GATEKEEPERS OF VENTURE GROWTH:
The Role And Participation Of Women In The Venture Capital Industry

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From 1990 to 2000, venture capitalists funded the growth of more than 23,000 high potential businesses in the United States and, of these, more than 1,800 later issued initial public offerings.[i] The entrepreneurs leading these companies were successful in convincing equity providers to invest in their entrepreneurial dreams, but they should not be thought of as the "lucky ones." Getting equity funding wasn't easy, even for the most seasoned of these entrepreneurs. Those who secured funding were hard drivers, dedicated to creating the next Fortune 1000 company. Unfortunately, very few of them were women.

While the rate of women's participation in new venture creation around the world was at an all time high during the 1990s, their ability to grow their companies by accessing equity capital was extremely limited. Nearly 20% of the IPOs brought to market from 1995-1998 were women-owned or managed firms, providing evidence of women's ability to lead high-growth, high-value firms, yet only 2% of these were venture funded.[ii]

Venture Capital: Is It Essential?

For most high potential entrepreneurs who sought capital in the 1990s, time was of the essence. They needed to quickly claim market space, establish patent control of a new technology, or gain adoption of a breakthrough innovation. They couldn't wait patiently for their companies to generate funds internally. For them, outside equity investments were essential, so

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[2] Grateful appreciation is extended to Linda Sauber for assistance in database construction.

they wrote business plans, created elevator pitches, and developed short, pithy power point presentations. They pounded the pavements of Sand Hill Road in Menlo Park, CA and Route 128 in the Boston, MA area, knocking on doors and trying to get the attention of the venture capital community. But, despite enormous effort and time, very few equity-financed deals originated from business plans received "over the transom."

Instead, an investor's knowledge of an entrepreneur's capabilities – knowledge based on a direct relationship, a strong recommendation from a trusted colleague, or a referral from another VC partnership looking for a co-investor –determined whether the entrepreneurial team was granted an audience. The record of investments throughout the history of organized venture capital suggests that "who you know" may be as important as "what you know."

Networks Link Entrepreneurs to Equity Markets

If "who you know" is critical, then being connected to the right people may be a necessary first step to getting the attention of potential investors. For men seeking funding, getting access to the venture capital network often presents a major challenge, but for women, the challenge may be all but insurmountable. Women are rarely included in the investors' networks and they have very few point of access through referral. Although women are active in building social networks, their circle of contacts contains few individuals who can "chauffeur" their deals to equity investors[iii].

The Investor Community is Overwhelmingly Male

The venture capital industry has been characterized as male-dominated, small, and geographically concentrated.[iv] In fact during the most recent decade, entrepreneurs who received an audience to present their plans were very likely to be sitting across the desk from a group of partners who were "white males between the ages of 35 and 50 who got their M.B.A.s from Harvard or Wharton."[v] One survey of 145 venture capitalists over 98 firms showed that more than 67% had an MBA and 56% graduated from Stanford & Harvard. A majority had more than 10 years business experience for which 35% of the respondents was in corporate management were 30% were former entrepreneurs.[vi] Did the personal profiles of these investors make any difference in how they saw the world and which entrepreneurs they would invest in? Did characteristics of the investors influence which entrepreneurial teams were given access to the inner sanctum of the investment world?

A top-tier group of venture capital firms dominates the industry and controls a significant majority of funds invested.[vii] Trish Costello, CEO of the Center for Venture Education remarks that, "*most venture capitalists have a tight and trusted circle of business colleagues who act as gatekeepers for high potential deals, and women have rarely been networked into this small inner circle.* If men dominate the industry it's unlikely that women will connect directly with key gatekeepers in the industry. Network studies show that people associate with others like themselves. Women tend to associate with other women; men with other men. Consequently, if few women occupy investment decision-making positions in the venture capital industry women entrepreneurs will have fewer points of entry to the negotiation table than will their male counterparts.

Consequences of Being Outside the Right Network

Failing to get access to the investor network may provide one explanation for why women received less than 5% of the venture capital investments made in the United States over the past 40 years.[viii] What are the consequences of failing to get venture funding for women with high growth businesses? If they are unable to access venture capital, entrepreneurs have to seek other (and often more costly) sources of funding or they must slow their companies' growth plans. In either case, they will fail to get the guidance and access that VC investors often provide to their portfolio companies.

Most venture capitalists take an active role in the entrepreneurial companies they fund, sometimes as advisor, board member, or even part of the top management team during the early days of the company's growth. Many of these VC investors are seasoned entrepreneurs in their own right. In addition to the capital they supply, they also provide functional and financial expertise, information about suppliers, customers, distributors, leads on where to recruit key management personnel or potential partners, and in-depth knowledge about particular industries. Access to these resources and expertise can make the difference between whether companies become leaders in their industry, exit early, or subsist as an "also ran."

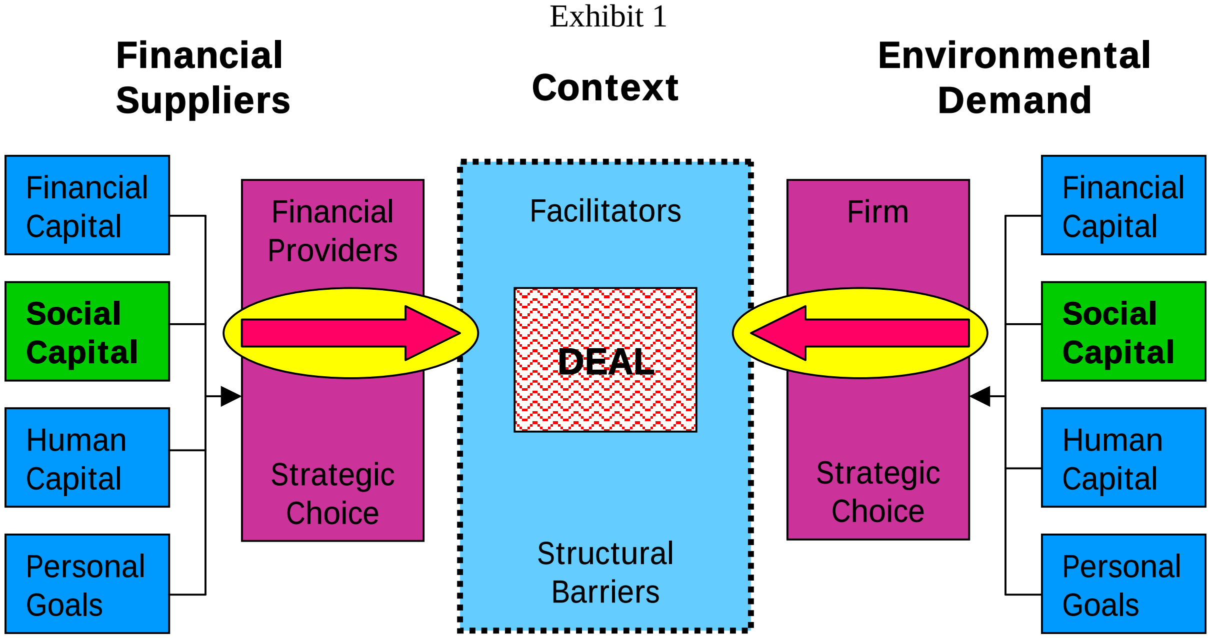
Why Haven't Women Gotten Equity Funding

Most venture capitalists insist that they invest in great deals and that gender does not play a part in their decision-making. If this is the case, why is it that so few of the companies in their investment portfolios are led by women? Women led 28 % of all U.S. businesses in 2002, and were partners or major shareholders of 46 %. Their businesses employed nearly 10.1 million employees and generated nearly $1.5 trillion in sales.[ix] Yet, despite their successes, few of these businesses received equity funding.

