

**PART**  
**One****Raising the Venture Fund**

**W**hen Jan Garfinkle decided to be a venture capitalist, she polished her resume and approached several early-stage venture funds and was turned down. Jan had spent 20 years in various operational capacities and had cut her teeth primarily at two venture-backed cardiovascular device companies. A large publicly traded company acquired both these companies, leaving Jan a bit richer, wiser, and hungrier. She joined these start-ups after the initial idea had been vetted and the strategic direction of the company was being crystallized.

Early in her career, Jan joined Advanced Cardiovascular Systems (ACS) as an associate product manager, the company was seen as the forerunner in over-the-wire angioplasty—a technique that reopens narrowed or blocked arteries in the heart (coronary arteries) without major surgery. The founder of the company, John Simpson, once remarked, “When we started the company, there was no interventional cardiology device sector.”<sup>1</sup> C. Richard (“Dick”) Kramlich, founder of New Enterprise Associates (NEA), one of the world’s leading venture capital (VC) firms with over \$10 billion under management today, had then invested in Advanced Cardiovascular Systems. Dick once said of ACS, “The procedure was entirely non-invasive ... the body didn’t have to go through the trauma it once had to endure.”<sup>2</sup> At Advanced Cardiovascular Systems, Jan spent six years in marketing and sales of angioplasty systems. When Eli Lilly came knocking and acquired the company, the foundation stone for Guidant Corporation was laid. “We were the largest single shareholder in [Advanced Cardiovascular Systems]... The company did extremely well,”<sup>3</sup> Kramlich would say. That was over 25 years

ago, when Jan was at the threshold of her career. To be in an NEA-backed start-up was certainly fortuitous for Jan's career path.<sup>4</sup>

Like all good serial entrepreneurs, Jan moved on to John Simpson's next company, Devices for Vascular Intervention. The same founder who had built Advanced Cardiovascular Systems was now leading the charge in the next wave of the cardiovascular sector. Devices for Vascular Intervention laid its bets on atherectomy—a procedure to remove plaque from arteries. Here, Jan wrote the first business plan, and over the next six years, as director of marketing and clinical research, she dove deep into the universe of regulatory trials and approvals. Again, Eli Lilly had been watching closely and came knocking at the door. These two companies acquired by Eli Lilly became the foundation for Guidant Corporation, which was eventually spun off by Eli Lilly as a separate company and listed as GDT on the New York Stock Exchange (NYSE). Boston Scientific acquired Guidant in 2006 for \$27.2 billion. At that time, the vascular intervention business was valued at \$4.1 billion.<sup>5</sup>

When venture firms turned her down time and again, Jan decided to do what any entrepreneur does—never take no for an answer! She decided to raise her own fund and launched Arboretum Ventures, a fund focused on early-stage health care and medical device companies. Having lived close to Nichols Arboretum in Ann Arbor, and with her own DNA of a nurturing type, she found the name to be the appropriate encapsulation of her philosophies and style.

Like Jan, John Hummer, cofounder of Hummer-Winblad, interviewed at five venture firms. "All five turned me down—on the same day," reminisces John with a smug smile. "I climbed in from the window, as most do to get in this business of venture capital," comments the towering John, who once was a professional basketball player.

Most venture professionals agree that there is no straight path into the business of VC. You have to climb in from the window, if that's what it takes!

A venture firm's functions can be broken down into four key parts:

1. Raise a venture fund.
2. Build a portfolio of investment opportunities.
3. Monitor and add value to this portfolio.
4. Generate a superior financial return via timely exits.

Part One of the book addresses the various aspects of raising a venture fund. It starts with the universe of investors, or limited partners (LPs). We consider their investment criteria, LP-GP terms of investment, and fund structures.

Investment professionals, or general partners (GPs), develop an investment strategy and raise a fund, a process that may take anywhere from a few months to a few years. The investment period commences after the “close” when the money has been raised. This period typically lasts for four to five years, when the GPs, or practitioners, search for opportunities and make the initial portfolio company investments. The initial capital is deployed in four to five years with follow-on rounds being funded in years 5 to 10. Ideally, all the invested capital would be harvested and returned to the investors, the LPs, in 10 years. The fund would then be fully liquidated.

