VENTURE CAPITAL & THE FINANCE OF INNOVATION

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CHAPTER 5

THE BEST VCs

N THIS CHAPTER we discuss specific VC firms and their activities in more detail. The notion that a VC firm's reputation can play a direct role in its future success is an important theme of this chapter. The empirical support for this notion is developed in Hsu (2004), who uses a sample of startup companies that received multiple offers from VCs. Then, using a simple measure of VC reputation, he finds that high-reputation VCs are more likely to have their offers accepted than are low-reputation VCs. Furthermore, high-reputation VCs pay between 10 and 14 percent *less* for shares than do low-reputation VCs. Thus, even if reputation is worth nothing else, it enables VCs to get cheaper prices and more acceptances for their offers.

Section 5.1 discusses some basic economics of venture capital firms, using a simple model of supply and demand to gain insight into the key drivers of VC performance and reputation. Section 5.2 provides a subjective listing of 15 "top-tier" VC firms. This list provides an opportunity to discuss the history, performance, and strategies of some top VC firms. In Section 5.3, we discuss how VC skills and reputation can add value for its portfolio firms through monitoring activities: board representation, corporate governance, human resources, matchmaking, and strategy. These value-added activities of high-reputation VCs provide one justification for the willingness of portfolio companies to accept lower prices from these firms, as found by Hsu (2004).

5.1 THE ECONOMICS OF VC

In Chapter 3, we discussed evidence of performance persistence among VCs. In general, performance in one fund helps predict performance in subsequent funds raised by the same firm. Because LPs recognize this relationship, they react to good performance in Fund X by increasing their demand for Fund X + 1. An increase in demand can be met by some combination of an increase in price (carried interest and management fees) and quantity (size of the fund). It is interesting, however, that VCs rarely raise prices or quantities to a level that clears the market; there is almost always excess demand to get into funds raised by successful firms. There are two main reasons for this phenomenon: one from the "supply side" and one from the "demand side".

First, we analyze the supply side. Exhibit 5-1 gives an abstract representation of the typical dilemma facing a VC. The X-axis represents the total amount of investment made by a VC for any given time period. To decide on whether to make an investment, the VC compares the expected return on investment (ROI) with the appropriate cost of capital for VC (r). As a conceptual device, we imagine that the VC has ordered his investment ideas from best to worst, which ensures that the ROI curve is downward sloping. Furthermore, the VC's time is limited; so with each additional investment, he has less time to devote to each of the others, which also counts against the ROI of each new project. From the evidence of Chapter 4, we assume that the cost of capital (r) is constant, equal to 15 percent for all possible projects; therefore, r can be represented by a straight line. At the optimal investment I^* , the ROI will be exactly equal to r. Although this marginal investment does not earn any economic profits, the earlier investments do, with the total economic profits given by the region above r and below the ROI curve. Another way to compute these profits is by calculating the return on capital (R), which is defined as the average ROI of all investments. At the optimal investment level, I^* , we have $R = R^*$. In the language of microeconomics, ROI is a marginal benefit, R is an average benefit, r is a marginal cost, and economic profits are given by the product of $(R^* - r)$ and I^* . For any given model used to estimate r, the difference between R and r will be the alpha for the manager.

Under the representation in Exhibit 5-1, the optimal portfolio size for any VC is driven by the height and slope of the ROI line with respect to the cost of capital. VC investing is hard, and we are sure that if we took a random person off the street, his entire ROI line would lie below the cost of capital, suggesting that this person has absolutely no ability to make profits on any investments. Some moderately talented individuals might get one good idea a year, so I^* would be a few million dollars, with all other investments earning negative economic profits. In all likelihood, such individuals would not earn enough money to be professional VCs and would be better off plying their trade in another profession. The evidence of Chapter 3 suggests that there are a few people with consistent top performance and I^* high enough to support a lucrative career as a VC. Nevertheless, even these VCs recognize that most of what they do is not scalable, and there are limits on the total number of investments that they can make. The numbers from Chapter 2 (Exhibit 2-2) give estimates of \$197B for the total committed capital in the industry, as managed by an estimated 7,497 VC professionals. This means that the industry is managing about \$26M per investment professional (with just a couple of exceptions). Even the most famous VC funds—listed in Exhibit 5-2—usually only manage about \$50M to \$100M per professional. A pyramid-like structure, with junior VCs doing the work with companies and overseen by a senior VC, has never been a successful VC model.

Thus, to increase the size of a fund, a firm would need to hire more senior professionals. If these professionals do not have the same quality as the incumbent members of the firm, then the overall fund returns will suffer. Even if high-quality professionals are hired, there are still organizational constraints of the VC model: Because most firms allow partners to share in the majority of carried interest from all deals, a large organization will tend to weaken the incentives for individual partners. Thus, firms are understandably reluctant to increase fund sizes by very much. One apparent exception to RETURNS AND INVESTMENT

<u>ехнівіт 5-1</u>



this reluctance occurred during the boom period, when capital per partner increased by a factor of five at many firms. The exception can be understood as a natural reaction to increased investment sizes for each portfolio company combined with shorter holding periods. In the postboom period, fund sizes have returned closer to historical levels.