Numerous arguments have been offered for why more women-led businesses don't receive equity investments. For example, some argue that women lack the necessary human capital: the education, experience, or management skills required by venture investors.[x] Other explanations include strategic choice of industry or business concept and the lack of sufficient personal financial capital.[xi] Others suggest that women are not motivated to have venture partners because they prefer to retain full control of the business[xii] or want to build lifestyle or income-substitution businesses rather than businesses with the rapid growth potential sought by equity investors.[xiii] There is research that supports some of these explanations – in some cases. There certainly are some women entrepreneurs who choose to keep their businesses small and there are many entrepreneurs – both male and female – who lack sufficient human and financial capital to support high growth companies. However, there are many women entrepreneurs who do possess high growth aspirations, along with the education, industry and managerial experience that make them worthy of venture capital support.[xiv]

The following model indicates the key factors that entrepreneurial firms need to mobilize in order to achieve a satisfactory deal. It indicates the attributes that must be aligned in order to qualify the venture for consideration, but it also demonstrates how the context (e.g., the environment or regional location) can increase or reduce barriers that affect the exchange between entrepreneurs and financiers. The arrows indicate the role that social capital plays in the process. The model suggests that, even when the entrepreneurial team has adequate financial and human capital and its goals are aligned with the strategic choice favored by equity investors, the entrepreneurs may fail to get to the negotiating table if they lack the relevant network connections and social capital.

Exhibit 1



The model emphasizes the importance of the network connection. It suggests that increasing the number of female venture capitalists would enhance opportunities for highly qualified women entrepreneurs to establish network links. We know that women are more likely to be involved in networks with other women, so having women in corresponding leadership positions in the venture capital industry could enhance female entrepreneurs' chances of establishing contact and ultimately presenting their business proposition to potential investors and negotiating for equity investments.

Women Venture Capitalists: Do They Make a Difference?

We set out to test the hypothesis that having more women in decision-making roles in the VC industry would provide greater access to women entrepreneurs seeking capital. Our investigation centered around three key questions:

1. Are there highly visible and experienced women venture capitalists in the venture capital industry? If so, where are they?
2. Do these highly visible and experienced women venture capitalists influence the decision-making models, processes, norms and outcomes within their firms?
3. Do these highly visible and experienced women venture capitalists increase the flow of women-led deals to their partnerships?

Research Design

To answer these questions, we designed and implemented a research methodology that identified women on managerial tracks in the venture capital industry. We selected *Pratt's Guide to Venture Capital Sources* as the standard of industry membership. Though there are other directories of the industry, including the membership roster of the *National Venture Capital Association* and *Galante's Venture Capital and Private Equity Directory*, we believed *Pratt's* to be the most comprehensive and consistent source of information. We choose the 1995 and 2000 editions in order to provide us a snapshot of managerial women in the industry at two distinct points in the midst of the venture capital boom. This enabled us to identify and track women venture capitalists progress over a 5-year period.

We reviewed every firm listing published in the 1995 and 2000 editions of the *Guides* to identify females in management positions[xv], the rank they held, and characteristics of their partnership firms. In addition, we selected a random sample of men in firms that listed no females so we could compare the experiences of managerial women with those of men. We considered this latter sample to represent men in male-managed partnerships. The combined data set includes industry and firm demographics at two specific points in time and allows tracking of changes from 1995 to 2000 at industry, firm, and individual levels. [xvi]

In addition to analyses of archival data reported in *Pratt's Guides*, we identified and interviewed "high profile" female venture capitalists to develop a more complete picture of women's experience in the industry. We selected women who were of senior rank (partner or managing director), with five or more years experience in the same partnership, and early stage funds of $100 million or more under management. We judged these female venture capitalists as "high profile" because they had been with the same firms for a minimum of five years and were "visible" to stakeholders in the industry, including women entrepreneurs, through their consistent

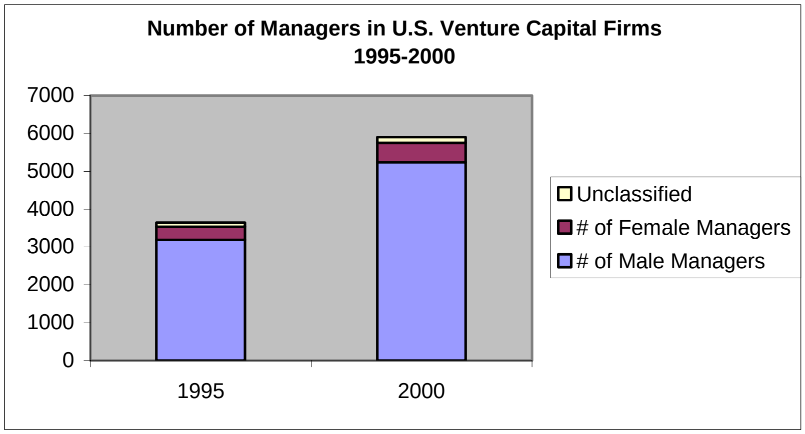
Pratt's Guide to Venture Capital Sources listings. Furthermore, their five-year tenure in the industry gave them sufficient time to have had an impact on their firms' decision-making models and processes.[xvii]

Only a Few "Highly Visible" Women Found in the Industry

It's widely recognized that a few women in the venture capital industry have achieved remarkable and highly acclaimed success – including industry veterans Pat Cloherty (Patricof), Jacqui Morby (TA Associates), Ann Winblad, (a founder of Hummer, Winblad), and Kathryn Gould (a founder of Foundation Capital). These women are "exceptional" not only in their accomplishments, but also in their participation in the industry. The archival data for 1995 and 2000 shows a significant gender gap in the management ranks of the U.S. venture capital industry.

In 1995, *Pratt's Guide to Venture Capital Sources* listed 346 professional women[xviii] in the venture capital industry, representing approximately 10% of management track venture capitalists (e.g., including partners, principals, and associates). The number of women decision makers increased to 510 between 1995 and 2000, but female representation in the industry actually fell slightly to 9% of the total. This is noteworthy given the tremendous growth rate that was occurring in the industry during this time period -- both in the number of managers and in the number of partnership firms. As shown in Exhibit 2 the total number of people listed in the industry guides increased from 3,647 in 1995 to 5,903 – a 62% increase. The number of men in the industry increased by 64%, whereas decision making women in the industry increased by only 47%.

Exhibit 2

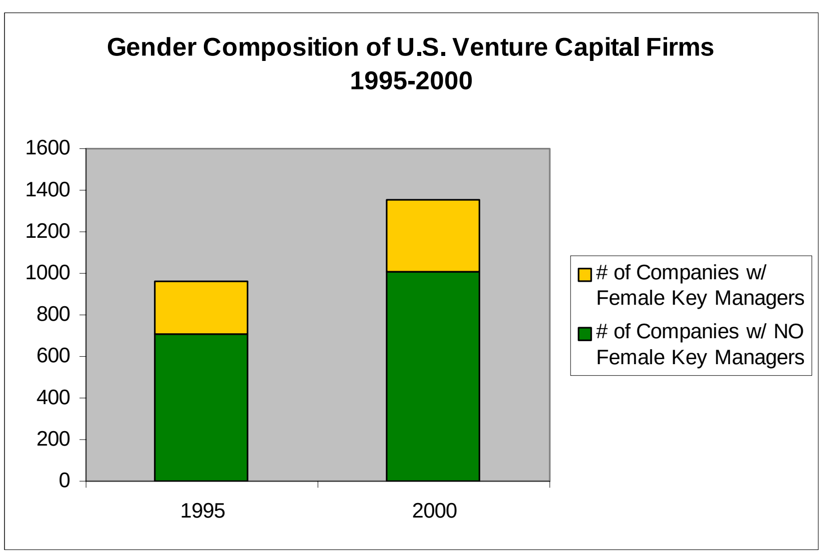


1995 N=3,647; 2000 N=5,903

Women Were On The Managerial Track In Only About ¼ Of U.S. Venture Capital Partnerships in 1995 and 2000.

The number of U.S. venture capital partnerships increased by 40+% between 1995 and 2000. Only 27% of these partnerships had management track females in 1995, and that number had slipped to just 25% in 2000. As shown in Exhibit 3, the number of partnerships employing management track females grew 35% during the five year time period, but the growth rate didn't keep pace with the 40% industry growth pace for partnerships overall.

