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THE CHARACTERISTICS AND VALUE-ADDED CONTRIBUTIONS OF PRIVATE INVESTORS TO ENTREPRENEURIAL SOFTWARE VENTURES

John Freear and Jeffrey Sohl

ABSTRACT

The nature and role of early stage equity financing in the development of emerging entrepreneurial ventures in the software industry is examined. To provide an understanding of the relationship between the suppliers of capital and the ventures they bankroll, issues concerning equity positions and holding periods are addressed. Given the unique position of private investors in the early stage equity market, particular attention is given to the characteristics of these investors and the investor characteristics germane to the software industry. Results for the software sector are compared with technology-based companies in an attempt to uncover any discernable differences between the two groups. The research hypothesizes that there are differences in the informal venture capital market among broadly defined sectors in terms of the sectors' technology and competitive conditions and their impact on: first, the need for, and timing of, external equity capital; and secondly, the characteristics and value-added contributions of the private investors attracted to the sector.

INTRODUCTION

The important role of the entrepreneurial firm in the creation of wealth and jobs, and the general problem in financing the growth of these ventures, has attracted considerable interest among researchers. For the established firm, financial markets offer an array of financing instruments. These markets are relatively accessible to the established and larger firm, the managers of which are left to decide the optimum mix of debt and equity in its financial structure, based on value and cost of capital considerations. For the high growth entrepreneurial firm, this supply assumption may not hold, causing systematic market mismatches at particular stages of development of the fast growth firm (Brophy, 1997). These imperfections, most notably in the informal venture capital market, are well documented, for both North America (Riding and Short, 1987; Haar, Starr and MacMillan, 1988; Gaston, 1989; Freear, Sohl and Wetzel, 1994) and Europe (Landstrom, 1992; Mason and Harrison, 1992a; Harrison and Mason, 1993; Landstrom, 1993). Market imperfections lead to market inefficiencies, and at least two inefficiencies in the equity financing market for entrepreneurial ventures have been identified (Obermayer, 1983; Wilson, 1984). The first is a capital gap between the needs of early stage ventures and the suppliers of early stage capital. The significance of the capital gap is mitigated by the existence of private investors (Wetzel, 1983), and by the availability of capital and the lack of a quality deal flow to potential investors (Mason and Harrison, 1994; Stevenson and Coveney, 1994). The second, and more important, market inefficiency is an information gap. An efficient market implies an open and timely flow of reliable information concerning financing sources and investment opportunities. In the informal venture capital market, with the suppliers of capital seeking a degree of anonymity consistent with the need to maintain reasonable deal flow, information flows very inefficiently (Freear, Sohl and Wetzel,

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1994; Mason and Harrison, 1996; K+V Organisatie adviesbureau bv and Entrepreneurial Holding bv, 1996). The sources of capital, most notably risk capital or equity, and the relative position of these sources during the growth stages of the entrepreneurial venture, have been examined over time. Previous studies identified private investors, commonly referred to as "business angels," as the major source of equity capital in the seed and start-up stage (Freear, Sohl and Wetzel, 1995; Gaston and Bell, 1988; Wetzel, 1987). In contrast, institutional venture capital funds, the visible segment of the private equity market, tend to invest in fewer ventures, later stages, and larger amounts, than their angel counterparts (Meyer et al., 1995; Timmons and Bygrave, 1997; Timmons and Sapienza, 1992). Bygraves and Timmons (1992) cited a trend on the part of venture capital funds out of the early seed and start-up phases, and observed that the "venture" seemed to be eroded from the institutional venture capital industry. While private investors and venture capital funds operate primarily in different stages, they do overlap and they are complementary. The informal private investor market provides seed and start-up external equity capital that helps spawn new ventures (Freear and Wetzel, 1990). As the venture grows, however, it continues to outstrip its own ability to generate cash internally, and it begins also to outstrip the ability of individual investors, alone or in syndicates, to supply adequate additional equity capital to support growth. At this point, typically in the $1,000,000 to $2,000,000 range, professional venture capital funds may take an interest in the venture. This is particularly the case if the venture has demonstrated some success and has progressed beyond the risk-laden seed and start-up stages towards potentially high and sustainable future growth and a not too distant exit horizon (Freear, Sohl and Wetzel, 1994).

Several studies have examined the characteristics of private investors who participate in the early stage equity financing of entrepreneurial ventures. Most have used a convenience sample of one sort or another, and the present study is no exception. Typical angel profiles have been assembled (Freear, Sohl and Wetzel, 1997; Harrison and Mason, 1992; Kelly and Hay, 1996a; Riding and Short, 1989), and Mason and Harrison (1995b) provided an inter-country comparison of these profiles. However, the need to delineate private investor characteristics along a broad spectrum has led researchers to recognize the diversity of angel traits. Gaston (1989) presented one of the earliest attempts at delineation through the development of a number of individual categories and market profiles. Freear, Sohl and Wetzel (1994) subdivided the population of high net worth individuals into three categories: business angels with experience investing in entrepreneurial ventures (habitual investors in new and/or existing ventures); interested potential investors with no venture investment history but who express a desire to enter the venture investment market; and uninterested potential investors who under no circumstances would consider investing in entrepreneurial ventures as part of their investment strategy. Stevenson and Coveney (1994), in a survey of 500 British angels, developed a six category typology based on entrepreneurial backgrounds and levels of investment. Mason and Harrison (1995a) defined an "archangel" as the key individual investor in the formation of angel syndicates. When such a key player is a financial intermediary, this relatively new member of the market is termed an "institutional archangel." Sullivan (1991) provided an examination of angels along the entrepreneur/non-entrepreneur dichotomy. Also employing a two dimensional typology, Landstrom (1995) identified two extremes, passive investors who invest relatively small amounts of money and active investors who appear to operate in a more professional atmosphere than their passive counterparts. Restricting their analysis to serial investors (individuals who have made at least three private investments) Kelly and Hay (1996b) discussed two distinct investors: solo serial investors who invest on their own all the time; and syndicate serial investors who invest almost exclusively with others. While much work on the informal venture capital market has been accomplished, there remain many aspects of the market that call for further study or refinement of previous work. In particular, little research has been undertaken on the study of the early stage equity market within a specific economic sector in an attempt to uncover any discernable differences that may be attributed to sectoral attributes.

