each U.S. angel group in 2006 was \$1.78 million).

207. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 43–44 (finding that angel groups allow angels to “make larger and more frequent investments (though these remain smaller than those funded by even small venture capital firms)”).

208. Sohl, *supra* note 46, at 15.

209. See Susan Preston, *Seraph Capital Forum: National Trends in a Local Context*, in STATE OF THE ART 62, *supra* note 43, at 68 (“With venture capitalists moving farther up the

The Band of Angels was formed with the goal of filling this gap in mind.²¹⁰

B. The Angel Groups' Move Toward Venture Capital-Like Contracts

This “professionalization” of angel investing through the formation of angel groups has brought with it a change in the angel investment model. Given that angel groups are a product of the last decade, they still account for only a very small portion of the literature on angels. In particular, empirical studies on the terms of angel group investment contracts are currently lacking.²¹¹ However, a few case studies, along with anecdotal accounts, suggest that angel group investment contracts bear a closer resemblance to venture capital contracts than to traditional angel contracts, albeit without some of the venture capitalist’s bells and whistles.

A 2000 study from MIT’s Entrepreneurship Center found that most angel groups “have modeled their terms and conditions after venture capital deals which include demand rights, voting rights/Board representation, registration rights, piggyback rights, anti-dilution provisions and information rights.”²¹² The MIT study cited two Harvard Business School case studies in support of this conclusion, one of which focused on the Band of Angels.²¹³ I have examined standard term sheets used by the Tech Coast Angels, the country’s largest angel group (based in Southern California), which also reveal the inclusion of most common venture capital terms.²¹⁴

Anecdotal accounts also reveal that angel groups favor preferred over common stock. For instance, the Band of Angels “invest[s] almost solely in preferred stock, and often it will be the first round of outside capital, the preferred A.”²¹⁵ Boston’s Angel Healthcare Investors contract for “preferred security, dividends where

funding chain, a second funding gap has opened up between \$2 million and \$5 million—a gap that few individual angels can fill. The potential white knight is the angel organization.”)

210. See Severiens, *supra* note 43, at 20–21.

211. It should be much easier to conduct empirical studies of angel groups than traditional angels because they are far more visible. This Article should also provide a framework for designing these studies, at least to the extent they are concerned with contract design.

212. MIT Study, *supra* note 67, at 63.

213. *Id.*

214. Series A Preferred Stock Financing Term Sheet (on file with the Vanderbilt Law Review); XYZ Venture Inc. Summary of Deal Terms (on file with the Vanderbilt Law Review). I thank Luis Villalobos for providing these.

215. Severiens, *supra* note 43, at 23. *But see* Geshwiler, *supra* note 194, at 142–43 (finding that Common Angels “recommend a fairly standard, clean term sheet without multiple liquidation preference, too low a valuation, or other ‘bells and whistles’”).

applicable, preemptive rights, antidilution protection, and board observation rights.”²¹⁶ Board seats may also be a more common feature in angel group contracts than in traditional angel contracts.²¹⁷ Where board seats are not secured, board observation rights (i.e., the right to attend and participate in board meetings but not the right to vote) probably are included.²¹⁸

But again, it must be emphasized that, without more information about angel groups, including empirical studies of their investment contracts, it is difficult to tell to what extent the typical angel group contract replicates the venture capital contract. Based on the limited information available, the trend is for at least preferred stock over common and some sort of board rights, with the more sophisticated angel groups adopting even more of the venture capitalists’ standard terms.²¹⁹

This leads to another question that cannot be answered yet: What counts as a “typical” angel group? The Band of Angels and Tech Coast Angels, which we know the most about, are sophisticated operations in investment-rich California. Angel groups in other regions (especially outside of major metropolises) may look and function very differently. On the other hand, other angel groups may have more or less adopted the more sophisticated angel groups’ model in the same way that law firms outside of Silicon Valley have adopted

216. Robyn C. Davis et al., *Angel Healthcare Investors: Capitalizing on Innovation*, in STATE OF THE ART 146, *supra* note 43, at 157; *see also* STATHIS, *supra* note 171, at 133 (“[T]he increasing trend is for angels to receive preferred stock, although it lacks many of the stipulations found in the preferred stock issued to venture capitalists.”).

217. *See, e.g.*, Severiens, *supra* note 43, at 22 (reporting that a Band of Angels member who serves as the sponsor of a start-up in front of the entire group will take a seat on the board if an investment is made).

218. Goff, *supra* note 77, at 76:

The Sierra Angels encourages its portfolio companies to choose the most effective candidates for their boards of directors rather than insist that the network be given a seat. In instances when the group does not have a board seat, our member sponsor frequently acts as an informal advisor, and, as a rule, we expect visiting privileges at board meeting[s].

219. The angel group will be even harder to distinguish from the early stage venture capitalist if the hallmark of angel investing—the investment of personal funds—is relaxed and angel groups also begin to invest other people’s money. Indeed, some angel groups are now doing just that by tacking on “sidecar” investments for an angel’s friends and family to at least some deals. *See* Sands, *supra* note 199, at 39 (finding that the Angels’ Forum’s “creation of The Halo Fund in 2000 allowed our friends and family members as well as institutional investors to co-invest in the group’s best deals”). So in a sense, angels are now also investing other people’s money, although the ratio is extremely small compared to the venture capitalists’ predominant use of investment funds. Still, the trend is toward a further blurring of the angel/venture capitalist line.

Silicon Valley form contracts for venture capital financings.²²⁰ Based on the limited information available, it appears that the formalization and professionalization of angel investing has brought with it a move toward venture capital-like contracts.

C. Explaining Angel Group Investment Contracts

If there is indeed a shift toward venture capital-like contracts in angel group investments, what are we to make of this? On the one hand, angel group investment contracts might be seen as an overdue corrective for traditional angel naiveté. For those who accept the conventional wisdom about traditional angels, this stands as the ready explanation. On the other hand, in light of this Article's rational explanations for traditional angel contracts, angel group contracts are themselves a puzzle. **Can it be rational for traditional angels to invest on simple, non-protective terms similar to those taken by minority shareholders in close corporations, yet equally rational for angel groups to invest on detailed, protective terms resembling those taken by venture capitalists?** The answer is yes for several reasons, all of which stem from the fact that angel groups more closely resemble early-stage venture capitalists than traditional angels in a number of important ways. Some of these resemblances have been mentioned, but their relevance to contract design will now be explored in more detail.

First, an angel group's higher investment amounts, slightly later investments, and relationships with venture capitalists allow it to move further down the sliding scale of permissible preferences than the traditional angel without the fear of venture capital unwinding.²²¹ **While the traditional angel has close relationships with entrepreneurs, angel groups are more plugged into local venture capital communities.**²²² If angel groups do not have preexisting relationships with venture capitalists, a steadier deal flow makes them repeat players in entrepreneurial finance and these relationships can quickly develop. Because of these relationships,

220. Mark C. Suchman, *On Advice of Counsel: Law Firms and Venture Capital Funds as Information Intermediaries in the Structuration of Silicon Valley* (1994) (unpublished Ph.D. dissertation, Stanford University) (on file with Stanford Sociology Department).

221. *See supra* notes 122–24 and accompanying text.

222. *See* Band of Angels, *About the Band FAQs*, <http://www.bandangels.com/faqs/index.php> (last visited Aug. 18, 2008) (stating that Band of Angels founder Hans Severiens was a former venture capitalist “who formed friendships with many of the first generation of Silicon Valley entrepreneurs and high technology executives—the founders of Fairchild, National Semiconductor, Genentech, Intel, Compaq, Kleiner Perkins, and Sequoia”).

angel group members may have a better understanding of the venture capital process and refrain from overvaluing start-ups, thereby eliminating the venture capitalists' most common complaint about angels.²²³ In short, venture capitalists tend to view angel groups as the equivalent of early-stage venture capitalists and allow them to contract accordingly.²²⁴

Second, a more arms-length relationship with entrepreneurs reduces an angel group's ability to rely on informal substitutes for contract. Recall that referrals from a traditional angel's "network of trust," layered on top of her prior knowledge of the entrepreneur and/or the start-up's substantive field, reduce uncertainty and information asymmetry.²²⁵ Conversely, the angel group's desire for a more consistent deal flow means that fewer entrepreneurs and business plans are known to the angel group members beforehand, thereby sacrificing some of the familiarity and intimacy such preexisting knowledge brings.²²⁶ Higher levels of uncertainty and information asymmetry are not reduced by the pre-investment nature of the relationship, and therefore must be mitigated by contract. Moreover, some angel groups may be less active participants in start-up development post-investment than traditional angels. While it may be rare, some angel groups actually hire outside parties to serve the function of liaison between the angel group and the entrepreneur,²²⁷ a departure from the traditional angel investors' premium on participation.²²⁸ Fewer opportunities for informal monitoring create the need for formal control rights to serve as a check on entrepreneurial opportunism. It should be noted that angel groups may forego participation at their own peril, as participation has been correlated to greater returns on investment.²²⁹

223. See *supra* note 117 and accompanying text.

224. On the other hand, some venture capitalists lament the nonfinancial "dinner club" aspect of angel groups. See MIT Study, *supra* note 67, at 63 ("Some venture capitalists do not feel that angel groups support their companies well. They characterized angel clubs as dinner clubs in which members participated in due diligence, but did not sufficiently leverage their expertise and networks in building the company after the investment had been made.").

225. See *supra* notes 127–34 and accompanying text.

226. See Wilbank & Boeker, *supra* note 77, at 6 (finding that half of investments by angel group members were unrelated to the angel's industry experience, which correlated to returns on investments that were only half that of investments in the angel's field of expertise).

227. VAN OSNABRUGGE & ROBINSON, *supra* note 4, at 45 ("In most cases, one member of the syndicate acts as the lead angel, assuming a liaison role between the entrepreneur and the syndicate. In other cases, an outsider with no financial commitment to the group . . . is hired to perform this function.") (citation omitted).

228. See *supra* notes 172–77 and accompanying text.

229. Wilbank & Boeker, *supra* note 77, at 7.

Third, angel group investments tend to be larger than traditional angel investments, and there is potential for this trend to increase given greater opportunities for the pooling of capital. Recall that costly contracting theory made it irrational for traditional angels to use detailed contracts given the smaller amounts of funding and short duration for their preferences.²³⁰ Because angel groups make larger investments, and because venture capitalists are more willing to allow angel group preferences to stand, costly contracting theory becomes less of a reason to invest on simple terms.²³¹ Spending more to design, monitor, enforce, and write detailed contracts becomes worth the benefits it provides.

Finally, the nonfinancial perspective is also different for angel groups. Angel groups may still be distinguished from venture capitalists by their nonfinancial goals—angel group members are still investing their own money—but these goals may be different than the traditional angels' objectives. First, although some angel groups may wish to participate in venture development, they may put less of a premium on participation than traditional angels. Instead, the primary nonfinancial motivation for many angel groups is the opportunity to interact with *other angels*.

This is evident from both the candid admissions of angel group members and the lack of investment activity by a large percentage of them. Some angel groups have admitted that the “networking effect” is an important motivator for group membership. For instance, longtime traditional angel and now angel group member Susan Preston notes that one “reason for the rise of angel groups, a reason that is difficult to quantify . . . [is] the simple desire for group interaction and socialization.”²³² In the view of Bob Goff, founder of the Sierra Angels in Lake Tahoe, Nevada, “The central element of the Sierra Angels’ mantra is having fun,” and spouses are an integral part of that group’s activities.²³³ A telling statistic underscores the point: thirty to forty percent of angels who join angel groups do not make a *single investment*.²³⁴ This has led some groups to require a minimum

230. See *supra* notes 146–49 and accompanying text.

231. John May, co-founder of a Washington, D.C.-area angel group, suggests that costly contracting theory plays a role in determining whether his angels bargain for a board seat. John May, *The Dinner Club: Embracing the New Economy*, in STATE OF THE ART 120, *supra* note 43, at 127 (“When a board seat is inappropriate for the size of our investment, we often take on an advisor role.”).

232. Preston, *supra* note 209, at 68–69.

233. Goff, *supra* note 77, at 72.

234. Jeffrey E. Sohl, *Angel Investing: A Market Perspective*, in STATE OF THE ART 2, *supra* note 43, at 12 (“In 2000 and 2001, indications were that 36 and 41 percent, respectively, of angel

investment amount for membership.²³⁵ In short, angel groups may serve each other as much as they serve entrepreneurs.

Second, while angel groups may have altruistic objectives, their altruism can take a different form than that of traditional angels. Although giving back to the entrepreneurial community is still important to angel groups, philanthropy also takes the form of donations to nonprofit organizations and foundations through pooling member resources. One angel group has even endowed a professorship.²³⁶ Angel groups also can further social goals, such as enticing more women to become angel investors. This goal is important to Seraph Capital Forum, an angel group in the Pacific Northwest comprised entirely of female members.²³⁷

These possible differences in nonfinancial goals are relevant to the choice between simple or detailed contracts. Achieving the angel group's nonfinancial goals is not as dependent on securing the trust of entrepreneurs. Recall that traditional angels will not demand protective contracts because of the ramifications for entrepreneurial trust.²³⁸ But for angel group members who are not driven primarily by the desire for participation or altruism toward entrepreneurs, but instead by other factors, there is less need to engender trust in

organization members did not make an investment. This compares with 32 percent of investors in 1998.") (citation omitted).

235. See William H. Payne, *Tech Coast Angels: An Alliance of Angel Networks*, in STATE OF THE ART 54, *supra* note 43, at 58 (explaining that Tech Coast Angels' members are required to invest at least \$50,000 each year); Sokoloff, *supra* note 200, at 46 (discussing the fact that members of Tenex Medical Investors "were expected to invest at least \$75,000 yearly (this has been relaxed in the current economy)"). In addition, social networking can pay off financially in other ways for some angel groups, who have been known to start businesses together outside of the group. See Davis et al., *supra* note 216, at 161:

Not only have many of the members developed friendships but also several have created new businesses together outside of [Angel Healthcare Investors]. Two of the original members joined with two later members to launch a specialty pharmaceuticals company that has the potential to reshape the value chain of drugs coming off patent. One founding member joined with a newer member to create a fund of hedge funds investing in non-health-care companies and offered the fund to members and other high-net-worth individuals.

236. See Davis et al., *supra* note 216, at 161 (finding that of Boston's Angel Healthcare Investors, "[s]everal shared philanthropic interests have emerged since the group was founded A recent example is the endowment of a charity at a well-known local university to acknowledge the contributions to the school and to health care nationwide by a member of AHI."); Barry Moltz, *Prairie Angels: Redefining Midwest Investing*, in STATE OF THE ART 108, *supra* note 43, at 115 (reporting that Prairie Angels in Chicago has "donated money to a nonprofit organization in town that trains inner-city youth to become familiar with Web sites and expand their technical expertise").

237. Seraph Capital Forum, <http://www.seraphcapital.com/> (last visited Aug. 18, 2008).

238. See *supra* Section III.C.2.b.

entrepreneurs by using simple contracts. Because angel group members secure their nonfinancial benefits *outside* of their relationships with entrepreneurs, they are less constrained to act a certain way within those relationships.

V. CONCLUSION

Start-up companies have brought us some of the greatest technological and scientific advances in recent years, as well as significant job creation and economic prosperity. At the outset, however, these companies are little more than an idea. The entrepreneur's greatest challenge is obtaining the funding and advice needed to turn her company into the next Google or eBay. As this Article has explained, it is at this early stage that angel investors play a critical and underappreciated role. Angels enable new start-ups to develop by providing early financing and seasoned advice to entrepreneurs. Angels invest at a critical time, after friends-and-family money has run out but before venture capitalists will invest. In doing so, they fill a funding gap that, left unremedied, would endanger both start-up survival and the venture capital industry.

This Article has also examined angel investment contract design, which appears very puzzling on its face. Traditional angels, who still make the bulk of angel investments, use simple, entrepreneur-friendly contracts despite the extreme risks that this practice entails. The conventional wisdom is that they do so because they are unsophisticated investors who don't know any better. But this Article has explained that traditional angels are misunderstood—upon closer examination, their investment contracts are rationally designed to achieve financial and nonfinancial objectives.

Finally, this Article examined the recent trend toward the professionalization of angel investing. Although more information is needed to understand this phenomenon, one of its consequences is that professional angels are increasingly adopting venture capital contract design. In doing so, they are instituting a major change in angel investing, albeit one that is rational given their closer resemblance to early-stage venture capitalists than to traditional angels.

Reading 2

Best Practice Guidance for Angel Groups – Deal Structure and Negotiation

Ann-Marie Koss, New York University

July, 2007

Structuring the deal is a key aspect of completing an angel round of financing. It is critical to ensuring that management, employees, past investors, current investors and future investors are all satisfied with the company under its new capital structure. As a result, negotiating and structuring the deal can be the most complex aspects of angel investing.

“Often times the best negotiated deal is the deal in which each party feels like they could have done a bit better – or simply put, nobody got everything they wanted.” – James Geshwiler of CommonAngels

Valuation

Angel investing groups generally aim to take 20 to 50 percent ownership stake of early-stage companies. Therefore, structuring the deal and negotiating the terms begin with the valuation of the company. The valuation of a company represents its price tag, wherein the pre-money valuation is the value of the business before it receives investor funds and the post-money valuation incorporates the amount of investor funds raised. For instance, a company has a pre-money valuation of \$2.5 million, then it receives an angel round investment of \$0.75 million to result in a post-money valuation of \$3.25 million.

Typically angel investor groups look for less than \$5 million pre-money valuation and as low as \$500,000; however the investment range varies by groups. Many times the different investment opportunities available to the investors at a given time are taken into consideration. That is, all other factors equal, \$500,000 invested on a pre-money of \$1.5 million is a more attractive percentage ownership for an investor than \$500,000 invested on a pre-money of \$3.5 million.

“We have to be careful of valuations that are too high because if there’s too much dilution, then we won’t make money. We also look at the type of capital requirements of a company. The semiconductor and pharmaceutical sectors are almost impossible to do low cost development. They require huge amounts of capital unless the company gets lucky and gets bought out at an early stage. So it almost never makes sense to invest at the angel level. Clean technology is also capital intensive so also hard to invest in. Software and services are less capital intensive.” – John May of New Vantage Group

The angel investors will often feel that the valuation of a company is less than what the entrepreneur has proposed. However, investors will work with the entrepreneurs' financial projections and use various valuation methods to arrive at a valuation. Such valuation methods include transactional value, market value, and return as a multiple of investment. The valuation methodology most frequently used is backing into it from the exit value. For example, if the company is expected to be worth \$50 million in five years, the company needs to raise a single \$1 million round to reach that valuation, and the investors will require a 10X cash-on-cash return upon exit, the investors' share must be worth \$10 million in five years. Thus, the investors would need to own 20 percent of the company, which implies a \$4 million pre-money valuation and \$5 million post-money valuation. (Note: this presumes no further dilutive capital is needed.)

“The discounted cash flow method is difficult to use when there are little to no cash flows,” – Catherine Mott of BlueTree Allied Angels.

“Factors that affect valuation include management experience, the size of the opportunity/addressable market, size of the round, intellectual property or other barriers to entry, need for future rounds, industry comparables and exit opportunities,” – Stephanie Hanbury-Brown of Golden Seeds.

It is common to see angel investors take the next round of financing into consideration when the valuation is determined. The angel investor will calculate the valuation as a discount to the valuation of the next round of financing, whereby it may be a fixed percentage or a sliding scale based on the next round of financing.

“Put down a small amount of money at first; invest more in each new round.” – John May of New Vantage Group

“With pre-money valuation, lower is better so that the company can meet milestones to increase the next rounds' valuation.” – Bill Moore of LORE Associates

Taking into consideration future rounds of financing allows angel investors to account for such factors as the time that elapsed to the next round of financing or whether milestones were achieved prior to the next round of financing. With staged pay-ins such as milestone payments, however, the milestone achievements should be easily and objectively assessable. Also, keep in mind, what should happen if adverse events occur to the company even though the milestones are achieved.