Exhibit 3

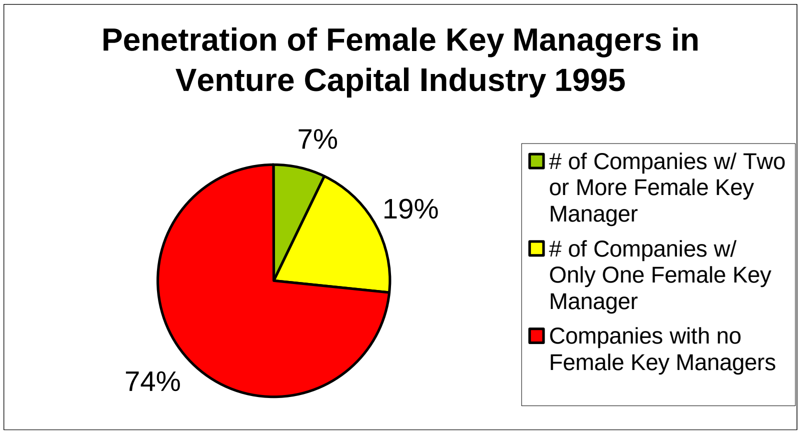


1995 N=965; 2000 N=1,355

Managerial Women in the U.S. Venture Capital Industry are Isolated

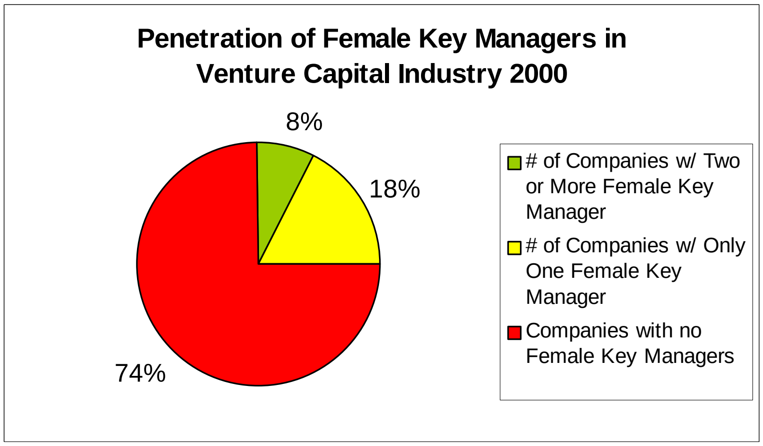
Managerial women working in the venture capital industry often find themselves somewhat isolated in their practice. Many are the only woman of senior rank in their partnership. In 1995 nearly 75% of the firms with women on managerial track had just one woman in management, and there was little change by 2000. Nearly 70% of firms with managerial women in 2000 had just one senior woman. As shown in Exhibits 4 and 5 having two or more female key managers in a partnership was extremely rare.

Exhibit 4



N=965

Exhibit 5



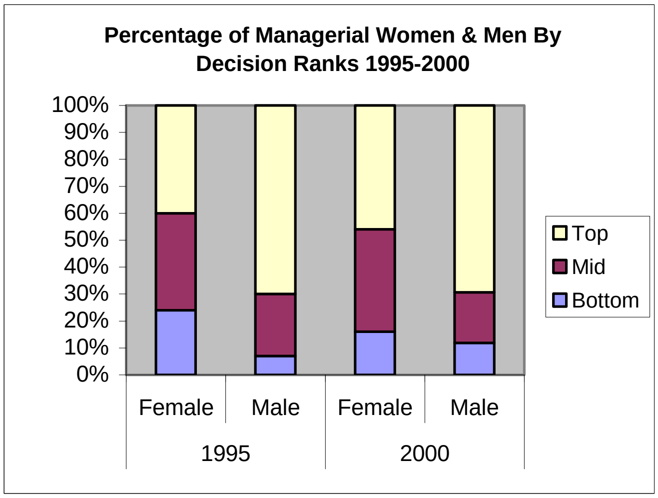
N=1,355

Women Managers Are Heavily Clustered In Entry- And Mid-Level Positions.

The majority of women managers in the V.C. industry were in entry and mid level positions during 1995 and 2000, which means they participated in the research but were not likely to have much input into the final investment decisions. The extent to which managers in the venture capital industry participate in the investment decision process varies by managerial level within the partnership. Most senior managers are actively involved with the investment decision, either as a part of a group process or, in some cases, acting independently. Individuals in middle level positions have less direct responsibility for investment decisions, instead providing support services for the operation of the partnership itself. At the low levels of the firms staff are most often responsible for researching industries, companies for potential investment, or the portfolios' performance. We categorized every individual in our dataset as a top, mid or low-level decision maker.[xix] Top-level titles included Chairman/CEO, Director, Executive Director, or General Partner. Mid-titles were Administrative General Partner, Marketing Director, Assistant Vice President, CAO/CFO/CFD, or Comptroller, Principal. Examples of job titles corresponding to the low level included Analyst or Associate.

Exhibit 6 displays differences between the distribution of managerial women and managerial men across the three decision levels. The results show substantial differences. In 1995, 70% of managerial men were in top decision positions in their firms whereas only 40% of women managers were. Women were three times more likely to occupy lower level decision positions (24% vs. 7%). By 2000 women had improved their decision making clout somewhat. The percentage of managerial men at the top was still at 70%, but the percentage of women who held that rank had increased from 40% to 46% by 2000. While their representation at the top is still remarkably lower than that of managerial men, the 6% increase marks progress nonetheless.

Exhibit 6



1995 N=607; 2000 N=1,025[xx]

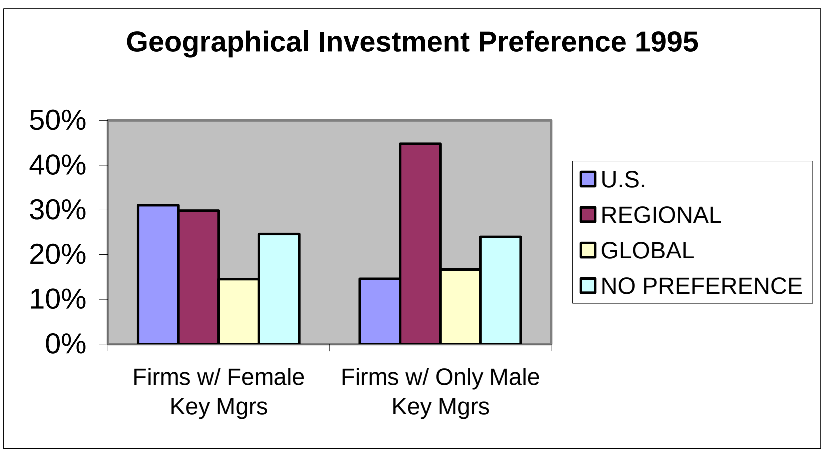
Managerial Women Are Associated With Larger Partnerships That Have a National Scope

The venture capital partnerships that included managerial women in their ranks were substantially larger, both in terms of number of managers as well as the amount of funds under management than those managed by men. In 1995 the average number of managers in partnerships that included women was 5.27, while in male managed firms it was 3.31.[xxi] The magnitude of this difference persisted in 2000 when the average number of managers in partnerships that included women was 6.21 in comparison to 3.68 for all male partnerships. The differences are statistically significant in both years.[xxii]

Similarly, funds under management in firms with managerial women were significantly higher than those at firms managed only by men. In 1995 the median[xxiii] size of funds under management in partnerships with managerial women was $67 million, in firms managed by men $45 million. In 2000 the comparison median value had increased to $135 million at firms with women managers vs. $67 million at firms managed by men. The differences were statistically significant in both years.[xxiv]

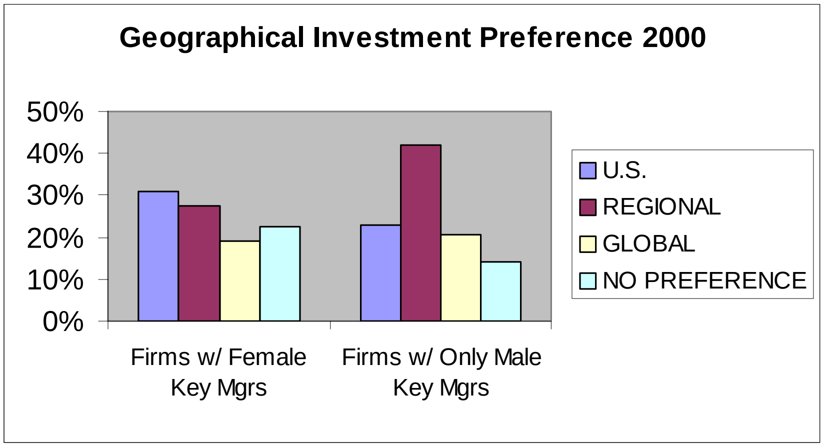
In addition to size differences between the two types of firms, the geographic investment preference also differed significantly in both 1995 and 2000.[xxv] Male managed firms were much more likely to prefer regional investments which probably corresponded to their smaller size. Partnerships with managerial women were larger and more likely to represent a nation wide scope for their investments. One noticeable change across the five-year period was the fact that male-managed firms increased their preference for nation-wide investments. In 1995 only 15% of these firms indicated a broad scope preference, by 2000 the number had increased to 22% noting a national preference. Global investments were preferred by about 15% of the firms in 1995 and the number had increased to about 20% in 2000. There was essentially no difference between the global preference of male-managed and firms with managerial women (see Figures 7 & 8).