Successful firms do not necessarily wait until liquidation of the previous fund; they raise their next fund as soon as the majority of the capital of the current fund is invested or designated as reserved for existing portfolio companies. Leading venture firms raise a fund every three to five years. Typically, funds are labeled with Roman numerals, such as ABC Ventures Fund II, III, IV, and so on. Roman numerals are a soft indicator of a venture fund’s ability to survive and to generate returns across the various economic cycles. A firm’s true measure of success is its ability to generate consistent returns over multiple economic cycles. The VC business is subject to pressures from multiple ends: the supply of capital, the availability of investment opportunities, liquidity time frames, and regulatory dynamics.

Successful venture fund-raising is 90 percent preparation. Investors or limited partners seek a blend of strong investment expertise, a compelling investment strategy, and supportive market conditions. For proven top quartile fund managers, fund-raising is a breeze. Good fund managers, like good brands, have customers knocking at their doors at all times. At the other end of the spectrum are the unproven: the first-time fund managers, for whom the fund-raising process can best be described as crawling uphill . . . on broken glass.

A thorough analysis of the LP universe can help a GP target the right LPs and beget unusual results. This section starts with identifying the universe of LPs. LPs follow predetermined investment processes and criteria. We look at how LPs assess GPs in making 10-year blind pool commitments. Finally, LP-GP investment terms are covered, along with details of terms that matter.

In considering investments in private equity and venture capital, LPs adhere to certain norms and practices. The objective of this section is to help a fund manager to understand these clearly. The fund-raising process, that uphill incline, may become a tad bit easier.

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## CHAPTER 1

## The Universe of Limited Partners

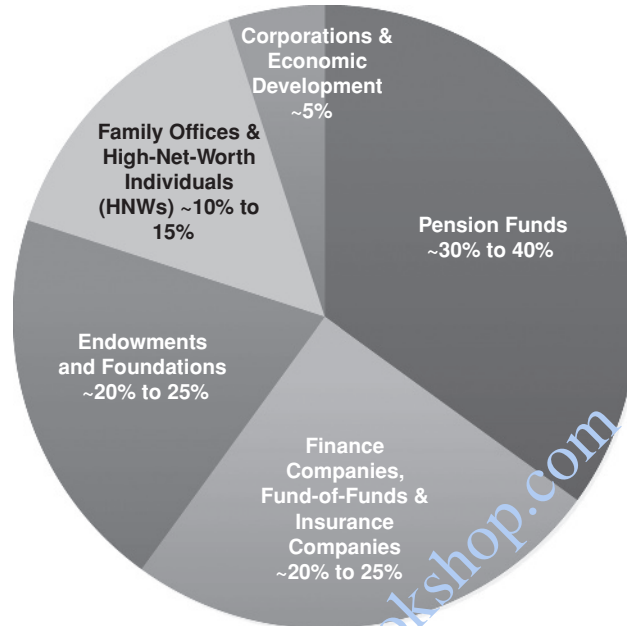
*Before beginning a Hunt, it is wise to ask someone what you are looking for before you begin looking for it.*

—Winnie the Pooh

**P**otential investors in venture funds, or limited partners (LPs), do not hang a largish dollar sign at their doors, but they do have what all venture capitalists (VCs) seek—capital! These LPs include a mix of institutional investors (e.g., pension funds, foundations, and endowments) and family offices, including high-net-worth individuals (HNWIs). As seen in Figure 1.1, typically, the bulk of capital for venture funds comes from pension funds. Each LP follows a unique set of characteristics:

- *Asset allocation strategy.* A set of investment principles and portfolio construction guidelines designed to generate an overall target rate of return. Venture capital is treated as a subasset class of private equity that falls under “Alternative Assets.”
- *Investment criteria.* The factors that help choose target investments within each of the asset classes.
- *Investment process.* Time lines and steps to make an investment within each asset class