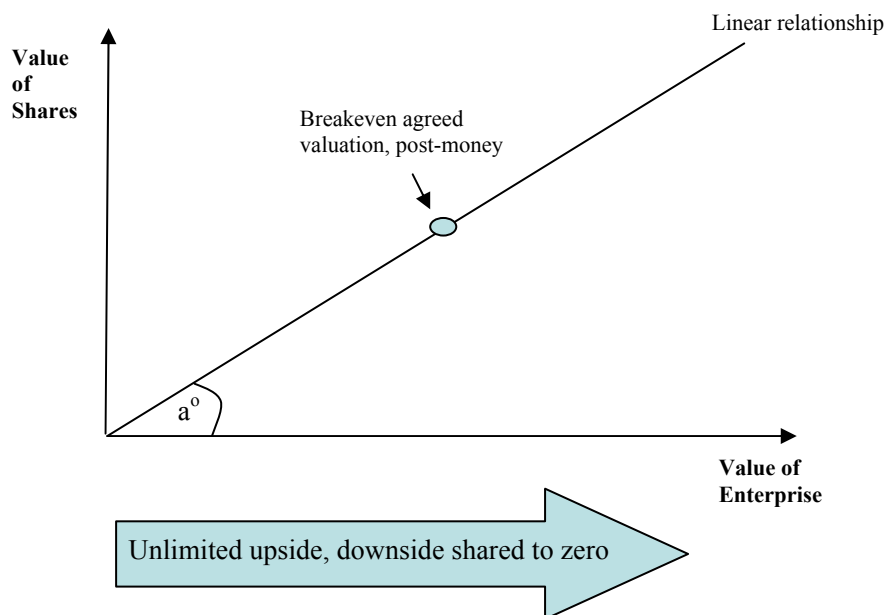
“How knowledgeable, experienced, flexible and, dare say, desperate, the entrepreneur is can be quickly assessed from how flexible the entrepreneur is to negotiating the valuation.” – Tom Jones of BlueTree Allied Angels

The valuation of a company is a critical component to whether the deal occurs or not. How the entrepreneur approaches the valuation is very revealing about the management and can make or break the deal. The tone of the relationship between the angel investors and the entrepreneurs is frequently established early on and if there is no mutual consent to the valuation then there is slim likelihood that a deal will proceed.

Structuring the Deal

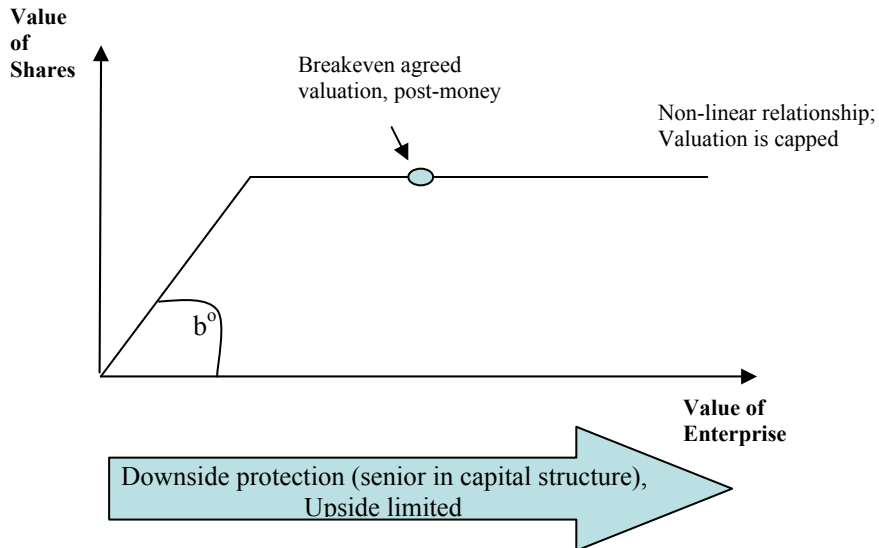
Part of structuring the deal entails defining the ownership. Equity ownership structures commonly used are common stock, preferred stock, participating preferred stock, and convertible notes. Preferred stock is distinguished from common stock when the company goes bankrupt or undergoes liquidation. Then the preferred stock holders have priority in getting their invested capital back, along with any unpaid dividends (known as a preferred return), before the common stock holders receive any distributions. In contrast to preferred stockholders, participating preferred stockholders will be repaid their original investment plus any unpaid dividends upon liquidation, and then share in the remaining assets as if they held common stock. Thus, the participating preferred stockholders still earn a return, even if common stockholders realize little or no return.

Common Shares

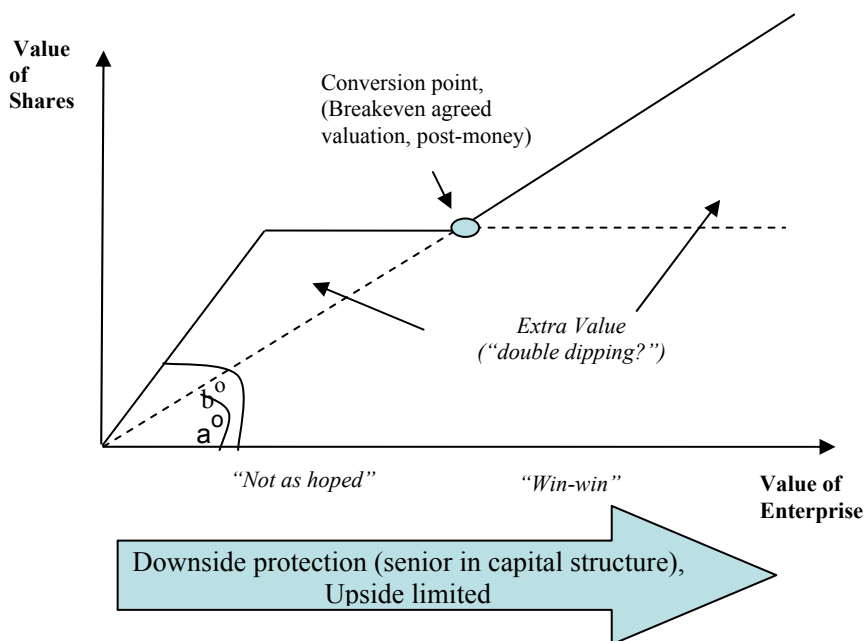


Convertible preferred shares are able to be converted to common shares at a predefined conversion rate. They perform like a note by providing downside protection for the investor because they have preferred status, and the option to convert to common stock provides upside. The strike price is the exercise price of the conversion privilege. In the event of an IPO or the sale of the Company, returns on convertible preferred can be quite attractive. However, large quantities of convertible preferred issued at a low strike price can be highly dilutive to follow on investors in later rounds. In many cases, the notes will be structured in a manner to allow the notes to convert at a discount to the next round. This also enables entrepreneurs to raise money at a very early stage without having to establish a specific valuation when the Company's prospects are unclear.

Preferred Shares



Convertible Participating Preferred Shares



In contrast to convertible preferred, participating preferred sees a return of capital invested, accrued dividends, and participates in the upside through conversion into common stock. However, many entrepreneurs see participating preferred as “double dipping” because if the

stock is liquidated, then the participating preferred stockholders will be repaid their money as well as any unpaid dividends, then get to share in the remaining common stock. In the case of an exit at a low valuation, the participating preferred stockholders would realize a return on their investment whereas the common stockholders get little to no return. (NOTE: this is applicable if the founders have not invested cash money.)

Convertible Notes

In contrast to all of these, Convertible Notes are debt instruments and are preferred by some angel investors and entrepreneurs. Typically convertible notes contain the right to convert into equity upon the occurrence or non-occurrence of specified events (specified event is usually the raising of a minimum specified amount of equity at a minimum value).

Convertible Notes come in many forms, but when properly structured, provide all of the advantages of both debt and equity. Such notes generally are issued for either a fixed rate or variable rate of conversion. Fixed notes carry the same rate for their duration, normally 1 to 2 years; convertible notes usually carry a set rate for some period, typically 6 to 9 months, and then increase the rate monthly or quarterly until the due date. For example, such a note might carry a 20% rate for the first 9 months, and then increase 5% per quarter up to a 30% maximum.

Conversion rates can range from 15% to 50% and can be structured as “discount” to the following priced equity round or as a “premium” with warrants to purchase a additional shares. For example, a note can carry a discount of 30% (i.e., the holder gets to purchase 130 shares for the price of 100), or a separately exercisable warrant to purchase an additional 30% of shares (typically, at a nominal price per share). There are advantages and disadvantages to both methods, but in practice, the discount method is generally preferred since several years of post investment activity often presents significant logistical or administrative issues for exercising warrants.

NOTE: If the conversion rates are on the high end, venture capital or later investors might be dissuaded from accepting such a premium. This can become problematic as it makes the company less attractive on the next round of finance. The optimal rate is one which provides a reasonable premium for the risk taken, but which is not so onerous as to discourage follow-on investors.

Alan May of Life Science Angels in Menlo Park, CA states the following: “The principal advantages of convertible debt to the entrepreneur and startup are (1) the avoidance of setting a pre-money value by angel investors and, (2) the raising of money via an initially non-dilutive instrumentthe Note is carried as debt on the balance sheet. Many venture and professional investors feel that angels are not sufficiently experienced to price early stage rounds and do not want to be in a position of investing at a “down round” to the angel set value. As such, they prefer maintaining the right to set the initial price and allow the earlier investors to convert into that price with their premium, so long as the premium is considered reasonable and proportionate to the risk taken. For the investor, a properly structured convertible note can carry all of the downside protections of debt and all of the upside protections of equity. The

Note can be secured by the intellectual property of the company, which often is the only asset a startup company possesses besides management.”

Corporate Structures

Common corporate structures include S-Corporation (“S-Corp”), C-Corporation (“C-Corp”), and Limited Liability Corporation (“LLC”). An S-Corp cannot have more than 100 shareholders (and generally has 35 or fewer shareholders) and pays no corporate income taxes on its profits. There is only one class of stock in an S-Corp. Note: Sub S Corps cannot have LLCs as investors, so angel funds that are LLCs cannot invest in a Sub S Corp. Similar to a partnership, the shareholders in the S-Corp pay income taxes on their respective shares of the S-Corp’s profits. In contrast to an S-corp, a C-Corp does not have any restrictions on the number of shareholders or class of stocks. Furthermore, the income of a C-Corp is taxed under Federal income tax laws.

A LLC is a business company offering limited liability to its owners. This means that the owners of the LLC are protected from liability for acts and debts of the LLC. It is similar to a C-Corp in that an LLC is often a more flexible form of ownership, and typically appropriate for smaller companies with a limited number of owners. A LLC with multiple owners is typically treated as a partnership for tax purposes, whereby the profits and deductions proportionate to each member’s ownership are reported on that owner's tax return. An advantage for an LLC is that there is no loss of power to a board of managers. Furthermore, in the event that there is an illness or even death of the owner(s), similar to any corporation an LLC will carry on and avoid complicated business termination of sole proprietor death.

Negotiating the Deal

“Angel group deals have become more structured. What angel groups are doing now is very similar to what VCs were doing five years ago. Angel group deals are just as airtight and professional as VC deals.” – Paul Sciabica of New York Angels

The key aspects that underpin negotiating the deal include reduction of risk, amount of control, and provisions for liquidity.

“When structuring the term sheet in a deal negotiation, various terms and conditions have different priority. What’s always important to remember is that percent ownership does not mean percent control.” – Stephanie Hanbury-Brown of Golden Seeds

“As a group of investors, there is enough power to negotiate good terms. A balanced term sheet is best – some things for the investor and some things for the entrepreneur. And take care of your friends. If venture capitalists think they will invest with angel investors, they won’t upset them. An angel group can be a steady source of good deals to the venture capitalists, so the venture capitalists know he/she must be nice.” – John May of New Vantage Group

It is important to consult an attorney during the negotiation process, but one must try to be cognizant of all the options and risks before you start accumulating legal fees.

“Some angel groups prefer to get the terms of the deal fully negotiated with the entrepreneur before they bring in the attorney... Many times a fixed amount for the attorney fees is agreed upon with the attorney before the attorney steps in – this is usually in the ballpark of \$20,000.” – Stephanie Hanbury-Brown of Golden Seeds.

The terms and conditions commonly considered in an angel investors group’s term sheet:

Liquidity

| | |
|----------------------|--|
| Dividend: | Dividend rate at an agreed %, cumulative |
| Registration Rights: | Two demand, unlimited piggyback, one S-3 per year. All rights terminate 5 years after IPO. |
| Co-sale agreements: | Provision to include investor shares on a <i>pro rata</i> bases in a private sale of founder shares. All rights terminate upon an IPO. |

Risk

| | |
|----------------------------|--|
| Liquidation Preference: | In sale or liquidation of the company, founders have first risk of loss while investors recapture their investment and minimum return ahead of founders. Non-participating Preferred (Return capital to Series A, then remaining proceeds to Common); provided that if the Company grants participating rights to next round of investors, then Series A will be revised to include similar rights; participating preference (“double dip”). |
| Conversion: | Autoconversion on IPO at 5x purchase price with offering size of at least \$10,000,000; permissive Conversion at any time. |
| Anti-dilution: | In a down round, founders have disproportionate share of dilution and conversion ratio of preferred adjusted or issue more shares to preferred. Stock splits and price based anti-dilution on a weighted average basis. “Ratchet” to adjust price of old investors to new round, however less common. |
| Right of First Refusal: | Major investors get right to maintain ownership percentage on future financing. |
| Drag-along rights: | If holders of 50% of the Preferred approve a proposed sale of the Company, then other involved parties will agree to approve the proposed sale. All rights terminate upon an IPO. |
| Key person life insurance: | The Company will obtain and maintain a “key person” life insurance policy on essential Company person in case of incapacitation of that person. |

Control

| | |
|-----------------------------|---|
| Voting Rights: | Preferred vote with Common, except as required by Law. Other protective provisions may be included. |
| Directors: | Series A elects one director, Common elects one director, all others elected by Common and Preferred voting together. |
| Information Rights: | Monthly or Quarterly Internal Statements– and annual reviewed or audited statements |
| Vesting of founders shares: | Shares and options of founders subject to 4-year vesting with 25% vesting on first anniversary and remaining vested over scheduled vesting rate thereafter. |
| Vesting of employee shares: | Usually same as founder, plus the company will have right, upon termination of services, to repurchase any unvested shares. |

Capitalization

“Numbers are numbers. No such thing as accurate numbers in a capitalization table. The table is a reflection of the legal structure of the company, options granting, warrants, fundraising, etc.” – David S. Rose of New York Angels.

An integral part of deal negotiation involves examining the capitalization table for the company. Capitalization is the total amount of a company’s outstanding securities such as common stock, preferred stock, stock options and restricted stock, warrants, convertible securities and shares reserved for issuance under company option plans. For purposes of display in a registration statement, the capitalization table presents the capital structure of the company, both prior to the offering and assuming that all securities offered are sold. The components of the capitalization table typically reflect:

- Number of shares
- Ownership percentage
- Security structure type
 - Common vs. Preferred
 - Warrant/Options (e.g. convertibles)
 - Dividends
- Debt Financing

It is important for the entrepreneur and angel investors to understand the anticipated capitalization and pricing. It is also useful to provide pro-forma capitalization information. For later financing rounds this information should also take into account the effect of any anti-dilution provisions of prior stock issuances.

Typical Securities Distribution of Early Stage Companies

| | |
|--|--------------------------|
| Lenders get ... | Warrants |
| Angels/Venture/strategic investors get ... | Preferred Stock |
| Key hires/employees get ... | Restricted stock/options |
| Founders get ... | Common Stock |

“A management team carve out is important to negotiate the employee options pool in advance to ensure that there is equity compensation for future hiring. Also, option pools and vesting are important ways to keep the management team motivated.” – Carol Sands of The Angels’ Forum

Warning Bells

There are some red flags that investors should watch out for. Are there any unknown investors? Is the term sheet too complicated or inappropriate for the nature, context and stage of the company? Is the company raising enough money? What’s the possibility of dilution?

Red Flags in Deal Negotiation

Entrepreneur

- Under financing
- Impossible milestones
- Limitations of syndication
- Corporate strategic investor?

Investor

- Lack of downside protection
- Non-willingness to report
- Weak board composition & poor approval requirements for board membership
- Corporate strategic investor?

With regard to ensure that there are no unknown investors: *“The SEC requires investors to be listed, accredited investors. The investors are sent a questionnaire in which they self certify.”* – David S. Rose of New York Angels

It is critical that the size of each financing round will enable achieving significant milestones in order to justify selling the next round at a heightened valuation (i.e. an “up round.”)

“What’s the burn rate and is the company raising enough money to make it to the milestones for the next round? Where will this round of financing get the company to? Will it be something measurable to justify a higher valuation in the next round?” – Bill Moore of LORE Associates

Angel investors worry about dilution when the company is low on cash and may have to raise additional financing in a “down round”, or reduced valuation round of financing. **Dilution is a reduction in a shareholder's relative ownership percentage of a company as a result of the company's issuance of more shares, which will generally occur in the VC round.** The entrepreneur, early investors and angel investors are invited to participate, but they may not have

the money to invest since it is already tied up in the company. Thus, the entrepreneur and angel investors are subject to being “crammed down” and diluted through the subsequent purchase of stock at valuations that are close to or less than the initial purchase price, which can cause their percentage interest in the company can be reduced significantly. John Huston of Ohio Tech Angels Fund states, “Of course, the angels’ best protection against a “down round” is to have adequate dry powder to preclude the need to seek new outside investors”.

“Ultimately investors care more about whether the value of the stock has changed more than whether or not their percent ownership has changed.” – Stephanie Hanbury-Brown of Golden Seeds

These circumstances can put an angel investors’ equity stake at risk. In order to avoid these situations, it helps to get to know the Company’s advisors. A company needs good advisors who are experienced and can help navigate these pitfalls.

Exit Strategies

“Typically look for an exit through a sale of the company, a merger or to take it public.”
– Stephanie Hanbury-Brown of Golden Seeds.

Context and Reality of Exits

- Distributions and calls on capital
- Control of company passes:
 - To buyer in a merger
 - To management in IPOs
- When to sell out and get out:
 - Waiting to see further growth in company
 - Fixing IRRs

Exits for investors can occur when there is still further growth to occur in the company or the investors are ready to realize a return on their investment. Exiting an investment can result in the transfer of control to another party. In the instance of a merger or a sale, the buyer assumes control. When a company is exited through an IPO, the management takes control. The reality is that roughly 85 percent of exits are through mergers and acquisitions. IPOs are glamorous and receive much media coverage, but mergers and acquisitions generate the bulk of angels’ returns.

Finally, it is important to be aware that potential exit strategies affect the way a deal is structured. For example, **if an entrepreneur does not pay enough attention to the possibility of a low exit valuation and concedes many participating preferred terms in the deal terms, then the entrepreneur may get little return upon exit.** Therefore, this underscores the point that the best negotiated deals are the deals in which the terms between each party are balanced, the investors and the entrepreneurs understand one another, and each party made concessions.

Take-Home Lessons

*“Angel investing is a learned profession. It takes 18-24 months for an investor to simply experience a normal cycle of angel investing. At that point, investors start to see their losses. In their enthusiasm, they may have over invested. Then they suddenly say, ‘Why am I doing this?’ They are **now** ready to make investments but they usually get out, unfortunately.*

Some simple advice is to start off with really small [investment] amounts. Always be a follower if you are new. If you can’t find someone to lead a deal, pay attention to that. Furthermore, group wisdom is the best. But also remember that investors need to make their own decisions and can’t always follow someone else’s lead.” – Carol Sands of The Angels’ Forum

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Leaders interviewed for the guidance document:

- Catherine Mott of BlueTree AlliedAngels (Pittsburgh, PA)
- Tom Jones of BlueTree Allied Angels (Pittsburgh, PA)
- Stephanie Hanbury-Brown of Golden Seeds (New York, Connecticut)
- Carol Sands of The Angels' Forum (Palo Alto, CA)
- David S. Rose of New York Angels (New York, NY)
- Paul Sciabica of New York Angels (New York, NY)
- James Geshwiler of CommonAngels (Boston, MA)
- John May of New Vantage Group (Washington, DC)
- Bill Moore of LORE Associates (Philadelphia, PA)
- John Huston, Ohio Tech Angels Fund (Columbus, OH)
- Alan May, Life Science Angels (Menlo Park, CA)

Reading 3

TechStars Model Seed Funding Documents



by David Cohen

Today, just as I promised in the recent Venture Voice interview, we're releasing the various legal documents that we use as a starting point for seed stage financing for our companies. We've now done a dozen or so of these, and we thought it would be useful to release the documents to the community. We think that they're great model documents for an angel or seed financing in the \$250k-\$2M range. They represent a "light" preferred equity financing and have very simple terms that are generally "balanced" but if anything lean toward the entrepreneurs and represent a great deal of trust in them, which we think is appropriate for angel deals where you are primarily investing in the people at the early stage.

