

CHAPTER 1

Industry Overview



After reading this chapter, you will be able to:

- Distinguish venture capital from other asset classes.
- Recognize the key functions and processes of venture capital investing.
- Differentiate between general partners and limited partners.
- Estimate typical investment returns for venture funds.
- Understand the seven reasons for the current performance crisis in venture investing.

What Is Venture Capital?

The best definition of venture capital comes from the man who created the industry. General Georges Doriot, a Harvard Business School professor and early venture capitalist, said that his firm would “invest in things nobody has dared try before.”

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Venture capitalists, sometimes called “VCs,” look for new technology emerging from a government laboratory, a university research department, a corporate incubator, or an entrepreneur’s garage that disrupts a big market. It may even create entirely new markets. Such disruption presents fertile ground for rapid growth and wealth creation, or wealth redistribution. Venture capitalists professionally invest money in businesses that are neither proven nor safe.

They advise and assist growing companies to achieve extraordinary investment returns. Venture capitalists often say they are “value-added investors” who offer important services to start-ups beyond just writing a check.

The three most common things they do to help start-ups are to give strategic advice, recruit executives, and make introductions to customers. Venture capitalists make their presence known in a company via the corporate board. A venture investor may sit on several boards of directors and can take an active role in company direction, finance, and staffing.

Venture capitalists professionally invest money raised from large institutional investors. They typically buy a minority share of any company they invest in, though a syndicate of venture capital investors might own the majority of a start-up’s stock after several years. It is unusual for venture investors to push debt obligations onto their start-ups. Start-ups seldom have a predictable revenue stream to pay off the debt and few, if any, tangible assets that a lender could foreclose on.

Venture capitalists should be distinguished from “angel investors,” who use their own money to invest in newly formed companies. Angels are typically retired executives who can give advice and

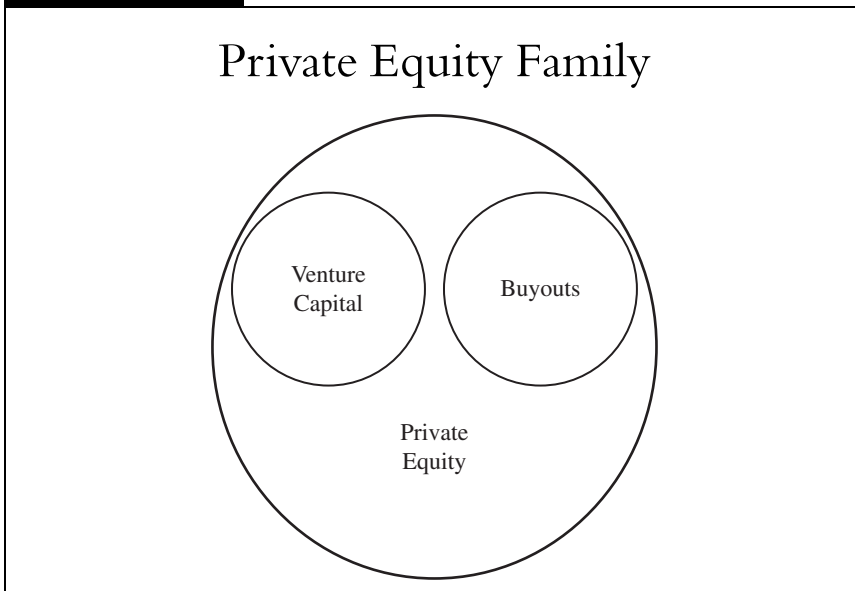
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between \$50,000 and \$500,000 of early investment capital. They do similar things as venture capitalists but are not professional investors.

Venture capital is a specific type of private equity investing. Private equity investors bankroll companies that do not have stock traded in public markets, such as the New York Stock Exchange or NASDAQ.

The distinction between venture capital firms and buyout shops, the other group of investors lumped into the private equity category, is the ownership level that they take in the companies they invest in. Buyout shops will buy up enough stock in a target company to be majority owners so that they can make serious changes to a company's operations. Exhibit 1.1 shows the differences between venture capital, buyouts, and private equity.

EXHIBIT 1.1



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I think of venture capital as investing money into small, private technology companies expecting rapid growth. But there is no formal definition of what kind of deal a venture investor can or can't do. They invest in corporate spinouts, leveraged buyouts, public stock, and just about anything else they think they can turn a buck on. A typical year may see anywhere from 2,500 to 3,500 venture capital deals, and no two are identical. Still, there are some norms that prevail and you can get a sense of what type of companies venture investors look for.



IN THE REAL WORLD

Done Deals

What types of investments do venture capitalists make? Here's a sample of representative deals from top-flight investors.

CANADIAN FUSION STARTUP POWERS UP WITH \$22 MILLION^a

A Canadian-based startup that is experimenting with fusion energy technology has quietly raised \$22 million in early stage funding from venture capitalists.

Burnaby, British Columbia-based startup General Fusion plans to develop a prototype that will show its fusion technology can produce energy cheaper than coal-fire plants and safer than standard nuclear fission plants.

"What General Fusion is working on is game changing," says investor Rolf Dekleer, vice president of investments for Canadian venture capital firm GrowthWorks Capital. "If they were working on this 10 years ago, we wouldn't be talking about global warming today."

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GrowthWorks Capital, Braemar Energy Ventures, Chrysalix Energy Ventures, and The Entrepreneurs Fund combined to provide \$9 million for General Fusion. The Sustainable Development Canadian Technology Fund, a government entity charged with financing environmentally friendly technology projects, additionally kicked in more than \$13 million, contingent on General Fusion's ability to meet key milestones.

MOTALLY RAISES \$1 MILLION TO MONITOR MOBILE WEB TRAFFIC^b

Metrics matter. That's especially true on the Web, where the number of "eyeballs" a site attracts helps to establish what a company charges advertisers.

But as people move from desktop browsing to accessing sites via mobile phones, tracking the exact number of visitors has become more difficult.