This chapter describes the various types of LPs such as pension funds, finance companies, endowments, and foundations. All LPs aim to manage risk and returns and construct portfolios that aim for a target return. Targeting the right mix of LPs is a bit like matchmaking; understanding the array of potential investors and their decision-making process is the first step to raising the fund in an efficient manner. For example, a first-time



**FIGURE 1.1** The Limited Partner Universe: Typical Sources of Capital for Venture Funds

fund launched by first-time managers is likely to raise capital from individuals and family offices but will seldom get the attention of institutional investors. In this chapter, we look at allocation strategies of various LPs and develop a framework for targeting suitable LPs. For any venture fund, it is prudent to know that competition does not come necessarily from other venture funds, but from asset classes that offer a better risk-adjusted return to the LPs.

## **AN OVERVIEW OF ALTERNATIVE ASSETS**

The four major asset classes are stocks (public equities), bonds (sources of fixed income), alternative assets (private equity, VC, hedge funds, real estate), and cash. Investors establish asset allocation strategies to adopt optimum allocation percentages in each of these asset classes. Asset allocation, a prudent method to manage risk and returns, is driven by each investor's appetite for risk, rewards, and liquidity. Consider Figure 1.2. VC is a subasset class of private equity and falls under the alternative investment asset class, and for most LPs, it is a small fraction of the overall portfolio.

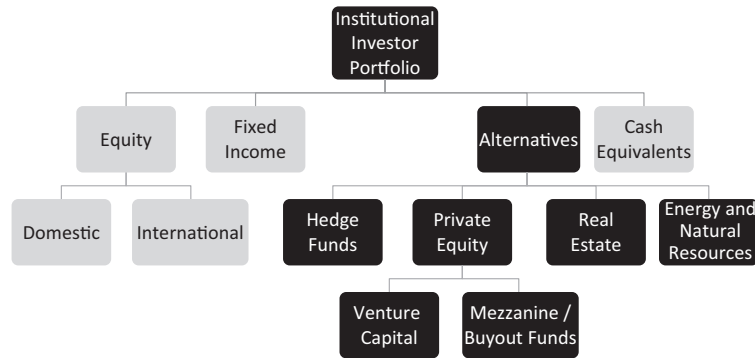


FIGURE 1.2 A Typical Institutional Portfolio

### ASSET ALLOCATION 101

Put your eggs in different baskets and watch *all* baskets. The risk/rewards of various assets are evident from this simple example: If an investor had allocated 60 percent in stocks, 30 percent in bonds, and 10 percent in cash, an average annual return would be 9.2 percent. If allocation is increased to 100 percent in stocks, the return would increase to 11.0 percent. If the entire portfolio is shifted to bonds, the return falls to 6.1 percent.

Risk is measured by standard deviation, an indicator of uncertainty, which increases about three times between the stocks and bonds portfolio. Investors expect higher returns when the risk is high.

#### Impact of Asset Allocation on Returns

Portfolio and Returns*	100% Bonds	60% Stock/30% Bonds/10% Cash	100% Stocks
Average annual return	6.1%	9.2%	11.0%
Standard deviation	6.4	10.8	18.0

\*Calculated over the 60-year period from December 31, 1949, to December 31, 2009.

Source: T. Rowe Price Associates.

**TABLE 1.1** The Alternative Investments Universe

Class	Subasset Class	Investment Goals
Private equity	VC, Leveraged buyout funds (LBOs), distressed debt, mezzanine funds, special situations, and international private equity	Higher returns and diversification
Hedge funds	Global macro, absolute return, market neutral, long/short, 130/30, event driven, and derivatives	Higher returns and diversification with better liquidity as compared to private equity
Real estate, infrastructure	Real estate investment trusts (REITs), private real estate funds	Diversification
Commodities	Energy, oil, gas, timber, agriculture, and managed futures	Returns/cash income streams from other assets

Alternative assets are alternatives to equity and include a growing array of options, listed in Table 1.1.