They documents were created by Cooley Godward Kronish, LLP, and we thank them and Michael Platt specifically for allowing us to release them publicly.

Please feel free to use these documents, but please do so responsibly only after retaining your own legal counsel. Don't use these documents blindly. All of the figures in them are made up, and are not necessarily accurate or consistent. We've made best efforts to call out the places that need to be edited based on the situation using brackets. But still, using these documents for a real financing and without good legal advice is just plain foolish. Think of them as a good starting point that can save you some time and money.

TechStars never leads the investment rounds of our companies, but we always provide these documents as a starting point for the entrepreneurs and lead investors. Using these documents as a starting point, our companies have been able to complete equity financings for legal costs in the \$5-10k range on a regular basis.

Things usually start with a Term Sheet which describes the basic agreements about the investment. The term sheet lays out the proposed capitalization which includes number and type of shares for each shareholder and their relative ownership percentages, post-financing. It goes on to describe the liquidation preference, mechanics of conversion, how the board of directors will be determined, protective provisions, and other rights and agreements. The term sheet is not a definitive document – it just describes the basic agreement. This is the one we promote and use.

Reading 4

Convertible Debt – The Discount

As we start our convertible debt series, we'll focus on the discount. Remember that a convertible debt deal doesn't purchase equity in your company. Instead, it's simply a loan that has the ability to convert to equity based on some future financing event (we'll tackle the conversion mechanics in a later post.)

Until recently, we had never seen a convertible debt deal that didn't convert at a discount to the next financing round. Given some of the excited market conditions at the seed stage, we've heard of convertible deals with no discount, but view this as irregular and not sustainable over the long term.

The idea behind the discount is that investors should get, or require, more upside than just the interest rate associated with the debt for the risk that they are taking by investing early. These investors aren't banks – they are planning to own equity in the company, but are simply deferring the price discussion to the next financing.

So how does the discount work? There are two approaches – the “discounted price to the next round” or “warrants.” We are only going to focus on the discounted price to the next round approach, as it's much simpler and better oriented for a seed round investment. We'll cover warrants in a later post in the series.

For the discounted price to the next round, you might see something like this in the legal documents:

“This Note shall automatically convert in whole without any further action by the Holders into such Equity Securities at a conversion price equal to eighty percent (80%) of the price per share paid by the Investors purchasing the Equity Securities on the same terms and conditions as given to the Investors.”

This means that if your next round investors are paying \$1.00 per share, then the note will convert into the same shares at a 20% discount, or \$0.80 per share. For example, if you have a \$100,000 convertible note, it'll purchase 125,000 shares ($\$100,000 / \0.80) whereas the new equity investor will get 100,000 shares for his investment of \$100,000 ($\$100,000 / \1.00).

The range of discounts we typically see is 10-30% with 20% being the most common. While occasionally you'll see a discount that increases over time (e.g. 10% if the round closes in 90 days, 20% if it takes longer), we generally recommend entrepreneurs (and investors) keep this simple – it is the seed round, after all.

Convertible Debt – Valuation Caps

Today, in our series on convertible debt, we examine the conversion valuation cap.

The cap is an investor-favorable term that puts a ceiling on the conversion price of the debt. The valuation cap is typically only seen in seed rounds where the investors are concerned that the next round of financing will be at a price that is at a valuation that wouldn't reward them appropriately for taking a risk by investing early in the seed round.

For example, an investor wants to invest \$100,000 in a company and thinks that the pre-money valuation of the company is somewhere in the \$2 to \$4 million dollar range. The entrepreneurs thinks their valuation should be higher. Either way, the investor and entrepreneurs agree to not deal with a valuation negotiation and consummate a convertible debt deal with a 20% discount to the next round.

Nine months pass and the company is doing well. The entrepreneurs are happy and the investor is happy. The company goes to raise a round of financing in the form of preferred stock. They receive a term sheet at \$20 million pre-money valuation. In this case, the discount of 20% would result in the investor having an effective valuation of \$16 million for his investment nine months ago.

One on hand the investor is happy for the entrepreneurs but is shocked by the relatively high valuation for his investment. He realized he made a bad decision by not pricing the deal initially as anything below \$16 million would have been better for him. Of course, this is nowhere near the \$2 to \$4 million the investor was contemplating the company was worth at the time he made his convertible debt investment.

The valuation cap addresses this situation. By agreeing on a cap, the entrepreneur and investor can still defer the price discussion, but set a ceiling at which point the conversion price “caps”.

In our previous example, let's assume that the entrepreneurs and investor agree on a \$4 million cap. Since the deal has a 20% discount, any valuation up to \$5 million will result in the investor getting a discount of 20%. Once the “discounted value” goes above the cap, then the cap will apply. So, in the case of the \$20 million pre-money valuation, the investor will get shares at an effective price of \$4 million.

In some cases, caps can impact the valuation of the next round. Some VCs will look at the cap and view it as a price ceiling to the next round price, assuming that it was the high point negotiated between the seed investors and the entrepreneurs. To mitigate this, entrepreneurs should never disclose the seed round terms until a price has been agreed to with a new VC investor.

Clearly, entrepreneurs would prefer not to have valuation caps. However, many seed investors recognize that an uncapped note has the potential to create a big risk / return disparity especially in frothy markets for early stage deals. We believe that – over the long term – caps create more alignment between entrepreneurs and seed investors as long as the price cap is thoughtfully negotiated based on the stage of the company.

Convertible Debt – Conversion Mechanics

We continue our convertible debt series today with a discussion about conversion mechanics. This is a very important term, but usually one that everyone can be happy with at the end if they concentrate on it.

In general, debt holders have traditionally enjoyed superior control rights over companies with the ability to force nasty things like bankruptcy and involuntary liquidations. Therefore, having outstanding debt (that doesn't convert) can be a bad thing if an entrepreneur ever gets “sideways” with one of the debt holders. While it's not talked about that much, it happens often and we've seen it many times leaving the debt holder in a great position of leverage in negotiations.

Here is typical conversion language:

“In the event that Payor issues and sells shares of its Equity Securities to investors (the “Investors”) on or before [180] days from the date herewith (the “Maturity Date”) in an equity financing with total proceeds to the Payor of not less than \$1,000,000 (excluding the conversion of the Notes or other debt) (a “Qualified Financing”), then the outstanding principal balance of this Note shall automatically convert in whole without any further action by the Holders into such Equity Securities at a conversion price equal to the price per share paid by the Investors purchasing the Equity Securities on the same terms and conditions as given to the Investors.”

Let's take a look at what matters in this paragraph. Notice that in order for the note to convert automatically, all of the conditions must be met. If not, there is no automatic conversion.

Term: Here, the company must sell equity within six months (180 days) for the debt to automatically convert. Consider whether or not this is enough time. If we were entrepreneurs, we'd try to get this to be as long as possible. Many venture firms are not allowed (by their agreements with their investors) to issue debt that has a maturity date longer than a year, so don't be surprised if one year is the maximum that you can negotiate if you are dealing with a VC investor.

Amount: In this case the company must raise \$1,000,000 of new money, because the conversion of the outstanding debt is excluded, for the debt to convert. Again, it's the entrepreneur's decision on how much is a reasonable number, but think about how long you have (here 180 days) and how much you think you can reasonably raise in that time period.

So what happens if the company does not achieve the milestones to automatically convert the debt? The debt stays outstanding unless the debt holders agree to convert their holdings. This is when voting control comes into play. It is key to pay attention to the amendment provision in the notes.

“Any term of this Note may be amended or waived with the written consent of Payor and the Majority Holders. Upon the effectuation of such waiver or amendment in conformance with this Section 11, the Payor shall promptly give written notice thereof to the record Holders of the Notes who have not previously consented thereto in writing.”

While one will never see anything less than a majority of holders needing to consent to an amendment (and thus a different standard for conversion), make sure the standard doesn't get too high. For instance, if you had two parties splitting \$1,000,000 in debt with a 60 / 40 percentage split, you only need one party to consent if the majority rules, but both parties would need to consent if a super majority must approve. Little things like this can make a big difference if the 40% holder is the one you aren't getting along with at the present moment.

Convertible Debt – Conversion In A Sale Of The Company

In today's installment of our convertible debt series, we cover **a specific case where the company is acquired before the debt converts into equity.** There are a few different scenarios.

The lender gets its money back plus interest. If there is no specific language addressing this situation, this is what usually ends up happening. In this case, the convertible debt document doesn't allow the debt to convert into anything, but at the same time mandates that upon a sale the debt must be paid off. So the lenders don't see any of the upside on the acquisition. **The potential bad news is that if the merger is an all stock deal, the company will need to find a way to find cash to pay back the loan or negotiate a way for the acquiring company to deal with the debt.**

The lender gets its money back, plus interest plus a multiple of the original principle amount. In this case, the documents dictate that the company will pay back outstanding principle plus interest and then a multiple on the original investment. Usually we see 2-3x, but in later stage companies, this multiple can be even higher. Typical language follows.

Sale of the Company: If a Qualified Financing has not occurred and the Company elects to consummate a sale of the Company prior to the Maturity Date, then notwithstanding any provision of the Notes to the contrary (i) the Company will give the Investors at least five days prior written notice of the anticipated closing date of such sale of the Company and (ii) the Company will pay the holder of each Note an aggregate amount equal to _____ times the aggregate amount of principal and interest then outstanding under such Note in full satisfaction of the Company's obligations under such Note.

Some sort of conversion does occur. In the case of an early-stage startup that hasn't issued preferred stock yet, the debt converts into stock of the acquiring company (if it's a stock deal) at a valuation subject to a cap. If it's not a stock deal, then one normally sees one of the above scenarios.

With later stage companies, the investors usually structure the convertible notes to have the most flexibility. They either get a multiple payout on the debt, or get the equity upside based on the previous preferred round price. Note that if the acquisition price is low, the holders of the debt may usually opt out of conversion and demand cash payment on the notes.

While in many cases issuing convertible debt is often easier to deal with than issuing equity, the one situation where this often becomes complex is an acquisition while the debt is outstanding. Our strong advice is to address how the debt will be handled in an acquisition in the documents.

Convertible Debt – Other Terms

In today's episode of our convertible debt series, we discuss a few other terms that come into play with a transaction.

Interest Rate: We believe interest rates on convertible debt should be as low as possible. This isn't bank debt and the funders are being fairly compensated through the use of whatever type of discount has been negotiated. If you are an entrepreneur, check out what the Applicable Federal Rates (AFRs) are to see the lowest legally allowable interest rates are and bump them up just a little bit (for volatility) and suggest whatever that number is. Typically we see an interest rate between 7% and 10%.

Pro-Rata Rights: This term allows debt holders to participate pro-ratably in a future financing. Since many times the dollar amounts are low / lower in a convertible debt deal, investors may ask for "super pro-rata" rights. For instance, if an investor gave a company \$500,000 in a convertible debt deal and the company later raises \$7,000,000, the investor's pro-rata investment rights wouldn't allow them to purchase a large portion of the next round. Sometimes investors will ask for pro-rata rights that are a multiple of their investment. In this case the investor may ask for two to four times their amount. While pro-rata rights are pretty typical, if you have people asking for super pro-rata rights, or a specific portion of the next financing, you should be careful as this will likely limit your long term financing options.

Liquidation Preferences: Every now and then you'll see a [liquidation preference](#) in a convertible debt deal. It works the same as it does in a preferred stock deal – the investors get their money back first, or a multiple of their money back first, before any proceeds are distributed to anyone else. This usually happens in the case when a company is struggling to raise capital and current investors offer a convertible debt (also called a bridge loan) deal to the company. Back in the good old days usury laws prevented such terms, but in most states this is not an issue and allow the investors to not only have the security of holding debt, but the upside of preferred stock should a liquidation event occur.

Other Terms: If you see other terms in a proposed deal outside of these, we'd guess that they are unique to your situation, as the ones we've discussed should cover the vast majority of debt transactions.

Convertible Debt – Warrants

Earlier in the convertible debt series we talked about the "discounted price to the next round" approach to providing a discount on convertible debt. **The other approach to a discount is to "issue warrants". This approach is more complex and usually only applies to situations where the company has already raised a round of equity, but it still pops up in early stage deals.** If you are doing a seed round, we encourage you not to use this approach and save some legal fees. However, if you are doing a later stage convertible debt round, or your investors insist on you issuing warrants, here's how it works.

Assume that once again the investor is investing \$100,000 and receives warrant coverage in the amount of 20% of the amount of the convertible note. In this case the investor will get a warrant for \$20,000.

This is where it can get a little tricky. What does \$20,000 worth of warrants mean? A warrant is an option to purchase a certain number of shares at a pre-determined price. But how do you figure out the number of warrants and the price that the warrants will be at? There are numerous different ways to calculate this, such as:

1. \$20,000 worth of common stock at the last value ascribed to either the common or preferred stock;
2. \$20,000 worth of the last round of preferred stock at that round's price of the stock; or

3. \$20,000 worth of the next round of preferred stock at whatever price that happens to be.
- 4.

As you can see, the actual percentage of the company associated with the warrants can vary greatly depending on the price of the security that underlies it. As a bonus, the particular ownership of certain classes may affect voting control of a particular class of stock.

If there is a standard, it's the second version where the warrants are attached to the prior preferred stock round. If there is no prior preferred, then one normally sees the stock convert to the next preferred round unless an acquisition of the company occurs before a preferred round is consummated and in that case, it reverts to the common stock.

For example, assume that the round gets done at \$1.00 / share, just like in the previous example. The investor who holds a \$100,000 convertible note will get \$20,000 of warrants, or 20,000 warrants, at an exercise price of \$1.00, to go along with the 100,000 shares received in the financing from the conversion of the note.

Warrants have a few extra terms that matter.

Term Length: The length of time the warrants are exercisable which is typically five to ten years. Shorter is better for the entrepreneur and company. Longer is better for the investor.

Merger Considerations: What happens to the warrants in the event the company is acquired? We can't opine more strongly that all warrants should expire at a merger unless they are exercised just prior to the transaction. In other words, the warrant holder must decide to either exercise or give up the warrants if the company is acquired. Acquiring companies hate buying companies that have warrants survive a merger and allow the warrant holder to buy equity in the acquirer. Many a merger have been held up as warrants with this feature have upset the potential acquirer and thus as part of the closing requirements mandated that the company go out and repurchase and / or edit the terms of the warrants. This is not a good negotiating spot for the company to find itself in. It will have to pay off warrant holders while disclosing the potential merger (so the company will have little leverage) and at the same time will have a sword over its head by the acquirer until the issue is resolved.

Original Issue Discount: This is an accounting issue that is boring, yet important. If a convertible debt deal includes warrants, the warrants must be paid for separately in order to avoid the OID issue. In other words, if the debt is for \$100,000 and there is 20% warrant coverage, the IRS says that the warrants themselves have some value. If there is no provision for the actual purchase of the warrants, the lender will have received an "original issue discount" (OID) which says that the \$100,000 debt was issued at a "discount" since the lender also received warrants. The issue is that part of the \$100,000 principal repaid will be included as interest to the lender, or even worse, it will be accrued as income over the life of the note even before any payments are made. The easy fix is paying something for the warrants, which usually is an amount in the low thousands of dollars.

The difference between warrants and discounts is probably insignificant for the investor. We suppose if the investor is able to get warrants for common stock, then perhaps the ultimate value of warrants may outweigh the discount, but it's not clear. As evidenced by the number of words above, warrants add a fair amount of complexity and legal costs to the mix. On the other hand, some discounts will include valuation caps (more on this in our next post) and that can create some negative company valuation ramifications. Warrants completely stay away from the valuation discussion.

Finally, in no case should an entrepreneur let an investor double dip and receive both a discount and warrants. That's not a reasonable position for an investor to take – he should either get a discount or get warrants.

Convertible Debt – Early Versus Late Stage Dynamics

Once again we continue our series on convertible debt deals. Today's subject is early versus late stage dynamics.

Traditionally, convertible debt was issued by mid to late stage startups that needed a financing to get them to a place where they believed they could raise more money. Thus, these deals were called "bridge financings."

The terms were basically the same unless the company was fairing poorly and there was doubt about the ability to raise new capital and / or the bridge was to get the company to an acquisition or even orderly shutdown. In these cases, one saw terms like liquidations preferences and in some cases changes to board and / or voting control come into play. Some of these bridge loans also contained terms like [pay to play](#).

Given the traditional complexity and cost of legal fees associated with preferred stock financings, however, convertible debt became a common way to make seed stage investments as it tended to be simpler and less expensive from a legal perspective. Over time, equity rounds have become cheaper to consummate and the legal fees argument doesn't hold much weight these days. In the end, the main force driving the use of convertible debt in early stage companies is the parties' desire to avoid setting a valuation.

Optional Background 1

Raising Angel Money

By Mark Suster on July 20, 2009

This post is part of a series of posts called "[Pitching a VC](#)" that explains how to get access to VC's, what to say when you get there and what will happen afterward. The series outline is [here](#) and the first post "what goes in a VC presentation" is [here](#). But you can read this stand alone.

A friend of mine who lives in Silicon Valley called me last week to talk about his new company. He's been a very prominent member of the technology community for 15+ years and is deeply respected by both junior and senior members who have worked closely with him. This is the exact kind of guy who as a VC you would love to invest in provided he can deliver on a well rounded team (getting there) and a great idea (done).

We had a lengthy conversation about whether he should take angel money, which has been offered to him. The investment money he's been offered has been "priced" (meaning the value of his company at which the angels would buy stock has been set at the recommendation of the angel investors) and he was wondering whether he should take the money.

His alternative is to hold out for "convertible debt" that would not immediately be priced. The purchase price for investors in this type of investment is set in the future when he would raise his first round of venture capital money. (Quick side note for explanation: when you raise money as convertible debt it means that the money you raise is in the form of a loan and not given as equity. It is called convertible because it usually automatically converts to equity when you raise your professional round of venture capital. It typically gets a discount to the price that the VC pays. The discount can be any % number but in my experience is usually between 15-30%).

The conversation about angel money is one I have all the time with entrepreneurs so I thought it would make for a good post on understanding angel investing – how they think, how you should think and how the first round venture capital firm will think by the time the deal gets to them.

How Angels Think – OK, let me start by saying that I rarely do angel investing since I mostly think it's a sucker's bet unless you have very deep pockets or unless you're in a tech bull market ('97-00, '05-'08) where exits can happen without a lot of follow-on rounds of funding. If you want to know more about why I feel this way feel free to ask in the comments section and I'll elaborate. I have had the discussion about whether angels should price their investments or offer convertible debt with many professional angel investors in the past and 2 in particular that I'll use in this discussion.

One side of the argument – angels should price: 18 months ago I sat on a panel with [Ron Conway](#), the legendary angel investor from Silicon Valley who invested in Google, Twitter, Digg and many other early-stage Silicon Valley success stories. The topic of angel pricing came up. Ron said he never likes to do convertible debt deals and always insists on pricing his investments. His rationale was clear, "If I invest in a company I open my Rolodex for them. I help them with business development introductions. I introduce employees. I give them credibility in the fund raising process. Let's say the company was worth \$1 million when I met them and I've helped them with both my Rolodex and my cash and they can now raise a round of venture capital at a valuation of \$6 million. I would be hurting my own interests. A \$500,000 investment at a 30% discount to a \$6 million round is still priced and more than \$4 million and is certainly worth much less than my investing at a \$1 million pre-money where I could own 33% of the company."

This is how I believe angel investors should think. Your money helps the entrepreneur get through a very difficult period and your money has a lot more risk since you don't know whether VCs will really want to back this idea or team. Your biggest risk is what we call in the industry, "funding risk" and it is especially prevalent in tough economic times like now where VC money is harder to come by. Now more than ever I think angels should be pricing rounds.

The other side of the argument – angels should not price if the deal is "hot": I had breakfast in Palo Alto recently with a friend of mine who is a very well known angel investor. He actually invests angel sized rounds on behalf of a larger VC fund. He told me the following in private (versus Ron's comments on a public panel) so I'd prefer not to reveal his name since I didn't ask for authorization.