San Francisco-based Motally is working to help online publishers determine who is accessing their content and how visitors are interacting with their websites. The startup recently raised \$1 million in early-stage venture funding from BlueRun Ventures and angel investor Ron Conway, according to regulatory filings and the company.

BIOTECH STARTUP RAISES \$8 MILLION FOR ASTHMA TREATMENT^c

Newton, Massachusetts-based NKT Therapeutics is looking for ways to subdue Natural Killers and now has \$8 million in fresh funding to do that.

The company recently raised its first round of venture capital funding from SV Life Sciences and MedImmune Ventures to help it develop treatments for asthma and other diseases.

The company focuses on researching so-called Natural Killer T-Cells, which the company describes as a central component of the human immune system, playing a role in human health and disease. Natural Killers play a very different role in the 20 million asthmatics estimated to be living in the United States, waging war on otherwise normal lung tissue.

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IN THE REAL WORLD (CONTINUED)

“By selectively activating or depleting the function of NKT (Natural Killer T-Cells), NKT Therapeutics’ approach has the potential to treat a wide range of important diseases and provide new avenues for vaccine creation,” says investor Michael Ross, a managing partner at SV Life Sciences.

^a “Canadian Fusion Startup Powers Up with \$22 Million,” Reuters.com, August 4, 2009, <http://bit.ly/cgaup>.

^b “Motally Raises \$1 Million to Monitor Mobile Web Traffic,” Reuters.com, June 24, 2009, <http://bit.ly/ci3uj3>.

^c “Biotech Startup Raises \$8 Million for Asthma Treatment,” Reuters.com, March 23, 2009, <http://bit.ly/cqWnNW>.

Companies that raised money from venture capitalists contributed 21 percent of the U.S. gross domestic product (GDP) and employed 11 percent of the workforce in 2008, according to a study financed by a venture capital lobbying group.¹ It cites several prominent examples of companies that relied on venture capitalists to get their start: Microsoft, Intel, Oracle, Google, Amazon, Staples, Netscape, AOL, FedEx, eBay, Apple, Cisco, YouTube, and others.

Venture capitalists have come to be associated with technology start-ups and California’s Silicon Valley because the technology industry there has yielded some of the largest growth opportunities in the past three decades. Before that, the epicenter of technology innovation was the greater Boston area.

During the past 20 years, the majority of venture investors were white males in their late thirties to early fifties, educated at either Harvard or Stanford Business School with a background in either operations or entrepreneurship. They typically work in partnerships

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of 3 to 10 investors with offices within five miles of Sand Hill Road in Menlo Park, California, and make \$774,000 a year, according to data from Thomson Reuters. These characterizations are changing as firms diversify and expand beyond their roots. The next 20 years of the venture capital business will see a new generation of investors that reflect the diversity of every other industry.



TIPS AND TECHNIQUES

Venture Capital Spotting

If you spend enough time in Silicon Valley, you'll learn to spot the venture capitalists in any crowd. Here are a few tips on how to pick them out:

Clothes. Male venture capitalists wear blue button down shirts and khaki pants. Navy blazers are optional, though sometimes you'll see windowpane-style checkered jackets. I've never seen them with herringbone jackets or leather patches on their elbows. Most venture capitalists don't wear ties. Vinod Khosla has a closet full of mock turtlenecks. There are two notable exceptions: Kleiner Perkins's John Doerr and Draper Fisher Jurvetson's Tim Draper. Doerr has one tie he's worn for at least a decade that has broad black and silver stripes. Draper wears red ties from the Save the Children Foundation.

Early stage and seed investors dress more casually. Marc Andreessen wears flip-flops and shorts. European seed investor Morten Lund wears a blue Adidas hooded sweatshirt and Birkenstock sandals.

Female venture capitalists wear a range of styles. Blouse and slacks combos seem to be the norm, though one periodically sees variation ranging from pantsuits to a black Lacoste polo shirt with jeans.

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TIPS AND TECHNIQUES (CONTINUED)

Communication. Investors love buzzwords and love to look intelligent. Here's a typical venture capital sentence that one might encounter in casual conversation: "His go-to-market strategy wasn't going to help him cross the chasm and deliver a scalable, robust solution in real time."

Eating. Favorite feeding spots tend to persist over time, and Buck's of Woodside is one which investors consistently favor. It's not unusual for the waitstaff at this rustic flapjack shop located in the suburbs around Stanford University to automatically bring whatever a venture capitalist typically orders. The place is full of real Silicon Valley history, from boxcar racers hanging from the ceiling to framed semiconductors and a California license plate that says GOOGLE.

Buck's has become well known to the point where it's unhip to be seen there. Other venture capitalist favorites in the Silicon Valley area include the laid back Palo Alto Creamery; Redwood City's upscale Chantilly (down the street from the Ferrari dealership); Menlo Park's Kaygetsu, a hot sushi spot right off Sand Hill Road; and Menlo Park's Dutch Goose, which makes killer deviled eggs.

Exercise. Venture capitalists could exercise like normal people, but don't. Consider Brad Feld, a managing director at The Foundry Group, who is shooting to run a marathon in every state before he turns 50. To balance his strenuous training regimen with work, Feld invented the *Treadputer*, a computer with three screens mounted to his treadmill. It's an IBM ThinkCenter with 19-inch flat screen monitors and voice recognition software.

How Venture Capital Works

A venture capitalist's job is generally broken down into three major functions:

How Venture Capital Works

1. Fundraising
2. Finding start-ups to invest in
3. Reaping the rewards

Fundraising

Venture firms are usually set up as investment partnerships rather than corporations or companies. Venture capitalists split the earnings from their work among themselves rather than giving it to shareholders. There are two components to a venture capital investing partnership, the *general partners* (GPs) and the *limited partners* (LPs).

The general partners are the venture capitalists. They are the active participants of a partnership agreement, investing in start-up companies. The money they invest comes from limited partners.