This supply-side reasoning can explain why firms do not increase fund sizes to clear the market, but it cannot explain why they do not increase prices (carried interest) to do so. To explain the failure of prices to clear the market, we need a demand-side explanation. Of course, some firms do raise their carried interest—at the height of the boom a few dozen VCs had increased carried interest on new funds to 25 or even 30 percent—but even these firms do not raise carried interest as much as they could have. For example, Accel Partners raised carried interest to 30 percent in 1999 for its \$500M Accel VII fund, but still managed to raise the fund in a few months and to leave many LPs desiring a higher stake.¹

As a market leader, Kleiner Perkins Caufield & Byers was also at a 30 percent carry and barely had to lift the phone to raise its most recent fund. Surely it could have raised its carried interest to 35% and still raised the same size fund. The main

¹See Kaplan (1999) for a discussion of this Accel fundraising process.

reason to avoid doing this is to preserve the long-run value of its franchise. Suppose it did raise carried interest to 35 percent. At this price, the firm would lose some of its LPs. (If it didn't lose any, then it should raise the carry even more, right?) These LPs would be replaced by others who had been clamoring for a place. But now, fundraising is not so easy anymore. The KPCB partners might have to travel around a bit and sell themselves. This takes time away from working with their portfolio companies. Furthermore, the firm's mix of LPs would be different, and some of the long-serving LPs would be gone. The new LPs, lacking the long-standing relationship, are less likely to remain loyal if the firm has a poor performing fund. If that occurs, the firm would need to take even more time to raise its next fund. The KPCB partners probably decided that this extra time—and the risk to investor loyalty—was worth more than the extra return from raising the carried interest on one fund.²

5.2 THE BEST VCs: A SUBJECTIVE LIST

In this section, we select the top 15 VC firms in the world, using our own arbitrary and subjective criteria. We do this because it gives us a good chance to discuss the various strategies employed by the best firms in the world and to provide a springboard for discussing the value of a VC reputation in the rest of the book. Of course, other market watchers will have different opinions, but this is our book, so we get our list. The 15 firms divide naturally into two groups. The six firms in Group A were the easiest to select, for reasons that will be described later. These firms represent our selection as the top six in the world, and we do not think that this grouping will be very controversial. The nine firms in Group B were more difficult to select, and many other firms could reasonably have been included.

We begin with a few definitions. Although industry participants frequently refer to **top-tier firms**, it is never clear exactly who belongs in this group. In this book, when we use the expression *top-tier firm*, we will always be referring to the 15 firms on this list. Furthermore, when we refer to a *star fund*, we mean a specific VC fund with at least \$50M in committed capital and a value multiple of five or greater. A *superstar fund* must have committed capital of at least \$50M and a value multiple of 10 or greater. It would be ideal if we could also use IRR as part of this definition; but data on IRRs are less complete than are data on value multiples, so we rely only on the latter for the achievement of star and superstar status. (Remember that the use of *bold italics* means that these definitions are special to this book, and are not industry-standard terms.)

²Yet another benefit of not clearing the market might be to keep the emergency option of raising annex funds in times of severe market busts. Both in the aftermath of the dot.com bubble and in 2009, a number of top-tier VC (and buyout) firms (including KPCB) raised annex funds from existing and new investors to ensure sufficient capital to feed their existing portfolio companies while the market recovered.

A few comments on the criteria used for selection:

- 1. In the last several years, the industry publication *Private Equity Analyst* has reported on firms that have been able to raise their carried interest to 30 percent. The publication identifies eight such VC firms, including all six firms from Group A. A seventh firm, New Enterprise Associates, is included in Group B. The eighth firm, Bain Capital, charged a 30 percent carry on a VC fund, but had earned its reputation (and an earlier 30 percent carry) primarily as an LBO firm.
- **2.** *The Private Equity Performance Monitor*, a new industry publication first discussed in Chapter 3, allows us to observe the performance for 1,193 VC funds. From this sample of funds, 63 (about 5 percent) have achieved at least star status. Of these 63 stars, 18 had committed capital of less than \$50M, so we drop them.³ Of the remaining 45 stars, 14 have achieved superstar status. Only six firms have achieved a superstar fund with at least \$100M in size *plus* another star (or better) fund. These are the six firms in Group A. (Not coincidentally, this represents six of the eight firms with a confirmed 30 percent carry.)
- **3.** Items (1) and (2) make it easy to identify the top six firms for Group A. To identify the nine firms in Group B, the primary driver was consistency of top-quartile and top-half performance, presence of star funds (if any), combined with information on carried interest percentage (when available), history of innovative VC strategy, and our own subjective view of their reputation in the industry.