His argument was simple, "The best deals in Silicon Valley are very competitive and I only want to invest in the best deals. If I have to spend weeks debating valuation with entrepreneurs then my probability of getting into the best deals is decreased. I'd much rather be in the deal at a 30% discount to the VC round than to out of the deal altogether and miss investing in the best deals. If the market conditions worsen then I'll ask for a larger discount. Maybe 40%? Maybe 50%?"

He has a point. This individual really does have access to the best deals in Silicon Valley at formation stage based on his solid reputation for working with entrepreneurs in a hands-on way to help them with their business strategy before raising money. People like working with him and feel he gives credibility. His view is that if he gives the entrepreneurs more time to get around to meet all the angel stars in Silicon Valley (Ron Conway, [Mike Maples](#), [Jeff Clavier](#) or any of the other host of angel investors who have sterling reputations and once under their spell it may be harder for my friend to close the deal.

In my estimation he has done good investments in the past 2 years but obviously we'll need to judge that later when we see whether these investments make money. My bet is they will. Two observations here: 1) he has very unique access to the some of the most proprietary deals in the world and 2) he has only been a VC for 2 years and therefore might see a side benefit of increasing reputation by being in "hot" deals.

For everybody else I believe angels should price. So why do many angels agree to fund with convertible debt? Maybe there are more sophisticated reasons than I am aware of so feel free to weigh in with comments if you think I'm missing something.

I believe most convertible debt deals by angels are done by people who are not professionally investors. There are many groups of angels who like to pool their money together to invest in technology. Sometimes they are ex Tech execs who have made a bit of cash and sometimes they are groups of wealthy doctors, lawyers, real estate professionals – whatever. But I believe they don't price either because they don't know better or they want proprietary access to deals they think they otherwise wouldn't have been able to invest in without agreeing this structure.

How entrepreneurs should think – So now that you know how angels think about pricing early-stage deals, how should this affect your decisions in the fund raising process?

As an entrepreneur you should raise money from the most experienced people possible – period. If you have the opportunity to raise a small amount of money from a group of experienced investors who have a track record of helping companies get from that tricky idea stage to being a well-formed company with a good product and solid market-entry

strategy I would take the money – even if it were priced. Worrying about giving up an extra 10% of your company at this stage can be meaningless if the ultimate outcome is either success or failure. Even VC's think this way, which is why Fred Wilson when describing his decision to syndicate a portion of his investment in GeoCities to another investor says, "I learned that good partners are worth every penny of returns you give up to get them." (whole article [here](#) if you're interested)

Don't worry about getting "screwed" by sage angel investors. If they really are well regarded and serial investors they won't likely screw you. Why? Because if they try to take 50% of your company for \$500,000 then they know it will be very hard to raise VC because we'll know that too much of the value has been taken away from the founders before our investment.

People like [John Greathouse](#) and [Klaus Schauer](#) in Santa Barbara have a great track record both in building companies themselves and also in helping the companies that they angel fund pull together great management teams, launch great technology products and importantly raise VC from top-notch VC's.

If you're the kind of person that Ron Conway, Klaus Schauer or John Greathouse would be willing to fund then you're probably the kind of person who could string together a group of wealthy real estate professionals to give you a convertible debt financing and avoid taking as much dilution at this early stage of your company. Should you take the "cheap" and easy money?

I've obviously laid out my case in the argument. Most companies have binary outcomes: you're either really successful as a company or you're not. Unfortunately the overwhelming majority of companies end up in the latter category. You know the old saying, "a larger percentage of zero is still zero." So my advice is to stack the odds as much in your favor as possible by taking the experienced money from people who have a reputation for really helping entrepreneurs.

If you're struggling to raise money at all then you should obviously take the money from wherever you can get it and many times that is reality. If you believe you have a great idea and are passionate about trying to build a company around it then the only thing worse than raising money from inexperienced people is raising no money at all. Go for it.

If you can raise money from prominent angel investors AND get the investment done as convertible debt – knock your socks off! Take the money. (note: this advice does not include taking convertible debt from VC investors, which I generally advise against. (Again, if you want me to elaborate I'm happy to do so in the comments section).

How do VC's think about your angel money structure? – First, let me state that many VC's have done many earlier-stage, angel-like deals in the past few years. It takes less money to start companies than it did 10 years ago and these VC's had seen the best deals get done by über-wealthy angels. As a result many VC's were getting into the game of writing \$500,000 – \$1 million checks.

Will this continue? I don't know for sure. On the one hand I believe many VC's have realized that this early-stage investing is riskier than they had perceived and they'll just end up doing the \$3 million rounds down the line when the business has more proof points. So I think many VC's may pull back to their traditional roles of letting angel investors take the early stage risk.

On the other hand, it is true that it takes significantly less capital to get companies off the ground these days and given Cloud Computing I believe this trend will continue (see [my experiences and views here](#)). It is also true that many VC fund sizes going forward will likely be smaller as LP's come to realize that smaller fund sizes for VC funds (as opposed to growth equity funds) better aligns the interests of the VC and the LP. So I suspect some VC's will continue doing deals that are on the border between what an angel would do and what a VC would do. I am personally in this camp. And Andreessen Horowitz certainly is as well, [announcing their willingness to deals as low as even \\$50,000](#).

But to the question of how a VC thinks about your angel money if you do raise it, here are my thoughts:

- Your chances of raising money from a VC are significantly greater if you have raised money from prominent people.
- In most cases we probably don't care whether the deal was priced or convertible debt. We would, however, look to make sure that you didn't take too much dilution, which would be a negative.
- If you did convertible debt at a large discount (say 30%) and it was done only 2 months before you're talking to a VC they will probably grumble about the discount that the previous investor is getting. But ultimately I believe most VCs will get over this because the dilution taken from the discounted convertible debt will likely come from the founders and not the VC
- If you have many angels (say a group of 10-15 people) and if these people are not sophisticated serial angel investors it could cause problems. VC's will be a bit wary of having small investors who try to hold the company hostage during future financing rounds. Anyone who has been around the industry long enough would have seen this happen at least once. If you do round up money from a load of small unsophisticated investors please make sure to get a great corporate lawyer with experience in doing VC deals to structure the deal to minimize the amount of signatures you need to get for approvals and to ensure that every angel has signed an accredited investor statement.

If you ever see me in person ask me to tell you the story about the pig farmer who seed-funded my first company. I have all the scars from F'ing up the formation of my first company to write blog posts like this.

Optional Background 2

The Importance of Angel Investing in Financing the Growth of Entrepreneurial Ventures

A Working Paper

by

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for



Under contract no. SBAHQ-O7-Q-0016

Release Date: September 2008

This report was developed under a contract with the Small Business Administration, Office of Advocacy, and contains information and analysis that was reviewed and edited by officials of the Office of Advocacy. However, the final conclusions of the report do not necessarily reflect the views of the Office of Advocacy.

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2008 [47] pages. Under contract number: SBAHQ-O7-Q-0016.

Introduction

Many observers consider angel investments to be one of the key drivers behind the startup and the growth of new businesses, despite a paucity of information to confirm whether or not this is true. Unlike venture capital investments, angel investments are made by individual investors who do not make up a known population. **Therefore, much of what is reported about angel investing comes from anecdotes and surveys of convenience samples, which are prone to biases and inaccuracies. Moreover, research on angel investment is plagued by definitional confusion, in which different investigators confound informal investors, friends and family who invest in startups, accredited and unaccredited angel investors, and individual and group investing.** The variation makes it difficult to compare findings across studies.

Purpose

This report seeks to provide an accurate understanding of the role of angel investing in the entrepreneurial finance system. It provides a definition of angel investing and reviews the current state of understanding of the phenomenon, focusing on answering four questions: (1) How large is the angel capital market? (2) How much demand is there for angel capital? (3) What are the primary characteristics of angel investments? (4) What do the companies that receive angel financing look like? Among other databases, the study draws on the Survey of Business Owners (SBO); the Business Information Tracking Series (BITS); the Entrepreneurship in the United States Assessment (EUSA); the survey of the members of the Angel Capital Association

(ACA); the Federal Reserve Survey of Small Business Finances (FRSSBF); and the Global Entrepreneurship Monitor (GEM).

Overall Findings

The angel capital market is smaller than is generally believed. Few companies are appropriate for angel financing, a fact that limits demand for this source of financing. Angel investments are smaller and less sophisticated and include more debt than is commonly thought. And the companies that receive angel financing are more similar to typical startups.

Highlights

- According to the EUSA and GEM data, the estimated number of people who made an angel investment between 2001 and 2003 is between 331,100 and 629,000 people.
- According to estimates based on the EUSA data, between 2001 and 2003, angels invested an estimated \$23 billion per year.
- Estimates based on several sources suggest that most angel investors are unaccredited investors, but that accredited investors provide the majority of dollars invested.
- Estimates based on data from the EUSA and the 2003 FRSSBF suggest that the number of companies that receive angel investments annually is between 50,700 and 57,300.
- According to the ACA, in 2006, the 5,632 accredited angel investors that make up its member groups made 947 investments in 512 companies, providing startups with a total of \$228.8 million.

- According to estimates from the BITS, 3,608 companies founded in 1996 achieved the \$10 million or more in sales by 2002 that many experts say angels' target.

- According to the EUSA data, the typical angel investment made between 2001 and 2003 was \$10,000.

- According to the ACA, in 2006, the average dollar value invested per angel in an angel group deal was \$31,457.

- According to the EUSA data, debt accounts for 40.2 percent of the money angels provided to startups between 2001 and 2003.

- Estimates based on the 2003 FRSSBF and the EUSA data suggest that between 0.17 and 0.2 percent of the companies financed by angels go public, and between 0.8 and 1.3 percent are acquired.

- Estimates of the rate of return net of opportunity cost of high-net-worth accredited angels affiliated with groups and willing to talk about their investments is 19.2 percent, according to data from the Angel Investor Performance Project (AIPP).

- According to the EUSA data, 25 percent of angel investments made between 2001 and 2003 went into retail businesses, and 12.5 percent went into personal service businesses.

- According to the 2003 FRSSBF, the typical business of any age—the average age was 13.3 years—that received an informal equity investment in the previous year had sales of \$435,000, employment of seven, and profits of \$7,500.

- According to data from the 2002 SBO, only 11 percent of firms that were five years old or younger and had received an external equity investment had a female primary owner, only 3.8 percent had a Hispanic primary owner, and only 1.4 percent had a Black primary owner.

- According to data from the 2002 SBO, over two-thirds of the entrepreneurs whose businesses had received an external equity investment and were less than six years old were between the ages of 35 and 54 years.

Scope and Methodology

This study reviewed the literature, including published books and articles, as well as unpublished reports. It also involved a statistical evaluation of data sources drawn from representative samples of known populations the SBO (through special tabulations); the BITS (through special tabulations); the EUSA; the survey of the ACA members; the Federal Reserve Survey of Consumer Finances (FRSCF); the FRSSBF; the GEM; and the Kauffman Firm Study (KFS)—not previously used to examine angel investing in the United States. The study also examined new, nonrepresentative surveys of angel investors, such as the AIPP. Finally, it compared the results of these analyses to previous studies of nonrepresentative samples of business angels.

Ordering Information

The full text of this report and summaries of other studies performed under contract with the U.S. Small Business Administration's Office of Advocacy are available on the Internet at www.sba.gov/advo/research. Copies are available for purchase from:

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Overview

Investigation of the role of angel investing in financing private businesses in the United States is important.¹ Many observers consider angel investments to be one of the key drivers behind the startup and the growth of new businesses,² despite a paucity of information to confirm whether or not this is true. Unlike venture capital investments, angel investments are made by individual investors who do not make up a known population. Therefore, much of what is reported about angel investing comes from anecdotes and surveys of convenience samples, which are prone to biases and inaccuracies. Moreover, research on this topic is plagued by definitional confusion, in which different investigators confound informal investors, friends and family who invest in start-ups, accredited and unaccredited angel investors, and individual and group investing; this confusion makes it difficult to compare findings across studies.

This report seeks to provide an accurate understanding of the role of angel investing in the entrepreneurial finance system. It provides a definition of angel investing, and reviews the current state of understanding of the phenomenon, focusing on answering four questions: (1) How large is the angel capital market? (2) How much demand is there for angel capital? (3) What are the primary characteristics of angel investments? (4) What do the companies that receive angel financing look like?

To answer this question, the author reviewed the literature, including published books and articles, as well as unpublished reports. The study also includes a statistical evaluation of data sources drawn from representative samples of known populations—the Survey of Business Owners (SBO) (through special tabulations); the Business Information Tracking Series (BITS) (through special tabulations); the Entrepreneurship in the United States Assessment (EUSA); the survey of the members of the Angel Capital Association (ACA); the Federal Reserve Survey of Consumer Finances (FRSCF); the Federal Reserve Survey of Small Business Finances (FRSSBF); the Global

¹ Portions of this report will also appear in Scott Shane's book, *Fool's Gold: The Truth Behind Angel Investing in America*, Oxford University Press 2009. Scott Shane is authorized to sign the proposal and to negotiate on the offeror's behalf with the government in connection with this solicitation.

² Council on Competitiveness. 2007. *The Competitiveness Index: Where America Stands*, Washington, D.C.: Council on Competitiveness.

Entrepreneurship Monitor (GEM); and the Kauffman Firm Study (KFS)—not previously used to examine angel investing in the United States. I also examined new, nonrepresentative surveys of angel investors, such as the Angel Investment Performance Project (AIPP). Finally, I compared the results of these analyses to previous studies of nonrepresentative samples of business angels.

The primary findings are:

- According to the EUSA and GEM data, the estimated number of people who made an angel investment between 2001 and 2003 is between 331,100 and 629,000 people.
- According to estimates based on the EUSA data, between 2001 and 2003, angels invested an estimated \$23 billion per year.
- Estimates based on several sources suggest that the majority of angel investors are unaccredited investors, but that accredited investors provide the majority of dollars invested.
- Estimates based on data from the EUSA and the 2003 FRSSBF suggest that the number of companies that receive angel investments annually is between 50,700 and 57,300.
- According to the ACA, in 2006, the 5,632 accredited angel investors that make up its member groups made 947 investments in 512 companies, providing start-ups with a total of \$228.8 million.³
- According to estimates from the BITS, 3,608 companies founded in 1996 achieved the \$10 million or more in sales by 2002 that many experts say angels target.
- According to the EUSA data, the typical angel investment made between 2001 and 2003 was \$10,000.
- According to the ACA, in 2006, the average dollar value invested per angel in an angel group deal was \$31,457.
- According to the EUSA data, debt accounted for 40.2 percent of the money angels provided to startups between 2001 and 2003.

³ Hudson, M. 2007. ACA Briefing and Angel Group Stats. *Presentation to the Angel Capital Association April 12.*

- Estimates based on the 2003 FRSSBF and the EUSA data suggest that between 0.17 and 0.2 percent of the companies financed by angels go public, and between 0.8 and 1.3 percent are acquired.
- Estimates of the rate of return net of opportunity cost of high-net-worth accredited angels affiliated with groups and willing to talk about their investments is 19.2 percent, according to data from the AIPP.
- According to the EUSA data, 25 percent of angel investments made between 2001 and 2003 went into retail businesses, and 12.5 percent went into personal service businesses.
- According to the 2003 FRSSBF, the typical business of any age—the average age was 13.3 years—that received an informal equity investment in the previous year had sales of \$435,000, employment of seven, and profits of \$7,500.
- According to data from the 2002 SBO, only 11 percent of firms that were five years old or younger and had received an external equity investment had a female primary owner; only 3.8 percent had an Hispanic primary owner, and only 1.4 percent had a Black primary owner.
- According to data from the 2002 SBO, over two-thirds of the entrepreneurs whose businesses had received an external equity investment and were less than six years old were between the ages of 35 and 54 years.

The study makes two contributions to public policy. First, it provides more accurate estimates of the market for angel capital, the demand for angel capital, the companies that receive angel capital, and angel deals than were previously available. These data provide the facts that policymakers need to develop ways to enhance the growth of entrepreneurship in the United States.

Second, the report provides insight into the role of public policy in the angel capital market. The information from this study will allow policymakers to evaluate the importance of the angel capital market to entrepreneurial activity in the United States, and the need for policy intervention. In addition, it provides insight into the investment activity of different groups of angel investors (e.g., accredited and unaccredited

investors), which will be useful in predicting how angel investors might respond to public policy toward angel investing.

However, the data on which all discussions of angel investing are based are flawed, leading researchers to draw inferences from either nonrepresentative convenience samples or small representative samples, both of which can lead to inaccurate estimates (although for different reasons.) A truly accurate understanding of angel investing will require the creation of large representative samples of angel investors, angel investments, and angel-financed companies.

Introduction

Investigation of the role of angel investing in financing private businesses in the United States is important. Many observers consider angel investments to be one of the key drivers behind the startup and growth of new businesses,⁴ despite a paucity of information to confirm whether or not this is true. Unlike venture capital investments, angel investments are made by individual investors who do not make up a known population. Therefore, much of what is reported about angel investing comes from anecdotes and surveys of convenience samples, which are prone to biases and inaccuracies. Moreover, research on this topic is plagued by definitional confusion, in which different investigators confound informal investors, friends and family who invest in startups, accredited and unaccredited angel investors, and individual and group investing; this confusion makes it difficult to compare findings across studies.

This report seeks to provide an accurate understanding of the role of angel investing in the entrepreneurial finance system. It defines angel investing and reviews the current state of understanding of the phenomenon, focusing on answering four questions: (1) How large is the angel capital market? (2) How much demand is there for angel capital? (3) What are the primary characteristics of angel investments? (4) What do the companies that receive angel financing look like? It answers these questions by reviewing the literature, providing a statistical evaluation of data sources drawn from representative samples of known populations, examining new nonrepresentative surveys of angel investors, and comparing the results of these new analyses to previous studies of nonrepresentative samples of business angels.

Definitions

Because of the definitional confusion that plagues research on angel investing, this report begins with some definitions. **An angel investor is a person who provides capital, in the**

⁴ Council on Competitiveness. 2007. *The Competitiveness Index: Where America Stands*, Washington, D.C.: Council on Competitiveness.

form of debt or equity, from his own funds to a private business owned and operated by someone else who is neither a friend nor a family member.

Business angels are far from the only source of external capital entrepreneurs can tap. The entrepreneur's friends and family, institutional investors such as venture capitalists and banks, trade creditors, and a host of other entities provide capital to private businesses. Therefore, it is important to differentiate angel investors from other sources of capital. To minimize the confusion about who is an angel investor and who is not, the following definitions are provided:

- **Institutional investor: A corporation, financial institution, or other organization (e.g., venture capital firm) that uses money raised from another party to provide capital to a private business owned and operated by someone else.**
- **Friends and family investor: An individual who uses his own money to provide capital to a private business owned and operated by a family member, work colleague, friend, or neighbor.**
- **Informal investor: An individual (not an institution) who uses his own money to provide capital to a private business owned and operated by someone else.**

The most important point about angel investing that comes from these definitions is the following: **every angel is an informal investor, but not every informal investor is an angel. That is, informal investors are made up of two different groups of investors, angels and friends and family.**

Another important point that comes from these definitions is the heterogeneity among angel investors. Some angels are accredited investors,⁵ while others are not. Some angels are early-stage capital providers, while others put money into businesses that are cash flow positive at the time of investment. Some angels are passive investors, conducting little, if any, due diligence of potential investments, and having scant involvement with the companies or founders after they invest, while others undertake more detailed due diligence and get actively involved with the companies that they

⁵ The federal securities laws define the term "accredited investor" in Rule 501 of Regulation D as a person whose household net worth exceeds \$1 million, or whose income exceeds \$200,000 in the two previous years if single (or \$300,000 if married) and reasonably expects to maintain the same income level (See Loritz, J. 2007. *Angel Investment: State Strategies to Promote Entrepreneurship and Economic Growth*. National Governors Association Center for Best Practices, Washington, D.C)

finance. Some angels are quite knowledgeable about investing in private companies, while others are quite naïve about entrepreneurship. Some angels take high risks to earn high returns, while others seek lower risks and lower returns. Some angels invest alone, while others invest as part of an organized group. These different dimensions affect the range of businesses in which angels invest, the organizational arrangements that they employ, their investment criteria, their decision-making processes, and a host of other things that make describing business angels quite difficult.