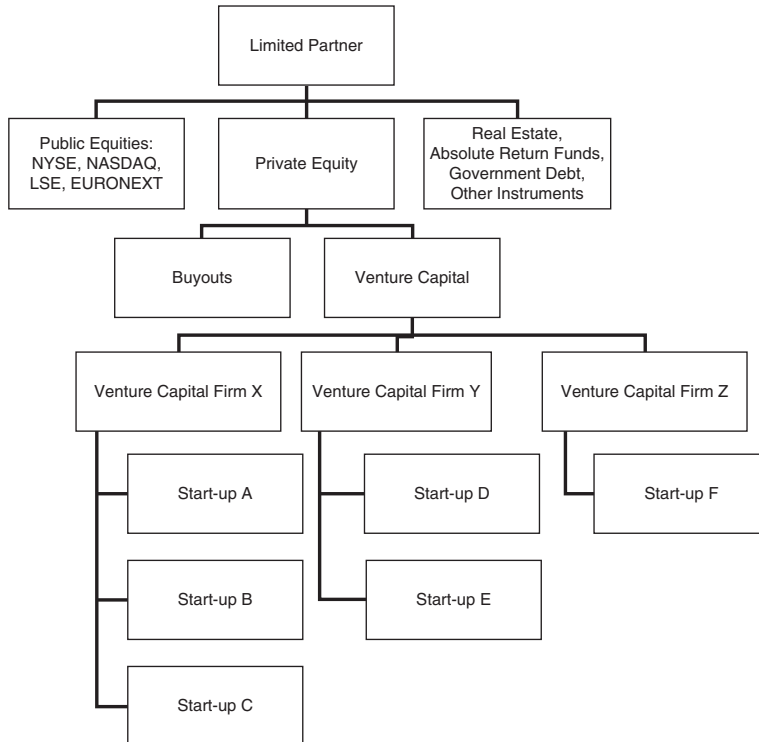
Limited partners are the passive participants in a venture capital partnership. They entrust their money to GPs and expect to get it back and more in several years. Limited partners are institutions, endowments, pension funds, or other large pools of money. They invest in a wide range of asset classes, such as stocks, bonds, real estate, and “alternatives,” such as venture capital, private equity, and hedge funds. Examples of big limited partners include the Harvard University Endowment, the California Public Employees Retirement System (CalPERS), the J. Paul Getty Trust, and HarbourVest.²

Exhibit 1.2 shows the way in which limited partners invest in various asset classes and how the money eventually trickles down to start-ups.

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EXHIBIT 1.2

Limited Partner and Venture Capital Investment Map



These limited partners entrust the venture capitalists to invest money on their behalf for a period of time through a legal structure called a *fund*. The fund sets the parameters for the partnership, including what financial commitments the LPs will make, what compensation the GPs will get, and what types of investments GPs will

How Venture Capital Works

make. A typical venture capital fund usually spends three to five years investing in companies and another five to seven years reaping the rewards and distributing the returns to its limited partners. The standard venture fund agreement is designed to terminate after ten to twelve years.

Many people have some small level of investment exposure to venture capital through pension funds, but most individuals cannot buy into a venture capital fund because they do not meet the requirements set by the Securities and Exchange Commission (SEC). The SEC requires individual investors to be accredited before they may invest in a venture capital fund. The rules for accreditation are complicated and subject to interpretation, but a good rule of thumb is that if you don't have a net worth of \$1 million, you are unlikely to be able to invest in a venture capital fund.

From an individual investor's standpoint, venture funds are likely to be a poor choice. The main reason is that they are illiquid. Once you're in a fund, you should expect to hold that position for 10 years. There are a handful of firms that will buy positions in venture capital funds, but only at a steep discount. Even then, good venture capital firms may be able to choose the type of investors they allow into their funds and may prefer institutions that are stable instead of individuals whose commitment may fluctuate.

There's no formula for what percentage of an institution's money should be invested into venture capital, but it generally only accounts for a small portion of its overall portfolio. A big institution might invest as much as 15 percent of its capital in private equity funds.

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Pension Fund Holdings

The California Public Employees' Retirement System (CalPERS) is the granddaddy of pension funds, managing around \$175 billion on behalf of 1.6 million retired Californians. CalPERS is one of the more transparent retirement systems. Below is its portfolio allocation at the end of January 2009:^a

- Domestic Fixed Income: 22.4 percent
- Domestic Equities: 21.3 percent
- Global Equities: 18.4 percent
- Alternative Investment Management (AIM): 13.8 percent
- Real Estate: 12.1 percent
- Cash Equivalents: 7.6 percent
- International Fixed Income: 2.3 percent
- Inflation Linked: 2 percent

The CalPERS Alternative Investment Management (AIM) program is the vehicle the pension fund uses to invest in venture capital and other private equity. The \$23.9 billion CalPERS allocated to its AIM program only counts the money the pension fund has actually invested to date. It does not include commitments that CalPERS has made to general partnerships but has yet to actually write checks for. When you put the value of the investments CalPERS has already made together with the value of the commitments that it has made to write checks in the future, you arrive at the pension fund's "total exposure," to the AIM program: \$47.9 billion.

^a CalPERS web site, "Asset Allocation," June 2009, <http://bit.ly/da0Utl>. It's worth noting that after a terrible year on the stock market, the fund is likely overallocated to alternative investments at the point this data shows. Its target allocation for the AIM Program for 2009 was 10 percent.

How Venture Capital Works

Investing

Once a venture firm raises a fund, it invests in companies. Some venture firms have specific rules about what type of companies they can invest in, others are more flexible. Typically, venture firms invest in small, recently incorporated companies called start-ups.

When I think about start-ups, my first thought is two young guys in a garage. After all, it's Bill Hewlett and Dave Packard founding HP, Steve Jobs and Steve Wozniak founding Apple, and Sergey Brin and Larry Page founding Google. But the truth is that about twice as many U.S. tech entrepreneurs are in their fifties than in their twenties. And the average number of people employed in a start-up isn't 2—it's 42, according to a study by the Kauffman Foundation.³

Finding good start-ups to invest in isn't easy. Venture capitalists churn through thousands of business plans, hundreds of company presentations, and fund just a handful of start-ups. Picking the right handful relies on careful research and vetting called *due diligence*. The term comes from the standard of care a trustee must bring to the process of investing. In practice, it means interviewing the entrepreneur several times, testing the proposed technology, and speaking to potential customers or experts in the applicable technology field. Most venture capitalists feel more comfortable investing in companies that were introduced to them by someone they know or have worked with in the past.