Exhibit 5-2 gives the rankings, along with a few key facts about each firm. We follow the exhibit with a short discussion of each firm. We will then use these firms as a reference as we discuss VC activities and competitive advantage in Section 5.3. Note that four of the top-tier firms, including three from Group A, are located in Menlo Park, California, right in the heart of Silicon Valley. Menlo Park is the center of the VC universe, with about 60 VC firms, more than 80% of which—including all eight on our list—have their offices on one street: **Sand Hill Road**. This curious agglomeration of VC activity demonstrates a phenomenon that economists call "local network effects", where firms in the same industry co-locate to take advantage of (and thus add to) the benefits of that local human capital and other shared resources. Although many Silicon Valley startups are riding the outsourcing wave for some of their corporate functions, it is telling that the top-management function usually remains in Silicon Valley, and many of the most successful investors remain on one street in Menlo Park. Not only has this part of VC resisted globalization, but so far it has also resisted Americanization (most VC remains in small pockets of the United States instead of spreading to cheaper

³Prevalence of small funds among star funds is expected, and in most cases these are the VC firms' first funds that had a home run or two. It is much harder for firms to repeat the >5X returns with subsequent larger funds.

EXHIBIT **5-**2

TOP-TIER VENTURE CAPITALISTS

Group	Name	Location	Founded	\$ under management
А	Accel Partners	Palo Alto, CA	1983	\$6.0B
	Benchmark Capital	Menlo Park, CA	1985	\$2.9B
	Charles River Ventures	Waltham, MA	1970	\$2.4B
	Kleiner Perkins Caufield and Byers	Menlo Park, CA	1972	\$3.3B
	Matrix Partners	Waltham, MA	1982	\$4.1B
	Sequoia Capital	Menlo Park, CA	1971	\$4.0B
В	Battery Ventures	Wellesley, MA	1983	\$3.2B
	Doll Capital Management (DCM)	Menlo Park, CA	1996	\$2.0B
	Draper Fisher Jurvetson	Menlo Park, CA	1986	\$4.4B
	Institutional Venture Partners	Menlo Park, CA	1974	\$2.2B
	InterWest Partners	Menlo Park, CA	1979	\$2.8B
	Menlo Ventures	Menlo Park, CA	1976	\$4.0B
	New Enterprise Associates	Baltimore, MD	1978	\$10.7B
	Summit Partners	Boston, MA	1984	\$11.2B
	Technology Crossover Ventures	Palo Alto, CA	1995	\$7.7B

Note: Firms are listed alphabetically within each group.

SOURCE: Dow Jones LP Source Galante, Firm websites.

places in the country), Californization (California VC is overrepresented in Silicon Valley), and even Menlo Parkization (Sand Hill Road rents must be among the highest in the city—why don't more VCs move?). This demonstrates that local network effects remain an important brake on the geographic homogenization of economic activity.

In a cross-country echo of the local network effects on Sand Hill Road, we see that two of the firms on the list are located in Waltham, Massachusetts, which lies within the second-largest VC agglomeration in the world: the Route 128 corridor around Boston. These two firms, Matrix Partners and Charles River Ventures, are not only in the same town and street (Winter Street—the Sand Hill Road of the east), but also in the same building (1000 Winter Street). All told, there are 16 VC firms in the small town of Waltham, with 13 of them on Winter Street—and six of them at the same 1000 address. Battery Ventures, another top-tier VC, is only minutes away in the neighboring town of Wellesley.

There is an important caveat to doing this exercise: as is well known among industry participants, no one did spectacularly well after 2000, and even the Group A funds, if they don't perform in the next five years, could be in big trouble. Also, there is not a lot of data since five years ago to update the list; so the ranking is still largely based on the performance from the 1990s and the inferences made from the fact that these funds are still easily raising funds from LPs (who know the true performance).

Now, let's go to the list. We begin with the Group A firms, in alphabetical order.

Group A

Accel Partners is a firm that rode the boom, had a bumpy ride in the postboom period, and seems to have survived with its stellar reputation bruised but alive. In business since 1983, it has raised 10 general funds; the most recent, Accel X, closed with \$520M in 2007. In addition to these general funds, Accel was the first major VC to raise a dedicated "Internet fund", with the \$20M Accel Internet Fund I raised in 1996 and three subsequent Internet funds raised over the next four years. Accel has also been an innovator in other ways, with geographic expansion (the \$500M Accel Europe fund raised in 2001, second European fund raised with \$450M in 2005, and the \$60M Accel India Venture Fund raised in 2008), and a unique partnership with the most famous name in LBO investing—Kohlberg Kravis Roberts & Co., with whom it raised the joint Accel-KKR fund, with \$500M in 2000, and two subsequent funds in 2006 and 2008 at \$400M and \$600M, respectively.⁴