This paper examines the nature and role of early stage equity financing in the development of emerging entrepreneurial ventures in one particular sector, the software industry. Within this context, it discusses the relationship between the sources of early stage capital. To provide an understanding of the relationship

between the suppliers of capital and the ventures they bankroll, the paper addresses issues concerning equity positions and holding periods. Given the importance of private investors ("business angels") in the early stage equity market, the paper pays particular attention to the characteristics of these investors and the investor characteristics germane to the software industry.. Through an analysis of early stage ventures in a specific economic sector, the research aims to uncover distinguishing sector-related market characteristics. In addition to those market characteristics unique to the software industry, the paper attempts to identify traits that the software industry shares in common with general technological-based ventures.

While emerging technology-based companies are prime candidates for equity financing, the research focuses on the software industry in an attempt to uncover differences between the software industry and the general technology sector. The research hypothesizes that there are differences in the informal venture capital market among broadly defined sectors in terms of the sectors' technology and competitive conditions and their impact on: first, the need for, and timing of, external equity capital; and secondly, the characteristics and value-added contributions of the private investors attracted to the sector. The unique characteristics of early stage software ventures, which include relatively small initial capital requirements, the prevalence of bootstrapping and the robust formation of strategic alliances, provide the impetus for using the software venture as the unit of study. In addition, the dominant role of start-up ventures in the industry provide fertile ground for analysis. This role of start-up ventures in the software industry began with the industry fragmentation that occurred in the mid-1970s. The introduction of microprocessor-based personal computers in the 1970s helped usher in a period of transition in which demand for new software products led to the emergence of many new companies. Today, start-up software ventures represent a dynamic force in the industry. While revenues continue to be concentrated in the top 5 to 10 companies in the industry, research and innovations developed by start-up competitors have made significant contributions to the growth of the software industry (US International Trade Commission, 1995).

SURVEY METHODOLOGY

The data collection for this study was achieved through a survey instrument mailed to the CEOs of software ventures that were members of the Massachusetts Software Council in 1995 and 1996. The survey elicited responses on external equity financing, the attributes of private investors and demographic information on the venture. One hundred and three usable surveys were returned. About one quarter of the original 756 ventures to which the survey instrument was sent had existed for five or fewer years. Most (86%) were less than ten years old.

The survey methodology included a combination of mail and phone contacts with the CEOs of software ventures. The four points of mail contact with potential respondents were: a letter introducing the nature and purpose of the research; the survey instrument accompanied by a cover letter; a second mailing to ventures that did not respond to the initial inquiry; and a post card reminding participants to complete the survey (see Table 1). Subsequent to these four contacts, the research team conducted a phone survey with a random sample of 324 of the remaining 602 non-respondents. The purpose of these phone contacts was to elicit responses to the survey, to obtain an estimate of the size of the non-respondent pool, and to uncover reasons for their non-response. A summary of the results of this procedure is shown in Table 2. The first four categories in Table 2 contain a total of 94 ventures, 29% of the sample of 324. This represents an estimate of 175 (29% of the 602 non-respondents) ventures that did not survive, ventures and these were removed from the potential non-respondents. The next four categories (a total of 72 ventures, 22% of the sample of 324) may also represent an estimate of 134 (22% of the 602 non-respondents) ventures that no longer existed. These ventures also may be removed from the potential non-respondents. The result is a range of the size of the non-respondent pool, which in turn provides a range for the response rate. Based on the above two classifications, the response rate for the survey is between 20% and 26%. Both of these response rates are

TABLE 1

MAILINGS AND RETURNS

Two Mailings:	756
Returned to Sender:	(51)
Total:	705
Number of Surveys Returned:	103
Original Non-Response Pool	602
Number of Ventures Contacted/Researched Through Direct Calls	324

sufficiently high to mitigate any effect of non-response bias on the results. In addition, an analysis of the responses between early and late respondents failed to reveal any significant differences between these two groups, further mitigating the potential for non-response bias.

PROFILE OF RESPONDENTS

For the ventures that responded, one-quarter had existed for five or fewer years and the majority of the ventures was less than ten years old. The ventures were predominantly privately held corporations with a principal business (87% of the respondents) of software products (58%) or consulting (16%) or services (13%). During the early stages of the ventures, the competitive environment for their product or service divided almost equally among the three categories: completely new area, no competition (31%); competing against larger, more established ventures (39%); and competing against other equally sized ventures (30%). On average, the responding ventures had 25 employees the previous year, of whom 90% were full time. One year later, these ventures employed 32 people on average, representing a 28% increase in employment levels, with the percent of full time employees remaining about the same (87%). The respondents predicted that their total average employment would rise to 45 employees within the following twelve months, for an average increase of 4041%. Historical growth rates were largest for ventures employing fewer than 25 employees, with ventures in this group having predicted a robust 50% growth rate for the following year. In terms of revenue-generating products 57% of the ventures produced between 1 and 3 products, and 33% offered between 4 and 10 products. These ventures forecasted a 52% increase in revenue-generating products in the next year, with 30% of the ventures planning to add one new product, 19% anticipating two new products, and 17% expecting to bring between three and five products to market.

In general, the respondents represented ventures that were closely held private corporations predominantly offering software products and services within varying degrees of competitive market structure and across all stages of the developmental cycle for young ventures. These ventures exhibited substantial growth rates in employment and were planning to bring several new products to market in the next year.

EXTERNAL EQUITY FINANCING

Equity investors in privately-held ventures provide seed, start-up and later stage financing to ventures that they believe to have high growth potential. The returns to these investors typically take the form of long-term capital gains, realized at the time of harvest through a variety of exit mechanisms. The purpose of this part of the research is to examine the extent of the role of equity in the development of the venture and to

TABLE 2

RESULTS OF PHONE CONTACTS

Company no longer in business:	14		
Disconnected Phone/non-functioning phone:	31		
Individual Unavailable:	36		
Individual No Longer With Company:	13		
Assumed to be ventures that did not survive (sub-total)		94	29%
Answering Machine (4 times):	61		
No Answer (4 times):	4		
No incoming calls to this number:	4		
Out of New England Region:	3		
Assumed to be ventures that no longer exist (sub-total)		72	22%
Questions did not apply to company:	21		
Concerned about confidentiality of response:	2		
Do not recall seeing survey/sent third copy:	47		
Do not answer surveys:	6		
Surveys require too much time:	53		
Voice Mail only:	2		
Refused After Delivery:	1		
Incorrect Phone Number:	14		
Decline to Participate/No Reason:	2		
Had Survey and Would Return It:	4		
Had Returned Survey:	3		
Had Survey and Might Return It:	3		
Other non-responses (sub-total)		158	49%
TOTAL:	324	324	100%

identify both the sources of equity and the associated cost. Although nearly one-half of the entrepreneurs had planned from the outset to raise outside equity capital, only 30 (29%) of the software ventures succeeded in this endeavor, a testimony to the arduous process of securing outside equity. Respondent comments on this endeavor ranged from the difficulty in securing the first meeting with potential investors to the importance of planning an adequate time horizon for the search for capital.