Once a venture capitalist identifies a start-up to invest in, there are competitive issues and deal structuring concerns to be considered.

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One of the biggest things to think about is whether to syndicate or share an investment with one or more other firms. Venture investors will choose to syndicate based on the macroeconomic environment and their beliefs about the risk of an investment.

A venture capitalist may write a small check to a start-up in the beginning, doing what is called an early stage or Series A investment round. The financing is intended to carry the company through a year or 18 months of operation and to a significant milestone. For example, an Internet start-up might use its Series A round to get its site up and running.

Once that major milestone has been achieved, some of the risk is removed. An Internet start-up with a working web site is a more stable investment than one without. The company may then decide to raise more money from venture capitalists in a Series B financing.

The first venture capitalist involved in the company's financing may want to participate again, though he or she is not obligated to. An entrepreneur typically looks to an outside firm to objectively determine the value of its stock before inking a new deal. The price of a company's Series B shares usually represents an increase in its value. Most start-ups don't go beyond raising a Series D or E.

Deal structures that worked well for semiconductor and software investments may not fit companies installing solar panels, hunting for cancer cures, or building hot new consumer applications. Venture capitalists tailor their deal structures to accommodate new technologies and evolving market opportunities.

How Venture Capital Works

Reaping the Rewards

Of course it doesn't matter where you find great deals or how you structure an investment if you can't get a healthy return. Venture capitalists typically plan to hold onto an investment for five to seven years. They used to rely on initial public offerings (IPOs) to value their companies and provide stock that they could distribute to their limited partners. That avenue has been all but inaccessible since the dot-com downturn, due in part to increased government regulation.

Start-ups increasingly sell to strategic acquirers, big corporations such as Cisco, Oracle, and Google. Those companies may pay cash or with their stock, which the venture capitalists are then able to pass out to their limited partners.

Venture capitalists get paid when one of two things happen. They collect money just for raising and managing an investment fund on behalf of large institutions. This payment is called a *management fee* and increases proportionately with the size of a firm's fund. A venture partnership that raises a \$100 million fund might get a 2 percent fee of \$2 million each year. Management fees generally decline as a firm moves from actively investing to passively managing the investments it has made.

Venture capitalists also get paid a portion of any profits they make from their investments. This compensation is called *carried interest* or just *carry*, and is a prearranged percentage of whatever the firm earns for its investors. Carried interest generally ranges between 20 percent and 30 percent of a fund's profits. A venture firm that raises a \$100 million fund, makes \$150 million for its investors, and

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has a 20 percent carried interest would get \$10 million to split among the venture capitalists.

Performance Expectations

To determine how well any given venture capital firm is doing is tricky. You can't just look up its stock price or go to the SEC for its latest annual report. There are five major reasons why it is difficult to know how well a venture capital firm is doing.

1. Variability of the business cycle impacts industry-wide performance.
2. Different types of investors have different performance goals.
3. The investment time horizon is long.
4. A single excellent deal could drastically affect a fund's performance.
5. Little data is available.

The way to evaluate the performance of a firm is to look at each of its funds and compare its fund performance to other funds that operated at the same time and invested in the same stage of start-up development. Venture capital funds raised in 1997 typically did very well because they invested during a time of unprecedented economic expansion in the technology industry, and they harvested their returns at the peak of the dot-com boom. Funds raised in 2000 have not fared as well. Many invested in companies that seemed promising during the boom but proved to be duds during the bust.

Different types of venture firms have different performance expectations that make comparisons between funds difficult. An early

Performance Expectations

stage venture capitalist will do extremely well if he or she can pick the next Google and buy its shares for pennies. The return expectation is high, but the variance in performance is also high, since there aren't many proto-Google's out there to find and because so much can go wrong going from a great idea in a garage to a public offering.

A late stage venture capital firm invests in companies that have fully developed products and at least some revenue. Since most of the risk has already been eliminated at this point, the late stage firm buys in at a higher price per share than an early stage venture firm. This leads to lower returns for the late stage-focused firm but also lower risk.

Each venture capital firm raises a fund that typically spans the course of 10 to 12 years, during the first half of which it makes investments and the second half of which it liquidates its holdings. A lot can happen during that time. Early stage investors often joke that the business of investing in a company that is little more than a team with a prototype is a lot like playing Russian roulette—only that you pull the trigger now and don't know if you're dead for another half a decade.

There's a lot of truth to that joke. The average time it takes a start-up to go from incorporation to being bought by a strategic acquirer was 6.5 years in 2008. It took the average company 7.9 years to go public in 2009, according to data from Dow Jones VentureSource.⁴ Venture capitalists will own the company for most of that time.

It's easy to understand then why most funds are underwater, showing negative returns, for the majority of their decade-long life. Investors call this effect the *J-curve*. It comes from the fact that a firm spends at least the first three to five years of a fund's life just writing

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checks for start-ups, passing out money with the hope of collecting it in the second half of the fund's life, when its investments are mature and ready to be harvested.

The J-curve makes it hard to identify an underperforming fund, since negative returns are typical for the early years of any fund. There are two other major factors that also contribute to negative returns at the beginning of a fund's life: management fees collected each year that are used to pay the general partners and early failures that can be quickly identified and written down.

Success for a venture firm could always be just right around the corner. It may sound strange, but one major deal could take a fund from money loser to top performer. You can look at a venture firm's portfolio of companies and perhaps predict which will be successful, but nothing is certain until a start-up goes public or is acquired.

Averages are close to meaningless in venture capital. Looking at the distribution of returns on start-up investments is similar to looking at the average wealth of me, you, and Bill Gates: One data point skews the average so much that it jeopardizes logical conclusions.

Most statistics books would tell you to take the median of the set instead of the mean, but that's not particularly helpful in thinking about venture capital returns either.