Accel's first star fund was the \$135M Accel IV raised in 1993, and it sealed its reputation with the superstar \$150M Accel V fund raised in 1996.⁵ By the time of the \$500M Accel VII fund raised in 1999, it had joined the elite with a 30 percent carry. The firm hit rough times with its 2001 Accel VIII fund. Originally, this fund had \$1.6B in committed capital. In the postboom period, it became apparent to Accel and to many other GPs that the available opportunities were insufficient to sustain these boomtime megafunds, and it subsequently reduced the size of this fund to \$680M, but not before some controversial attempts to extend its investment period on the full amount. The LP community appears to have forgiven this episode, however, because it effortlessly raised Accel IX with a 30 percent carry and almost certainly kept its carry level for Accel X, judging from the LP demand. As of March 2007, Accel VIII has returned 37 percent of committed capital and has a net IRR of 2.6 percent, which puts it in the second quartile of its vintage year peers. Its best-known recent investment is Facebook, which it has yet to exit as of the writing of this book.

Benchmark Capital is the new kid on the block among the Group A firms. Its first fund, the \$113M Benchmark Capital Partners Fund raised in 1995, had a spectacular investment in eBay, which netted the fund (LPs + GPs) \$2.5B on a \$5M investment. eBay was not the only successful exit for this fund, as the fund is reported to have earned a value multiple of 42X, giving it the highest reported

⁴Unless otherwise noted, all citations to fund sizes, vintage years, and carried interest levels, are drawn from Dow Jones Financial Information Services.

⁵Unless otherwise noted, all performance data and citations to star funds or superstar funds are derived from data from *The 2005 and 2008 Private Equity Performance Monitor*.

multiple of all time. Benchmark II, a \$250M fund raised in 1997, reached star status to give the partners two great successes in a row. With this performance, it was able to raise its carried interest to a flat 30 percent by the time of the \$1.1B Benchmark IV fund in 1999. (Its previous funds had used a performance-based sliding scale for the carry.) Like several other top-tier firms, Benchmark has expanded internationally, with a \$500M Europe fund raised in 2000 and a \$260M Israel fund raised in 2002. After successfully raising three Europe funds, Benchmark Europe was spun off in 2007 and changed its name to Balderton Capital; Benchmark IV has returned 41 percent and has a net IRR of 0.2 percent, putting it in the second quartile among its vintage year peers. The LPs have stayed loyal in return, and the \$400M Benchmark V fund was raised in 2004, followed by its latest, the \$500M Benchmark VI raised in 2008. Its notable recent exits include OpenTable, which went public in May 2009 and traded up 72% on its first day of trading.

Charles River Ventures is one of the two Group A firms from 1000 Winter Street in Waltham. The firm also maintains a smaller office on Sand Hill Road, giving it a presence in both VC centers. Like many of the other top-tier firms, it had solid performance for many years, performed spectacularly in the boom, faltered in the postboom period, and has regained its focus and reduced the size of its most recent fund. Its first star was the \$85M 1995 Charles River VII fund. It gained superstar status with its \$100M 1997 VIII fund. Following this fund, it was able to raise its carried interest to 30 percent, a level it has maintained ever since, most recently with its \$320M Charles River XIV fund raised in 2009. As of December 2006, its 2000 fund (CRV XI) has a net IRR of 0.9 percent, which puts it in the second quartile of the 2000 vintage funds.

Charles River runs a seed program called QuickStart, which it launched in 2006 after recognizing that advances in technology had enabled Internet startups to operate with much less cash than traditionally required. In this program, Charles River invests \$250K in the form of a loan to a promising new startup. Startups accepting loans give Charles River the right to join a first-round syndicate, with the loan converting to equity at that point.

Our next fund, **Kleiner Perkins Caufield & Byers (KPCB)** was first discussed in Chapter 3, where we saw evidence of two superstar funds (the \$225M KPCB VII and the \$299M VIII), and we deduced that KPCB IX, a \$550M fund raised in 1999, defied the gravity of the worst vintage year in VC history and reached star status with its Google exit. Perhaps even more impressive than these returns is the list of famous KPCB investments: AOL, Amazon.com, Compaq, Electronic Arts, Genentech, Google, Idec, Intuit, Juniper Networks, Netscape, Sun, and Symantec. It is a "who's who" of successful technology businesses, reaching across industry lines to leaders in life science, software, hardware, communications, and the Internet. This performance has been sustained through multiple generations of firm leadership and seems in no danger of abating. That said, it is a bit troubling that KPCB's most recent funds' (KPCB X – KPCB XIII) performances are not publicly available as of the writing of this book.

KPCB has recently made big bets in two directions: Asia and green technology. It closed the \$360M China Fund in 2007 and now has two satellite offices in Beijing and Shanghai. It also raised the Green Growth Fund in 2008, which targets large clean-technology companies.