Figure 7



N=344[xxvi]

Figure 8



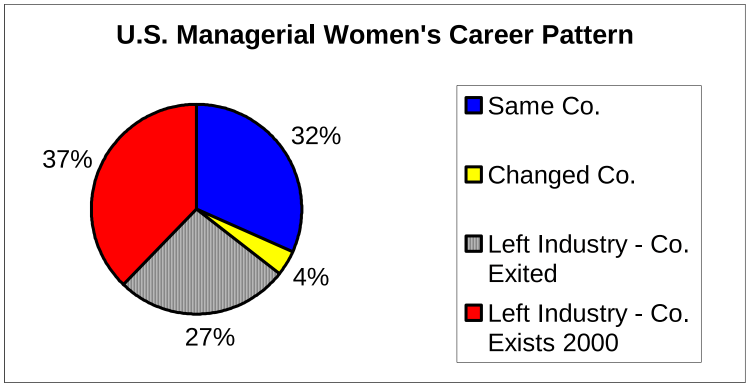
N=476

There was no significant difference in the age of partnerships that include managerial women and those that do not. The average age of firms in the sample was 13 years.[xxvii] Partnerships that were added to the database in 2000 were slightly younger (average age=11.25) probably reflecting the tremendous number of new partnerships that had been established during the five-year period.

Managerial Women Substantially More Likely to Leave V.C. Industry

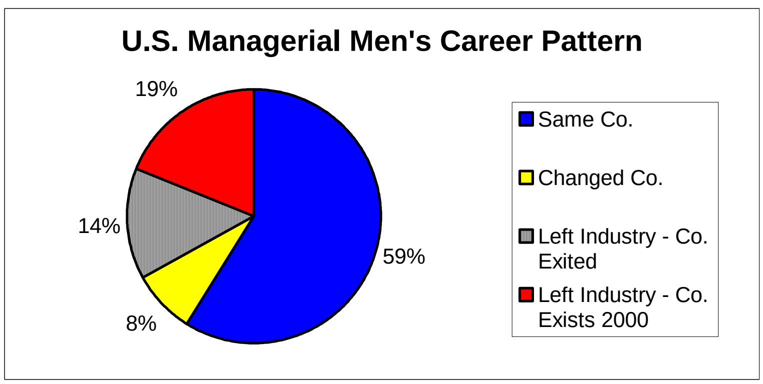
Our first research question asked whether there were highly visible and experienced women in the venture capital industry and, if so, where were they. One measure of experience is the level of decision-making responsibility as we show above. Another is the length of an individual's tenure in the industry. Between 1995 and 2000 managerial women were almost twice as likely to leave the industry as their male counterparts (64% of women left vs. 33% of men) (see Exhibit 9). Managerial men who were in the industry in 1995 were much more likely to be at the same company (59%) in 2000, although a small percentage had changed companies within the industry (8%) during the intervening years (see Exhibit 10). Hardly any of the managerial women had changed companies. The overwhelming majority exited the industry, nearly 30% apparently in concert with their company leaving the industry.

Exhibit 9



N=345

Exhibit 10



N=311

Managerial women who exited the industry were more likely to leave large companies.[xxviii] There is no relationship between size of the company and male key managers departing from the industry.

Summary Statement: The data shows that although there are some highly visible and experienced women venture capitalists in the venture capital industry, their numbers are few. Despite the dramatic growth in the U.S. venture capital industry between 1995 and 2000, both in number of partnerships and number of managers, women's representation in managerial

roles did not grow over this time period. Women were on the managerial track in only about ¼ of the partnerships, and when they were in senior management positions they tended to be the only managerial woman in the partnership. Women were more likely to work in larger partnerships, those with more managers and with larger funds under management that have a nation-wide investment focus. Although they made some strides in moving into more prominent decision making positions over the five year period, women are still more heavily clustered in entry and mid levels than their male colleagues. Finally, women appear to have far less experience than their male counterparts. Many don't stay in the industry long enough to accumulate the experience necessary to attain high visibility. They are much more likely to leave the industry.

The scarcity of women in responsible investment decision-making positions in the industry puts increased emphasis on our second research question:

2. *Do Highly Visible and Experienced Women Venture Capitalists Influence the Decision-Making Models, Processes, Norms and Outcomes Within Their Firms?*

In order to understand how women might influence their partnerships' decision making, we first wanted to identify those partnerships that had women in senior decision making roles for at least five years. We focused only on those partnerships that were listed in both the 1995 and 2000 *Directories*. Of the 352 partnerships included in the 1995 sample, 249 also were still listed in 2000 representing a 70% survival rate.

The Survival Rate of Venture Capital Firms with Managerial Women Doesn't Differ From Those Managed by Men.

The survival rate of all male venture capital partnerships was slightly higher than for comparable firms having women key managers. Over 75%[xxix] of the male only firms were listed in both 1995 and 2000, compared to just about 70%[xxx] of firms with managerial women. The difference is not statistically significant.

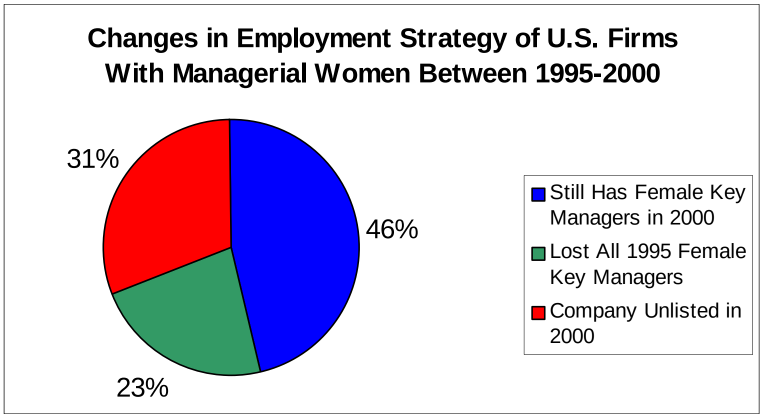
The Employment Strategy of Partnerships Committed to Managerial Women in 1995 Changed More Substantially Than That of Male Managed Firms

The inclusion of managerial women in 1995 can be viewed as a firm's commitment to diversity in the workforce. These were the companies that included women in their managerial ranks and publicized that commitment by listing women in the *Directory*, signaling the partnership's diversity to the marketplace. Similarly, those listing only male managers tacitly communicated to the marketplace their management structure and implicitly, the nature of the firm's employment strategy. By comparing the 1995 employment structure with that of 2000 we have a measure of long-term commitment to a diversity strategy.

Overall, the managerial employment strategy of firms surviving from 1995 and 2000 changed substantially, and there was a statistically significant difference between the employment pattern change in male managed firms and firms with managerial women.[xxxi]

As shown in Exhibit 11 only 46% of 1995 partnerships with managerial women retained their employment strategy and had at least one woman on managerial track in 2000. Nearly 25% of the 1995 firms had lost all managerial women, even though the partnership still existed in 2000.

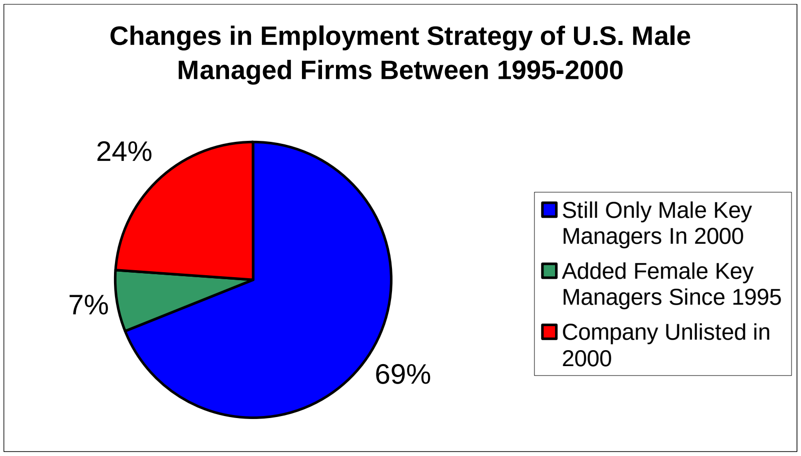
Exhibit 11



N=256

In contrast, Exhibit 12 shows that nearly 70% of the 1995 male managed partnerships retained their male only management structure in 2000. Only 7% of the male managed firms had departed from this employment strategy and included managerial track women in their Directory listing.