Certain types of alternative assets are illiquid and do not provide the same advantages that equities provide—that is, investor capital remains locked in for longer periods, which can be as long as 10 years in private equity and venture capital—and interim resale is not efficient. The concept of liquidity affects allocation outlays. Liquidity allows an investor to get out of investments without much friction, a concept that has continued to be debated through the years. In 1964, noted economist John Maynard Keynes stated that there is an “anti-social . . . fetish of liquidity” that drives investment institutions to concentrate their holdings in liquid assets. He added that “there is no such thing as liquidity of an investment for the community as a whole.”<sup>1</sup>

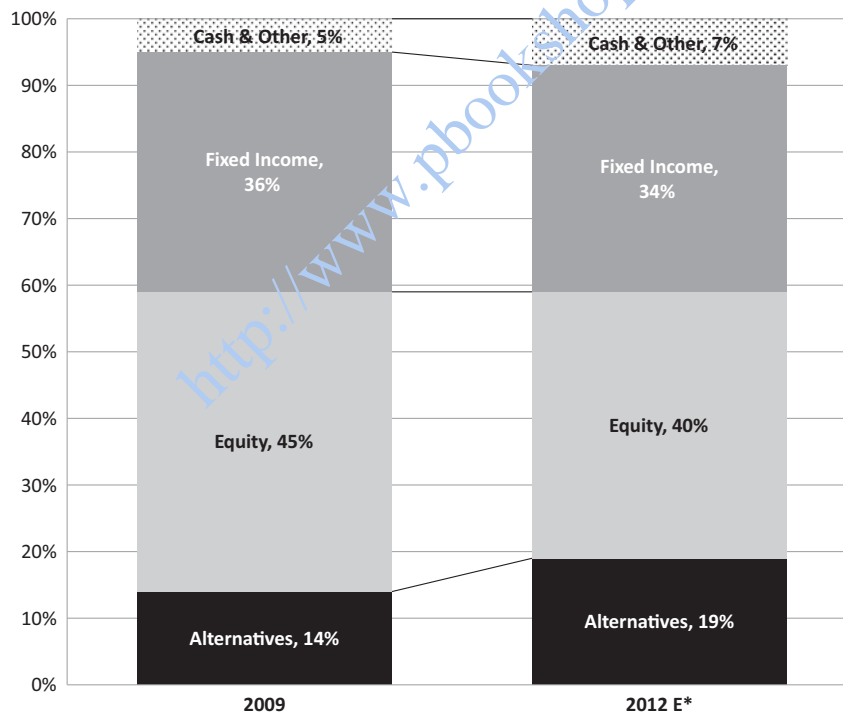
More recently, David Swensen, chief investment officer of Yale University, shares Keynes’ view. In 2000, he wrote, “Investors prize liquidity because it allows trading in and out of securities. Unfortunately, liquidity tends to evaporate when most needed,” offering examples of the stock market crash in 1987.<sup>2</sup> In the 2008 subprime crisis, his predictions rang true when liquidity evaporated and public markets crashed.

Keynes also wrote, “The spectacle of modern investment markets has sometimes moved me towards the conclusion that to make the purchase of an investment permanent and indissoluble, like marriage, except by reason of death or other grave cause, might be a useful remedy for our contemporary evils. For this would force the investor to direct his mind to the long-term

prospects and to those only.”<sup>3</sup> Unfortunately, neither marriage nor investments are treated as permanent in current times. Despite the emphasis on liquidity, alternatives as an asset class continue to grow steadily.