Debt versus Equity Investments

Angel investments include debt as well as equity. Because angels, unlike venture capitalists, have no fiduciary responsibility to other investors and are not regulated, as is the case for banks, angels can and do invest using a very wide range of financial instruments, from pure debt to pure equity. For instance, **some highly sophisticated accredited angel investors affiliated with organized angel groups report using debt instruments, particularly convertible debt, when investing in seed stage companies.**⁶

The use of debt instruments is not restricted to the use of convertible debt. In focus groups on angel investing sponsored by five Federal Reserve regional banks, several highly sophisticated angels reported that they had made investments as large as \$150,000 in unsecured debt.⁷ Moreover, earlier quantitative studies point to the use of debt by informal investors. For instance, Robert Gaston's 1989 study of informal equity investments in the United States showed that 41.2 percent of the money received by companies that had received an informal equity investment took the form of debt.⁸

Active versus Passive Investors

Previous research shows that many angels are passive investors. For instance, one study of a sample of accredited angel investors who appear in the database of a consulting firm showed that 35 percent would make an early-stage angel investment *without* looking at

⁶ Wong, A. 2002. Angel finance: The other venture capital. Working Paper, University of Chicago. The ability to skirt the dicey issue of valuation helps entrepreneurs and angel investors come to an agreement on the financing of new companies, and helps angel investors to avoid making an error in the valuation which will make the business unattractive to venture capitalists in a later round.

⁷ Shane, S. 2005. *Angel Investing. A Report Prepared for the Federal Reserve Banks of Atlanta, Cleveland, Kansas City, Philadelphia, and Richmond.* October 1.

⁸ Gaston, R. 1989. The scale of informal capital markets. *Small Business Economics*, 1: 223-232.

the entrepreneur's business plan.⁹ Other studies report that 20 percent of angels performed *no* due diligence on investments that they made.¹⁰

Data from the Angel Investor Performance Project (AIPP) indicate that many angels do not get actively involved with their ventures after investing. A study by Robert Wiltbank using these data showed that the bottom third of the sample spent only two hours per week on their ventures.¹¹ This number translates to less than eight minutes per week of post-investment involvement per venture.

Experienced versus Inexperienced Investors

One-time investors are included in the population of investors for this study. There are several reasons for not restricting angel investors to those who make more than one investment. First, studies of wealthy individuals known to make equity investments in early-stage technology companies—the “traditional” definition of an “angel” investor—show that a significant minority have made only one investment in their lifetimes. For instance, one study showed that 35 percent of these types of business angels had made only a single investment.¹² Similarly, the data from the AIPP show that 10 percent of high net worth (averaging \$10.9 million) angel investors who participate in organized angel groups have made only a single angel investment.

Second, the more representative Entrepreneurship in the United States (EUSA) data indicate that 20.8 percent of the people who had made an angel investment in the previous three years had made only one informal investment in their careers.

Third, anecdotal evidence suggests that one-time angels can be successful investors in startup companies. For example, the angel investment that is believed to have

⁹ Benjamin, G., and Margulis, J. 2000. *Angel Financing: How to Find and Invest in Private Equity*. New York: John Wiley and Sons.

¹⁰ Van Osnabrugge, M. 2000. A comparison of business angel and venture capitalist investment procedures: An agency theory-based analysis. *Venture Capital*, 2(2): 91-109.

¹¹ Wiltbank, R. 2006. At the Individual Level: Outlining Angel Investing in the United States. Downloaded from <http://www.willamette.edu/~wiltbank/AtTheIndividualLevel7.pdf>

¹² Van Osnabrugge, M. 1998. Do serial and nonserial investors behave differently? An empirical and theoretical analysis. *Entrepreneurship Theory and Practice*, Summer: 23-42

the highest return on capital invested—that made by Iain McGlenn in the Body Shop¹³—was made by an investor with no prior investments in startup companies.

Fourth, by definition, all angel investors, including the very most successful ones such as Andrew Flipowski, who made \$24 million from an investment in Blue Rhino; Andy Bechtolsheim, who made hundreds of millions of dollars from his investment in Google; and Thomas Alberg, the angel investor who earned \$26 million from his investment in Amazon.com,¹⁴ all had once made a single angel investment.

High Technology versus Low Technology Businesses

Angel investing includes investments made in companies in all industries. Many experts explain that angels invest in companies in low-technology industries. For example, Ian Sobieski, the managing member of the Band of Angels explains,

Angels, by some numbers, invest a total amount of money larger than the formal venture capital industry....Most of that money does not go into high-tech start-ups that get fed into the venture capital channel. Most of that money goes into other things. The amount of money going into high-tech equity is only a small part of that....They might invest in the local McDonald's franchise, or the roller rink, or the trendy restaurant downtown or the restoration of the artsy theater. Those are all angels—individuals that invest their own money.¹⁵

Moreover, several low-technology companies founded in industries in which most startups are not high growth have generated extremely high financial returns on angel investments, such as Starbucks and Kinko's. **Because angels can and do make successful investments in low-technology companies in slow-growth industries, it does not make sense to exclude these investments from the angel investment population.**

¹³ Von Osnabrugge, M., and Robinson, R. 2000. *Angel Investing: Matching Start-up Funds with Start-up Companies – The Guide for Entrepreneurs, Individual Investors, and Venture Capitalists*. San Francisco: Jossey-Bass.

¹⁴ Ibid.

¹⁵ Hill, B., and Power, D. 2002. *Attracting Capital from Angels*. New York: John Wiley and Sons Inc, p.52.

Definitions of Subsets of Business Angels

To mitigate confusion about angel investors, several key categories of angel investors are defined.

Unaccredited and Accredited Investors

- **Unaccredited angel investor: An individual who does not meet the Securities and Exchange Commission's (SEC) accreditation requirements** and who uses his or her own money to provide capital to a private business owned and operated by someone else, who is neither a friend nor a family member.
- Accredited angel investor: An individual who meets SEC accreditation requirements and who uses his or her own money to provide capital to a private business owned and operated by someone else, who is neither a friend nor a family member.

Active and Passive Investors

- Active angel investor: An individual who uses his or her own money to provide capital to a private business owned and operated by someone else, who is neither a friend nor family member, and who invests time as well as money in the development of the company.
- Passive angel investor: An individual uses his / her own money to provide capital to a private business owned and operated by someone else, who is neither a friend nor a family member, but who does not invest time in the development of the company.¹⁶

Individual Angels and Angel Groups

- Individual angel: A person who acts on his / her own to provide some of his money to a private business owned and operated by someone else, who is neither a friend nor a family member.

¹⁶ Passive angel investors include both passive investors who co-invest with other active investors and passive investors who invest alone without any active involvement with the portfolio company.

- Angel group member: A person who acts as part of a group to provide some of his / her own money to a private business owned and operated by someone else, who is neither a friend nor a family member.

Problems with Previous Research on Angel Investing

Previous research has not adequately addressed the questions policymakers have about angel investing for several reasons. First, there is remarkably little primary research on angel investing in the United States. Although there are a handful of practitioner articles in which angels reflect upon their experience as angel investors, a few descriptions of angel groups and angel investment programs, some business school teaching notes, and an occasional newspaper or magazine article that interviews a business angel, there is almost no qualitative or quantitative data on angel investing.

Second, a significant portion of primary research on angel investing takes the form of qualitative research. While these studies provide useful information, they suffer from two important limitations: All are based on convenience samples that cannot be generalized to the overall population of angel investors in the United States; and none involve a control group or a large enough number of angel investors to make hypothesis testing possible.

Third, the large-sample databases that have been used to examine angel investing in the past—for instance, the annual survey conducted by the Center for Venture Research at the University of New Hampshire—rely on convenience samples drawn disproportionately from angel groups. They do not accurately represent angels who make individual investments, because unaccredited angel investors are excluded from angel groups to comply with Securities and Exchange Commission (SEC) regulations. In addition, they are not available to other investigators, making it impossible to verify the accuracy of the findings claimed by the researchers or to evaluate the reliability, validity, and representativeness of the data.

Fourth, prior studies do not examine several important aspects of angel investing. For instance, no studies have examined the unaccredited angel market although several

data sources indicate that unaccredited investors make up a sizeable portion of angel investors.

Research Design

This study overcomes the limitations of prior studies of angel investing by examining new, more reliable, valid, and representative datasets than those used previously. The primary data sources used in this study are:

1. The U.S portion of the Global Entrepreneurship Monitor (GEM), a series of annual surveys conducted with a representative sample of the adult-aged population in a variety of countries from 1998 through 2003.
2. The Entrepreneurship in the United States Assessment (EUSA), a representative survey of U.S. adults conducted in 2004.
3. The Kauffman Firm Study (KFS), a representative survey of new, for-profit, independent businesses started in the United States in 2004 that were drawn from a Dun and Bradstreet sampling frame and adjusted to include only businesses that did not receive an employer identification number; report schedule C income; establish a legal form; or pay state unemployment or federal social security taxes prior to 2004.
4. The 2004 Federal Reserve Survey of Consumer Finances (FRSCF), a survey of financial characteristics of a representative sample of approximately 4,500 U.S. households that is conducted every three years by the Federal Reserve. (The report also draws on previously published research that examines earlier years of the FRSCF).
5. The (2002) Federal Reserve Survey of Small Business Finances (FRSSBF), a survey of a representative sample of small businesses in the United States, drawn from a Dun and Bradstreet sampling frame. This study will examine primarily the 2003 survey. (The report also draws on previously published research that examines earlier years of the FRSSBF).

6. A special tabulation of businesses founded between 1997 and 2001 from the Survey of Business Owners (SBO), a survey of all employer and nonemployer businesses operating in the United States in 2002.
7. The Wisconsin Department of Revenue records on the use of the state's angel tax credit (WATC) in 2005.
8. The Federal Reserve Angel Focus Group Study (FRAFG), a study consisting of four two-and-a-half hour focus group sessions conducted in 2005 with eight to ten business angels each in Atlanta, Cleveland, Denver, and Philadelphia identified by representatives of the Federal Reserve regional banks through a snowball sampling procedure in which existing study subjects are used to recruit more subjects into the sample.
9. The Angel Capital Association (ACA) Surveys of its member groups from 2004 through 2007.
10. The Business Information Tracking Series (BITS) of the U.S. Bureau of the Census on the sales of the 1996 cohort of new single-unit establishments from 1997 through 2002.
11. The Angel Investment Performance Project (AIPP), a survey of angel investors associated with groups on the performance of the angel investments from which they have exited.

The study also makes use of statistics published by researchers using other datasets. For instance, it includes information published by Dr. Andrew Wong about 143 businesses that received an investment from a business angel between 1994 and 2001. Finally, the study uses published statistics (with caveats, given the limitations of these data) produced from the annual survey conducted by the Center for Venture Research (CVR).

Analytic Techniques Used

The data from primary sources were examined in two ways. First, descriptive statistics were produced from the datasets. Second, regression analysis was conducted on some of

the datasets. However, the small sample sizes limit the power of the regression analysis. Therefore, the reported results take the form of descriptive statistics.

As Table 1 shows, the datasets on which inferences about angel investments are drawn for this report include relatively small numbers of business angels, angel investments, and angel-backed companies, making the estimates reported here imprecise. (The sources include much larger numbers of informal investments, informal investors, and informal investor-backed companies. So this imprecision is not present for those estimates.) To minimize inaccurate estimates, I seek convergence across results from multiple datasets. In addition, I compare the estimates for angel investment activity to estimates for the larger populations of which angels are a part to test the consistency between estimates from small samples with estimates from larger samples. Both of these approaches increase confidence in the results.

The Angel Capital Market

As defined earlier, an angel investor is a person who provides capital, in the form of debt or equity, from his own funds to a private business owned and operated by someone else who is neither a friend nor a family member. Measuring angel investing is difficult. As Table 1 shows, only two data sources include information from a representative sample and measure angel investing—EUSA and GEM. (The FRSSBF includes information from a representative sample on a subset of angel investing, those angels who make equity investments in companies.)

Three dimensions of the angel capital market are the amount of capital provided, the number of investors, and the number of companies receiving financing.

The Number of Angel Investors

Angel investing is a small part of the informal capital market. The operational definition of an angel investor in the GEM and EUSA data is a person who made an informal investment in the previous three years in a business run by someone other than a friend or family member. Analysis of data from the EUSA indicates that only 8 percent of the investments were made in a business run by “a stranger with a good idea,” rather than in

Table 1. The Sample Sizes of the Data Sources Used in this Report.¹

| Survey ² | Date | Sample Size | Informal Investor ³ | Informal Equity ⁴ | External Investor ⁵ | External Equity Investor ⁶ | Angel Investor ⁷ | Angel Equity Investor ⁸ |
|--------------------------|-----------|-------------|--------------------------------|------------------------------|--------------------------------|---------------------------------------|-----------------------------|------------------------------------|
| EUSA (Investor) | 2004 | 13,891 | 492 | 112 | 117 | 64 | 26 | 19 |
| EUSA (Deal) ⁹ | 2004 | 315 | 315 | 129 | 160 | 87 | 33 | 23 |
| FRSSBF | 2003 | 4,240 | | 114 | | | | 8 |
| SBO | 2002 | 322,327 | | | | 4,123 | | |
| FRSCF | 2004 | 4,522 | | 67 | | | | |
| KFS | 2004 | 4,930 | | 185 | | 85 | | |
| GEM | 1998-2003 | 23,077 | 1,079 | | 385 | | 71 | |

1 An empty cell means that no information is available. Because of missing cases, the percentages of the sample in each subsample do not correspond to the reported estimates.

2 The data from the EUSA, SBO, and GEM are unweighted; the data from the FRSSBF, FRSCF, and KFS are weighted. When the data are weighted, the weights are recentered for the subsample examined. The FRSSBF includes five “implicates” that include different values for imputed variables. Because it is unclear which imputation procedure is appropriate for these analyses, all “implicates” are used in the calculations.

3 Informal investor is an individual (not an institution) who used his own money to provide capital to a private business owned and operated by someone else. For the EUSA data, this investment was measured as the incidence of investment by a U.S. adult from 2001-2003 in a business owned by an immediate family member, other relative, friend, coworker, neighbor, or stranger. For the GEM data, this investment was measured as the incidence of investment by a U.S. adult made over the three previous years with data collected annually from 1998 to 2003 in a business owned by an immediate family member, other relative, friend, coworker, neighbor, or stranger.

4 Informal equity investor is an individual (not an institution) who used his own money to make an equity investment in a private business owned and operated by someone else. For the EUSA data, this investment was measured as the incidence of investment by a U.S. adult from 2001 to 2003 in a business owned by an immediate family member, other relative, friend, coworker, neighbor, or stranger. For the GEM data, this investment was measured as the incidence of investment by a U.S. adult made over the three previous years with data collected annually from 1998 to 2003 in a business owned by an immediate family member, other relative, friend, co-worker, neighbor, or stranger. For the FRSSBF, informal equity was measured as the receipt of an equity investment from individual investors by a company with fewer than 500 employees in the previous 12 months. For the FRSCF, informal equity was measured as ownership by a U.S. household of a business that is not actively managed by someone in the household. For the KFS, informal equity was measured as the receipt of an equity investment in its first year of operation by a noninstitutional investor who was not a member of the founding team in a for-profit business founded in 2004 that was not a branch or subsidiary owned by an existing business, was newly listed in Dun and Bradstreet’s directories, and did not have an employer identification number, schedule C income, a legal form, or paid state unemployment insurance or federal social security taxes prior to 2004.

5 An external investor is an individual (not an institution) who used his own money to provide capital to a private business owned and operated by a relative. For the EUSA data, this investment was measured as the incidence of investment by a U.S. adult from 2001 to 2003 in a business run by a friend, neighbor, coworker or stranger. For the GEM data, this investment was measured as the incidence of investment by a U.S. adult made over the three previous years with data collected annually from 1998 to 2003 in a business run by a friend, neighbor, coworker or stranger.

6 An external equity investor is an individual (not an institution) who used his own money to make an investment in a private business owned and operated by a relative. For the EUSA data, this investment was measured as the incidence of equity investment by a U.S. adult from 2001 to 2003 in a business owned by an immediate family member, other relative, friend, coworker, neighbor, or stranger. For the GEM data, this investment was measured as the incidence of investment by a U.S. adult made over the three previous years with data collected annually from 1998 to 2003 in a business owned by an immediate family member, other relative, friend, coworker, neighbor, or stranger. For the SBO, informal equity was measured as employer businesses that were established, purchased, or acquired in 1997, 1998, 1999, 2000, or 2001 for which owner 1 owned less than 100 percent and owners 2 or 3 spent no hours managing or working in the business; the business was not exclusively owned by members of the same family; and funds were received from an outside investor. For the KFS, external equity was measured as the receipt of an equity investment in its first year of operation by a noninstitutional investor who was not a member of the founding team in a for-profit business founded in 2004 that was not a branch or subsidiary owned by an existing business, was newly listed in Dun and Bradstreet's directories, and did not have an employer identification number, schedule C income, a legal form or had paid state unemployment insurance or federal social security taxes prior to 2004.

7 Angel investor is an individual (not an institution) who used his own money to provide capital to a private business owned and operated by someone else who is neither a friend nor a family member. For the EUSA data, this investment was measured as the incidence of investment by a U.S. adult from 2001 to 2003 in a business owned by a stranger. For the GEM data, this investment was measured as the incidence of investment by a U.S. adult made over the three previous years with data collected annually from 1998 to 2003 in a business owned by a stranger.

8 Angel equity investor is an individual (not an institution) who used his own money to make an equity investment in a private business owned and operated by someone else who is neither a friend nor a family member. For the EUSA data, this investment was measured as the incidence of equity investment by a U.S. adult from 2001 to 2003 in a business owned by a stranger. For the GEM data, this investment was measured as the incidence of equity investment by a U.S. adult made over the three previous years with data collected annually from 1998 to 2003 in a business owned by a stranger. For the FRSSBF, informal equity was measured as the receipt of an equity investment from individual investors by a company with fewer than 500 employees in the previous 12 months in which the respondents categorized the individual investors as "angel investors."

9 The respondents to the EUSA were asked if they made an informal investment in the previous three years. If they answered "yes", they were asked to describe up to three investments that they made over that period. The respondents were asked to identify whether each investment was made in a business owned by a friend, neighbor or coworker, immediate family member, other family member, or stranger. This information was used to determine whether the individual had made an angel investment during the previous three years. Because respondents could have reported on up to three angel investments, the EUSA contains information on more angel "deals" than angel investors.

a business run by a friend or family member. The GEM data corroborate this estimate.

Approximately 8.5 percent of the investments made by U.S. respondents to the GEM survey about their informal investments made from 1998 to 2003 were made in businesses not run by a friend or family member. Similarly, the 2003 SSBF reveals that 7.4 percent of the *equity* investments by nonfounders received by companies in the previous 12 months came from "angel investors."

The EUSA data gathered in 2004 show that of the overall population of adults, 0.2 percent made an angel investment in the previous three years. The GEM data, measured

over the 1998-2003 period, show that 0.3 percent of U.S. adults made an angel investment in the previous three years. Approximately 0.1 percent of adults who were surveyed in the EUSA made an angel equity investment in the previous three years; however, the sample size for this estimate is very small.

These numbers are much smaller than the portion of the U.S. adult age population who made an informal investment between 2001 and 2003. The EUSA showed that 3.5 percent of the adult-aged population made an informal investment over this period. Because there were 212 million adult Americans in 2003, the estimates from the GEM and EUSA mean that an estimated 7.4 million U.S. adults made an informal investment between 2001 and 2003.¹⁷

Multiplying the estimated 7.4 million U.S. adults who made an informal investment between 2001 and 2003 by the proportion of informal investments that are angel investments found in the EUSA and GEM datasets yields an estimate of between 592,000 and 629,000 people who made an angel investment in the 2001-2003 period. However, an estimate of the number of people who made an angel investment from 2001-2003 based on the EUSA counts of angel investors yields an estimated 331,100 people. In short, these different ways of estimating the number of business angels reveal an estimated range in the number of angel investors from 331,100 to 629,000.¹⁸

The number of investors estimated from the EUSA and GEM data are considerably higher than the number of investors estimated by the Center for Venture Research at the University of New Hampshire (CVR), which reported 220,000 “active” angel investors in 2003.¹⁹ However, the CVR defines “active” angel investors as people who made an angel investment in the previous 12 months. Adjusting the EUSA and GEM

¹⁷ The convergence between the EUSA and GEM data provides some confidence in the accuracy of the population estimates based on them. However, it is difficult to find other sources to corroborate them. The GEM and EUSA data sample the adult-age population and ask about the number of (debt and equity) investments made in the previous three years. Other studies do not sample the adult-age population, do not ask about investment flows, do not include debt as well as equity, and do not look at a three-year period of time. These differences, combined with the examination of different time periods from the EUSA and GEM, mean that the estimates of the number of informal investments from other sources cannot be compared directly to the EUSA and GEM estimates.