Exhibit 12



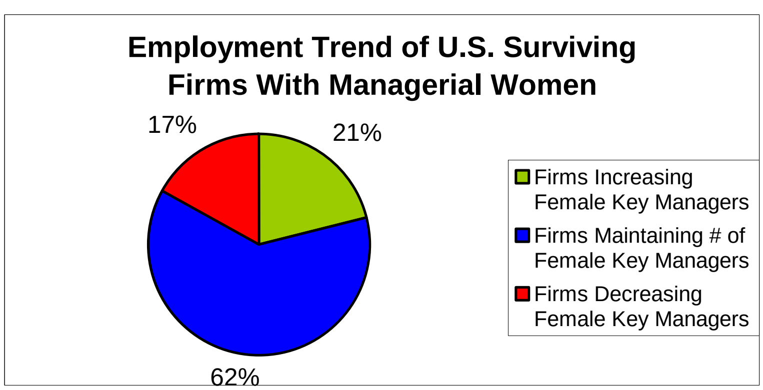
N=96

Having Women in Managerial Roles Doesn't Lead to Adding More

A review of the employment changes among the partnerships that had the same management employment strategy in 1995 and 2000 reveals that having women in managerial roles doesn't necessarily encourage the addition of more managerial women. As shown in Exhibit 13, of the 118 partnerships that reported having managerial women in both 1995 and 2000 only 21% had increased their number of managerial women. In fact there is a negative correlation between the number of managerial women in 1995 and the net change in their number by 2000.[xxxii] Almost 17%, although still reporting women on managerial track, had reduced their number of managerial women by 2000. Over 60% had the same number in both years. Of the 25 companies that had added managerial women, 18 had added one woman in a managerial track, four partnerships had added two women, and three companies had added three.

There also is a significant and negative correlation[xxxiii] between the net change in managerial women at these companies and the percentage of female managers present in 1995. In other words, the higher the ratio of female to male managers in 1995, the lower the number of managerial women added in 2000. Females comprised almost ½ of the key management team in companies that lost women between 1995 and 2000 (45%), and about 1/3 in partnerships that had the same number of managerial women in both years (36%). Managerial women comprised just over 20% of the managers in firms that had increased their number of women on management track by 2000. These findings question whether there is an implicit rationale operating in the industry that having "one or two is enough".

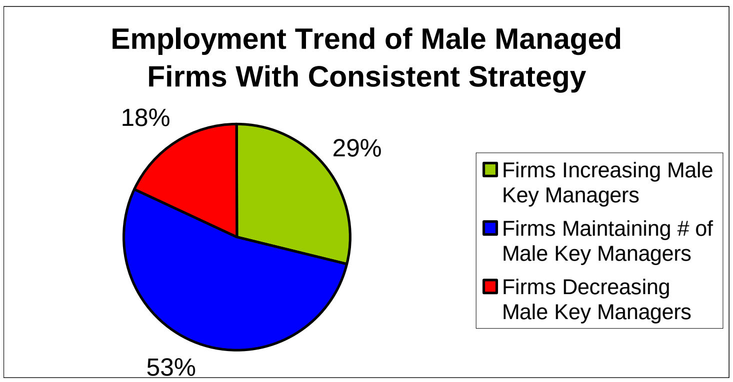
Exhibit 13



N=118

In contrast, 1995 all male partnerships still in the industry in 2000 were more likely to have added male managers, but they also were more likely to have lost more of their managerial cohort. As depicted in Exhibit 14, almost 30% of the 1995 partnerships had added male managers. Only 53% of the partnerships had maintained their numbers at the managerial rank in comparison to 64% of firms with managerial women.

Exhibit 14

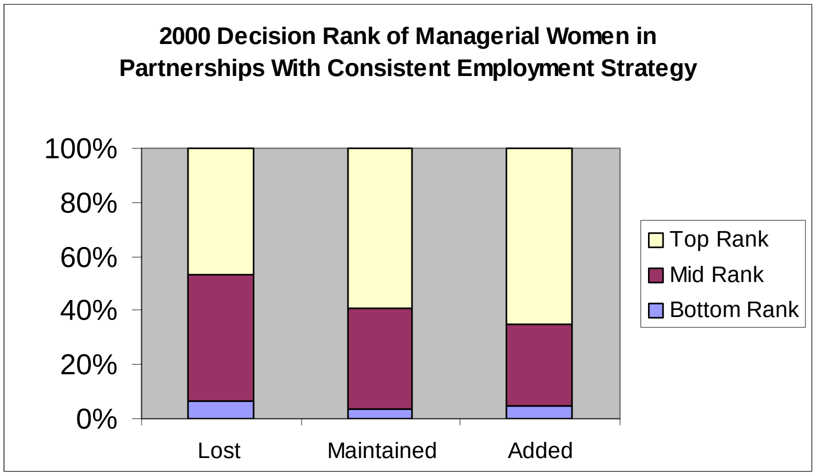


N=66

Partnerships with Managerial Women in 1995 That Increased Their Numbers By 2000 Added Them at the Top Level. Male-Managed Partnerships Added Women at Mid-Decision Level.

Partnerships with managerial women in both 1995 and 2000 that increased the number of women on management rack, had added women with substantial decision discretion. As shown in Exhibit 15, 65% of those added were at top decision rank, 30% at the mid rank. The exhibit also reveals that managerial women at companies that had maintained their number of women on managerial track had promoted many of them. Over 50% of managerial women in these partnerships were at the senior most decision rank in comparison to 40% in 1995 as illustrated in Exhibit 6.

Exhibit 15



N=118

Only 10% of the 1995 male managed firms had added women to their managerial ranks by 2000. Five had added one managerial woman; two added two women. Almost 75% of these new women were at the middle decision level in 2000.

Partnerships with the Same Number of Managerial Women in 1995 and 2000 Were Smaller Than Those That Had Lost or Gained Women by 2000.

There is a significant difference in the size of partnerships that had managerial women in 1995 that had maintained, lost or gained managerial women by 2000. Partnerships that had the same number of managerial women in both years had significantly smaller funds under management in 1995, [xxxiv] and had significantly fewer managers overall [xxxv] than partnerships that added or lost managerial women during the time period. The average number of key managers in 1995 at companies that lost female key managers by 2000 was 7.4. The average number of managers at partnerships where managerial women had been added was 7.6.[xxxvi] Partnerships with the same number of managerial women in 1995 and 2000 averaged 4.6 managers.

There is no significant difference in the age or size of 1995 male managed partnerships that had added, maintained or lost male managers by 2000.

Summary Statement: The archival data from Pratt's Guides to Venture Capital Sources indicates mixed support for the supposition that highly visible women venture capitalists are influencing the processes, norms and outcomes within their firms. Among partnerships that were in the industry during the five-year time period, women increased their presence in top managerial positions indicating that they were better positioned to make change. Partnerships that increased their number of women added them at the top level. However, having women in managerial roles in 1995 did not predict the addition of more women in 2000. Only 22% of the partnerships increased their number of managerial women by 2000. Additionally, the commitment to maintaining a diverse managerial structure in those firms seemed to weaken over the time-period. Only 45% of the 1995 partnerships with managerial women retained their employment strategy and had at least one woman on managerial track in 2000. Nearly 25% of the surviving firms lost all managerial women. Changes in 1995 male-managed firms did not make up the shortfall of women in top decision positions. Only seven percent of the 1995 male managed firms had added managerial track women by 2000 and these were added at the middle level of the partnerships.