Matrix Partners shares a building in Waltham with Charles River Ventures and also maintains a smaller office on Sand Hill Road. Matrix had four straight topquartile funds from 1985 to 1997, including one star and two superstar funds: the \$80M 1990 Matrix III fund (star), the \$125M 1995 Matrix IV fund (superstar), and the \$200M 1997 Matrix V fund (superstar). Indeed, Matrix came very close to having two funds with value multiples above 20 (double-superstar?), which has not even been accomplished by its famous peers from Sand Hill Road. Its investment record includes several famous names and spans across software, hardware, and communications, including Apple Computer, Veritas, and Sycamore Networks. Its 2000 Matrix VI has returned only 12 percent of committed capital and has little chance of ever breaking even, as the remaining portfolio is held at 54 percent of fund size. In contrast, its 2002 fund (Matrix VII) is doing much better, and has a net IRR of 12.4 percent, putting it in the top quartile among its peers. In addition to its latest general fund, the \$450M (plus \$150M optional fund) Matrix IX, raised in 2009, it also raised a China fund and an India fund in 2008 and 2006, respectively, thus making inroads to two more fast-growing markets.

Sequoia Capital is certainly KPCB's strongest competition for the title of "most famous VC firm in the world". Its investment list is almost as impressive as KPCB's—Apple, Cisco, Google, Electronic Arts, Symantec, Yahoo, YouTube missing only the life sciences breadth of its neighbor on Sand Hill Road. Note also the overlap in investments between these two top firms. This is the most salient example of the pervasive **syndication** of investments among firms of similar rank. In a VC syndicate, a **lead investor** takes primary responsibility for the investment, usually making the largest investment and taking the board seat. (In some cases, such as the Google investment, this role can be shared by co-leads.) The other investors take smaller stakes and may or may not get a board seat. Syndication varies over time, often depending on the relative supply of capital. In the preboom period, syndication was the norm. During the boom, it was comparatively rare.

Sequoia's performance has been remarkable. It is the only firm in the world with four confirmed star funds (three of which were superstars): The \$64M 1989 Sequoia V fund (star), the \$100M 1993 Sequoia VI fund (superstar), the \$150M 1996 Sequoia VII fund (superstar), and the \$250M 1998 Sequoia VIII (superstar). No other firm, not even KPCB, can match that record. KPCB's main claim for the top spot is that it has earned similar returns with funds about twice the size.

Group B

Battery Ventures is our third firm from the Route 128 corridor around Boston. Relatively young for firms on this list (founded in 1983), Battery made up for lost time with six top-quartile funds in its first six attempts, including the star \$200M 1997 Battery Ventures IV. It charged a 25 percent carry on its seventh and eighth funds (raised in 2004 and 2008). Reflecting the tough economic conditions of 2009–2010, for its latest fundraising efforts for its ninth fund, targeted at \$750M, Battery plans to use a performance-based sliding scale, charging a base carry of 20 percent, which will climb to 30 percent once it returns three times capital to LPs. Battery has a broad focus—both by stage and industry—and has made headlines by teaming up with the Blackstone Group, a major LBO firm, on several deals.

DCM (**Doll Capital Management**) is the youngest firm in this list of top-tier VCs—it was founded only in 1996. Though there are many other firms with much longer track records, we pick this firm for two reasons. One is its relatively strong track record in the non-U.S. markets, notably Asia, where we have seen the fastest growth in recent years. It has had offices in Menlo Park, CA, and Beijing, China, and recently opened a satellite office in Tokyo as well. While many U.S. VC firms have recently started investing in China, few can claim exits yet; in contrast, DCM invested in the region as early as 2000, and has had a string of successful exits. Its notable Asia investment exits include 51job (NASDAQ IPO in 2004), VanceInfo (NYSE IPO in 2007), and Fortinet (NASDAQ IPO in 2009). Its notable domestic U.S. investment exits include Foundry Networks (1999 IPO), About.com (1999 IPO; then acquired by New York Times; its Japanese affiliate also went public on JASDAQ), and Neutral Tandem (NASDAQ IPO in 2007). According to the *Wall Street Journal*, Fortinet was one of the best-performing VC-backed IPOs in 2009.

Another reason is the premium carry it charges. According to Private Equity Analyst, its fifth fund (the 2006 \$505M DCM V) and its latest fund (DCM VI, which is being raised amid the toughest economic conditions in decades) charge a 25 percent carry. We interpret this to be an indication of LPs' enthusiasm about the firm's international reach and recent successes.

Draper Fisher Jurvetson (DFJ) is an innovative firm that has experimented with several different organizational forms and strategies. Its inclusion on this list was a difficult decision, because not much performance information is available. The \$50M 1995 DFJ III fund reached star status, but we know very little about its 11 subsequent funds, save for the 1999 DFJ ePlanet Ventures (returned 136 percent and is in the top quartile as of March 2007) and the 2000 DFJ VII (in the second quartile as of September 2007). We include DFJ as a top-tier firm because of its string of notable successful investments in companies including Skype, Athena-Health, and Baidu, and because of its reputation as market leaders in extending its VC brand. The DFJ "affiliate network" includes 17 firms across 13 locations on three continents. Many of these firms are cobranded with the DFJ name, such as Draper Triangle Ventures (Pennsylvania and Ohio), DFJ DragonFund (China), and DFJ VTB Aurora (Russia).