These thirty ventures raised outside equity capital in 69 rounds of financing, with private individuals being the source in 27 of the rounds. In another 27 of the rounds, venture capital funds were the source. Thus,

nearly 80% of the rounds were accounted for by two sources. Corporate investors provided the majority of the remaining rounds of outside equity. Table 3 gives the details. For the 27 rounds of private individual financing, 10 rounds (37%) were seed financing, relatively small amounts of equity capital provided to the entrepreneur to prove a concept and to qualify for start-up capital. Fourteen rounds (52%) were start-up financing, typically considered to be equity capital provided to ventures completing product development and initial marketing. The remaining 3 rounds (11%) were later-stage financing defined as financing provided for full scale production or expansion of a company whose sales volume is increasing. The average amount

TABLE 3

SOURCE, AMOUNT AND STAGE

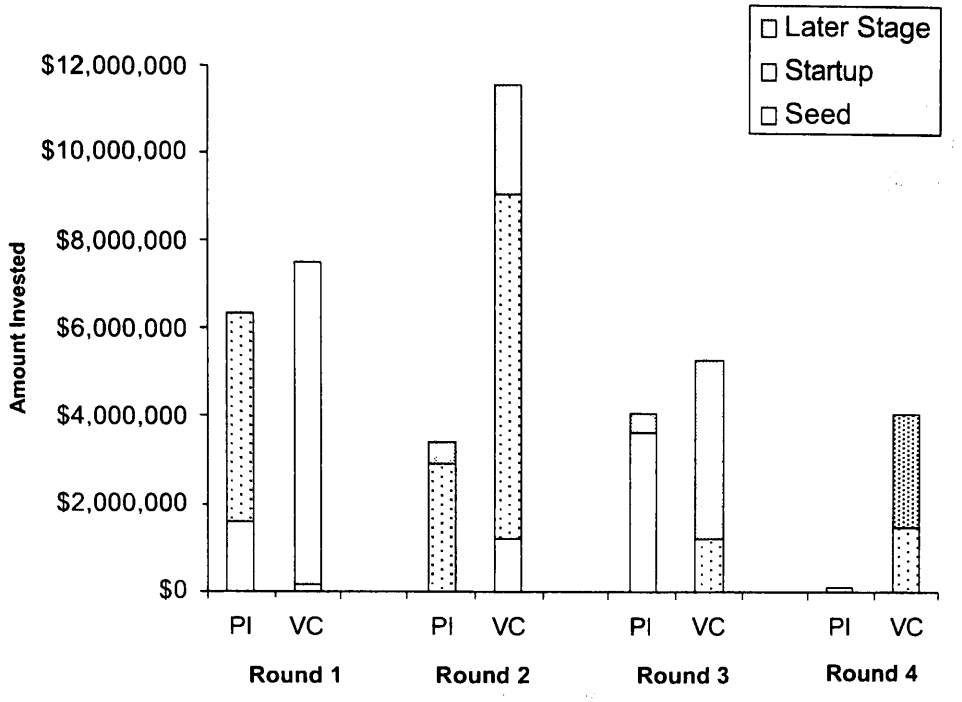
	Private Investors		Venture Capital Funds	
Seed Stage	10	37%	2	7%
Start-Up Stage	14	52%	16	59%
Later Stage	3	11%	9	33%
Total	27	100%	27	100%
Average amount raised per round	$527,000		$1,164,000	
Average ownership stake relinquished	18%		21%	

raised per round where private investors were the principal source was $527,000. In contrast, for the 27 rounds where venture capital funds were the source, 2 rounds (7%) were seed financing, 16 rounds (59%) were start-up financing, and 9 rounds (33%) were later-stage financing. The average amount raised per round was $1,164,000.

Data from the survey give added weight to two earlier research findings. First, it is clear that private investors tend to bring more than money to the ventures in which they invest (Ehrlich et al. 1994; Freear and Wetzel 1992; Mason and Harrison 1992b). Nearly half of the respondents reported that they had reasons beyond the strictly financial for raising outside equity capital, the most common reason being that the investor would bring additional expertise, advice, contacts, and credibility to the venture. In this study these motivations beyond the strictly financial attest to the value-added component of the informal venture capital market. Secondly, the research provides added evidence to support the existence of a complementary relationship between private investors and venture capital funds (Freear and Wetzel, 1990). As the data suggest (Table 3Figure 1 gives an overview summary), private investors typically invest smaller amounts in earlier stages of software ventures. In contrast, the institutional venture capital market prefers later-stage, and consequently larger size, deals. This size and stage dichotomy between private investors and venture capital funds found in the software industry is consistent with previous research on equity financing of entrepreneurial ventures (Freear and Wetzel 1990; Freear, Grinde and Sohl 1997). As the current and previous research indicate, even in the best of times, venture capital funds are not the place to look for very early-stage financing. Research on early-stage investing has identified the informal venture capital market as the major source of seed and start-up equity financing for entrepreneurial ventures. The data suggest that this is also the case for software entrepreneurs.