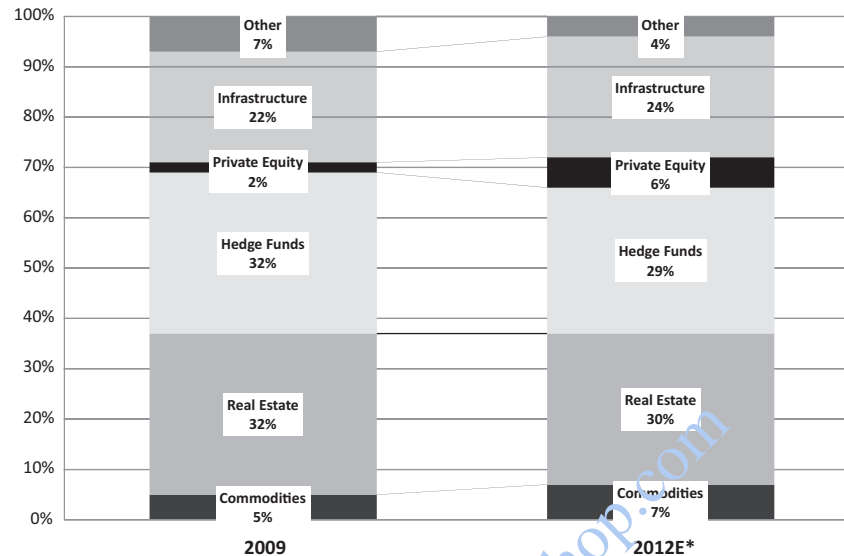
Market surveys affirm that alternative assets are an attractive asset class. Institutional investors plan to increase their allocations to alternative assets over the next few years. In 2010, Russell Investments surveyed 119 large institutional investors that manage \$1.3 trillion in assets around the globe. These investors sought to increase their allocation to alternatives to 19 percent (from 14 percent in 2009) of the total portfolio. In addition, private equity (which includes VC) is projected to rise to 6.8 percent of the total portfolio (up from 2 percent in 2009) by 2012.<sup>4</sup> See Figures 1.3 and 1.4.

To address the liquidity risk, these alternative asset classes offer a higher return than do public equity or other lower risk asset classes. Fees and expenses, valuation and regulatory challenges, and limited control over investment decisions are major drawbacks to alternative assets. A measure of risk, volatility, is estimated to be twice that of equity. Despite these drawbacks,



**FIGURE 1.3** Growth in Alternatives Assets

Source: Russell Investments, 2010 survey of 119 large institutional investors managing \$1.3 trillion in assets.



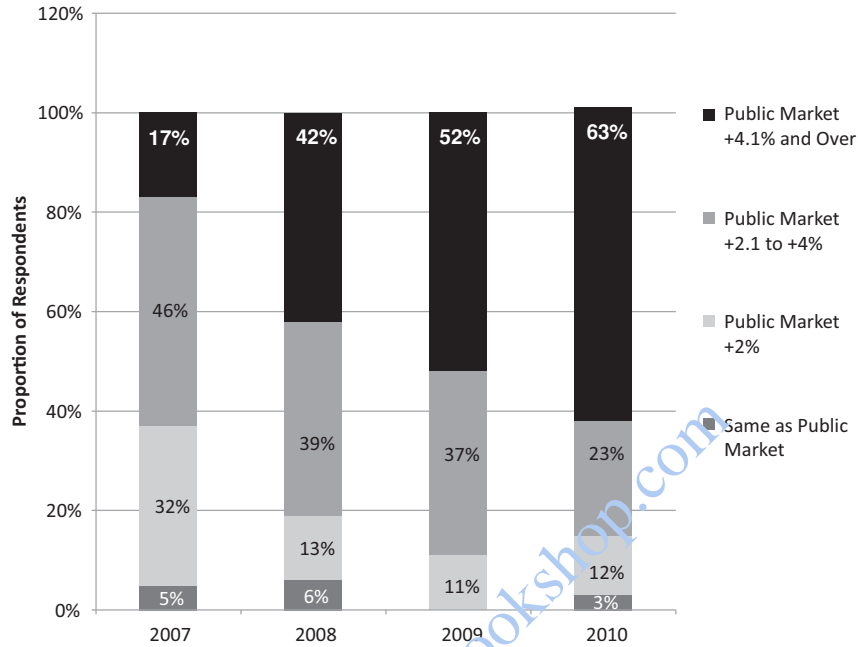
**FIGURE 1.4** PE Is Projected to Rise 3X from 2 Percent to 6.8 Percent by 2012

Source: Russell Investments, 2010 survey of 119 large institutional investors managing \$1.3 trillion in assets.