It charged above-market carried interest of 25 percent from 1999 to 2007. In its current efforts to raise the \$250M DFJ X, it is offering a performance-based sliding scale, charging a 20 percent base carry until the fund returns 2.5 times the committed capital, at which point GPs will catch up to 25 percent.

Institutional Venture Partners would have made the Group B list in the first edition of this book, were it not for some uncertainty about its future given significant personnel turnover at the time. The firm has apparently weathered the transition well, and including it in the Group B list this time was an easy decision for us, given its remarkable track record. It is a consistent performer with seven out of its eight funds from 1985 to 2004 in the top half category. Three of them are in the top quartile, including the 1994 \$141M Institutional Venture Partners VI and the 1996 \$187M Fund VII, which were both star funds.

It has two offices, one in Menlo Park (on, you guessed it, Sand Hill Road) and another north of San Francisco in Mill Valley, CA. It invests in late-stage private technology companies in communications and wireless technology, enterprise IT, and Internet and digital media. Its famous investments include TiVo, Juniper Networks, Netflix, MySQL, and more recently Twitter.

InterWest Partners is an early-stage VC firm founded in 1979. It is another consistent performer, with six out of its seven funds from 1985 to 2005 in the top half category. Three of them are in the top quartile. Commensurate with its long history (its first fund was raised in 1980), it boasts a long list of successful exits, with more than 60 IPOs and nearly 60 upside acquisitions. Its early successes include Silicon Graphics and Copper Mountain Inc., and its investments are about evenly split between life sciences and IT areas. Its investments on the IT side are fairly concentrated in the San Francisco Bay Area, while its life science investments—which are often originated in university research centers and in collaborations with biopharmaceutical companies—are geographically more diverse, with locations as varied as the Rocky Mountain states, San Diego, Northeast, and Florida.

Aside from the public record about its performance, another deciding factor for including the firm on our list was its carried interest level; according to the *Wall Street Journal*, it has charged 25 percent carry in the last decade.

Menlo Ventures, together with InterWest Partners, were honorable mentions in the first edition of this book. Menlo Ventures is an IT shop, meaning it does not make any investments in life science firms, while it is open to investing in early to late-stage rounds. It has one star fund, which is the 1988 \$111M Menlo Ventures IV; in addition, its 1997 \$253M Menlo Ventures VII was almost a star fund, with 4.8X value multiple and a net IRR of 135.6 percent as of September 2007. Its 2001 \$1.5B Menlo Ventures IX has a net IRR of 5.4 percent as of September 2007, which puts it in the second quartile category. It invested in earlier Internet and communications companies such as Hotmail, Infoseek, and UUNET, and more recently had successes with Acme Packet (2006 IPO) and Cavium Networks (2007 IPO). Its slogan, "Big Ideas. Realized", is quintessential Silicon Valley VC, and the firm states it only targets "large" emerging markets that can support a \$100M-per-year revenue after achieving realistic market shares. Likewise, it has so far stuck to its U.S.-centric model, with its focus on U.S.-headquartered companies only.

New Enterprise Associates (NEA) holds the distinction of raising the largest dedicated VC fund in history. Unlike most other megafunds of the boom period, its \$2.3B 2000 NEA X fund was never reduced, and current performance places it

among the top-quartile performers for its vintage. It later raised two more \$2B+ funds, NEA XII (\$2.5B, closed in 2006), and XIII (\$2.5B, just closed as of January 2010). NEA's history includes a remarkable six top-quartile performers, including star status for the \$230M 1993 NEA VI fund. Its famous investments include Silicon Graphics and Immunex, and it has maintained a strong record across all parts of the information technology and life sciences sectors, with a recent third focus on energy investments. Though it still maintains its operations in Baltimore, most of its investment professionals are located in either Silicon Valley or Chevy Chase, MD, in the metropolitan DC area.

Like many of its peers, NEA has made efforts to globalize. In 2007, it contributed \$30M from its twelfth fund to \$189M NEA-IndoUS Funds, which will invest in early-stage IT companies in India. It has also made direct late-stage and growth equity investments in companies outside of the United States using its core fund. As a result, its twelfth fund investments consist of about 84 percent North America, 7 percent China, 4 percent India, and 5 percent the rest of the world. NEA is the only firm in Group B to have obtained a 30 percent carry, but it has done so while effectively reducing its management fee percentage. Although this demonstrates a commendable willingness to accept nearly exclusively performance-based compensation, it also suggests slightly less pricing power than is enjoyed by Group A firms.