Consider a top-performing venture fund of \$100 million that invests its money evenly across 10 start-ups. Three of those start-ups will go out of business, and their value will be written down to zero. Four of those start-ups will be sold at cost, below cost, or just slightly above cost, but at least the venture capitalist will get his or her money back. Two will be sold for a profit. That, at least, salvages the portfolio and puts the investor on par with the

Performance Expectations

S&P 500. And then finally there's the one runaway success, the grand-slam home run, the Genentech, eBay, or Google. You can see these results tabulated in Exhibit 1.3.

The average return is \$63 million on a \$10 million investment, but most of the firm's companies will either break even or be money losers. The median return is \$10 million on a \$10 million investment, or 0 percent rate of return. But would you invest in that firm's portfolio? I sure would.

Venture investors are in the weird position of expecting most of their deals to fail and only one or two deals salvage their investment efforts. With so much variance in performance, how can a potential limited partner know what to expect from a venture fund?

EXHIBIT 1.3

Distribution of Returns from 10 Fictional Start-ups

	Amount Invested (\$M)	Status	Return (\$M)
Start-up A	\$10	Bankruptcy	\$ 0
Start-up B	\$10	Bankruptcy	\$ 0
Start-up C	\$10	Bankruptcy	\$ 0
Start-up D	\$10	Sale at Cost	\$ 9.5
Start-up E	\$10	Sale at Cost	\$ 10
Start-up F	\$10	Sale at Cost	\$ 10
Start-up G	\$10	Sale at Cost	\$ 10.5
Start-up H	\$10	Success	\$ 40
Start-up I	\$10	Success	\$ 50
Start-up J	\$10	Home Run	\$500
Total	\$100		\$630

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The National Venture Capital Association (NVCA) and Thomson Reuters used to collect average returns data for venture investments over time—a job the NVCA has since offered to Cambridge Associates. You can see this data in Exhibit 1.4.

The data are broken down into time-horizons of investment. They will tell you the average return that firms expect in 1, 3, 5, 10, and 20 years. The data show that short-term returns are volatile, but venture capital, over the long run, outperforms other assets, such as the S&P 500 and the NASDAQ.

It's also worth noting that the 10-year data is artificially high. It includes the runaway success of the dot-com boom and will likely drop precipitously in 2010 when those peak returns fall out of the dataset.

Using an average of venture capital returns skews the data when there are a small number of big winners and a plethora

EXHIBIT 1.4

Investment Horizon Performance through September 30, 2008

Fund	1 Year	3 Years	5 Years	10 Years	20 Years
Early/Seed	0.2	3.8	5.1	37.2	21.6
Balanced	−6.4	7.4	11.5	14.9	14.7
Later Stage	8.6	12.0	10.5	8.9	14.7
All Venture	−1.6	6.6	8.6	17.3	17.1
NASDAQ	−21.4	−1.1	3.1	2.1	8.7
S&P 500	−22.0	−1.7	3.2	1.4	7.5

Source: Thomson Reuters/National Venture Capital Association, <http://bit.ly/ahflF9>.

Performance Expectations

of losers. Just as one or two start-ups can return big money for venture capitalists, only a handful of venture funds ever return money to their LPs. The top firms return 40 to 60 percent in a good year and return much, much more than that in a great year. Most firms lose money on their funds during a down market.

Getting a specific fund's returns isn't always easy. The best source for finding a single fund's returns is from a public entity that reports the performance of its individual investments. CalPERS makes its data on venture capital easy to find online.⁵ But you won't find every venture fund on the CalPERS site. Some firms don't want to publicly report their returns and have opted to boot public-trust-style limited partners out of their funds so they won't be open to scrutiny.

But let's consider one firm that does take money from CalPERS and reports its returns to the giant pension fund.

Aberdare Ventures is a San Francisco-based early stage venture capital fund which invests in both biotechnology companies and medical device companies. Its returns, as of the end of 2008, are shown in Exhibit 1.5.

The CalPERS data in Exhibit 1.5 show several interesting things. The first thing to notice is the list of fund names. CalPERS has committed to three Aberdare funds so far. The fund "vintage" is the year that the fund was raised and began investing.

The "capital committed" is the amount of money CalPERS promised to put into each Aberdare fund. A firm such as Aberdare may go to many limited partners to raise a fund and CalPERS only has a small piece of each of the funds listed here. The firm's earliest

EXHIBIT 1.5

**CalPERS Investment Returns for Aberdare Ventures
as of December 31, 2008**

Fund	Vintage	Capital Committed	Cash In	Cash Out	Cash Out and Remaining Value	IRR	Notes	Investment Multiple	Notes
Aberdare II Annex Fund, L.P.	2006	5,985,000	1,975,050	0	1,428,140	-19.2	N/M	0.70×	N/M
Aberdare Ventures II, L.P.	2002	20,000,000	18,999,996	5,538,889	19,707,777	1.3		1.00×	
Aberdare Ventures, L.P.	1999	2,500,000	2,218,900	1,361,751	2,046,379	-1.6		0.90×	
N/M = Not meaningful.									

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fund, called Aberdare Ventures, L.P., raised a total of \$50 million, records show. Its next fund also raised \$50 million, but later added a \$15 million “annex fund,” which extends its investment ability beyond the initial fund size.

Capital committed is a promise to invest a certain amount of money, but the “cash in” column shows how much CalPERS has actually given Aberdare. Venture firms never get all of the money they raise at once; they get it over time by making capital calls to their limited partners. A capital call is nothing more than the process of transferring money out of CalPERS’s bank account and into Aberdare’s.

As you can see from Exhibit 1.5, Aberdare has not yet called down all the capital from its first fund. It has only called \$2.2 million of the \$2.5 million CalPERS promised. Venture firms typically hold a small amount of capital back to support portfolio companies as they grow.

“Cash out” is where the rubber meets the road. It is the money that the venture firm has distributed back to its limited partner. When Aberdare’s companies go public, it may pass out shares of stock. When its companies are acquired, it may pass out cash. However it comes, “cash out” is the ultimate measure of how much money a venture capital firm has returned to shareholders.