Twenty-three of the thirty ventures that raised outside equity did so in multiple rounds of financing. Comparing round to round pairs, in 90% of the cases the time between financing rounds was less than two

Figure 1
Private Investor and Venture Capital Fund Financing by Amount, Round and Stage



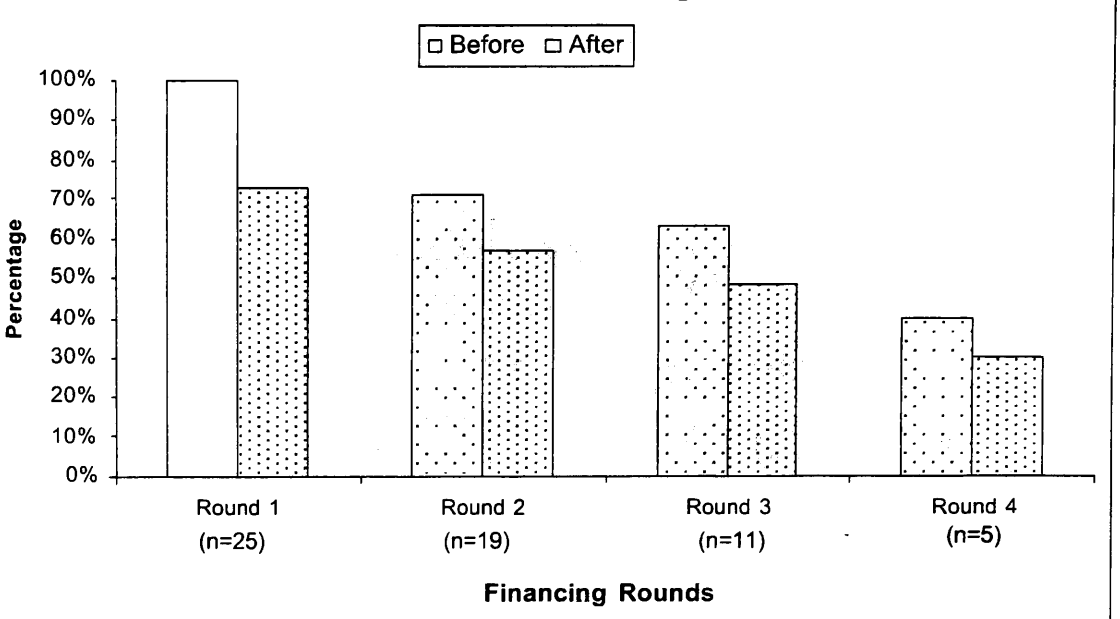
Source: Survey Data/External Equity Financing/Question 4.

years and in over half it was less than one year. In addition, neither the amount of dollars raised nor the source of the capital appeared to have had an impact on the elapsed time between successive rounds. In the high growth sector of the software industry, this short cycle investment process appears to be testimony to the rapidly changing environment of software development.

In terms of the ownership and control costs of outside equity, software ventures appeared to have been well positioned. After the first round of outside equity financing, the founding management team retained, on average, a 76% equity share of the venture. Figures 2 and 3

provide, respectively, the mean and median equity stakes of the founding management team before and after each financing round. Thus, the founding team relinquished less that one-quarter of the venture for an average first round of financing of $1,230,000. After a second round, with an average size of $2,071,000, the management team retained approximately half (54%) of the equity of the venture. In addition, there appear to have been no time-related effects on the size of the equity stake, with these percentages having remained relatively stable over the last decade. Recall that private investors participated in 27 rounds of financing, with an average amount raised per round of $527,000 (see Table 3). In order to secure this capital, the entrepreneur relinquished an average of 18% equity share in the venture. For the venture capital rounds (27 rounds at $1,164,000 per round), the average loss of ownership and control was 21%. Thus, it appears that while the amount per round doubles, the loss of ownership and control percentage remains about the same. This apparently counterintuitive result may be explained by the stage of the round. The private investor is the predominant player in the seed and start-up stage, while venture capital funds tend to invest in later stage deals. In

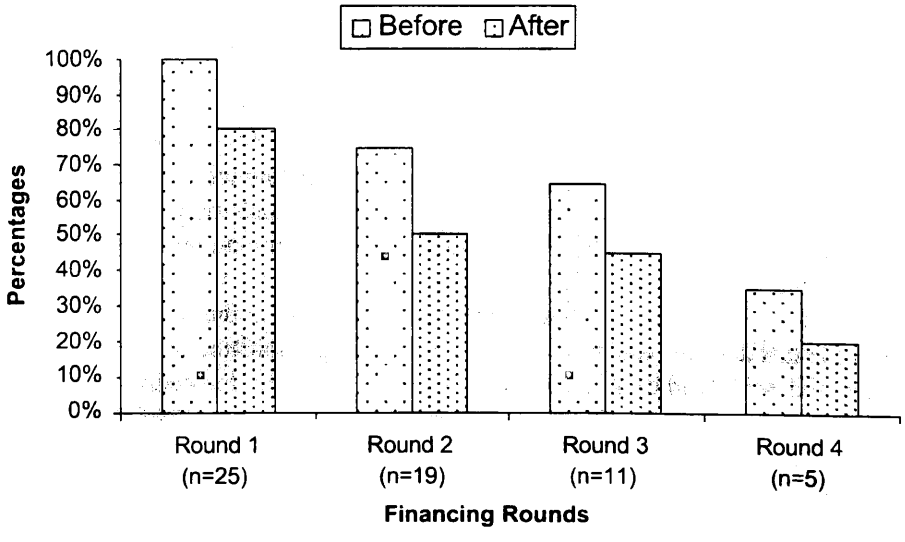
Figure 2
Mean Percentage of Equity Owned by Founding Management Team Before and After Each Financing Round



Source: Survey Data/External Equity Financing/Question 5.

these earlier rounds, the risk is likely to be greater than in later stage rounds. One would assume, however, that the total value of the firm is smaller at the early stage. This early stage combination of risk and

Figure 3
Median Percentage of Equity Owned by Founding Management Team Before and After Each Financing Round

