ENTREPRENEURIAL FINANCE: ANGEL INVESTING AS A SOURCE OF FUNDING HIGH-GROWTH START-UP FIRMS

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ABSTRACT: *One of the most difficult components in starting and growing a new venture is securing funding and other resources to sustain the firm's survival and growth. Funding for many new ventures comes from a large, yet relatively unidentified, group called angel investors. This paper provides an overview of angel investing as a source of funding for start-up firms.*

KEY WORDS: *Angel investing; venture funding; entrepreneur; innovation; start-up*

JEL CLASSIFICATION: *L26*

1. INTRODUCTION

New ventures are critical contributors to economic growth through their innovation, job creation, competitiveness, and entrepreneurial behaviour. The key process in driving change in the marketplace is the introduction of innovations, and the central innovator is the entrepreneur. "The function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, opening a new source of supply of materials or a new outlet for products, by reorganizing a new industry" (Schumpeter, 1952). US President Barack Obama acknowledged the role small businesses have at a speech he gave about job creation at the Brookings Institution in Washington, DC. on December 8, 2009, "Over the past 15 years, small businesses have created roughly 65 percent of all new jobs in America...These are also companies that drive innovation, producing 13 times more patents per employee than large companies".

One of the most difficult components in starting and growing a new venture is acquiring capital and other resources to sustain the firm's survival and growth. The

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lack of funding can lead to cash flow problems, missed opportunities, and shutdown of the fledgling enterprise (Van Auken, 2002). Funding for many new ventures comes from a large, yet relatively unidentified, group called angel investors. Angel investing supplies more capital to early-stage companies than do venture capital firms and this capital drives most of the economic growth and job creation in the United States (Wiltbank, 2005). The term "angel" originally comes from the Broadway theatre in New York where it was used to describe wealthy individuals who provided money for theatrical productions. In 1978, William Wetzel, then a professor at the University of New Hampshire and founder of its Center for Venture Research, completed a pioneering study on how entrepreneurs raised seed capital in the USA, and he began using the term "angel" to describe the investors that supported them. Today, the term angel usually refers to high-net-worth individuals who make investments of time and money to help startup companies through their initial stages of growth (Lange, Leleux, & Surlemont, 2003).

The US Securities and Exchange Commission, under Rule 501 of Regulation D in the Securities Act of 1933, provides a definition of an accredited investor. A natural person can qualify as an accredited investor if they have an individual net worth, or joint net worth with the person's spouse, that exceeds $1 million. Another qualifier is income. A natural person with income exceeding $200,000 in each of the two most recent years or joint income with a spouse exceeding $300,000 for those years and a reasonable expectation of the same income level in the current year also qualifies as an accredited investor. The Federal Reserve's Survey of Consumer Finances from 2004 to 2007 estimates that over 6 million US household qualify to be accredited investors. Many studies estimate that the number of active angel investors in the US is between 250,000 and 400,000. Acting alone, angel investors face a common set of challenges. Most individual angels do not see a consistent quality deal flow. They see only what they come across through their own contacts and relationships. They have limited capability to conduct in-depth due diligence that an early stage investment demands. They don't have the breath of knowledge and the time needed to perform deep due diligence and understand all aspects of the venture they are evaluating. Individual angels do not have the negotiating leverage to set ideal valuations and terms and conditions. Post investment, they lack the breadth of capabilities and network to really assist their entrepreneurs grow their companies, and increase the return to the angel's investment.

While angel investors have a long history, angel investment groups are a quite recent phenomenon. The first organized group of angel investors in the USA is the Band of Angels, which was formed in 1994. Angels began forming groups to collectively evaluate and invest in entrepreneurial ventures. These groups are seen as having several advantages by the angels in the opportunity to collectively pool capital to make larger investments than they could individually. Each angel can invest smaller amounts in individual ventures, allowing participation in a spectrum of opportunities thus diversifying their investment risks. They can also undertake costly due diligence of prospective investments as a group, reducing the burdens for individual members. These groups are generally more visible to entrepreneurs and thus receive a higher quality deal flow. Finally, the groups frequently include some of the most sophisticated and active angel investors in the region, which results in superior decision-making. The Angel Capital Association (ACA), North America's professional alliance of angel groups, lists 300 American groups in its database. According to the 2009 ACA Angel Group Confidence Survey, its member angel groups in average have 43.6 members. The average ACA member angel group invested a total of $1.78 million in 4 deals in 2006 with an average of $241,528 invested per round, $1.94 million in 4.8 deals in 2007 with an average of $265,926, and $1.77 million in 3.7 deals in 2008 with an average of $276,918 per round. When asked about major changes to the group structure or investment process that the ACA member angel group predicts, 53.8% of the respondents expected to do more co-investment with other groups, 35.4% expected to increase co-investment in general, and 32.3% expected to invest more in their portfolio companies.