¹⁸ Because many angel investors are married in households in which only one individual makes the angel investments, the number of households making angel investments over this period would be lower.

¹⁹ Wright, L. 2004. UNH Center For Venture Research: Angel Investors Have Returned To The Market But The Post Seed Funding Gap Continues. Downloaded from http://unhinfo.unh.edu/news/news_releases/2004/october/lw_20041013cvr.html

data to conform to the CVR definition, gives comparable estimates for the number of active angel investors.²⁰ The EUSA and GEM data generate estimates of 140,000 to 266,000 “active” angel investors in one of the three years covered by the study. That is, measured on an “active” angel basis, the numbers from the EUSA and GEM databases are in a similar range to those provided by the CVR.²¹

The Number of Companies Receiving Angel Investment

It is possible to extrapolate to the number of companies receiving angel investments in the United States every year from data on angel investments made by respondents to the EUSA. This extrapolation yields an estimate of angel investments in approximately 57,300 companies per year. Limiting the estimate to those companies that received an equity investment from a business angel produces an extrapolation of 49,800.²²

²⁰ To figure out the number of “active” angel investors from the EUSA and the GEM, the EUSA and GEM numbers of people who “made an angel investment in the past three years” are multiplied by the EUSA estimate of the number of angel investments made by each angel (1.27) over the three-year period. Then that number is divided by three (for the number of years). This adjustment yields estimates of 140,000 to 296,000 “active” angel investors in one of the three years covered by the study.

²¹ In addition, Several facts suggest the accuracy of these numbers. The EUSA reports that those people who made informal investments over the three-year period made an average of 1.91 of them—a rate of investing almost identical to the 0.68 per year rate found by Robert Gaston in his 1989 study (See Gaston, R. 1989. The scale of informal capital markets. *Small Business Economics*, 1: 223-232.)

The rate of informal equity investment is also consistent with data from other sources. Estimates from the EUSA data indicate that 62 percent of informal investments made over this period involved equity. Given that 7.4 million American adults made informal investments over the three-year period from 2001 to 2003, this suggests that approximately 4.6 million adults made an informal *equity* investment over that time period. These people made 1.91 investments over a three-year period, yielding an estimate of approximately 2.9 million informal equity investments made per person-year from 2001 through 2003. Translated into households, this estimate is approximately 2.2 million.

This rate of informal equity investment activity is consistent with that found by other sources. For instance, George Haynes of Montana State University and Charles Ou of the Office of Advocacy of the U.S. Small Business Administration used data from the 1989 through 1998 FRSCF to measure the informal equity *holdings* of U.S. households. They found that in 1998, 1.4 percent of American households *held* an informal equity investment. (See Haynes, G., and Ou, C. 2002. A Profile of Owners and Investors of Privately Held Businesses in the United States, 1989–1998. Paper Presented at the Annual Conference of the Academy of Entrepreneurial and Financial Research, April 25–26, City College of New York.) However, an analysis of the 2004 FRSCF showed a higher proportion of U.S. households with an informal equity holding—1.5 percent. Translated into the number of households, the 2004 FRSCF estimate yields 1.7 million households. That is, estimates from the 2004 FRSCF suggest that U.S. households *hold* approximately 1.7 million informal investments, while estimates from the EUSA suggest that U.S. households *make* 2.2 million informal investments per year.

²² The EUSA showed that 3.5 percent of the adult-aged population made an informal investment from 2001 to 2003. Because there were 212 million adult Americans in 2003, the estimates from the GEM and EUSA mean that an estimated 7.4 million U.S. adults made an informal investment over this period. The EUSA shows that 8 percent of the informal investments made by U.S. adults during this period were angel investments, yielding 629,000 American adults who made an angel investment over this three-year period.

This estimate is close to the estimate of the number of companies receiving angel investments every year extrapolated from the 2003 FRSSBF, which found that 0.19 percent of U.S. businesses with fewer than 500 employees had “received an equity investment from a business angel in the previous 12 months.”²³ The FRSSBF number extrapolates to 44,100 companies that received an angel equity investment in the previous 12 months. Adjusting the FRSSBF estimate by the proportion of angel investments that do not involve equity produces an estimate of 50,700 companies that receive an investment from a business angel each year.

The estimates from the FRSSBF and the EUSA are similar to those reported for 2003 and 2004 by the CVR, which found that 39,000 companies received an angel investment in 2003 and 48,000 companies received such an investment in 2004,²⁴ or an average of 43,500 across the two years. Assuming that the CVR measures only companies that receive *equity* investments from business angels, its numbers are consistent with the 49,800 companies that receive angel equity investments estimated from the EUSA and the 44,100 companies estimated from the FRSSBF.²⁵

The EUSA shows that the average number of angel investments made by an angel investor over the period was 1.3 and that each investor co-invested with an average of 3.9 investors. Multiplying the 629,000 by 1.3 investments and dividing it by 4.9 investors yields 167,000 companies that received an investment over the three-year period, or an average of 57,300 per year. (These estimates are subject to rounding error.)

²³ These numbers may be imprecisely estimated because they are estimated from small samples.

²⁴ Angel Investor Market Sustains Modest Recovery in 2004, According to UNH Center for Venture Research. Downloaded from

http://www.paangelnetwork.com/index2.php?option=com_content&do_pdf=1&id=31

²⁵ It is important to note how much smaller estimates of the number of companies that receive angel investments are than estimates of the number of companies that receive informal investments. Data from the EUSA indicate that 7.4 million people made informal investments from 2001 through 2003. An average of 4.37 investors per company received an informal investment, yielding an average of 564,000 companies per year that received an informal investment. This rate of informal investing is not that different from that reported in 1989 by Robert Gaston, who found that 9 percent of firms, identified from Dun and Bradstreet files, had received an informal investment (445,600 firms). (Gaston, R. 1989. The scale of informal capital markets. *Small Business Economics*, 1: 223-232.) Moreover, as mentioned earlier in this report, data from the 2003 FRSSBF indicate that 2.6 percent of small businesses received an informal equity investment in the previous 12 months, but for only 7 percent of these businesses (0.2 percent of small businesses overall) was this informal equity investment an angel investment.

The Amount of Angel Capital Invested

Estimates of the size of the angel capital market calculated from the proportion of informal investments that are angel investments,²⁶ weighted by the different median sizes of angel and friends and family investments as indicated by the EUSA data, yield an estimated value of \$23 billion in angel investment per year.²⁷ Calculating the dollar amount of angel investment from the average investment multiplied by the average number of investors per company and the number of companies estimated to receive an angel investment annually yields \$21.4 billion.²⁸

Estimating the dollar value of the angel capital market in the United States from the GEM data yields a lower estimated value of \$12.7 billion per year.²⁹

²⁶ Using data from representative samples of the adult-age population of the United States from 2000 to 2004, Paul Reynolds estimates that informal investors provide private companies with \$162 billion (in 2004 dollars) annually (see Reynolds, P. Forthcoming. *New Firm Creation in the U.S.: A PSED I Overview*. Berlin: Springer-Verlag; Reynolds, P. 2007. *Entrepreneurship in the United States: The Future is Now*. Boston: Kluwer.) an amount equal to 1.3 percent of U.S. gross domestic product (GDP). (See Reynolds, P. 2007. *New Firm Creation in the U.S.: A PSED I Overview*. Berlin: Springer-Verlag. The estimate for the amount of informal investment comes from the average amount across the five years reported in Reynolds's study; the venture capital amount is his estimate drawn from other studies. It is important to note that these estimates may be imprecise because some of the money provided by entrepreneurs and informal investors takes the form of debt. However, direct analysis of the EUSA and GEM data from which these estimates are drawn confirms Reynolds's numbers.

Comparison of these numbers to estimates reported in previous studies is difficult because few previous studies measure informal investment. However, one study—that published by Robert Gaston in 1989 on investments made in the mid-1980s—can be compared with this one. Gaston found that \$32.7 billion of informal equity is invested annually (Gaston, R. 1989. *The scale of informal capital markets*. *Small Business Economics*, 1: 223-232.) an amount equal to \$57.3 billion in 2004 dollars. Because Gaston focused on informal *equity* investments, EUSA data must be adjusted to focus on only informal *equity* investments to compare Gaston's numbers to the EUSA figures. The EUSA data show that 56 percent of informal investment takes the form of debt. Therefore, limiting the EUSA estimate to informal *equity* investments yields annual investments of about \$71.3 billion. That is, the EUSA-based estimate for the dollar value of informal equity investments made annually is approximately 24 percent higher than the estimate provided by Gaston.

²⁷ The median angel investment is \$10,000; whereas the median nonangel investment is \$5,000.

Approximately 8 percent of informal investments were angel investments. Angel investments account for 14.8 percent of the dollar value of the informal investments if the proportion of investments is weighted for the relative sizes of angel and nonangel investments. Since informal investments total \$162 billion per year, angel investments amount to about \$23 billion per year.

The exact proportion of informal investments that are angel investments were used in this calculation. This estimate includes debt provided by business angels. The estimate of only equity provided by business angels every year would be smaller.

²⁸ The average angel investment is \$76,774; the average number of investors per company is 4.85, and the estimated number of companies receiving an angel investment annually is 57,300.

²⁹ Multiplying the average dollar value of all angel investments made by respondents to the GEM survey in the previous three years (\$47,723) by the estimates from the GEM data of the number of people in the United States who made these investments over that period yields an estimate of \$32.8 billion over a three-year period, or \$10 billion per year. Because there is no information on the number of angel investments

It is also possible to estimate the dollar value of the angel capital market in the United States by examining the data from the FRSSBF on the ratio of venture capital to angel capital received by small businesses. A study that looked at these data found that 3.6 percent of the capital that the companies had received had come from business angels, compared with 1.9 percent from venture capitalists.³⁰ Multiplying the ratio of angel equity investment to venture capital equity investment by estimates of the amount of venture capital investment made in 2003 produces an estimated \$36 billion per year in capital invested by business angels.³¹

These estimates are comparable to those found by the CVR. The dollar value of annual flows of angel capital calculated in different ways from the EUSA, GEM and FRSSBF (\$12.7 billion to \$36 billion) bound the estimate provided by the CVR, which reported \$18.1 billion in business angel investment in 2003.³²

Two Subsets of Angel Investors

Two important subsets of angel investors are angel groups and accredited angel investors.

Angel Groups

Recently, accredited angel investors have begun to invest collectively in “angel groups.” Observers estimate the number of these groups in the United States to be between 125

made by each investor in the previous three years, the number is assumed to be the same as that found in the EUSA.

³⁰ Berger, A., and Udell, G. 1998. The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking and Finance*, 22: 613–673.

³¹ “The total funds provided to start-ups by the entire U.S. venture capital sector ... was ... \$19 billion in 2003.” Reynolds, P. 2005. *Entrepreneurship in the United States*. Miami: Florida International University.

³² Wright, L. 2004. UNH Center For Venture Research: Angel Investors Have Returned To The Market But The Post Seed Funding Gap Continues. Downloaded from http://unhinfo.unh.edu/news/news_releases/2004/october/lw_20041013cvr.html. It is important to note that all of these estimates are smaller than Gaston’s estimate of the dollar value of informal equity investment flows made almost 20 years earlier. For instance, the CVR reports angel investment dollars that are only one-third of the \$57.3 billion (in 2004 dollars) in annual flows of informal equity investment estimated by Gaston. The gap between these numbers illustrates the importance of distinguishing between *informal equity* and *angel* investment dollars when estimating the size of the angel capital market.

and 300.³³ About half of all known angel groups have banded together to form a trade association called the Angel Capital Association (ACA).³⁴

Angel group members are a minority of all business angels operating in the United States. In 2006, the angel groups that participate in the Angel Capital Association were composed of 5,632 angel investors.³⁵ In 2006, the groups that were the members of the Angel Capital Association made 947 investments in 512 companies, providing start-ups with a total of \$228.8 million.³⁶

Users might have less confidence in the ACA data than some of the other sources of angel data provided in this report. The ACA is a trade association that angel groups can choose to join or not join. Therefore, the sample of groups in the ACA is probably not representative of the overall population of angel groups. Moreover, the ACA survey of its members is voluntary and subject to significant nonresponse. As a result, the means and other estimates reported by the ACA are based on the respondents and therefore might be biased because of the nonresponse of some groups.

Nevertheless, the ACA surveys of its members provide some basic demographics of angel groups. Each year, the average angel group invests in 3.8 companies. The average angel group investment is \$241,528 per round.³⁷ The median age of a group is 3 years, and the average age is 4.2.³⁸ The average size is 47.6 members (median of 37).³⁹

³³ Hudson, M. 1997. ACA briefing and angel group stats. Presentation to the Angel Capital Association, May 24; Becker-Blease, J., and Sohl, J. 2007. Do women-owned businesses have equal access to angel capital? *Journal of Business Venturing*, 22: 503-521; Benjamin, G., and Margulis, J. 2005. *Angel Capital*. New York: Wiley Finance.

³⁴ Much of what is known about angel groups comes from surveys of the membership of the ACA, which may or may not accurately represent the typical angel group. Almost all well-known angel groups are part of the association, suggesting that the investment numbers for those groups not part of the association are lower, on average, than for those that are members of the ACA.

³⁵ Hudson, M. 2007. ACA Briefing and Angel Group Stats. Presentation to the Angel Capital Association, April 2. I report the 2006 data because I had access to only the summary statistics for 2007. A number of non-U.S. groups are members of the ACA, which means that the overall numbers need to be adjusted to estimate the U.S. figures. Without access to the raw data, this adjustment was not possible. Moreover, there are some strange numbers reported in 2007, which undermine confidence in the data. For instance, the ACA reports that, in 2007, its member groups were composed of 6,800 angels. However, the association also reports that there were 147 “full member” groups, and 18 “provisional member” groups and that the groups had an average size of 55 people.

³⁶ Hudson, M. 2007. ACA Briefing and Angel Group Stats. Presentation to the Angel Capital Association April 12.

³⁷ Hudson, M. 2007. ACA Briefing and Angel Group Stats. Presentation to the Angel Capital Association, April 12.

³⁸ Angel Capital Association. 2007. *Angel Group Confidence Report*. March 27.

However, estimates from the ACA data indicate that only 17.5 percent of angel group members invest in each deal the group invests in.⁴⁰

Unaccredited and Accredited Angel Investors

Only some angel investors meet the SEC income or net worth requirements necessary to be accredited investors.⁴¹ At the level of the investors, only 23 percent of the people who made an investment in the previous three years in a business run by someone who is neither a friend nor a family member would meet SEC accreditation requirements. At the deal level, only 21 percent of the investments made in a private business run by someone who is neither a friend nor a family member from 2001 through 2003 were made by an investor who meets SEC accreditation requirements by either net worth or income.⁴²

These numbers are hard to corroborate given the paucity of the data. However, the available data support the observation that most angel investors are not accredited investors. For instance, data from the GEM show that 8.3 percent of business angels were in the lowest third of income for Americans, and 21.7 percent were in the next third, leaving only 70 percent of angel investors in the top third of income in the United States (the cut off to enter the top third of U.S. income earners is only \$75,000 per year, well below the level that makes someone an accredited investor).

Data from the state of Wisconsin's Revenue Division on taxpayers who took advantage of that state's angel tax credit in 2005 show that 52 percent of the tax filers who received an angel tax credit, and 54 percent of the tax filers who received a seed

³⁹ Hudson, M. 2006. Angels, saints and sinners: Where they fit in a community's entrepreneurial finance strategy. Presentation to the CDFI Annual Summit, June 1.

⁴⁰ Hudson, M. 2007. ACA Briefing and Angel Group Stats. Presentation to the Angel Capital Association, April 12.

⁴¹ The estimates that follow are likely to be imprecise because the sample size on which they are based is small.

⁴² The 23 percent figure represents the percentage of respondents who indicated that they are not accredited investors and who made an angel investment in the previous three years. The respondents who made an angel investment in the previous three years could have identified up to three informal investments, of which one, two, or three could have been angel investments. The 21 percent refers to the angel percentage of the total number of reported informal investments made by someone who made at least one angel investment over the three-year period and who was an unaccredited investor. The 2 percent difference between the two numbers reflects a slightly higher tendency for accredited investors to have made more than one angel investment in the past three years than for unaccredited investors to have done so..

angel investment credit, had an adjusted gross income of less than \$200,000 per year, the minimum for a single person to be an accredited investor.⁴³

Accredited angel investors account for a larger portion of the *dollar value* of the angel capital market because their investments tend to be larger than those of unaccredited angels. Data from the EUSA suggest that accredited angels provide about 54 percent of the angel dollars invested annually. Data from the state of Wisconsin's Revenue Division on the taxpayers who took advantage of the state's angel tax credit in 2005 suggest a much higher accredited angel share of angel investment dollars. Investors with more than \$200,000 in income accounted for 80.6 percent of the amount invested in businesses eligible for the angel tax credit in Wisconsin in 2005. However, these data need to be treated with caution because they are data from a single state, based on a tax credit that is limited to certain types of investments, and are estimated solely on the basis of income that reaches the accredited investor level only for a single person.⁴⁴

Demand for Angel Capital

Another approach to examining angel investing is to look at the demand for angel capital. An estimate of the demand for angel capital is based on the number of companies that need amounts of money that angels provide *and* that take a legal form in which an external equity investment is possible; the number of companies that look for angel capital every year; and the number of businesses with angel-appropriate growth rates.

The Number of Companies Needing the Appropriate Amount of Capital

Some experts say that companies seeking angel financing typically need between \$25,000 and \$500,000.⁴⁵ Approximately 15.1 percent of new business founders surveyed in the Entrepreneurship in the United States Assessment say that they need between \$25,000 and \$500,000 from an external source.

⁴³ The \$200,000 cutoff understates the proportion of credit users whose incomes would make them unaccredited investors because many people who received the angel tax credit are likely to be married.

⁴⁴ Wisconsin Department of Revenue, Division of Research and Policy. 2007. *Individual Income Tax Statistics Report for Tax Year 2005*, Madison, WI.: Wisconsin Department of Revenue

⁴⁵ Benjamin, G., and Margulis, J. 2000. *Angel Financing: How to Find and Invest in Private Equity*. New York: John Wiley and Sons.

However, angels tend to invest only in corporations, rather than sole proprietorships or partnerships, because they want to make investments in entities from which they can exit with reasonable ease, and they generally want some mechanism to protect themselves against malfeasance and opportunistic behavior by entrepreneurs. In fact, data from the FRSSBF indicates that *only* businesses taking a corporate legal form had received an informal equity investment in the previous 12 months.

Therefore, the number of companies that demand angel investment can be estimated to be the count of businesses that need the amount of money that angels provide *and* have the appropriate legal form to receive an external equity investment. The number of new businesses founded every year that take a corporate form,⁴⁶ and need between \$25,000 and \$500,000 from someone other than the founder is estimated at 71,382 annually.

However, some observers believe that companies do not seek angel financing until their capital needs are significantly greater than \$25,000. For example, business angels John May and Cal Simmons argue that entrepreneurs do not tend to look for money from business angels until their funding needs exceed \$100,000.⁴⁷ At the same time, they say that companies generally need to go to venture capitalists when they need \$2 million or more. If angels fund companies that need between \$100,000 and \$2 million, then only an estimated 31,279 new companies founded each year need the amount of money that angels can provide *and* take the appropriate legal form for angel financing.

The Number of Companies that Look for Angel Money

Another estimate of the demand for angel capital is based on the number of companies that seek angel money at any point in time. One study that examined data from the FRSSBF showed that only 4 percent of corporations *sought* an equity investment from a nonfounder during the previous three years.⁴⁸ Four percent of the number of corporations with fewer than 500 employees is 215,000 companies. The FRSSBF data also indicate

⁴⁶ Reynolds, P. 2004. *Entrepreneurship in the United States Assessment*. Miami, FL: Florida International University Limited liability companies are included among companies that take the appropriate legal form for angel investments.