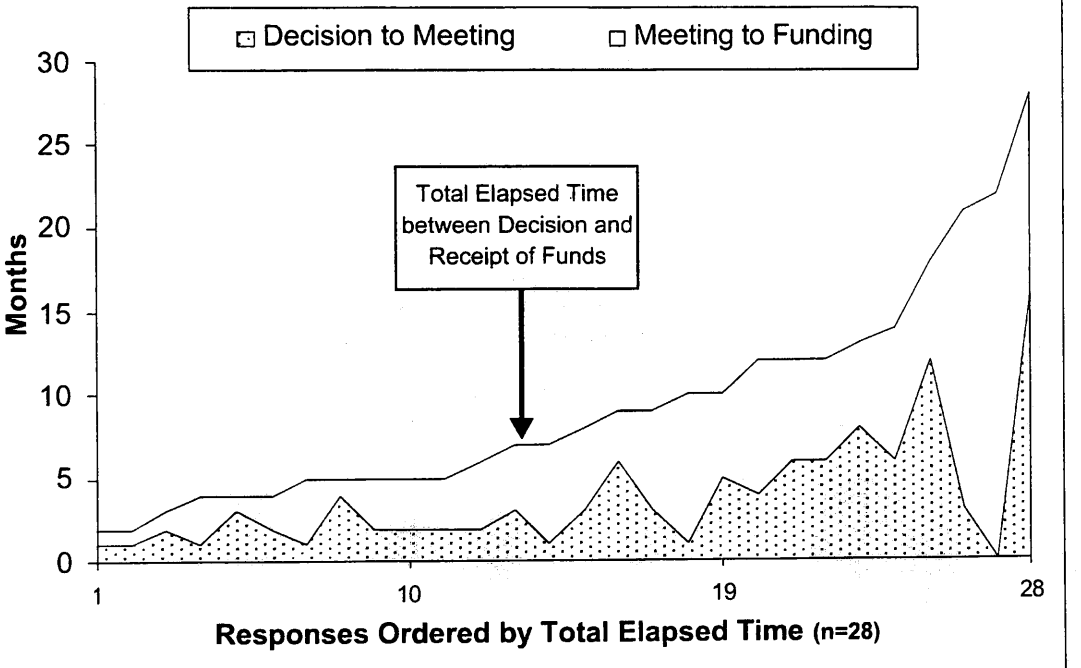


Source: Survey Data/External Equity Financing/Question 5.

valuation translates into a larger equity share for the dollar, at least in the software industry. In contrast, at the later stage, the risk of failure is less, at least in a relative sense, and the venture should have a higher value, other things equal, since the venture is further along the development cycle. Thus, the stage relationship of risk and valuation can explain the existence of an approximately equal ownership and control cost for a larger capital.

In an attempt to gain some additional understanding of the process involved in raising equity capital, software entrepreneurs were asked to provide details of the earliest round of outside equity financing that was in excess of $50,000. In half of the cases, private investors were the source of equity capital in this initial round of financing and venture capital funds were nearly a third. In addition, the rounds in this initial financing were approximately equally divided between seed and start-up financing. The ventures reported that, on average, a little over three and one-half months elapsed between the decision to seek funds and the first face-to-face conversation with an investor who later invested in the firm. Subsequent to this initial meeting, an additional six months usually elapsed before the receipt of funds. Figure 4 portrays data on the elapsed time from decision to meeting, meeting to funding, and total elapsed time. It appears that this six months period was consumed by the lengthy due diligence process involved in this type of early-stage investing.

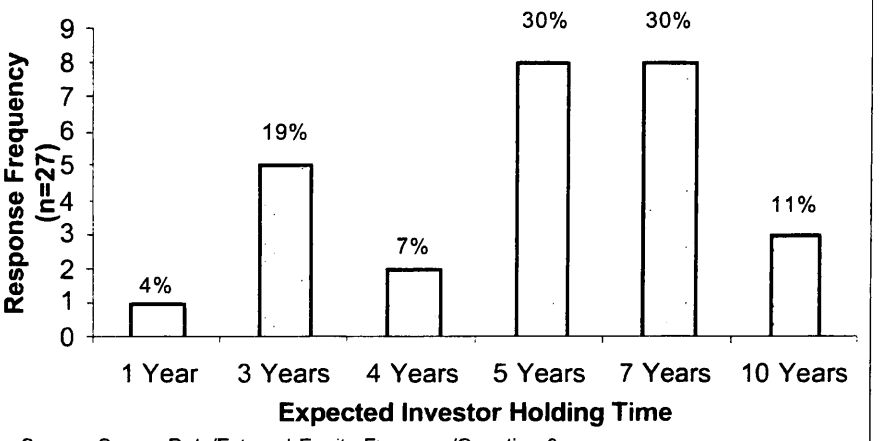
Figure 4
Elapsed Time Between Decision to Seek Funds and Receipt of Funds



Source: Survey Data/External Equity Financing/Questions 10 and 11.

Investors were similarly patient with respect to the length of time that they expected to hold the investment (see Table 4Figure 5), with 87% of the investors expecting to hold their investment up to seven years before cashing out. Investors expected to achieve a multiple of their original investment in the neighborhood of 7 times, or approximately a 32% annual compound rate of return on investment. Figure 6 shows the expected multiples of the original investment, and Figure 7 re-expresses those multiples as annualized percentages over the expected holding period. In the vast majority of cases (73%) investors did not specify an exit

Figure 5
Expected Investor Holding Time
(Earliest Financing Round in Excess of $50,000)

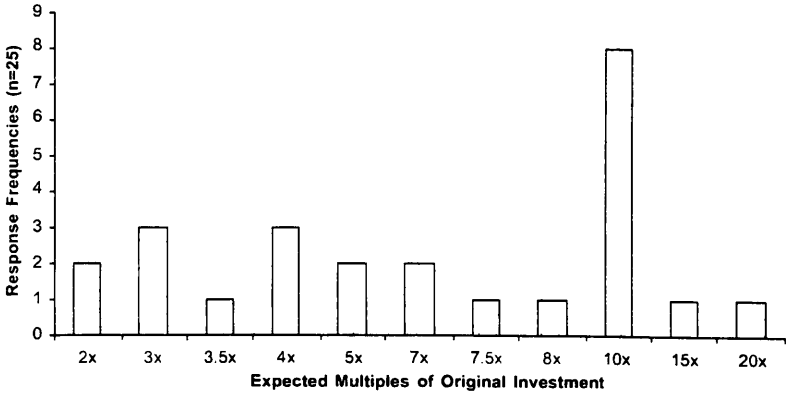


Source: Survey Data/External Equity Financing/Question 8.

strategy.