2. ANGEL INVESTMENT PROCESS

Investment Criteria. At the heart of the entrepreneurial process are the creation and/or recognition of opportunities. Entrepreneurial ventures go through several stages in their lifecycle. In the *seed stage* the entrepreneur has a concept for a potentially profitable business opportunity that still has to be developed and proven. In the *start-up stage*, the newly formed business is completing product development and initial marketing. Typically the business is one year old or younger. In the *early stage* the firm is usually expanding, and producing and delivering products or services. It is often less than five years old and it may not yet be profitable. In the *later stage*, also called the expansion stage, at this level of development the firm is mature and profitable, and often still expanding. With a continued high-growth rate, it may go public within six months to a year. Table 1 indicates the level of investment entrepreneurial ventures typically need and seek to obtain from investors in different stages of their lifecycle. Angels fill the gap in the funding of entrepreneurial ventures below the threshold at which venture capital firms would invest.

Table 1. Investment Needs in Different Stages of the Start-Up Venture Lifecycle

Stage	Seed	Start-Up	Funding Gap	Early Venture Stage	Later Venture Capital
Source	Founder Friends Family	Individual Angels	Angel Organizations	Venture Funds	
Amount Invested	$25,000 to $100,000	$100,000 to $500,000	$500,000 to $2 million and up	$2 million to $5 million and up	

Ventures suitable for angel financing are ones with capital requirement of $100,000 to $500,000, with sales potential of between $2 million and $20 million within five to ten years, small, established, privately held ventures with sales and profit growth of 10% to 20% per year, special situations, such as very early financing of high-technology inventors who have not developed a prototype, and companies that project high levels of free cash flow within three to five years. Angel investors expect an average 26% annual return at the time they invest, and they believe that about onethird of their investments are likely to result in a substantial capital loss. Angels list the following top ten criteria when considering investing in a start-up venture: (1) enthusiasm of the entrepreneur, (2) trustworthiness of the entrepreneur, (3) sales potential of the product, (4) expertise of the entrepreneur, (5) investor liked the entrepreneur upon meeting, (6) growth potential of the market, (7) quality of product, (8) perceived financial rewards for investors, (9) niche market, and (10) track record of the entrepreneur. Angels accept an average of 3 deals for every 10 considered. The most common reasons given for rejecting a deal are: insufficient growth potential, overpriced equity, lack of sufficient talent of the management, lack of information about the entrepreneur or key personnel.

Deal Review and Selection Process. Most groups follow a similar deal selection process. Entrepreneurs typically begin the process by submitting to the group an application that may also include a copy of their business plan or executive summary. Some groups prefer that the deals are introduced or championed by one of its members. The entrepreneurial ventures are initially screened by the angel group staff and some of its members with domain expertise. The ones that are advance in to the next step are then invited to give a short presentation to a small group of members, followed by a question and answer session. Promising companies are then invited to present at a monthly meeting (often a weekday breakfast or dinner). The presenting companies that generate the greatest interest at the investor meeting then enter a detailed due diligence process with the group members that are interested in the deal. Depending on the findings in due diligence, the angels make an investment three to six months after the presentation. Most often the angels invest directly in the company, with all angel group members entering with the same terms. Some groups invest from a pulled investment fund where a designated group manager (member) leads the funding process. As an example, Figure 1 provides an outline of the Keiretsu Forum monthly deal review process.

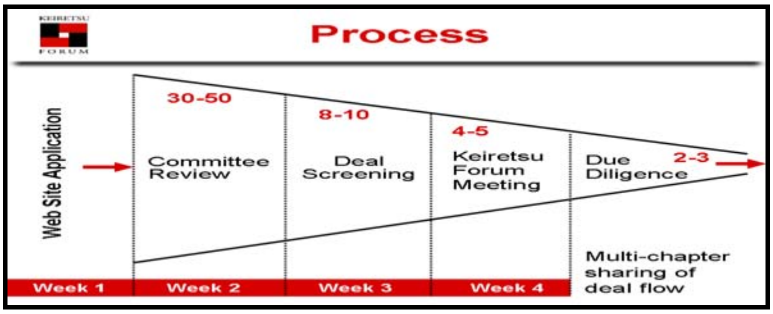

Figure 1. Keiretsu Forum Process

Keiretsu Forum is a large global angel investment network that started in 2000 in the San Francisco Bay Area. It has since expanded to eighteen chapters in America, Asia, and Europe and over 750 members. Its members invest in a variety of industries in the amount of $250,000 to $2 million. The Keiretsu Forum chapters implement the same deal selection process and the deals that receive the most interest in the local chapter are then invited to present to other chapters in the network. Additional information on this group is provided at http://www.keiretsuforum.com/.