Of course each venture firm has at least some companies that haven’t been bought or gone public. Those companies have value and the next column, “Cash out and remaining value,” attempts to capture that fact. The remaining value of a portfolio is reported by the general partners.

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Remaining value is difficult to judge, even for the general partners in charge of the investments. Shares in private companies are not liquid securities. You can't just look up the recent trading prices on the Internet. Is the right way to account for their value to use the price of the last sale of shares to a private investor? Those transactions can be years old. Benchmarking a company's value against similar companies is hard too. There just aren't that many public-market competitors to use.

It's important to remember that "remaining value" is a little bit squishy, especially when it comes to evaluating a fund's Internal Rate of Return (IRR). The IRR is a measure of annualized return on investment: the amount of interest you'd get each year you invested in the fund. The IRR includes "remaining value" as part of its calculation even though those returns have yet to be realized.

Few venture investors use the IRR metric when discussing fund returns. Instead, they talk about cash-on-cash return or *investment multiple*. This number measures the number of times a firm returns the size of its fund to investors. A \$100 million fund with a cash-out and remaining value of \$200 million would have "2X," or two times the return. You can see that CalPERS has yet to get more than a 1X return on an Aberdare fund. That means the firm has lost money for its investors.

The notes of the last column in Exhibit 1.5 offer some perspective on the returns information. You'll see that the Aberdare II Annex L.P. fund has the note "N/M" next to its investment multiple. That means the fund is still too young to expect returns. The returns data shown are "not meaningful" yet. It's important to remember that a venture fund is typically a 10-year investment vehicle and

Performance Expectations

the Aberdare II Annex L.P. fund was, at the time the data were collected, less than three years old.

Not every firm has public data available as Aberdare does. For example, getting performance data for Kleiner Perkins Caufield & Byers usually involves having a close relationship with one of the firm's investors and seeing its private records.



IN THE REAL WORLD

Why We Don't Have Venture Capital Performance Data

Should the University of California be excluded from investments that returned more than half a billion dollars?

Sure. No problem.

That was the answer that Sequoia Capital gave when booting the school from its list of limited partners. The firm had counted the school system among its investors for 22 years (spanning from Sequoia III to Sequoia X), during which time it had taken \$110 million of investment capital and turned it into \$508 million.^a But that relationship came to an end in 2004, when Sequoia unceremoniously blocked the school from putting money into its next fund.

The move came after the University regents lost a lawsuit to the Coalition of University Employees and the San Jose Mercury News in 2003. The plaintiffs demanded the school comply with the California Open Records Act and disclose the individual rates of return made by each of its private equity funds. The school had previously released only the aggregate returns for the entire private equity portfolio.

Disclosing individual fund returns could make it possible for a motivated data analyst to extrapolate the value of specific

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IN THE REAL WORLD (CONTINUED)

companies within a venture firm's portfolio. That information could then be used as the basis for a strategic acquirer's bid and would subsequently depress returns—or at least that's what venture capitalists feared would happen.

Even worse, start-ups might have to disclose their financials, revenue projections, valuation, or other proprietary information by virtue of having received some small sliver of public money. The fear was that disclosure requirements would prevent private companies from being private.

"Discretion and privacy are the handmaidens of successful venture capital firms," wrote Sequoia Investor Michael Moritz in a widely circulated letter to the University of California investment team at the time.^b "Our portfolio companies are hurt when sensitive information about their activities becomes available to competitors."

The same day the California judge issued his ruling, Sequoia sent another letter to the University of Michigan, informing the public school it would not be invited to invest in Sequoia's next fund and asked its Chief Investment Officer to sell the University's positions in previous funds.^c The school had earned \$125 million on its \$14 million investment in Sequoia VI, VII, and VIII, according to reports.

Sequoia wasn't the only firm to stop looking to public pension funds and university endowments. Benchmark Capital, Charles River Ventures, and the Woodside Fund are a few that turned exclusively to private sources of funding, according to reports.^d

State legislators panicked over the disclosure issue and soon were proposing or passing laws to protect private equity data from public scrutiny. Michigan determined that IRR data was a "trade secret" and passed a law preventing the disclosure of top-line fund performance data or any data associated with underlying portfolio assets. Colorado determined it would permit top-line performance disclosure, but explicitly protected all information pertaining to portfolio companies.^e Massachusetts and Virginia passed similar laws.^f

Performance Expectations

Not all states reacted this way. Texas Attorney General Greg Abbott extended an interpretation of his state's Open Records laws to make information on the underlying assets of venture firms public. "There is no proof that secrecy will ensure good investments, but it is true that secrecy can conceal bad investments," he said in a speech to the Freedom of Information Foundation of Texas.

The University of Texas Investment Management Co., which manages money for state-run University of Texas, said that this expanded interpretation forced several firms to exclude it from investing. Those firms included American Securities, Barclays Private Equity, Foundation Capital, and Prospect Venture Partners. Perhaps most stunning was that the venture firm that took its name from the state's capital—Austin Ventures—said it would not raise any funds from Texas-based public funds in 2005, citing concerns it would be forced to disclose information about its specific portfolio companies.^g

Disclosure requirements are one of the reasons we have little or no performance data from top performing funds. Good firms can call the shots on who gets a chance to invest and they'd rather not have their private performance data exposed to public scrutiny.

^a "UC Files Appeal in Venture Capital Disclosure Case," *University of California Press Room*, September 5, 2003, <http://bit.ly/cSJwJs>.

^b "Venture Capital Firm Severs UC Ties After Court Ruling" *The Berkeley Daily Planet*, September 2, 2003, <http://bit.ly/beyC4V>.

^c "Sequoia Boots Wolverines," Thomson Reuters' *Buyouts*, August 25, 2003, <http://bit.ly/a3uC0d>.

^d "VCJ Editor: Clip and Send," *Venture Capital Journal*, June 1, 2004, <http://bit.ly/cdFt4I>.