For additional insight about the influence of highly visible managerial women in the industry we interviewed women who were listed as key managers by their venture capital partnership in both 1995 and 2000. From the *Pratt's* Guides we identified 109 such women professionals. We narrowed the list of include only those women who met the criteria of senior rank (partner or managing director) with five or more years experience in the same partnership with funds of $100 million or more under management. The highly specified subset included only 34 women. These female venture capitalists had both seniority and longevity and were deemed “visible” to women entrepreneurs through the *Pratt’s Guide to Venture Capital Sources* listings. Interviews were conducted using a combination of structured and open-ended questions. The questions were designed to better understand the roles women partners and managing directors played in their firms’ decision-making rules, processes, and behaviors and to answer our third research question:

3. Do highly visible and experienced women venture capitalists increase the flow of women-led deals to their partnerships?

A field test interview was conducted with a female industry veteran who changed firms in 1996. She provided useful feedback on the structure and direction of the interviews.

Changes in Venture Funds In Which Women Are Partners

The average tenure of the “highly visible” female partners interviewed was 13 years, with a range of 7-24 years. Several of the women worked in the industry longer than the five year time period being studied, and were with other venture firms before joining their current group. Two founded their own venture funds – others had deep experience in venture capital or related experience in banking. Several worked with their partnerships as consultants before being asked to join the team.

None of the women interviewed participated in funds that specifically targeted female entrepreneurs and none expressed a preference for women-led ventures. All of the partnerships included male partners. Funds under management ranged from $100 million to more than $5 billion. The partnerships had been in operation from 14 - 34 years. The large funds tended to be more highly diversified in terms of industry focus and stage of investment.[xxxvii]

In their discussion of how their firms sourced new deals, the women venture capitalists indicated that their firms received unsolicited (*over the transom*) business plans but were unlikely to invest in these. Preferred sources of deals included referrals from entrepreneurs in their networks and from other venture capitalists in the industry. All of them indicated that they actively prospected for potential entrepreneurs in their preferred industry sectors and "positioned themselves in the mainstream of deal flows." A few of the women venture capitalists believed that they knew more entrepreneurial women than did their male colleagues and so had expanded the firm's network.

They were careful to point out that they did not have any preference for doing business with these women – at least not on the basis of gender. However, they did indicate that being connected through a professional network enabled them to know more about the talent and experience of the entrepreneurs (including women) and helped them make more informed judgment about the entrepreneur's likelihood of success. A few indicated that male venture capitalists in their own firms or in other firms sometimes referred female entrepreneurs to them "because they might understand the deal better" or be more likely to "connect" with the entrepreneur, but neither woman thought these were important considerations.

Just over 70% of the women venture capitalists had made investments in female-led ventures. They reported multiple deals done, but believed that only a few of the investments (a cosmetics venture and a women's website) had any gender-related aspects. Though they could not recall the total number of investments made by their partnerships in women-led ventures over time, the majority of the women indicated that their male partners had also brought in women-led ventures that were funded by the firm. Nine such deals were specified by name.

The majority of the women VCs reported that the performance of the women-led ventures in their portfolios were on a par with overall portfolio performance. One reported that of her two investments, one was a big "hit" selling at fourteen times investment and the other was sold at a loss. Another reported that her two investments were sold – one in a private sale at a loss and the other at a substantial gain in a public offering. Another reported poor performance by one investment, but noted that the result was related to industry performance rather than the entrepreneur. Two of the women reported that they found it more difficult to manage portfolio companies with a woman CEO because women frequently associate criticism related to the business with personal criticism and do not respond well in times of crisis.

The women investors were adamant that they did not invest in deals led by women because of any gender preference. They believed that the deal flow of women-led ventures to their firms may be somewhat enhanced by their own network connections. However, to a woman, they insisted that they subjected every woman-led venture to the same standards and scrutiny as any other deal. They noted the biggest problem in funding female entrepreneurs was the dearth of high quality women-led businesses – a problem they traced back to the human capital issues of technical training and management experience. The observed that very few women were equipped to compete in the highest growth industries, though several noted progress by women in the software arena.

The women VCs reported that they held themselves and their deals to the same high standards as did their male partners. Several thought they had influenced the decision-making process positively by bringing a new (more thoughtful and questioning) approach to the review process. One pointed out that the investment meetings were somewhat more formal because of her presence and were likely to be more thorough.

Those interviewed made several observations about being women partners in a predominantly male industry. Most said that the business was “gender blind” and that the partners made their choices of management partners and investments on the basis of objective quality standards. The women with the longest tenure in the industry felt there were unusual challenges to being female in the early years, but that those no longer exist. Several of the women observed that there is little collegiality or networking among the women professionals in the industry, and two noted that women VCs are more competitive with each other than are their male counterparts.

One woman whose partnership used to include three women and now has only one observed that there are fewer women in the industry today, but others reported seeing growth in numbers and in cooperation. One partner forecasted active recruitment of women professionals to improve fund-raising opportunities, noting that an increasing number of the managers of large institutional funds are women.

Summary Statement*: *The results of the interviews are mixed. Women professionals in the venture capital industry have attracted more female-led ventures to their firms, even though they are not actively seeking out women-led ventures. This supports previous research findings that women have more women in their networks than men.*[xxxviii] *However, only a small number of the deals proposed are seriously considered and very few are accepted. Women appear to continue to be disadvantaged in the referrals from entrepreneurs and VCs that provide many of the strongest leads.

The women venture capitalists interviewed observed that their participation in the decision-making process has influenced discussions in new and positive ways, bringing new perspectives to the table. However, these changes have not resulted in any noticeable changes

in the number or quality of investments in female-led businesses. This implies that institutional change is evolving very slowly and may need to be catalyzed by more dramatic rather than incremental shifts.[xxxix]

The observation that the industry is "gender blind" and that investment choices are made based on objective standards seems to be a contradiction of sorts. Anecdotal and empirical evidence suggests that investment decisions are often more "subjective," based on gut feeling rather than being truly objective.[xl] This raises the question of whether women in the venture capital industry are adopting the norms and beliefs of their male partners (rather than changing them) in order to succeed in their roles.

An International Perspective

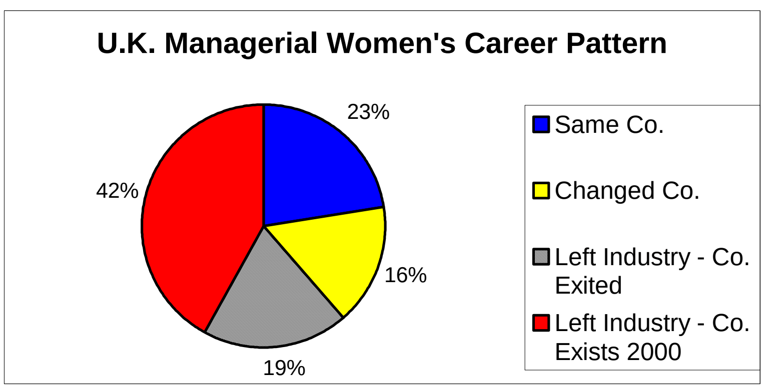
The venture capital industry in the U.S. has flourished over the past 20 years. Other countries have tried to emulate the U.S. model of venture capital, succeeding to varying degrees. What is the experience of professional women in these other countries? An exploratory examination of the European venture capital industry indicates that women's penetration in Europe is even less than it is in the U.S. and rate of women leaving the industry there is higher than in the U.S. We coded listings from the 1995 and 2000 Venture Capital Reports (VCR), directories that list private equity and venture capital sources and personnel. Although most of the listings in the VCR are U.K. partnerships, some other European firms are listed. Consequently, we refer to the partnerships in the following discussion as European recognizing that they are predominately U.K. firms and that the experiences of women venture capitalists in other European countries may be better represented using other directories.[xli]

The VCR archival data reveals that although the number of women doubled between 1995 and 2000, their numbers are few and they represent only 6% of the professionals in the European industry in comparison to their 9% representation in the U.S.

As in the U.S. managerial women in Europe are affiliated with larger partnerships both measured by number of key managers and funds under management. The difference in key managers was statistically significant for both years.[xlii] The average number of key managers in partnerships with managerial women was 7.8 in 2000 in comparison to 5.5 in male managed firms. Difference in the size of funds was statistically significant in 1995, but not in 2000.

The turnover rate of European and U.S. managerial women in the industry was about the same with 61% of the European women listed in the 1995 VCR absent from the 2000 VCR. However, as displayed in Exhibit 16, European managerial women were more than four times as likely to change companies during the five-year interval as U.S. managerial women (16% vs. 4%).