1. Entrepreneur Application. Companies that apply to Keiretsu Forum are typically in their A or B rounds, usually with $500,000 to $1.5 million received in friends and family investments. Interested companies complete an application (Fact Sheet) available on the Keiretsu Forum web site.

2. Committee Review. Candidate companies are pre-screened by an industry-specific committee. Keiretsu Forum has the following committees: clean technology, consumer “cool stuff”, digital media, food and beverage, life sciences/healthcare, real estate, social venture investing, software, and telecommunications committee. The committee chair assigns a team of two to five keiretsu forum members and a team leader of the pre-screening. Based on committee recommendation, each month eight to ten companies are scheduled to present at the Screening.

3. Deal Screening. At the deal screening eight to ten companies give a 15-minute presentation (7-minute core presentation followed by 8-minute question and answer session). After each presentation there is discussion on each company and the Screening Committee (about twenty Keiretsu Forum members) anonymously votes on a scale from 1 to 7 (where 1 is the worst and 7 us the best score). At the end of the deal screening the companies that ranked highest are selected to present at the Keiretsu Forum investment meeting.

4. Keiretsu Forum Meeting. The companies that are selected at the Screening present in front of the full Forum (approximately 130 members and invited guests). Usually four to five companies give a 20-minute presentation (10-minute core presentation followed by a 10-minute question and answer session). After each presentation, interested investor members sign in on an Interest List. At the end of the meeting, entrepreneurs are excused and the members have discussion on each company.

5. Due Diligence. The Company then enters into a due diligence phase with the Keiretsu Forum members that signed the Interest List. The company sets a conference call or meeting in their office seven to ten days after the presentation. It is common for one or two members to take the lead in due diligence and negotiations with the company.

6. Multi-Chapter Investing. After a company has presented to the chapter in the closest geography and has received investment interest traction from members of that chapter, the company then has the unique opportunity to present to other chapters of their choice. Members of each chapter conduct their own due diligence and make their own investment decisions; however they benefit greatly from shared due diligence. The members that decide to invest in the company make a direct individual investment.

Another example with data on the deal flow process was highlighted in a recent Harvard Business School study by Kerr, W., Lerner, J., and Schoar, A. (2010). The study analyzed data provided by the Tech Coast Angels and the Common Angels. Tech Coast Angels is a large angel investment group based in Southern California. They have over 300 angels in five chapters seeking high-growth investments in a variety of high-tech and low-tech industries. The group typically looks for funding opportunities of $1 million or less. Additional details on this angel group are available at http://www.techcoastangels.com/.

Table 2 documents the selection funnel for Tech Coast Angels. The analysis was based on available records at the beginning of 2007 of over 2,500 ventures that approached Tech Coast Angels between 2001 and 2006. The central variable for the Tech Coast Angel analysis is a count of the number of angels expressing interest in a given deal. This indication of interest does not represent a financial commitment, but instead expresses a belief that the venture should be pursued further by the group. The decision to invest ultimately depends upon a few angels taking the lead and championing the deal. The first three columns show that 64% of ventures receive no interest at all. Moreover, 90% of all ventures receive interest by fewer than ten angels. This narrowing funnel continues until the highest bracket, where there are 44 firms that receive interest from 35 or more angels. The maximum observed interest is 191 angels. This funnel shares many of the anecdotal traits of venture funding - such as selecting a few worthy ventures out of thousands of business plans - but it is exceptionally rare to have the interest level documented consistently throughout the distribution and independent of actual funding outcomes.