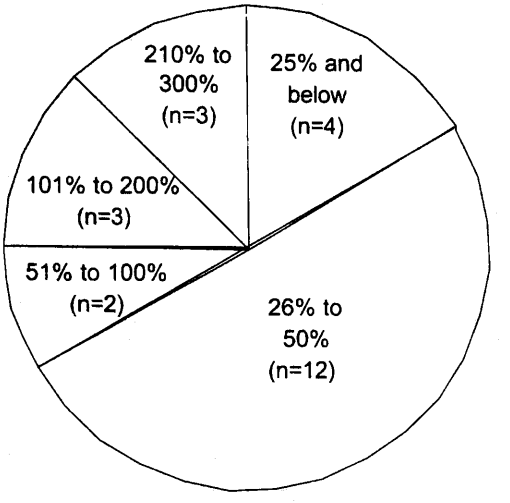
How did the software entrepreneur find this patient capital? Entrepreneurs reported that the best place to

Figure 6
Investor Expectations of Multiple of Original Investment
(Earliest Financing Round in Excess of $50,000)



Source: Survey Data/External Equity Financing/Question 9.

Figure 7
Annualized Return Based on Holding Period and Expected Multiple
(n=24)



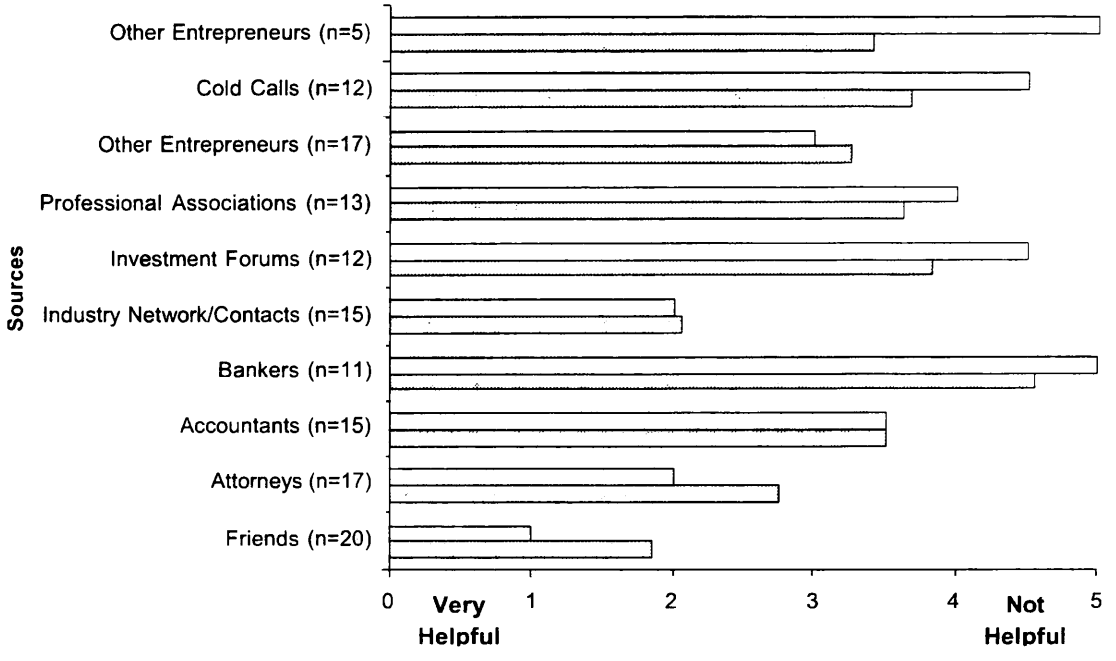
Source: Survey Data/External Equity Financing/Questions 8 and 9.

find first round investors was through friends, industry networks and contacts, followed closely by attorneys and other entrepreneurs (see Figure 8). They did not perceive bankers to be helpful in this process. In addition, while the source of angel financing was in general more than one investor, these investment groups were dominated by the presence of a lead investor. Thus, the search process for the software sector described in this research followed closely the description of the informal venture capital market for technology-based ventures in general (see, for example, Freear, Sohl and Wetzel, 1990).

While outside equity capital was part of the financing base of 29% of the software ventures, what can be deduced about the remaining 71%, who by choice or necessity did not have external equity in their capital structure? The data indicate that there were many software entrepreneurs who had succeeded without external equity financing. Recall that the software ventures in the study currently employed 32 people on average, representing a 28% increase in employment levels over the previous year. While employment growth rates for non-equity ventures (30%) appeared to be lower than for their equity based counterparts (35%), the difference was small. These conclusions were similar for both predicted employment growth (43% vs 47%) and forecast growth in the number of revenue generating products (51% vs 56%). The major difference between the two groups was in current employment levels, with non-equity ventures having employed, on average, 23 employees, and the equity ventures having been about twice as large (57 total employees). Thus, it appears that the lack of outside equity capital was not a major deterrent to the growth of software ventures, at least in the short term. Unfortunately, the effect of equity on long-term growth patterns cannot be ascertained from the data.

In a series of open-ended questions, software entrepreneurs expressed two sentiments that resonate throughout the general early stage equity financing market for technology-based ventures. The first was a general wariness of the institutional venture capital industry that revolved around issues of a general lack of patience and compatibility. One possible explanation for these less than complimentary observations may lie in the nature of the industry. The institutional venture capital industry is the visible segment of the market, as

Figure 8
Finding Investors - Helpfulness of Sources
(Earliest Financing Round in Excess of $50,000)



Source: Survey Data/External Equity Financing/Question 12.

opposed to the invisible informal market. This visibility attracts many unprepared and/or non-viable suitors to venture capital funds. Hence, rejection rates tend to be high, especially in light of the fact that the majority of the ventures in this study were in the early stage of growth. With the preponderance of institutional venture capital funds focused on late-early to later stage financing, it was perhaps inevitable that entrepreneurs perceived a lack of patience and compatibility on the part of venture capital funds.

The second concern raised by entrepreneurs was the issue of control: that it is better to avoid or delay seeking outside equity capital than to relinquish control at the early stage of the venture. As previous research indicates, the increasing rate of formation of business alliances and the role of bootstrapping offers innovative ventures the potential for acquiring the use of resources without borrowing money or raising equity financing from traditional sources (Freear, Sohl and Wetzel 1995a). Thus, in an industry in which alternatives to raising capital exist, entrepreneurs appear often to have taken advantage of business alliances and bootstrapping as a means of avoiding the loss of control inherent in raising external equity financing.