^e "Battle Over Preventing Disclosure Data Shifts to the East Coast," *Venture Capital Journal*, July 1, 2004, <http://bit.ly/d41wTj>.

^f "Disclosure and Exposure in the Private Equity and Venture Capital Industries: More to Come," Nixon Peabody Client Memo, March 30, 2005, <http://bit.ly/cNoFvk>.

^g "Limited Partner News," *Venture Capital Journal*, May 1, 2005, <http://bit.ly/9xVCTZ>. Once the Texas disclosure laws were interpreted to protect underlying portfolio data, Austin Ventures relented and still counts the University of Texas Investment Management Co. as one of its major investors.

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Venture Capital in Crisis

Looking at Aberdare's returns might surprise you. The firm has been invested for more than a decade and has yet to return the initial investment CalPERS made. The giant pension fund would have been better off hiding its money under a mattress.

But Aberdare is not unusual. Most venture capital funds lose money in anything but the most buoyant market.

The poor returns of the last decade have caused a massive crisis of confidence in the venture business and will force major changes on the industry.

"I don't know what kind of a career I'm going to have in venture capital," a managing director at a well-regarded Silicon Valley venture firm recently told me. His comment had little to do with his own interest or ability in the venture capital business. In fact, he's one of the more successful venture investors, with at least one major multi-hundred-million-dollar acquisition and a fistful of enviable portfolio companies. If anything, he should be one of the people who would keep his job in the coming venture shakeout.

His concern is that it would become increasingly difficult to sell start-ups or take them public and limited partner money would dry up.

He's not the only practicing venture capitalist to think that his or her career is in trouble—a recent survey found that nearly 53 percent of venture investors believe their business model is "broken"⁶—and that may be the biggest problem the venture industry faces. Would you bet on a baseball team where five of the nine players thought they were going to lose?

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Finance is a confidence game, literally. One group entrusts its money to another with confidence it will produce returns. Venture firms overdrew their confidence account during the dot-com boom and bounced bad companies on the public market.

So where did the confidence go?

The past decade has seen seven major reasons for poor performance by venture capitalists:

- 1.** The venture overhang
- 2.** Investment banking changes
- 3.** Sarbanes-Oxley regulation
- 4.** Consolidation of customers and strategic acquirers
- 5.** Institutional investor growth
- 6.** Difficulty commercializing cleantech
- 7.** The recession

The Venture Overhang

Venture firms raised too much money during the dot-com era—over \$100 billion in 2000 alone—and became desperate to put it to work as entrepreneurship seemed to evaporate after the bubble burst. The “overhang” is the amount of money raised, but not yet invested.

Too many dollars chasing too few attractive deals depressed returns. Venture capitalists either invested in companies doomed to be unsuccessful or were forced to bid too much for promising companies. Some firms gave money back to limited partners, saying there were few attractive opportunities, but many more kept the money,

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continued to collect management fees, and hoped against hope for a hit.

The venture overhang was estimated to be \$68 billion in 2004.⁷ The size of the overhang is, in part, a reflection of an information or demand asymmetry between venture capitalists and their limited partner investors. LPs still wanted to allocate money to the venture asset class, even after the GPs started to see opportunities go away.

Investment Banking Changes

There were two major changes to investment banking after the dot-com boom. The first was tightening the regulations that separated an investment bank's services department from its analyst department. The concept of this type of "Chinese Wall" is intended to keep analysts objective. Analysts, the professionals charged with rating stocks on their investment potential objective, are supposed to give unbiased advice to clients.

But allegations of conflicts of interest tainted many I-banks. Investors burned by dot-com companies blamed analysts for pumping the stocks of companies they had hoped their firms would collect fees from. The practice of keeping the deal-making and analysis groups separate has been regulated since the 1920s, but the government has since put additional measures in place to ensure investors don't get hurt again.

Although no venture capitalist would argue in favor of knocking down the Chinese Wall in banking, many will admit that it's difficult for a newly public company to attract the attention of institutional investors without coverage by analysts. In fact, many large money

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managers have provisions against investing in a company unless at least one investment banking analyst writes about it.

Investment banks have a limit to the number of analysts they can employ and tend to focus their resources on the biggest companies first, leaving a lot of small companies out to dry.

The other major change in the investment banking industry since the dot-com boom has been the consolidation of small banks focused specifically on technology companies. These boutique investment banks built good businesses consulting start-ups and taking tech companies public. Their success running up to the dot-com boom attracted attention and many small banks were acquired by bigger investment banks or rolled up into consumer banks following the repeal of the Glass-Steagall Act, a long-standing law preventing just such business combinations.

Former National Venture Capital Association chairman and venture capitalist Dixon Doll specifically pointed to the consolidation of Alex Brown, Hambrecht & Quist, Montgomery Securities, and Robertson Stephens—all key boutique banks of the 1990s—as a serious problem for venture capital liquidity.⁸ To make matters worse, even the big banks have had trouble as of late, with Bear Stearns, Lehman Brothers, and Merrill Lynch folding during the financial crisis of 2008.

Sarbanes-Oxley Regulation

A combination of investor pain after the dot-com boom and shock over the massive fraud at Enron and WorldCom resulted in government regulation of corporate governance. The main piece of

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legislation was the Sarbanes-Oxley Act of 2002, which had many facets, but two major ones that made venture capital investing harder.

The first provision that impacted venture capitalists was Title III of the Act, which made corporate boards individually responsible for the accuracy of financial reports. This made sitting on the board of a public company a potential liability for venture investors. Many interpreted the law to mean that if a company ran into any accounting error they might be forced to pay a penalty or even go to jail. Lots of venture investors determined the small chance of a big cost outweighed the big chance of no cost at all.

Title III was important to venture capitalists, but might not have significantly hurt their business. After all, their time might be better spent working with small, high-growth companies than advising established public companies.

The real blow to the venture capital business came in the form of the additional costs of complying with all 11 titles of Sarbanes-Oxley. A small company might expect to pay anywhere from \$250,000 to \$2 million to ensure its records were secure, correct, and in compliance with government standards.