⁴⁷ May, J., and Simmons, C. 2001. *Every Business Needs an Angel*. New York: Crown Books

⁴⁸ Fenn, G., and Liang, N. 1998. New resources and new ideas: Private equity for small businesses. *Journal of Banking and Finance*, 22: 1077–1084

that 7.4 percent of informal equity investments are angel equity investments. If the angel portion of companies that seek an informal equity investment is the same as the angel portion of companies that get an informal equity investment, then fewer than 16,000 small corporations sought an angel investment in the previous three years.

The Number of Firms with Angel-Appropriate Growth Rates

A third way to look at companies that are appropriate for angel capital is to look at the number of companies that display growth rates that fit the preferences of business angels. Experts typically describe angel-appropriate growth rates in terms of the level of sales achieved five to seven years after founding, although they disagree on the amount of sales businesses need to have. Some experts say that companies need to have \$10 million in sales after five years to be appropriate for angel investment.⁴⁹ Others, like Tech Coast Angels, a California-based angel investment group, say that businesses need to have the potential to create at least \$50 million in annual revenues to be appropriate for angel financing.⁵⁰ Still other experts, like successful and experienced business angel Bill Payne, say that a venture “must have” projected sales of \$100 million in year five to be angel-appropriate.⁵¹

A special tabulation of the BITS on the cohort of companies founded in 1996 provides the information needed to determine how many businesses reach each of these sales levels within five to seven years after starting. The BITS is the Census Bureau’s effort to match businesses surveyed by the Census at different points in time, and allows a view of the performance of different companies over their first six years of life. According to the BITS, 511,000 new single-establishment businesses were founded in 1996. Of these, 3,608 firms had achieved sales of \$10 million or more by 2002; 474 firms had achieved sales of \$50 million or more; and 175 firms had achieved sales of \$100 million or more.

⁴⁹ Sohl, J. 1999. The early-stage equity market in the USA. *Venture Capital*, 1(2): 101–120.

⁵⁰ Downloaded from <http://www.techcoastangels.com/Public/Content.aspx?ID=EA6BF3BE-964F-11D4-AD7900A0C95C1653&Redir=False>

⁵¹ Payne, B. Engaging Angel Investors. Downloaded from http://www.eventuring.com/eShip/appmanager/eVenturing/eVenturingDesktop?_nfpb=true&_pageLabel=eShip_linkDetail&_nfls=false&id=Entrepreneurship/Resource/Resource_546.htm&_fromSearch=false&_nfls=false.

Angels often say they try to invest in situations in which one out of ten of their investments works out.⁵² If this is true, then for the 1996 cohort, the following numbers of companies were appropriate for angel investors to investigate, depending on the angels' targeted sales for portfolio companies after six years of operation: 36,080 firms, if the target is sales of \$10 million or more; 4,740 firms, if the target is sales of \$50 million or more; and 1,750 firms, if the target is sales of \$100 million or more.

The Characteristics of Angel Investments

What type of investments do angels make? Several data sources provide information about different dimensions of these investments, including their size, their balance between equity and debt, and their investment terms.

Investment Size

The EUSA data show that the median angel investment made between 2001 and 2003 was \$10,000, the mean was \$77,000 and the range was \$600 to \$500,000. (The median and the range are the same if the analysis is restricted to those investors that made an equity investment).

The small size of some of the investments raises the question of whether some of these numbers are errors. Some evidence suggests not. The Angel Investor Performance Project, looked at people affiliated with angel groups, who had a net worth of \$10.9 million, had founded an average of 2.7 companies, had been entrepreneurs for an average of 14.5 years, and were among the 13 percent of those contacted willing to talk about their experiences investing in startups. This group reported a range of initial investments of \$1,000 to \$5 million for the 663 cases for which data were available. If a group of such sophisticated angels reports investments as low as \$1,000, then a \$600 investment by an investor from a representative sample of angels does not seem incorrect.

Moreover, the median "Series A" equity investment made by highly sophisticated business angels in California for whom the legal work was done by the law firm Brobeck,

⁵² Villalobos, L., and Payne, B. 2007. Valuation of Seed/Start-up Ventures. Presentation to the Power of Angel Investing Seminar.

Phleger & Harrison, was only \$27,100.⁵³ And data from the ACA on the *average* dollar value per round made by an individual angel who was a member of an angel group—all accredited investors— was only \$31,457 in 2006.

The GEM data indicate a smaller median investment, with that made over the previous three years by U.S. investors surveyed from 1998 to 2003 being \$5,000. For the GEM, no information is available on the number of other investors that invested in the same company as the focal investor or the proportion of these investments that took the form of debt versus equity.

Although the median size of an angel investment taken from the EUSA data might seem low in comparison with some estimates previously gathered, that may be because most studies report the *average* size of angel investments and these investments are highly skewed. In fact, the *average* investment made by angels responding to the EUSA was a much larger \$76,774 (in 2003), while the average for the GEM was \$47,723 (from 1998-2003).⁵⁴ (Restricting the analysis to those investors who made an equity investment yields an EUSA average of \$91,826; these data are not available for the GEM). In fact, the EUSA *average* investment size is not that much lower than the *average* size angel investment made by respondents to the CVR Survey—\$82,273 in 2003.⁵⁵

Moreover, it is important to note that these are the amounts invested by individual investors, not the amount received by the company in which the investment was made. The respondents also report that the average number of *other* private investors was 3.85 (median was two and the range was zero to 20).⁵⁶ Whether these other investors were also

⁵³ Goldfarb, B., Hoberg, G., Kirsch D., and Triantis, A. 2007. Are angels preferred venture investors? Working Paper, University of Maryland. Brobeck, Phleger & Harrison is no longer in operation.

⁵⁴ If some sort of bias led the mean and median size of an angel investment from the EUSA to be too low, then the average size angel investment of angel group members would be expected to be larger, not smaller, than the average size of an investment from a respondent to the EUSA. All angel group members are accredited investors, while only 28 percent of angels in the EUSA are accredited investors. Because accredited investors are wealthier and have higher incomes, on average, than unaccredited investors, one would expect the average investment by accredited investors to be larger than the average investment by unaccredited investors. Therefore, it is unlikely that the EUSA estimate of the median investment for angel investors would be too low.

⁵⁵ Center for Venture Research. 2007. The Angel Investor Market in 2006 downloaded from <http://unhinfo.unh.edu/news/docs/2006angelmarketanalysis.pdf>

⁵⁶ Restricting the analysis to those investors that made an equity investment yields an average number of four coinvestors, while the median remains two. For the Angel Investor Performance Project, the range is zero to 12, the mean is 5.2 and the median is two.

angel investors or if they made investments equal to that of the focal angel surveyed is unknown. But if the other investors were angels, then the average investment received per company would be \$372,354.

Debt Financing

Angel investing involves the provision of debt as well as equity.⁵⁷ In fact, debt accounts for 40.2 percent of the money that angels provide to startups, according to the EUSA.¹³ And, according to this same source, 14.8 percent of all angel deals are pure debt. Even among investments in which angels invest in return for some equity, debt is also used approximately 29.8 percent of the time.

Unfortunately, no other current data sources are available to corroborate these data, and the sample size for the EUSA is small. However, the proportion of debt financing shown by the EUSA is not unreasonable by the standards of previous research. Gaston's research on informal investments made in private companies in the 1980s revealed that 41.3 percent of the informal capital provided to companies that had received informal equity investments took the form of debt. This is, in fact, a *higher* proportion of debt than is seen among respondents to the EUSA, which shows that 29 percent of the informal capital provided to businesses in which an informal equity investment was made took the form of debt. This is a *higher* proportion of debt than is seen among angel equity investors who responded to the EUSA. Even among companies that receive informal equity investments, a significant portion of the capital they receive is lent to them.

Investment Instruments

Not much information is available from representative samples of angel investments on the typical investment terms used by angel investors. The only data come from convenience samples of companies known to be backed by sophisticated business angels, which are likely to be biased toward more sophisticated investment instruments. However, even in these samples, equity investments made by business angels are often straight common stock purchases. For instance, one study of sophisticated business angels investing in high-potential companies—the very situation in which convertible

⁵⁷ Angel investors may extend only loans to the businesses that they finance and take no ownership stake.

preferred stock would be most likely to be used—by Dr. Andrew Wong of the University of Chicago found that common stock was used in 40 percent of investment rounds that involved only angels.⁵⁸

Term Sheet Provisions

Moreover, little data are available from representative samples on the term sheet provisions used by angel investors. The data, again, are from sophisticated angel investors. Nevertheless, the data suggest that relatively little angel investing involves the use of venture capital-like term sheet provisions. First, angel investments are less likely than venture capital investments to use antidilution clauses. Moreover, when sophisticated business angels do use antidilution provisions, the terms of their provisions are much more favorable to entrepreneurs than similar provisions used by venture capitalists. For example, angels use full ratcheting much less frequently than do institutional investors.⁵⁹

Second, angels rarely reserve the right to take actions or change ownership conditional on the entrepreneur's achievement or nonachievement of milestones as venture capitalists do. For instance, one study of investments by sophisticated business angels showed that in only 5 percent of angel investments did investors have a right to force bankruptcy or to veto management decisions. In only 2 percent of angel investments did angels have contingent board rights—rights to obtain control of the board under certain conditions. Warrants at a lower valuation were present in only 4 percent of cases.⁶⁰ Furthermore, one study showed that angel investors were statistically less likely than venture capitalists to have made investments in which the shares are redeemable.⁶¹

Third, angel investment agreements are much less likely than venture capital investment contracts to include a liquidation provision.⁶² For example, one study found that only about half of the contracts written by sophisticated accredited angel investors, have a liquidation provision, compared with the vast majority of venture capital

⁵⁸ Wong, A. 2002. Angel finance: The other venture capital. Working Paper, University of Chicago.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Goldfarb, B., Hoberg, G., Kirsch D., and Triantis, A. 2007. Are angels preferred venture investors? Working Paper, University of Maryland.

⁶² Amis, D., and Stevenson, H. 2001. *Winning Angels*. London: Pearson Education.

contracts.⁶³ Another study showed that 12 percent of angel only deals had a liquidation preference, compared with 58 percent of venture-capitalist-only deals, a statistically significant difference.⁶⁴

Fourth, most angel investments are made without the angel receiving a seat on the board of directors.⁶⁵ One study of investments made by sophisticated business angels showed that board seats were granted in only 42.5 percent of angel funding rounds, and, even then, only the very largest angel investments were sufficient to justify a board seat.⁶⁶ Studies of accredited, sophisticated business angels show that only between 15 and 37 percent of them are company directors.⁶⁷ Moreover, angels account for only about 18 percent of the board seats among companies that get both angel and venture capital funding.⁶⁸

Follow-on Investment

A minority of business angels make follow on investments. Many studies of sophisticated, well-known, angels show that the typical angel invests in a single round.⁶⁹ One study of angels in the United Kingdom found that angels provide follow-on money only 25 percent of the time.⁷⁰ Similarly, a study by Professor Rob Wiltbank of Willamette University of a sample of accredited angel investors affiliated with angel groups, and

⁶³ Von Osnabrugge, M., and Robinson, R. 2000. *Angel Investing: Matching Start-up Funds with Start-up Companies – The Guide for Entrepreneurs, Individual Investors, and Venture Capitalists*. San Francisco: Jossey-Bass.

⁶⁴ Goldfarb, B., Hoberg, G., Kirsch D., and Triantis, A. 2007. Are angels preferred venture investors? Working Paper, University of Maryland.

⁶⁵ Benjamin, G., and Margulis, J. 2001. *The Angel Investor's Handbook*. Princeton, NJ: Bloomberg Press.

⁶⁶ Wong, A. 2002. Angel finance: The other venture capital. Working Paper, University of Chicago.

⁶⁷ Von Osnabrugge, M., and Robinson, R. 2000. *Angel Investing: Matching Start-up Funds with Start-up Companies – The Guide for Entrepreneurs, Individual Investors, and Venture Capitalists*. San Francisco: Jossey-Bass.

⁶⁸ Wong, A. 2002. Angel finance: The other venture capital. Working Paper, University of Chicago.

⁶⁹ Hill, B., and Power, D. 2002. *Attracting Capital from Angels*. New York: John Wiley and Sons Inc.; Von Osnabrugge, M., and Robinson, R. 2000. *Angel Investing: Matching Start-up Funds with Start-up Companies – The Guide for Entrepreneurs, Individual Investors, and Venture Capitalists*. San Francisco: Jossey-Bass.

⁷⁰ Mason, C., and Harrison, R. 1996. Informal venture capital: A study of the investment process, the post-investment experience and investment performance. *Entrepreneurship and Regional Development*, 8: 105-125.

worth an average of \$10.9 million, found that only 29 percent of the companies in which angels invest receive follow-on investment.⁷¹

Investment with Venture Capitalists

Angels and venture capitalists do not invest in the same companies very often. Even among the most sophisticated accredited angel investors, backing the highest potential businesses, studies show that venture capitalist co-investment occurs in only small portion of funding rounds.⁷²

Moreover, venture capitalists do not invest in enough businesses for a high rate of angel co-investment to occur, unless the number of angel-backed companies is much smaller than the estimates presented earlier in this report or in earlier studies. According to the National Science Foundation (NSF), in 2004 only 612 companies received venture capital for the seed or start-up phase—the stages at which business angels are likely to have enough capital to co-invest with venture capitalists.⁷³ If business angels had co-invested with venture capitalists in every one of these companies (a dubious assumption), only 1.1 percent of the 57,300 companies estimated to have received an angel investment that year would have received a co-investment from a business angel and a venture capitalist. Even assuming that business angels co-invest with venture capitalists in all investments that the VCs make, including late-stage ones, the maximum share of companies estimated to have received an angel investment that could also receive a co-investment from a venture capitalist is 4.3 percent.

Valuation

Very few companies that receive angel investments have a multimillion-dollar net worth when they receive angel money. According to the EUSA data, only 36.4 percent of angel investments were made in companies worth more than \$1 million at the time of investment.

⁷¹ Wiltbank, R., and Boeker, W. 2007. Returns to Angel Investors in Groups, Working Paper, Ewing Marion Kauffman Foundation.

⁷² Wong, A. 2002. Angel finance: The other venture capital. Working Paper, University of Chicago.

⁷³ The data were downloaded from <http://www.nsf.gov/statistics/seind06/c6/c6s6.htm>.

Data from the 2003 Federal Reserve's Survey of Small Business Finances found that the average net worth of a company less than five years old that had received an informal equity investment in the previous year was \$324,000, while the median net worth was \$58,000. (The average net worth of all companies that had received an equity investment from a business angel in the previous year was \$2.5 million, but the average age of those businesses was 16.5 years and only 15 percent were less than 10 years old, making it difficult to interpret the net worth information on the companies that had received actual angel investments in the previous year.)⁷⁴

Of course, it is possible that the valuations angels place on the companies are much higher than their net worth would suggest. The valuation of the typical company that received an external equity investment in its first year of operation can be determined using data from the KFS. The KFS data show that the valuation of a typical firm that was started in 2004 and received an external equity investment in that year was \$171,000 (but the average was \$1.4 million).

Ownership Share

Business angels rarely obtain majority ownership of their portfolio companies. Most studies show that the angels who invest in the initial financing round of a startup collectively acquire between 20 and 35 percent of the company in which they are investing.⁷⁵ For example, a study of a convenience sample of angel investments in 1,377 companies between 2000 and 2004 by the Center for Venture Research at the University of New Hampshire found that the angels took an average of 20.4 percent ownership.⁷⁶ The 2003 FRSSBF showed that the first owner of companies less than five years old that

⁷⁴ These numbers are likely to be imprecisely estimated because the sample on which they are estimated is very small.

⁷⁵ Wainwright, F., and Groeninger, A. 2005. *Note on Angel Investing*, Tuck School of Business Administration at Dartmouth Center for Private Equity and Entrepreneurship, Case Number 5-0001; Benjamin, G., and Margulis, J. 2000. *Angel Financing: How to Find and Invest in Private Equity*. New York: John Wiley and Sons; Wong, A. 2002. Angel finance: The other venture capital. Working Paper, University of Chicago; Sohl, J. and Sommer, B. 2007. Angel investing: changing strategies during volatile times. Working Paper, Center for Venture Research, University of New Hampshire; Van Osnabrugge, M. 2000. A comparison of business angel and venture capitalist investment procedures: An agency theory-based analysis. *Venture Capital*, 2(2): 91-109; Coveney, P., and Moore, K. 1998. *Business Angels*, New York: John Wiley.

⁷⁶ Becker-Blease, J., and Sohl, J. 2007. Do women-owned businesses have equal access to angel capital? *Journal of Business Venturing*, 22: 503-521.

received an informal equity investment in the previous 12 months owned 70 percent of the company after the investment occurred. A study of highly sophisticated business angels who made “Series A” investments showed that the average angel owned only 8 percent of angel-backed companies at the pre-Series A stage, and that the average founder still owned 62 percent of his company after an angel-only Series A round was completed.⁷⁷

Exits and Returns

Only a small portion of angel investments has a positive exit. The best financial returns for investors in startup companies tend to come from investments in companies that go public. But only a small portion of angel-backed companies go public. From 1980 through 2006, an average of 264 companies went public in the United States every year. However, many of these were companies in which angels almost certainly do not invest. Approximately 24 percent of the initial public offerings (IPOs) from 2000 through 2006 were buyouts of large long-established companies.⁷⁸ A substantial number of the others were foreign companies and companies well in excess of 10 years old. Therefore, the number of companies that angels could potentially have backed that went public was closer to 100 businesses per year.

Estimates from the 2003 FRSSBF show that approximately 50,700 companies per year get angel money. And estimates from the data in the EUSA indicate that 57,300 companies get angel money each year. If 100 angel-backed companies go public each year, that yields an IPO rate of between 0.17 and 0.2 percent of the companies financed by angels, depending on whether the FRSSBF or EUSA data are used to estimate the number of angel-backed businesses.

Few angel investments exit through acquisition. Estimates based on data from the Census Bureau’s Longitudinal Establishment and Enterprise Microdata file show that only about 7,000 small businesses are acquired each year.⁷⁹ Moreover, only 58 percent of

⁷⁷ Goldfarb, B., Hoberg, G., Kirsch D., and Triantis, A. 2007. Are angels preferred venture investors? Working Paper, University of Maryland.

⁷⁸ Calculated from data downloaded from <http://bear.cba.ufl.edu/ritter/New%20Folder/IPOs2006Factoids.pdf>

⁷⁹ Office of Advocacy. 1998. Mergers and Acquisitions in the United States, 1990-1994. Downloaded from http://www.sba.gov/ADVO/stats/m_a.html

these are 12 years old or younger. Therefore, approximately 4,000 small U.S. businesses less than 13 years old are acquired annually.

Furthermore, the estimate derived from Census data of 4,000+ small, young businesses that are acquired every year might be too high. In 2001, Thomson Financial Securities reported that there were 4,044 mergers and acquisitions worth \$5 million or more of businesses of *any* age that were not foreign acquirees, leveraged buyouts, or divestitures.⁸⁰ Given the proportion of U.S. businesses under 12 years of age, this suggests that the number of small young companies that are acquired every year for \$5 million or more is closer to 2,800.

The numbers are smaller based on the ratio between exits through IPOs and acquisition for venture capitalists. Many observers argue that angels seek follow-on investment from venture capitalists, and that angel financing is only a stage in the process of financing that involves venture capitalists at some point before exit. Because of how this process works, very few companies that receive angel investments will result in an IPO or acquisition without first receiving venture capital. Therefore, the ratio of acquisitions to IPOs for venture capitalists should also hold for business angels. For the 2001 through 2006 period, this ratio averaged 6.7. Given the earlier estimate of 100 angel-backed IPOs every year, this ratio suggests that approximately 670 angel-backed companies are acquired every year. Stated differently, the FRSSBF estimate of the number of angel-backed companies suggests that 1.3 percent of companies that receive angel financing are acquired, whereas the estimate based on EUSA suggests 0.8 percent.

What about returns earned on dollars invested by angels in private companies? Unfortunately, no information is available on the performance of angel investments for a *representative* sample of angel investors. The best we have is data from the FRSCF on the value of a typical *informal equity* investment held by an American household in 2004, which was \$79,300 with a cost basis of \$47,327. Thus, the multiple on a typical *informal equity* investment held by an American household in 2004 was approximately 1.7.