Summit Partners follows a resource-intensive, but very successful, strategy. To generate investment opportunities, Summit has developed a proprietary database of small to midsize companies. To maintain this database, Summit employs a relatively large number of junior professionals to periodically communicate with representative firms. Like many other firms, Summit also maintains a significant presence at technology industry events; but unlike most other firms, it takes a systematic approach to its data gathering at these events, constantly adding to and refining its database. The resulting database is the envy of the industry and often allows Summit to obtain the holy grail of all private equity investors: **proprietary deal flow**. Although some of its investments could be classified as mezzanine or even buyout, the majority remains at the late-stage VC and growth equity level. Its main competitor in this strategy is TA Associates, but TA's strategy tilts toward somewhat larger investments and is typically not classified as a VC. The competition and ties between these firms are quite extensive: Summit was founded when some TA professionals broke away and formed a new firm.

Summit's performance has been remarkably consistent. All seven core funds raised since its 1984 founding have IRRs above the median for their vintage years, and five of these seven are in the top quartile, with the \$610 million 1995 Summit Ventures IV fund achieving star status. Its consistent performance allows it to charge a 25 percent carried interest. It raised a \$1B European growth equity fund in 2008, which is its first non-U.S. fund.

Technology Crossover Ventures (TCV) is true to its name, engaging in **crossover investing** that spans late-stage VC and young public companies. This eclectic strategy has served TCV well, with five straight top-half funds from 1995 to 2004. Its \$1.7B 2000 TCV IV returned 79 percent of its capital, has a net IRR of

4.4 percent as of September 2007, and is in the second quartile among its vintage year peers. It wrapped its largest-ever \$3B TCV VII in 2007. It previously was reported to be charging 30 percent for its fifth fund, raised in 2004, but whether it continued to charge a premium carry for its latest fund could not be confirmed as of the writing of this book.

Unlike many of its peers, TCV has stuck it out with its focus on U.S. domestic deals—especially those away from the crowded hubs of Menlo Park, CA, and Waltham, MA. Its portfolio company locations range from Suwanee, GA, to Melville, NY, as well as Palo Alto and Boston.

This completes our list. Many other highly respected firms could reasonably have displaced some firms in Group B. In alphabetical order, these "honorable mention" firms include Columbia Capital (Alexandria, VA), Lightspeed Venture Partners (Menlo Park, CA), Mayfield Fund (Menlo Park, CA), Mohr Davidow Ventures (Menlo Park), North Bridge Venture Partners (Waltham, MA), Polaris Venture Partners (Waltham, MA), Sierra Ventures (Menlo Park, CA), TL Ventures (Wayne, PA), Trinity Ventures (Menlo Park, CA), US Venture Partners (Menlo Park, CA), and VantagePoint Ventures (San Bruno, CA). Three more firms, Bessemer Venture Partners (Wellesley Hills, MA), Greylock Partners (Waltham, MA), and Venrock Associates (NY, NY), have high-profile reputations but do not have sufficient information in the public domain about past performance or carried interest, so it is not possible to judge whether they belong in the top tier.

5.3 VC VALUE ADDED AND THE MONITORING OF PORTFOLIO FIRMS

After studying the list of top-tier VCs, it is natural to wonder how they got there. What value-added activities do VCs perform, and how does one acquire the skills to do them well? In Chapter 1, we categorized VC activities into three groups: investing, monitoring, and exiting. In each of these three groups, there is a potential for VCs to add value. The investing and exiting groups include many activities that require financial analysis; Parts II, III, and IV of this book cover these activities in detail. In contrast, the monitoring of portfolio firms, although certainly a crucial area for VC value added, does not lend itself well to quantitative analysis. Thus, we restrict our discussion to a brief summary of five main monitoring activities, with references to the relevant academic literature. In many of these activities, it is the VC reputation itself that provides a main source of added value.

Board Representation A seat on the board of directors is a key mechanism for VC monitoring. With a position on the board, a VC has explicit power to participate in and influence corporate activities. The level of board representation can be a highly contentious negotiation. VCs often want multiple board seats, whereas entrepreneurs are understandably reluctant to cede much control. In early round investments, a lead investor will virtually always get at least one board seat and other members of a syndicate will often get seats as well. In later rounds, board seats are not universal, and some investors will settle for board observer status, which does not have voting rights.

A VC spends a substantial fraction of his time as a board member. Many of the other monitoring activities are accomplished in the context of the board role. Notwithstanding the importance of this role and an enormous academic interest in studying the workings of corporate boards, we still know very little about how an individual person can become an effective board member. For obvious reasons, researchers are rarely invited into boardrooms, so most of what we do know about boards comes from quantitative studies of the relationship between company performance and various board characteristics.

This academic literature is mostly focused on board structure in public companies, rather than the dynamics within the boardroom. Some of the findings have some interest for VCs. For example, Yermack (1996) finds an inverse relationship between firm market value (per dollar of book assets) and board size. Although the causality of this finding is hotly debated, it is consistent with a tendency for VCs to favor small boards, sometimes at the cost of offending members of the management team who expected to be included. In a more cautionary result for VCs, Fich and Shivdasani (2006) find that public companies with "busy boards"—those where a majority of outside directors hold three or more directorships—have inferior performance to other companies for a variety of measures. The relevance of this finding for VCs is uncertain, because the outside directors of public companies, unlike VCs, usually do not consider their directorships to be their full-time job. Nevertheless, the results suggest that board member effectiveness cannot be scaled indefinitely.