PRIVATE INVESTORS

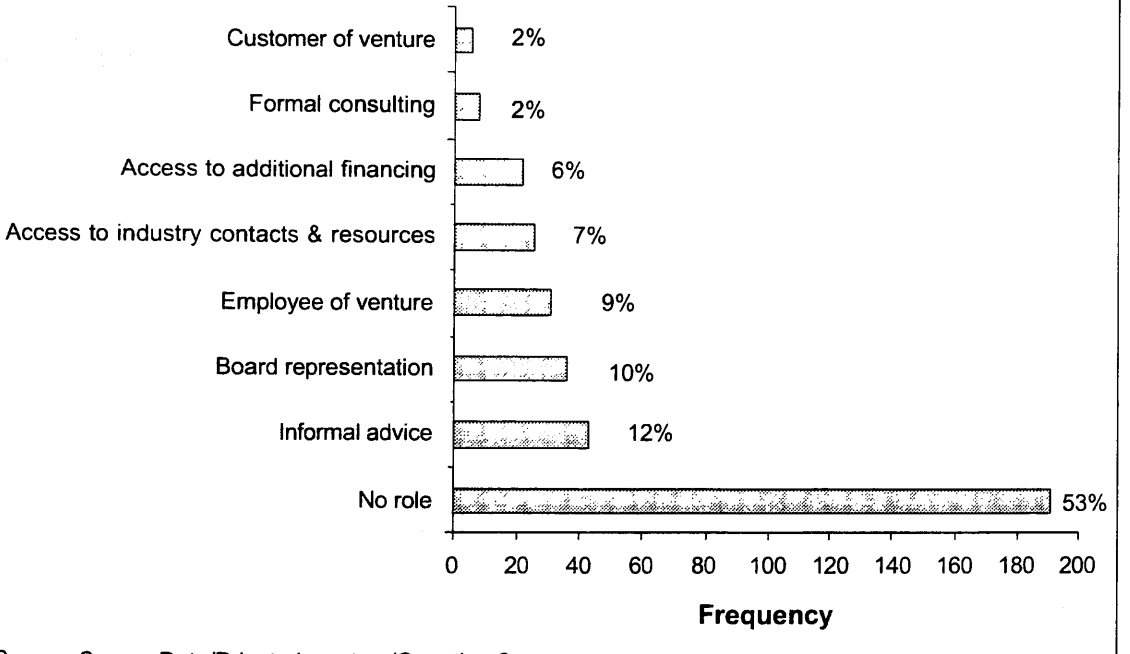
Given the important role of private investors in the seed and start-up stage of software ventures, this research study attempted to elucidate both the role and the characteristics of these "business angels." This study characterized a private investor as an individual who provided outside equity financing through an "arms length" transaction. The reason for the "arms length" distinction was to exclude the commonly referred to "family,

friends, and fools" from the private investor population.

Of the 30 ventures that raised $14 million in 27 rounds of outside equity capital from private investors, six of the ventures had multiple rounds of angel financing. In multiple rounds, the most common was two or three rounds of private investor financing. For the twenty-seven rounds, an average of slightly more than 7 investors participated in each round, confirming the notion that angels typically invest in groups. Almost three-quarters of the respondents noted the presence of a "lead" investor among the private investors. Excluding rounds in which there was only a single private investor, lead investors were to be found in rounds financed by as few as two and as many as 125 private investors. There are also examples of a venture being financed by 20 or 25 private investors, yet no lead investor was identified by the ventures.

A total of 219 private investors provided outside equity financing for 30 (27%) of the respondents, with most of the equity financing in the seed or start-up stage of the software venture. On average, each venture had nearly eight private investors, in addition to venture capital funds, as part of the external equity structure. Of these 219 private investors, 5053% had no role in the venture, other than that of receiving periodic financial statements and attending stockholder meetings (see Figure 9). However, several private investors participat-

Figure 9
Investors' Roles in Ventures



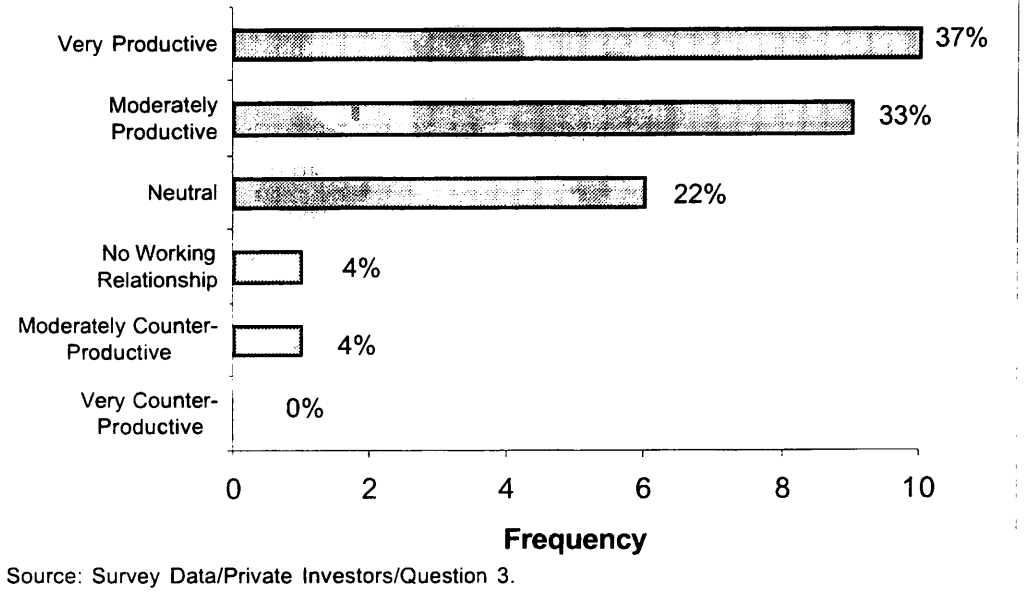
Source: Survey Data/Private Investors/Question 2.

ed in each round of financing (habitual private investors), and in all but one case (involving only one investor) angels engaged in multiple activities to assist in the development and growth of the venture. This value-added contribution of angel investors took several forms. For these active investors, 2625% provided informal advice as needed, access to additional financing, and/or access to industry contacts and resources., and 20% had representation on the Board of Directors, the two most common avenues for involvement. To a lesser extent, private investors provided access to relevant industry resources and contacts, provided access to additional financing sources, and were employees of the firm. Through their active involvement in the firm, these private investors represented a value-added approach to investing. While the activity of early

stage investors was noted, did entrepreneurs view this activity as a net benefit or a net cost of external equity financing? Seventy percent of the entrepreneurs considered their relationship with private investors to be productive (see Table 5Figure 10) and 8% viewed the advice as a net additional cost of the transaction.