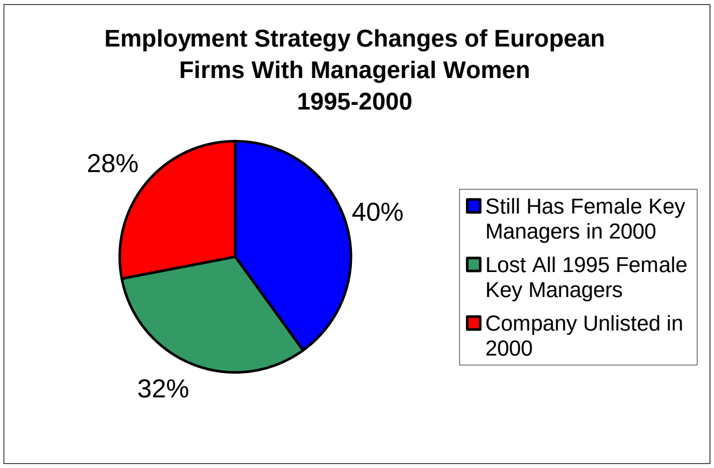
Exhibit 16



N=32

Only 40% of the 1995 European firms with managerial women still had at least one female key manager in 2000. As shown in Exhibit 17 substantially more of the 1995 European firms with managerial women had lost all female key managers by 2000 than in comparative partnerships in the U.S. (32% vs. 24%).

Exhibit 17



N=25

Similar to the experience in the U.S., there is little evidence that having women in managerial roles in the Europe encourages the recruitment of additional female managers. Nearly a third of the European firms with managerial women in 1995 that also were listed in 2000 had the same number of female managers; 22% had increased their number of female managers; and 44% had decreased their numbers during the intervening years.

Summary Statement

Managerial women in the European venture capital industry share many similarities with their contemporaries in the U.S. Our exploratory examination reveals that they are few in number, representing just over 5% of the professionals in the European industry. They tend to work for larger partnerships, both in terms of managers and the size of funds under management, and they leave the industry in staggering numbers. More than 60% of the women listed in the 1995 Venture Capital Report were absent from the 2000 directory. Furthermore, there is little evidence that the presence of highly visible women leads to the recruitment of more. Only 40% of the European firms with managerial women in 1995 still had at least one female key manager in 2000.

Prospects for Future Industry Diversity

The overwhelming maleness of the venture capital industry can be explained in part by qualification requirements applied to industry incumbents. Many of the principal's in the industry earned their stripes as successful entrepreneurs or senior managers of growth companies before becoming VCs. They came to the industry with substantial personal wealth and established records as decision makers. Although the larger partnerships hire young MBAs as associates, train them and promote them up through the ranks, the overwhelming majority come into the industry as experienced business leaders whose reputations and networks bring substantial benefits to the partnerships.

Because women have only recently begun to attain high levels of responsibility in the corporate world, or in the entrepreneurial arena, there are relatively few who have followed the traditional path to senior managerial positions in the venture capital industry. This is beginning to change.

Women who have joined the VC ranks since 1990 are more likely to have MBAs and industry experience as part of their background than the high profile women who preceded them. Many participated in special training programs designed to fast track them into substantial investment decision positions in the industry. The Kauffman Fellows Program sponsored by the Center for Venture Education[xliii] is one example. The Kauffman Fellows program is designed to educate and train emerging leaders in the venture capital industry by providing structured educational curriculum enhanced with facilitated mentoring, peer learning and networking. Of the 61 graduates of the program, 50 are VCs (28 General partners, 4 founders of their own funds) and 6 CEO founders of companies. A total of ?? women have completed the program since its inception in 1993, ?? of whom have become general partners or senior investment professionals in their firms, and ?? founders of their own venture capital firms. If they are well connected to the network of potential entrepreneurs and to additional resource providers, they will be able to add substantial social capital to their hard-won human capital. They will become highly valued members of their VC partnerships and will become beacons to talented women (as well as men) entrepreneurs.

Conclusion

This exploratory study provides the first comprehensive overview of women's roles and participation in the venture capital industry 1995-2000. It examines three fundamental questions about women's participation in the industry:

1. Size and location of the constituency (numbers, percentage of women in the industry and characteristics of their affiliated partnerships)
2. Levels of responsibility women have achieved in the industry
3. Impact of women venture capitalists in attracting and engaging with women entrepreneurs

We found that women constitute a very small percentage of the venture capital decision makers (10% of the 5,900 individuals in 2000). Furthermore, women are less likely to be in the senior most decision positions, more likely to leave their firm over 5 years, and more likely to work in large national venture firms. At the same time, the highly visible female partners we interviewed believed they had influenced the decision-making process in some ways, but insisted they applied truly objective criteria to all deals, not favoring or networking with women entrepreneurs more often than men.

There are several important implications. First, because there are so few women venture capitalists, women entrepreneurs have a very difficult time establishing initial connections. There are few first-degree network connections and relatively few gatekeepers who can provide women-entrepreneurs access to the mostly male venture capital community. Being out of the network, means women entrepreneurs may need to work harder to gain an audience with appropriate funders. At the same time, investors may be missing good opportunities to invest if they rely solely on their personal contact network – networks that are typically overwhelming male dominated.

The fact that women entrepreneurs face unusual challenges in getting access to venture capital means that their ventures may be resource poor throughout their infancy and adolescence. As a result the overall health of their companies may be less robust. Their young ventures may be less competitive in the race for market share and less resilient to business setbacks. Because women entrepreneurs are less visible to gatekeepers in the venture capital industry they ultimately will have fewer opportunities to receive returns generated from fast growth ventures when they have a liquidity event. This means women have less chance to build wealth.

Because there are so few women decision makers in the venture capital industry, women are missing an opportunity to vote with their investments for the next wave of technology and are not in a position to identify and support the next set of entrepreneurial leaders. In many ways, these are decisions that affect the entrepreneurial progress of our country, and women are being left out of this important process.

Given these implications, we offer some suggestions for future research:

- There is a need for more research about the relationships and behaviors of general partners in venture firms and the decisions to review/invest in women-led ventures. While the "highly visible" women partners we spoke with were candid and open, interviews with their male counterparts about their deal seeking, screening and investment process and how this is related to their networks would yield a more complete picture.

- There is a need for government, foundations, and entrepreneurship centers to provide both research and outreach to support women entrepreneurs in their pursuit of high growth, high value ventures. Investments and performance of investments by gender should be tracked and compared. A complete understanding of the participants and the process of equity investment is hindered by incomplete information.

- Another suggestion concerns education. The tiny number of women in the venture capital industry might be explained by career choice, inappropriate career qualifications, or high entry barriers to get into the pipeline. Education can affect each of these explanations. It might be possible to increase the number of women in the venture capital industry by encouraging and educating women to participate in the investment process as angels, or through corporate venture funds and venture capital firms. Women are playing a very minor role in the supply side of this multi-billion dollar industry. Educating women about angel investing, the investment process, and careers in the industry might serve as an career entry strategy into this male dominated industry. Venture firms, non-profit foundations, investment banks, educational institutions, and local agencies might sponsor and fund such programs. At the same time, venture firms should recognize the benefits of a more diverse employee group in the form of extended networks that might yield innovative fast growth deals.

Finally, entrepreneurship is at the top of the social, political and economic agenda for the US and around the world. It is the engine of economic growth, fostering creativity, economic development and competitive differentiation. It is in a country's best interests to encourage, facilitate and expand development of the most innovative ventures that stand the best chance of solving a business or social problem, create jobs and stimulate the economy. In a democratic society, the investment in innovative businesses created by women is vital to economic growth, and, at the same time, women should be able to fully participate in the venture capital funding decision and share in the returns.

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[i] PriceWaterhouseCooper/Thomson Venture Economics/National Venture Capital Association Money Tree Survey, October 29, 2003; 1990-1996 IPO data from P. A. Gompers & J. Lerner. 2000. The Venture Capital Cycle, p. 15. Cambridge, MA: The MIT Press; 1997-2000 data from Thomson Venture Economics and National Venture Capital Association press release, January 2, 2003.