In a related study, Tian and Wang (2010) develop a measure of VCs' failure tolerance and find that IPO firms backed by more failure-tolerant VCs are significantly more innovative, even long after VCs exit the IPO firms. Their measure of failure tolerance is a function of how many rounds (and how long) VCs invested in a firm before its ultimate failure. Since new rounds of financing typically require board approvals, this measure reflects existing VCs' exercise of their voting powers as board members. The persistence suggests that VCs' attitudes toward failure have likely been internalized by the startup firms and become part of the firm's culture.

Corporate Governance Corporate governance rules define the powersharing relationship between shareholders and managers. In recent years, a large body of academic research has demonstrated the relationship between corporate governance rules and corporate performance. The best time to set good rules is while a company is still small and before it goes public. VCs can and do have significant input into this process. Hochberg (2005) studies the first proxy statements filed by public firms to determine the influence of VC-backing on various corporate governance rules. She finds that VC-backed companies are (1) less likely to engage in aggressive accounting prior to their IPO, (2) more likely to have independent boards and board subcommittees, and (3) more likely to separate the role of chairman and CEO. Although it is always difficult to prove causality in these kinds of studies, the analysis does show that these governance differences do not occur in the presence of large, non-VC shareholders.

Human Resources VCs also spend a large fraction of their time working on human resource issues at their portfolio companies. This work requires the same set of skills used to evaluate management during the investment phase, plus the ability to recruit new managers and replace underperforming ones. In all these activities, a VC's reputation can make a huge difference, and the name of a VC investor is often invoked as a reason to join a company. (We have heard many MBA students, when describing their prior experience at a startup, say the name of the top-tier VC that invested in the company even before they said the name and business of the company!) Hellmann and Puri (2002) studied the human resource practices for a sample of VC-backed and non-VC-backed companies in Silicon Valley. They found that VC backing accelerates the hiring of senior executives (such as a VP of marketing), the adoption of stock option plans, and the turnover of the CEO. As in the Hochberg study, it is difficult to prove causality, but the authors do a good job of trying. One notable finding is that CEO turnover often occurs long after the original VC financing, suggesting that the financing and the turnover were separate events. Furthermore, the authors find that the replaced CEOs often stay with the company in another capacity. This last result suggests that the VCs managed to keep the skills of a founder-CEO while simultaneously getting a more experienced CEO to run a larger company.

Matchmaking VCs will often use their contacts and reputation to make introductions that can lead to new partnerships, customers, and suppliers. As in the human resource function, the reputation of the VC can often lead to relationships that would not otherwise be possible. One straightforward method is for VCs to make connections among their past and current portfolio companies. Academic research on the efficacy of VC matchmaking suggests that VCs do indeed facilitate alliances among their portfolio firms (Lindsey 2008). In this case, a potential portfolio company should care about the average quality of the other companies in the VC's portfolio, because these companies are more likely to be potential partners.

Strategy As advisors to the CEO, VCs have the opportunity to participate in strategic decisions. This opportunity must be used wisely, as many generalist VCs are not qualified to give strategic advice across all sectors. Indeed, it is in the area of strategy that it makes the most sense for individual VCs to focus on a specific sector so that they can build the knowledge and experience to add value. For VC firms as whole, the focus on one or two industries can enable the entire organization to participate as specialists in strategic discussions with the firm.

It would be silly to cite any academic literature here. "Strategy" is a large academic subject unto itself, and to do it justice would require at least a separate book and certainly a different author. What we can say here is that there is no existing academic evidence on the strategic contribution of VCs to the success of their portfolio companies. To the extent that the VCs can make such contributions, they can certainly be an important source of value added.

SUMMARY

A VC's reputation is a valuable asset. A high-reputation VC is more likely to have its term sheets accepted and can pay lower prices for shares than do low-reputation VCs. Top-tier VCs earn their reputations with superior investment performance, and many of these top-tier firms raise their carried interest to 25 or even 30 percent. Nevertheless, there is excess demand by potential LPs to invest in such top-tier VCs, even at these higher prices. VCs allow this excess demand so that they can maintain long-run relationships with LPs, minimize the time needed for fundraising, and maximize the chance of maintaining their high reputation. This reputation is valuable not only for striking better deals with portfolio companies, but also for increasing the value added to these companies. This value is added through monitoring activities such as board membership, corporate governance, human resources, matchmaking, and strategy.

KEY TERMS

Return on investment (ROI) Return on capital (*R*) Cost of capital (*r*) Top-tier firm Star fund Superstar fund Sand Hill Road Syndication Lead investor Proprietary deal flow Crossover investing

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