What allowed these angels to be in a position to establish both active and productive relationships with the

Figure 10
Entrepreneurs' Relationship with Private Investors



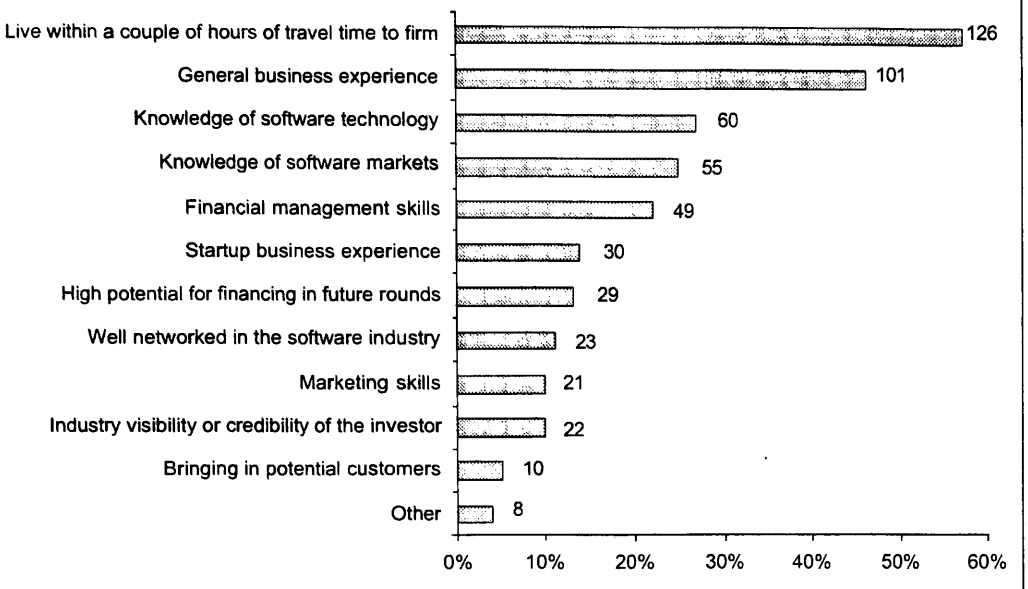
Source: Survey Data/Private Investors/Question 3.

ventures in which they had invested? The software entrepreneurs indicated that over half of their private investors possessed knowledge germane to the software industry, with 27% having knowledge of software technology and 25% having knowledge of software markets (see Figure 11). In addition, 46% of the private investors had general business experience. Nearly one-quarter of the angels were helpful in financial management issues, a quality critical in the early stages of development of a high growth venture. The data appear to indicate that general business skills were the important value-added contribution of angels. Since early stage technology-based ventures are unlikely to be short of technology but are likely to be short of general management expertise, angels were perceived to be providing the "know-how" where it was needed. Further facilitating the active investing role of angels, over half (51%) of the investors lived within a half-day travel time of the venture. Note that the estimate (51%) included all investors. It is surmised that a significantly larger proportion of active investors lived close to the venture, as opposed to all investors (both active and passive). This close proximity to the venture afforded the entrepreneur convenient access to the know-how of experienced investors. For the active investor, the ability to monitor the investment and provide assistance in growing the business was enhanced through close proximity to the venture.

CONCLUSION

This study set out to uncover both the myths and the realities that exist in the early stage development of software ventures by examining the frequency and characteristics of successful early stage equity financing strategies. Through an understanding of these ventures the research offers the next generation of innovative ventures guidance on the early stage strategies employed by successful software entrepreneurs.

Figure 11
Private Investor Characteristics



Source: Survey Data/Private Investors/Question 4.

Close to half of the software entrepreneurs planned to raise outside equity, with only a third succeeding in this endeavor. For those that did secure equity financing, smaller amounts in earlier stages of the software venture were provided by private investors. In contrast, institutional venture capital funds preferred later stage, and consequently larger size, deals. This size and stage dichotomy between private investors and venture capital funds that exists in the software industry is confirmed by current research on the equity financing of technology-based entrepreneurial ventures (Freear, Grinde, and Sohl, 1997). In terms of the cost of this equity, software ventures appear to be well positioned, with the founders typically having relinquished a 24% equity share for a first round of financing, as compared to a 30% equity share for the technology ventures as a whole. While outside equity was important to the quarter of the ventures that successfully engaged in the process, those ventures without equity financing appeared to experience somewhat smaller (but still quite strong) growth rates, at least in the short term. It appears that these non-investor backed ventures tended to rely on bootstrapping and, to a lesser extent, on business alliances, for a longer period of time than their equity financed counterparts. However, ventures with external equity were approximately twice as large as non-equity ventures in terms of the number of employees.

Private investors played a vital role in the financing of the early stage software ventures studied. In addition to capital, these investors added value to the venture through their active involvement in the development of the venture, including participation in more than one financing round. This value was derived from experience in start-up ventures and knowledge and contacts germane to the industry. As in other technology-based ventures, the software entrepreneurs considered their relationships with investors to be a productive one. In keeping with current research on start-up ventures in general, holding periods of 5-7 years confirmed the notion that angels provide patient capital, and the expected returns for these ventures (32% compound annual rate of return on investment) conformed to general new venture returns. Angels invested in groups with friends and associates, usually with a lead investor, and it appeared that the number of investors per round in the software industry was larger than in the technology sector as a whole. The private

investor market found itself once more to be largely a regional phenomena, with over half of the investors living close to the investment, and probably with an even larger percentage of the lead investors located within a day's travel time of the investment.

This research represents an attempt to delineate the early stage equity investing market along economic sectors. While in many instances the software sector reflects general technology industry market characteristics, certain characteristics distinguish the software industry. While researchers are continually developing the knowledge base for the early stage equity financing market, attempts to study this market along sectoral dimensions may lead to insights that benefit both the specific sector and the market as a whole.

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