The lack of studies of the performance of angel investments for a *representative* sample of angel investors necessitates looking at performance data using unrepresentative

⁸⁰ See <http://www.census.gov/prod/2003pubs/02statab/business.pdf>

samples. The best such data are those on the investment performance of business angels affiliated with angel groups, collected by Rob Wiltbank of Willamette University.⁸¹

It is important to note how unrepresentative the angels in this sample are. Because they are affiliated with angel groups, all of them are accredited investors. Moreover, they have an average net worth of \$10.9 million (which, according to the IRS Statistics of Income, puts them in a league with only 123,000 U.S. households), and they made investments in start-ups that averaged \$191,000. A full 85 percent of them had at least three years of entrepreneurial experience, and the average angel in the sample had founded 2.7 companies and had been an entrepreneur for 14.5 years.⁸² Moreover, participation in Wiltbank's study was voluntary, which almost certainly makes his respondents disproportionately good angel investors.⁸³

Wiltbank examined the investment returns of 539 angel investors from 86 groups of angels who had made 3,097 investments, from which they had experienced 1,137 exits. The average investment in the sample (mean investment) generated a profit of \$295,000 on an investment of \$191,000 in 3.52 years.⁸⁴

However, even these highly successful angels lost money on more than half (52 percent) of their investments. In fact, the median angel investment made by this sample of very experienced and successful angels involved an investment of \$50,000 that returned \$40,000 or 80 cents on the dollar. Moreover, only 7 percent of the investments accounted for three-quarters of the financial returns.⁸⁵

⁸¹ Prior to Professor Wiltbank's effort, there were other studies of the performance of angel investment efforts. One study looked at 1,200 angel investors' liquidated investments and found that over an average of eight years, 39 percent lost money, 19 percent broke even, 30 percent generated more than a 50 percent IRR and 12 percent generated more than 100 percent IRR. (See Benjamin, G., and Margulis, J. 2001. *The Angel Investor's Handbook*. Princeton, NJ: Bloomberg Press.) Another study of 128 exited investments made by 51 business angels in the United Kingdom found that 34 percent lost all the investment, 13 percent returned only as much as the capital, 23 percent had a return of more than 50 percent and only 10 percent generate more than 100 percent. (See Mason, C., and Harrison, R. 1999. The rates of return from informal venture capital investments: Some UK evidence. Paper Presented at the Babson College-Kauffman Foundation Entrepreneurship Research Conference, University of South Carolina, May 12-15.) However, these studies are less well designed than Professor Wiltbank's study, which makes the results that they provide less likely to be accurate.

⁸² Wiltbank, R., and Boeker, W. 2007. Returns to Angel Investors in Groups, Working Paper, Ewing Marion Kauffman Foundation.

⁸³ People with worse performance are less likely to participate in the study.

⁸⁴ Wiltbank, R., and Boeker, W. 2007. Angel Performance Project. Presentation to the Kauffman Foundation Conference on Entrepreneurship and Innovation Data, November 2.

⁸⁵ Wiltbank, R., and Boeker, W. 2007. Returns to Angel Investors in Groups, Working Paper, Ewing Marion Kauffman Foundation.

Many of the investors lost money on their entire portfolio. The data show that almost 40 percent did not get back the money they put into angel investments. And the top 10 percent of investors generated half the financial returns.⁸⁶

Furthermore, properly measuring the rate of return on angel investing requires taking the opportunity cost of the angel's time into consideration, because angel investing is not passive, like putting money into a mutual fund, a venture capital limited partnership, or a hedge fund. The rate of return on angel investments' net of opportunity cost can be found by looking at the data from Wiltbank's study because he measures the amount of time the average angel spends per week on his investments (12 hours).⁸⁷ Over the 3.52 years that it takes the average angel investment to reach an outcome, positive or negative, the average angel spends 2,196 hours on his investments. Because the respondents in Wiltbank's sample had an average of 5.16 investments, that comes to 426 hours per venture.

Given the average number of hours put in by an accredited angel to generate the average return, the opportunity cost of the angel's time is \$129,520. That is, the angel gave up the opportunity to earn \$129,520 in income to generate the financial return from angel investing, money that could have been earned if the angel had invested the money passively.⁸⁸ Subtracting this opportunity cost from the amount earned on the typical angel investment yields average angel earnings of \$165,480 on a 3.52 year investment of \$191,000³² or an annual rate of return of 19.2 percent. This number is less than the return

⁸⁶ Wiltbank, R., and Boeker, W. 2007. Returns to Angel Investors in Groups, Working Paper, Ewing Marion Kauffman Foundation.

⁸⁷ <http://www.willamette.edu/~wiltbank/AtTheIndividualLevel7.pdf>

⁸⁸ Because all of the angel investors in Wiltbank's sample are accredited investors, it is possible to estimate the cost to them of spending 426 hours on a venture. The minimum income level to meet SEC accreditation requirements is \$200,000 per year for a single person, which can be used as a conservative estimate of minimum annual income of someone in the sample. IRS data show that the average adjusted gross income of people who earn more than \$200,000 per year was \$608,545 in 2005. (Calculated from data downloaded from <http://www.irs.gov/taxstats/indtaxstats/article/0,,id=96981,00.html>). Assuming that people who earn \$608,545 per year work an average of 40 hours per week and take two weeks of vacation per year, the opportunity cost of an accredited angel's time is estimated conservatively at \$304.27 per hour. (Readers should note that this is a very conservative estimate. The typical angel is married. Therefore, most of the angels in the sample would have to exceed \$300,000 per year in income to meet SEC accreditation requirements. Moreover, the respondents have an average net worth of \$10.9 million. People with an average net worth that high probably have incomes considerably higher than \$200,000 per year.)

to investments in venture capital limited partnerships, which, as an asset class, had an average 10-year return of 26.9 percent.⁸⁹

The Recipients of Angel Investments

Angels invest in a variety of different kinds of companies at a variety of development stages, led by many different types of entrepreneurs in a wide range of industries.

The Industry Distribution of Recipients of Angel Capital

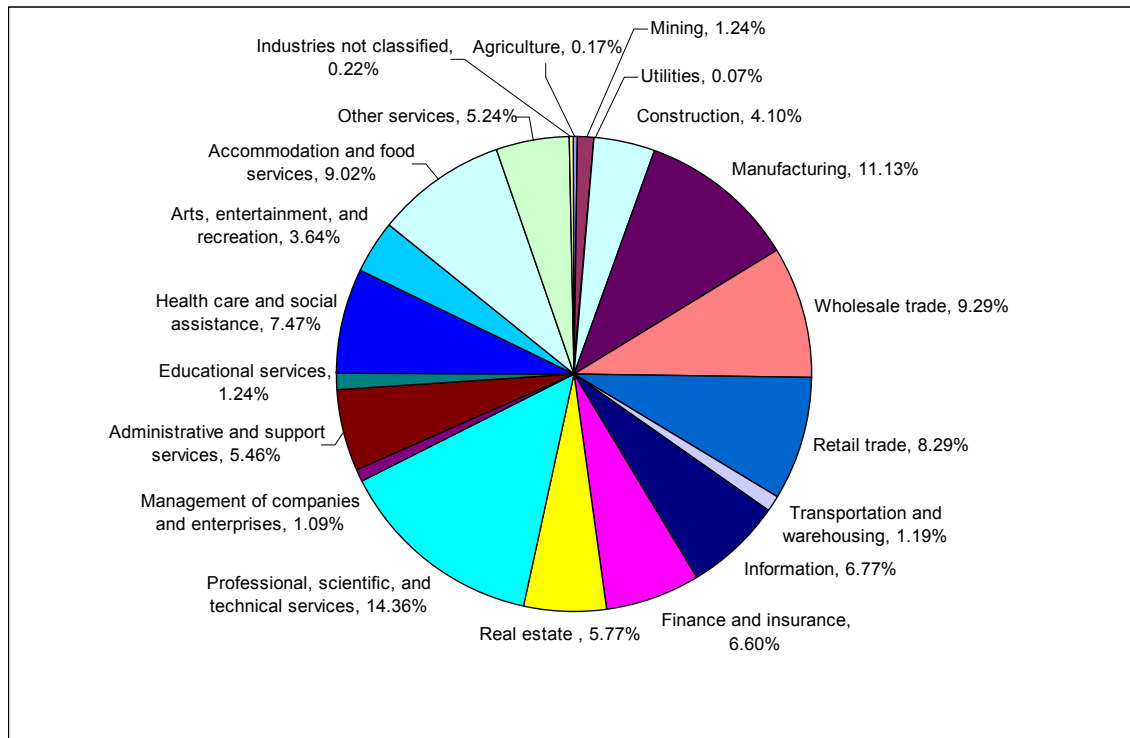
Angels invest in a very wide range of industries. According to the EUSA data, 25 percent of angel investments go into retail businesses, and 12.5 percent go into personal service businesses. And these numbers are not an artifact of the exclusion of investments by “friends” from the angel investment category. The numbers are similar for external equity investments.

The numbers in the SBO for companies aged five-and-under that received external equity investments from 1997 to 2002 show similar patterns. For instance, as Figure 1 shows, the information sector, which includes all of the software companies, accounts for 6.8 percent of the recipients of external equity investments and the professional, scientific and technical services sector 14.4 percent of them, while the retail trade sector accounts for 8.3 percent of them and the wholesale trade sector 9.3 percent.

The data from the KFS, although different from the SBO data, do not indicate a much greater focus on technology companies. The KFS data show that the information sector accounts for 2.5 percent of recipients of external equity investments and the professional, scientific and technical services sector accounts for 9.8 percent of them, while the retail trade sector accounts for 4.9 percent and wholesale trade, 10 percent.

⁸⁹ For the period ending in September 2004. See <http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=109&STORY=/www/story/01-19-2005/0002862967&EDATE>.

Figure 1. The Industry Distribution of the Recipients of External Equity Investment, 1997-2002.



Source: Adapted from a special tabulation of the Survey of Business Owners of the U.S. Census Bureau.

Business angels are much less industry-specialized than venture capitalists.⁹⁰ From 1980 through 2004, 81 percent of all venture capital dollars were invested in just five industries: computer hardware, computer software (including the Internet), semiconductors and other electronics, communications, and biotechnology; 73 percent of recipient companies operated in these industries.⁹¹

The Age/Stage of Development of Angel-Backed Companies

Angels tend to invest in later-stage companies than many observers believe. The data from the EUSA show that 64.6 percent of investments made by angel investors are cash-flow-positive, and almost half of the businesses (48.4 percent) are viewed by the

⁹⁰ Van Osnabrugge, M. 2000. A comparison of business angel and venture capitalist investment procedures: An agency theory-based analysis. *Venture Capital*, 2(2): 91-109.

⁹¹ Calculated from data downloaded from <http://www.nsf.gov/statistics/seind06/c6/c6s6.htm>.

investors as being “established companies” at the time of investment. Only 35.5 percent of angel investments are made in the pre-revenue companies.

Furthermore, this is not a function of the businesses to which angels lend money as opposed to those in which they buy shares. The numbers are very similar when the examination is limited to companies that receive an equity investment from business angels.

Similar patterns are seen in the data from the 2003 FRSSBF. The average age of the small businesses that received an informal equity investment in the previous 12 months was 13.3 years. The typical business was 11. Only 45.5 percent of the businesses were under 10 years old. The numbers are even more extreme for businesses that received angel investments, but the sample size is too small to have a great deal of confidence in those numbers.

The seed stage is also not the stage at which most angel group members most like to invest. In fact, slightly more angel groups like early-stage investing—82 percent—compared with 80 percent that favor the seed and start-up stage. Much smaller numbers of angel group members like the expansion (35 percent) or late stages (10 percent).⁹²

Characteristics of Angel-Backed Companies

The companies that receive external equity investment are better performing than the typical U.S. startup, but are not necessarily “high-growth potential” companies. The 2003 FRSSBF shows that the typical business of any age—the average age was 13.3 years—that received an *informal equity* investment in the previous year had sales of \$435,000, employment of seven, and profits of \$7,500.⁹³

Although many observers argue that companies need to have a proprietary competitive advantage to receive an angel investment,⁹⁴ the data from the KFS indicate that the founders of one of every five businesses that received an external equity

⁹² Hudson, M. 2007. ACA Briefing and Angel Group Stats. Presentation to the Angel Capital Association April 12.

⁹³ These estimates are likely to be imprecise because the sample on which they are estimated is very small.

⁹⁴ Benjamin, G., and Margulis, J. 2001. *The Angel Investor's Handbook*. Princeton, NJ: Bloomberg Press; Payne, B. Engaging Angel Investors. Downloaded from http://www.eventuring.com/eShip/appmanager/eVenturing/eVenturingDesktop?_nfpb=true&_pageLabel=eShip_linkDetail&_nfls=false&id=Entrepreneurship/Resource/Resource_546.htm&_fromSearch=false&_nfls=false.

investment in their first year of operations (19.2 percent) *do not believe* that their businesses have a competitive advantage of any kind. Moreover, the data from the KFS indicate that only 14.1 percent of the businesses that received an external equity investment in their first year of operation have a patent; 15.5 percent have a copyright; and 33.3 percent have a trademark.

Characteristics of the Owners of Angel-Backed Companies

White male-led businesses account for the vast majority of the companies that receive external equity investments. Data from the SBO showed that only 11 percent of the firms that were five years old or younger and had received external equity investor had a female primary owner.⁹⁵ These data also show that only 3.8 percent of businesses that have received external equity investments have a Hispanic primary owner; and only 1.4 percent of those businesses have a Black primary owner.⁹⁶

The patterns are similar for brand new firms. The KFS indicated that 90.4 percent of the primary owners of the businesses that received an outside equity investment from a nonrelative in their first year of operation were White and only 3.6 percent were Black.

The data from the SBO show that middle-aged entrepreneurs receive most of the external equity investments made in this country. More than two-thirds of the entrepreneurs whose businesses had received an external equity investment and were less than six years old in 2002 were between the ages of 35 and 54 years, and only 0.05 percent were younger than 25.⁹⁷

According to the SBO data, two-thirds of the primary owners of the businesses that receive an external equity investment have a college degree or greater education. Similar patterns can be seen in the KFS, which shows that 57.4 percent of the primary owners of the businesses that received an external equity investment in their first year of operation had a college degree or more education.

The data from the KFS show that 60.2 percent of the primary owners of businesses that have received an external equity investment have started at least one prior business. They also show that almost 89.3 percent of the entrepreneurs who founded a

⁹⁵ Calculated from data downloaded from <http://www.census.gov/prod/ec02/sb0200cscbt.pdf>

⁹⁶ Ibid.

⁹⁷ Calculated from data downloaded from <http://www.census.gov/csd/sbo/cbosummaryoffindings.htm>.

business that received an external equity investment in its first year of operation had at least one year of work experience in the industry in which the business was started, and 50.6 percent had more than 10 years of experience.

A large personal investment in a business is not a requirement for the receipt of an external equity investment. The data from the KFS reveal that in 25.5 percent of the businesses in which the founders had invested, the primary owner-founder's combined investment was less than \$10,000.

The patterns are similar for the founders' investment of time. According to data from the SBO, the business is the primary source of the founder's income for 54.8 percent of the companies less than six years old that receive an external equity investment. Moreover, the founders of these companies do not put a great deal of time into their businesses. According to the SBO data, in 32.6 percent of the businesses with external equity that are five years old or less, the founder worked 20 hours per week or less on the business, and in the *majority* of the businesses, the founder worked 40 hours per week or less.

Recommendations for Data Collection

One of the problems with understanding angel investment activity has been a paucity of data from large representative samples of angel investors. This lack of data has led researchers to draw inferences from either nonrepresentative convenience samples or small representative samples. The two approaches can both lead to inaccurate estimates (although for different reasons.)

An accurate understanding of angel investing requires the creation of large, representative samples of angel investors, angel investments, and angel-financed companies. A large representative sample of angel investors could be created by dramatically increasing the scale of data collection for the EUSA. Increasing the size of the EUSA tenfold would mean that data could be collected from between 200 and 300 business angels, a sample size large enough to draw inferences with confidence.

Better information about angel investments could also be obtained by increasing the scale of data collection for the EUSA, and by expanding the inquiry to all informal

investments made in the previous three years, rather than just up to three investments. Alternatively, the SCF could be expanded to collect data from a larger sample and more specific questions about types of informal investments could be added.

Better information about the companies that receive angel investments could be obtained through a dramatic increase (approximately tenfold) in the size of the sample for the FRSSBF. Alternatively, additional questions could be asked in the SBO to identify the source of the external equity investment, as well as more information about the recipient firms.

To get a better understanding of subsets of angel investors, particularly accredited angels, would require new research designs. For instance, to create an adequate sample for the examination of accredited angel investors, an IRS sampling frame on income and net worth would be required to permit high net worth and high income individuals to be oversampled. Otherwise, the sample size necessary to obtain data from a representative sample of several hundred accredited angel investors would need to be close to 500,000 people.

Conclusions

An Angel investor is a person who provides capital, in the form of debt or equity, from his own funds to a private business owned and operated by someone else who is neither a friend nor a family member.

Based on a review of the literature, a statistical evaluation of data from representative samples of known populations, and a comparison of the results to those from previous studies of nonrepresentative samples of business angels, this study found that:

- The estimated number of people who made an angel investment between 2001 and 2003 was between 331,100 and 629,000 people.
- Between 2001 and 2003, angels invested an estimated \$23 billion per year.
- Most angel investors are unaccredited investors, but accredited investors provide the majority of dollars invested.

- The number of companies that receive angel investments annually is between 50,700 and 57,300.
- In 2006, 5,632 angel investors in 128 groups made 947 investments in 512 companies, providing startups with a total of \$228.8 million.⁹⁸
- By 2002, 3,608 companies founded in 1996 achieved \$10 million or more in sales.
- The typical angel investment made between 2001 and 2003 was \$10,000.
- In 2006, the average dollar value invested per angel in an angel group deal was \$31,457.
- Debt accounted for 40.2 percent of the money angels provided to startups between 2001 and 2003.
- Between 0.17 and 0.2 percent of the companies financed by angels go public, and between 0.8 and 1.3 percent are acquired.
- The rate of return net of opportunity cost of high-net-worth accredited angels affiliated with groups and willing to talk about their investments is 19.2 percent.
- Between 2001 and 2003, 25 percent of angel investments went into retail businesses and 12.5 percent went into personal service businesses.
- The typical business of any age—the average age was 13.3 years—that received an informal equity investment in the previous year had sales of \$435,000, employment of seven, and profits of \$7,500.
- Eleven percent of firms that were five years old or younger and had received an external equity investment had a female primary owner; only 3.8 percent had a Hispanic primary owner, and only 1.4 percent had a Black primary owner.
- More than two-thirds of the entrepreneurs whose businesses had received an external equity investment and were less than six years old were between the ages of 35 and 54 years.

⁹⁸ Hudson, M. 2007. ACA Briefing and Angel Group Stats. Presentation to the Angel Capital Association April 12.

Contributions to the Literature

This study contributes to the literature by showing what angel investment activity looks like for representative samples of investors and companies. This information should be useful to researchers seeking to formulate hypotheses and test theories about angel investment activity in the United States.

The study's findings indicate the limitations of previous studies and suggest caution in assuming their validity. The differences between the findings here and those of prior studies that have been based on convenience samples suggest that some of what has been found previously about angel investment activity may be artifacts of the investigation of highly selected samples.

Contributions to Public Policy

This study makes two contributions to public policy analysis. First, it provides more accurate estimates than were previously available of the market and demand for angel capital, the companies that receive angel capital, and angel deals. These data should help policymakers develop ways to enhance the growth of entrepreneurship in the United States. In particular, the data show that the angel capital market is smaller than is often believed and involves more typical types of small business financing than is generally reported. Policy makers need to recognize the true nature of the angel capital market when they make decisions about how to influence this market.

The study provides insight into the investment activity of different groups of angel investors (e.g., accredited and unaccredited investors), which will be useful in predicting how angel investors might respond to public policy. Finally, the study suggests types of policy intervention that could be the most useful in the angel capital market. Because the study shows that most angel investments are not sophisticated equity investments made by accredited investors in high-growth, high-potential startups, policymakers may need to consider more targeted approaches to intervention if they are to influence the financing of companies.

Recommendations for Data Collection

The data on which all discussions of angel investing are based are flawed, leading researchers to draw inferences from either nonrepresentative convenience samples or small representative samples, both of which can lead to inaccurate estimates (although for different reasons.) A truly accurate understanding of angel investing requires data from large representative samples of angel investors, angel investments, and angel-financed companies.