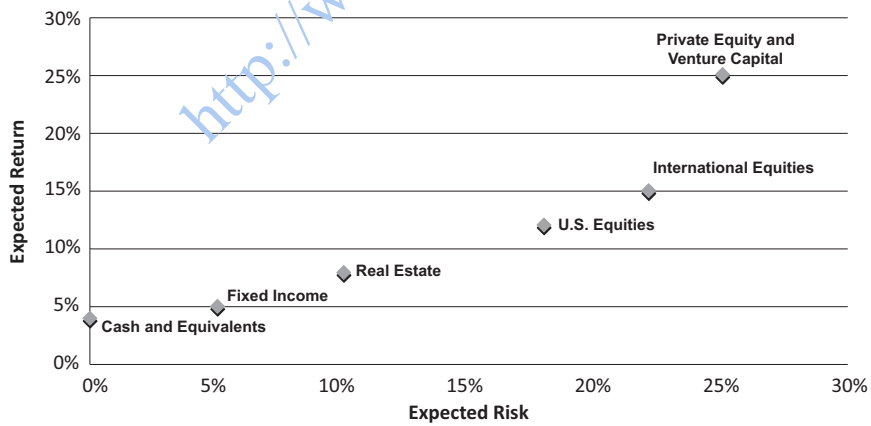
these alternatives remain attractive to investors for several reasons, including enhanced returns, improved diversification of their investment portfolios, and a hedge against inflation risk. Investors see alternative investments as a way of lowering the overall risk of their portfolios without giving up the opportunity for substantial returns. In recent years, investors have expected that PE portfolios should deliver as much as 4 percent above the public markets, as seen in Figures 1.5 and 1.6.

## SOURCES OF CAPITAL

Capital flows into venture capital funds from pension funds, university endowments, foundations, finance companies, and high-net-worth individuals. While pension funds are the largest contributor, these are also conservative with respect to PE and VC allocations. Endowments and foundations are comparatively more aggressive and allocate larger portions to private equity (PE) and VC asset classes. Finance companies function as specialized intermediaries and follow the guidelines established by their sponsors. A fund-of-funds (FoF) is established as an intermediary to allow larger institutional investors to research, access, and manage PE and VC investments.



**FIGURE 1.5** Growing Expectations: 63% of Institutional Investors Expect +4.1 Percent Above Public Market from Private Equity Asset Class  
 Source: Preqin.



**FIGURE 1.6** Expected Risk and Returns for a Portfolio

High-net-worth individuals and family offices generally lean toward conservative investments. Within all these players, some have a stronger penchant for PE and VC and will often deviate from the aggregate.

### Pension Funds

By far, the largest source of capital for the VC universe are pension funds. A public or private entity establishes a pension fund to manage employees' investments. Employees contribute a portion of every paycheck to a pension plan (such as a 401(k) in the United States). The pension fund is typically established as a separate entity and is governed by a board of trustees. Employees set aside a certain amount at a fixed interval of time, with the goal of enjoying their years of retirement. Employers, with an objective of attracting employees and incentivizing savings, match the employee contribution into the pension plan. Thus, the primary sources of cash inflows are a sum of contributions made by individuals and employers. With a larger pool of employees, the steady trickle of contributions grows to a significant amount over time. The primary goal of such a pension fund is to provide financial security to the employees and their beneficiaries.

The top pension funds in the world by assets under management are listed in Table 1.2, and the leading investors in venture capital are listed in Table 1.3.