It may not sound like a lot of money, but it could be the kiss of death for a start-up struggling to break even. It increased the amount of money companies had to make before they could afford to go public.

Consolidation of Customers and Strategic Acquirers

Start-ups are often viewed as being at war with entrenched corporations. The innovators are perceived to be poised to pounce on the

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incumbents. But the reality is that start-ups often need medium and large public companies to buy their products and to potentially acquire their stock.

The best type of environment for a start-up to grow is one with a variety of potential customers. Big companies may be more willing to go with an unknown brand or buy from a start-up if they think it may give them an edge over competitors.

Silicon Valley start-ups often find their first and best customers are other start-ups or the smallest public companies that are still in growth mode. These customers often give good product feedback, don't take a long time to commit to buying, and don't require the most stringent specifications. That's very different from a huge global conglomerate that may take months before making a purchasing agreement or can have too many middle managers with anxiety about buying from a recently founded company.

A start-up that can sell to five companies is better off than one that just sells to one company. The ability to sell to a variety of customers indicates a true demand for a start-up's products and doesn't tie the company to a single powerful customer that could stop buying at any time.

Just as smaller-sized public companies competing with one another make good customers, they can also make good strategic acquirers. When two public companies compete with each other, each may think that a start-up has the key technology it needs to win market dominance. This is how bidding wars begin.

Bidding wars are good for entrepreneurs and their investors because it drives the acquisition price up. If there's only a single

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potential acquirer, it has the power to set the purchase price much lower. A company without clear competition may not feel pressure to get ahead by quickly buying a start-up, especially when it may be able to build the needed technology itself over a number of years.

Overall, industry consolidation makes both selling products and being acquired more difficult for start-ups. At one time, it was possible to sell routers, switches, and fiber-optic connections—the guts of telecommunications—to Sprint, Nextel, SBC, AT&T, Verizon, and MCI. Now only three of these telecom companies control the majority of the U.S. market, and competition for new technologies has decreased. This slows innovation and depresses returns for investors in telecom equipment start-ups.

Institutional Investor Growth

Starting in the 1980s and throughout the 1990s, Americans put ever-greater amounts of their savings into the stock market through direct investments and mutual funds. More capital under management at big funds such as Fidelity meant they had an even harder time investing in small companies.

Just as tigers don't hunt mice, most big investment funds have provisions that prevent them from buying into small companies.

Not every large firm has explicit restraints; it's often just the way the math works out. Consider two typical provisions: The institution may not hold more than 5 percent of a company's outstanding shares; and it will not make any investments smaller than \$10 million. Put these two restrictions together and it limits the

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institutional investor's ability to invest in any company with a market capitalization under \$200 million.

That math makes it tough for small companies to attract stable, long-term institutional investors. Venture capitalists are increasingly forced to hold on to small companies until they reach a size that is attractive to big public market stock institutional buyers.

Difficulty Commercializing Cleantech

The emerging industry that focuses on environmentally friendly technologies looked like it could be the next big thing for Silicon Valley. Entrepreneurs turned their focus to producing better solar panels, ethanol distilling, and even manufacturing electric cars. Investors thought they might ride a wave of public interest and enthusiasm for combating global warming, substituting away from \$100 per barrel “peak oil,” and embracing efficiency.

But unlike software start-ups, dot-com companies, and semiconductor design shops, cleantech companies called for buckets and buckets of cash to actually build physical things. Many needed several hundred million dollars of investment before they could even get to revenue—a problem for private investors with limited resources and a need to flip companies into either the arms of acquirers or up to the public market.

The Recession

A recession has five major impacts on venture capitalists:

1. Entrepreneurs that might normally leave a stable job to start a company stay entrenched in large corporations.

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2. A start-up's customers delay purchasing products as budgets shrink.
3. Plunging public market stock prices make the climate for new issues unfavorable. IPOs just don't happen.
4. Potential acquirers lower their growth expectations and put off buying start-ups.
5. Limited partner investors reduce their allocations to venture capital funds. LPs balance their portfolios a little like a chef making a cake balances different ingredients. If a chef finds he only has three eggs instead of four, he'll have to use less flour and milk to keep the recipe balanced. When an LP's public market investments decrease in value, she will look to cut her allocation to venture capital in order to keep her portfolio balanced. It's called the *denominator problem* and may prevent some limited partners from investing in venture capital firms for several years.

Need for Innovation

The poor returns venture funds have delivered combined with a decreased supply of limited partner investment dollars is going to be hard on the industry of innovation financing. Researchers predict half of the operating venture capital firms of 2009 won't be in business within half a decade.⁹

It's more important now than ever that investors think hard about how to adapt and evolve to the new environment they'll be doing business in.

"What creates change is pressure," says John Balen, a general partner at Canaan Partners. The big pressure for venture capitalists,

Summary

nearly a decade after the dot-com boom, is finding new ways of organizing, fundraising, generating deal flow, and achieving liquidity. We'll consider each in the coming chapters.

Summary

A venture capital firm professionally manages money on behalf of investors by directing it to high-growth opportunities involving new technologies, markets, or business processes. Venture capital investors generally do not seek total control of a company's board of directors or a controlling share of its stocks as buyout investors might.

Venture capitalists invest at early stages of a company's development or at inflection points that precipitate rapid growth. They hold their shares until they can either sell the company to a strategic acquirer or take the company public.

General partners run a venture firm's day-to-day investing process and raise funds from limited partners, which are typically large financial institutions such as pension funds and university endowments.

The performance of a venture capital fund is hard to determine, since the companies held in its investment portfolio take years to mature and one major hit could drastically improve a fund's returns overnight. Industry statistics may be skewed by a handful of super-performers that offset the majority of money losers.

Venture capital funds have not performed well since the dot-com boom due to the venture overhang, changes to the investment banking industry, Sarbanes-Oxley regulation, consolidation of customers and strategic acquirers, institutional investor growth, difficulty commercializing cleantech, and the recession.

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Investors face an opportunity to innovate on existing venture capital business models.

Notes

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