Table 2. Tech Coast Angels Selection Funnel

Tech Coast Angels investment level	Number of ventures	Cumulative share of ventures	Share funded by Tech Coast Angels
0	1640	64%	0.000
1-4	537	84%	0.007
5-9	135	90%	0.037
10-14	75	93%	0.120
15-19	52	95%	0.173
20-24	42	96%	0.381
25-29	33	97%	0.303
30-34	21	98%	0.286
35+	44	100%	0.409

Angel Investment Returns. Few studies have been made to examine the returns from angel investing. Wiltbank (2005) found that 2/3 of angel investments fail while 20% of the investments returned an IRR of over 100%. In Wiltbank's sample, successful investments returned 2.9 times cash in an average 5.8 year holding period. In November 2007, Wiltbank and Boeker (2007) released the results of a survey of 539 angels whose investments have provided 1,137 exits. That research found that the average return on investment was 2.6 times with a holding period of 3.5 years resulting in an IRR of approximately 27%. Average IRR may be a misleading number when describing performance. Over half the investments surveyed returned less than the initial capital invested, and only 7% of the exits returned 10 times or more. That research also revealed three factors that have an effect on investment performance. First, the more time that angels spend doing due diligence, the greater the return from the investment. The more experience an angel has, the greater the return. Finally, angel activities such as mentoring, access to networks, coaching, and performance monitoring led to greater returns. The companies in which angels invested were early stage with 45% of the companies having no revenue stream at the time of the investment. Figure 2 details the distribution of returns across growing categories of multiples.

Roach (2008) provided the IRR on investments Keiretsu Forum members made in years 2000 through 2006 (see Table 3). The research analyzed over 120 investments in approximately 100 companies and excluded investments made in 2007 or later. These returns represent a hypothetical portfolio consisting of Keiretsu Forum investments made in the years 2000 through 2006. The returns include investments returned to investors through initial public offerings, mergers, acquisitions, and other exits as well as unrealized returns from new valuation events such as later stage investments that either increased or decreased the value of the original investments. Included in the results are also any closures or bankruptcies where the value of the original investments were written down to zero.

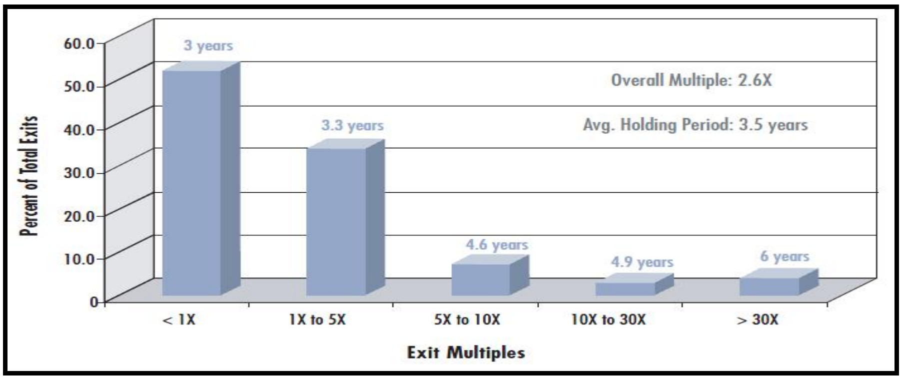

Figure 2. Distribution of Returns by Venture Investment

Table 3. Comparison of Keiretsu Forum Returns to Major Market Indices

Year	Keiretsu Forum	S&P 500	NASDAQ Composite
2000	-2.01%	-0.73%	-8.94%
2001	17.25%	0.87%	-3.74%
2002	13.28%	2.75%	1.87%
2003	8.49%	8.09%	11.81%
2004	16.99%	5.04%	4.62%
2005	12.25%	4.10%	3.21%
2006	20.13%	3.48%	4.03%

These returns are hypothetical since no single investor participated in all these investments. Figure 5 compares the Keiretsu Forum IRR results to those that could have been obtained in the major market indexes. The returns for the mutual funds assume that an investment was made on January 1 of each year and the investment was redeemed on March 31, 2008. This chart indicated that angel investing may have a broader role in the construction of investment portfolios with the idea that increased diversification reduces portfolio risk.

3. CONCLUSION

Angels have a significant role in supporting innovation by providing the first outside equity capital in start-up companies. The Center for Venture Research estimates that U.S. angel investors invested $19 billion in 55,000 deals (about 35,000 small businesses) in 2008. Angels invest both time and money in early stage entrepreneurs and their companies. Angel organizations now exist in nearly every American state. They have an impact on the venture ecosystem and they offer accredited angel investors the opportunity to invest in and help build successful companies. Angel investing is extremely risky. The most sophisticated angels make at least ten investments in order to make a return on their investment, counting on one or two to provide nearly all of their return. Since the risk and failure rates associated with start-up firms are extremely high, investors seek commensurable return. The key is the existence of efficient exit scenarios, such as mergers, acquisitions, initial public offerings, when investors can realize returns on their investment. Angel investing provides solid opportunity to individual investors for diversification of their investment portfolio while fuelling the economy by providing funding to innovative early stage opportunities.

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