The typical asset allocation strategy for this pool of capital depends on the cash needs of the pension plan. Pension fund cash outflows are a factor of the benefits paid to retirees. Consider California Pension Retirement System (CalPERS), the largest public pension fund in the United States, which had over \$200 billion in assets in management as of September 30, 2010.<sup>5</sup>

**TABLE 1.2** Top 10 Pension Funds

Rank	Fund	Country	Assets (\$M)
1	Government Pension Investment	Japan	\$1,315,071
2	Government Pension Fund-Global	Norway	\$475,859
3	ABP	Netherlands	\$299,873
4	National Pension	Korea	\$234,946
5	Federal Retirement Thrift	United States	\$234,404
6	California Public Employees Retirement Systems	United States	\$198,765
7	Local Government Officials	Japan	\$164,510
8	California State Teachers Retirement Systems	United States	\$130,461
9	New York State Common Fund	United States	\$125,692
10	PFZW	Netherlands	\$123,390

Source: *Pensions & Investments*, as of June 2010.

**TABLE 1.3** Top Pension Funds Investing in Venture Capital

Pension Fund	Investments in VC (\$M)
California Public Employees Retirement Systems	\$2,689
New York State Common Retirement Fund	\$2,424
University of California Retirement Systems	\$1,438
Pennsylvania Employees Retirement Systems	\$1,432
Verizon	\$1,294
California State Teachers Retirement Systems	\$1,138
Colorado Public Employees Retirement Systems	\$998
State of Michigan Retirement Systems	\$956
New York State Teachers Retirement Systems	\$889
Massachusetts Pension Reserves Investment Trust	\$866

Source: *Pensions & Investments*, as of June 2010.

CalPERS has over 1.6 million beneficiaries who receive pension and health care benefits every month. A pension fund's investment team has to juggle these cash inflows and outflows. Since a pension fund needs to pay retirees a set amount each month, the demands on its cash position are high, and thus the fund allocates a higher proportion of its assets to public equities, where liquidity is higher. A typical pension fund will allocate around 10 percent to 15 percent of its assets to alternative assets, which include hedge funds, natural resources (such as oil and gas partnerships), private equity, and VC. Table 1.4 shows the typical asset class allocations of public pension funds in the United States and the expected rate of return for these asset classes.

Pension plans are divided into defined benefit (DB) and defined contribution (DC) plans. DB plan sponsors promise a specific cash benefit to an

**TABLE 1.4** Asset Allocation of Public Pension Funds in the United States

Asset Class	Typical Allocation	CalPERS	Expected Return
Equity—domestic and international	52%	54.6%	7.5–9.5%
Fixed income	28%	23.1%	4.5–7.5%
Real estate	5%	7.1%	8.0%
Alternative assets	14%	13.9%	6.0–8.5%
Cash/cash equivalents	1%	1.3%	3.5%
Weighted Average Expected Return			7.0%

Source: Karl C. Mergenthaler and Helen Zhang, "Public Pension Funds: Allocation Strategies," J.P. Morgan, accessed January 23, 2011, [www.jpmorgan.com/tss/General/Public Pension Funds Asset Allocation Strategies/1289431691010](http://www.jpmorgan.com/tss/General/Public%20Pension%20Funds%20Asset%20Allocation%20Strategies/1289431691010).

employee upon retirement, with the benefit depending on years of service and salary grades. State pension funds typically offer DB pension plans. Under DC plans, also called 401(k) plans in the United States, the plan sponsor agrees to make contributions only to the employee's pension fund.<sup>6</sup>

The distinction between DB and DC plans has important consequences for asset allocation. For DB plans, the combination of the sponsor's contribution policy and asset allocation strategy must be designed to fund the sponsor benefits as they become due. This translates to long-term liabilities. In recent years, the number of DB plans in the United States has steadily declined as more and more employers see pension contributions as a large expense that can be avoided by disbanding the DB plan and instead offering a DC plan.