[ii] Greene, P.G., C. Brush, M. Hart & P. Saparito. 2001. Patterns of venture capital funding: Is gender a factor? *Venture Capital*, 3:1, 63-83.; Seegull, F. 1998. Female entrepreneurs' access to equity capital. *Harvard Business School. Working paper.*

[iii] Carter, N. M., Brush, C. B., Greene, P. G., Gatewood, E. & Hart, M. M. 2003. Women entrepreneurs who break through to equity financing: the influence of human, social and financial capital. *Venture Capital*, 5(1): 1-28.

[iv] Bygrave, W.D. 1992. Venture capital returns in the 1980's. In D. L. Sexton and J. Kasarda, eds., The State of the Art of Entrepreneurship. Boston: PWS Kent: 438-462.

[v] Calacanis, J. 2002. Editor's letter: Why we love lists. *Venture Reporter*, May/June: 2.

[vi] Smart, G., Payne, W. & Yuzaki, H. 2000. "What makes a successful venture capitalist?" Journal of Private Equity, Fall: 7-29.

[vii] BenDaniel,D. J., Reyes, J. E. & d'Angelo, M. R. 2000. Concentration in the venture capital industry. *Journal of Private Equity*, 3(3): 7-83.

[viii] Greene, P.G., C. Brush, M. Hart & P. Saparito. 2001. Patterns of venture capital funding: Is gender a factor? Venture Capital, 3:1, 63-83.

[ix] Center for Women's Business Research. 2002. Key facts about women-owned businesses. Washington, D.C.

[x] Brush, C., Carter, N., Gatewood, E., Greene, P. & Hart, M. 2004. Clearing the Hurdles: Women Building High Growth Businesses (forthcoming).

[xi] The historical wage gap between men and women in the U.S. work force has limited women's earning power and has consequently made it more difficult for women to build the personal assets that can serve as collateral or fund the early venture-building process. Without early stage personal financing, few outside investors will risk their capital in the venture.

[xii] Neider, L. 1987. A preliminary investigation of female entrepreneurs in Florida. *Journal of Small Business Management*, 25(3): 22-29.

[xiii] Greene et. al., 2001.

[xiv] Brush et. al. 2004. Clearing the Hurdles: Women Building High Growth Businesses (forthcoming).

[xv] For example, partners, managing directors, principals, associates.

[xvi] In the 1995 *Pratt's Guide to Venture Capital* Sources we identified 256 firms that listed managerial women. In addition to these firms, we drew a random sample of 96 firms from the 1995 *Guide* that did not list managerial women yielding a total sample of 352 firms to represent 1995 companies. In the 2000 *Guide*, 249 of the 1995 sample firms were listed. These partnerships had survived the five year interim. In addition to these companies, 329 partnerships were added to the 2000 sample. 220 were companies that had a woman not listed in 1995, and 109 were part of the male managed firm random sample selected to replicate the 1995 procedure. Partnership listings for branch offices were aggregated into parent company listings. Each individual listed as part of the administrative/management team by the 681 partnerships in the combined sample were coded by the year their name appeared in the directory (1995; 2000; both), and their job title in each year. This allowed us to trace individuals from 1995 to 2000 and make preliminary statements about the career paths of women and men. Characteristics of the partnership firms associated with the individuals also were coded. These variables included: name, number of managers listed for the firm, number of female and male managers, location(s), age, size of funds under management, date of last fund raised, and investment preferences by industry and geographic location.

[xvii] Interviews were conducted using a combination of structured and open-ended questions. The questions were designed to assess their interest and/or success in attracting more female-led deals to the firm and to understand the roles women partners and managing directors played in their firms' decision-making rules, processes, and behaviors. A field test interview was conducted with a female industry veteran who changed firms in 1996 and is therefore not a part of our data set. She provided useful feedback on the structure and direction of the interviews. The discussion reports on the results of the first 11 interviews.

[xviii] Names that could not be classified as male or female through a common knowledge of names, or web-research, were categorized as unclassified and eliminated from analyses (the gender of 85 names listed in 1995; 127 listed in 2000 could not be classified). Additionally, 27 of the female names in 1995 and 29 in 2000 were judged affiliated with non- managerial positions (e.g., were listed as contact person for the firm but no position title was given). These were added to the unclassified category and eliminated from analyses.
[xix] Job titles were categorized into three ranks corresponding to the authority to make investment decisions. Job titles considered at the top rank included: Chairman/CEO, Director, Executive Director, General Partner, Investment Manager/Officer, Managing Director/Senior Managing Director, Partner, President. Titles considered mid rank included: Administrative General Partner/Marketing Director, Assistant VP/General Manager, CAO/CFO/CFD, Comptroller, Executive Vice President, Loan Officer, Principal, Senior Vice President, Treasurer, Vice President. Titles considered representing low authority for making investments decisions included: Analyst/Senior Associate, Senior Analyst, Associate, or Corporate Secretary.
[xx] Not all listings included persons' titles such that their decision rank could be determined.
[xxi] At some partnerships there likely were more managers during the two years than the values reflect. The numbers reported here reflect the total managers listed in *Pratt's Guide to Venture Capital Sources* for each of the years studied.
[xxii] Means test for 1995 yields F=36.06, d. f. 1, 350 p<.000; 2000 F=72.28, d. f. 1, 576, p<.000.
[xxiii] The distribution of funds under management in the samples is highly skewed with a minimum of $1 million and maximum over $2 billion in 1995; and a minimum of $1 million and a maximum of $11 billion in 2000. To test for differences between the size of funds at firms with women managers and those male managed we used the log of the fund value.
[xxiv] Means tests for 1995 yields F=5.34, d. f. 1, 267, p<.022; 2000 F=13.79, d. f. 1, 414, p<.000.
[xxv] Pearson Chisquare for 1995 equals 11.87, d. f. 3, p<.008; 2000 Pearson Chisquare=14.04, d. f. 3, p<.003.
[xxvi] Not all firms indicated data for geographic preference of investments.
[xxvii] Average age of firm in 1995 was 13.02; 2000 average age was 13.84.
[xxviii] There is a statistically significant positive correlation between company size and female key managers leaving the industry (Pearson Correlation=.34, p<.000).
[xxix] 72 of the 96 male managed partnerships were listed in both 1995 and 2000 representing a 76% survival rate.
[xxx] 176 of the 256 partnerships with managerial women were listed in both 1995 and 2000 representing a 69% survival rate.
[xxxi] Pearson X^2=17.05, 2 d.f., p<.000.
[xxxii] Pearson Correlation= -.486, p< .000.
[xxxiii] Pearson Correlation= -.342, p< .000.
[xxxiv] Means test yields F=4.58, d. f. 2, 89, p<.017.
[xxxv] Means test yields F=10.599, d. f. 2, 115, p<.000.
[xxxvi] Average number of managers at employment diverse companies was 5.99.
[xxxvii] For the most part, the primary industry of the interviewees was in either software and software services or health care and medical devices. Approximately 40% of the women VCs had technical undergraduate degrees (engineering, math, science) and more than 70% had MBA degrees. More than 50% had prior experience in the high technology industry and 30% had been entrepreneurs.
[xxxviii] Aldrich, H. 1989. Networking among women entrepreneurs. In O. Hagan, C. Rivchun and D. Sexton, eds., *Women Owned Businesses*. NY: Praeger: 103-132.
[xxxix] Powell, W. 1991. Expanding the scope of institutional analysis. In W. W. Powell & P. J. DiMaggio (Eds.) *The New Institutionalism in Organizational Analysis.* Chicago, IL: University of Chicago Press.
[xl] Alimansky, B. 2000. Eight ways to ruin your chances of raising equity capital. *Journal of Private Equity*, 3(3): 78-83.
[xli] To examine the experience of women in the European venture capital industry we canvassed the 1995 and 2000 Venture Capital Reports (VCR). We selected 94 companies from the 1995 VCR to track across time. Of these, 25 listed managerial women. Of the 1995 partnerships, 61 were also listed in the 2000 VCR for a 71% survival rate. An additional 71 partnerships were added in 2000 to compare the experiences of male and female managers.
[xlii] Means test for average number of key managers for 1995 yielded F=36.49, d.f. 1, 90, p<.000; 2000 F=136.26, d.f., 1, 90, p<.02. Means test for log of funds under management for 1995 yielded F=19.77, d.f., 1, 77, p<000.
[xliii] See ***http://www.kauffmanfellows.org/cve/index.asp***