For DC plans, however, there is no similar issue of asset-liability matching. The sponsor has no obligations beyond the prespecified contributions. Instead, the theoretically optimal investment policy for DC plans depends on the participant's preferences with respect to risk and return and the composition of assets held in other accounts.<sup>7</sup>

Besides cash flow demands for retirees, other constraints that affect pension funds include growing health care costs, legislation, and political dynamics. As of 2010, 19 states have taken measures to manage the growing costs of health care and manage long-term liabilities. Since the pension funds manage public money, state legislation attempts to ensure that assets are preserved and a steady income stream is generated to pay for the retiree benefits. In many cases, the government mandates investment activities and prescribes language requiring that pension funds "maximize returns without undue risk of loss."<sup>8</sup> Pension funds are also subject to political pressures, and political interference can severely affect a pension fund's viability.

### Endowments

A university's cash inflows are a sum of student fees, grants, and contributions. On average, student fees and grants constitute 48 percent of a university's revenues; as these sources are uncertain, universities seek to insulate their position by creating endowments.<sup>9</sup> For example, in 2009, 23 percent of revenues at Yale University resulted from grants and contracts; 16 percent from medical services; 9 percent from net tuition, room, and board; and 6 percent from gifts and other income. The rest of the university's operating income—a whopping 46 percent—came from its \$16 billion endowment.<sup>10</sup>

The largest endowments, ranked by size, are listed in Table 1.5.

An endowment generates investment income and provides a cushion against any potential uncertainties. With it, a university can focus on its

**TABLE 1.5** Top 10 Endowments

Rank	Institution	Assets (\$B)
1	Harvard University	27.60
2	Yale University	16.70
3	Stanford University	13.80
4	Princeton University	14.40
5	University of Texas System	13.68
6	Massachusetts Institute of Technology	8.30
7	University of Michigan	6.75
8	Columbia University	6.50
9	Northwestern University	6.12
10	University of Pennsylvania	5.70

Source: *Pensions & Investments*, as of June 30, 2010.

primary goals of providing education and conducting research (or building a football stadium, depending on priorities)—activities that further social causes and knowledge. The grants and contributions are fickle and insufficient—neither of these tantamount to predictable revenue streams. Research grants largely depend on government and political priorities.

Donations received by universities or other nonprofit entities such as cultural and religious institutions are set aside in endowments to accomplish certain investment objectives. Donors frequently specify a particular purpose for gifts, creating endowments to fund professorships, teaching, and lectureships; scholarships, fellowships, and prizes; maintenance; books; and other miscellaneous purposes.

Institutions without permanent financial resources support day-to-day operations with funds from transient sources, limiting an organization's ability to shape its future. David Swensen, chief investment officer of Yale University, wrote in his book, *Pioneering Portfolio Management*. In 1755, the Colony of Connecticut refused to give Yale an annual grant, which resulted from the political backlash due to the college's religious character. Swensen pointed out that the Colony refused the grant under the guise of rising wartime expenditures.

Asset allocation for endowments is shown in Table 1.6 and Table 1.9. The Yale endowment's asset allocation is heavily aligned toward alternative assets: absolute return, real assets, and private equity. Swensen has made bold moves by shifting assets away from U.S. equities into illiquid securities and racked up strong returns. Table 1.7 demonstrates how Yale's assets have shifted toward alternatives over time. Swensen's portfolio management and

**TABLE 1.6** Asset Allocation Target for Yale Endowment

Asset Class	Yale Endowment (%)
Absolute return	19
Domestic equity	7
Fixed income	—
Foreign equity	9
Private equity	33
Real assets <sup>§</sup>	28
Cash	4

Source: Yale Endowment, <http://opac.yale.edu/news/article.aspx?id=7789>. Yale endowment grows by 8.9%, a gain of \$1.4 billion. Published: September 24, 2010. Asset Allocation Data as of June 30, 2010.

asset allocation strategy have been studied and duplicated by experts across the investment industry.

More than 90 percent of endowments typically spend around five percent of their assets each year. They use these cash outflows for university operations or capital expenditures. Due to limited demands on their cash

**TABLE 1.7** Yale Endowment's Asset Allocation: Private Equity Slice Grows Steadily

Asset Class	1985	1995	2009	2010
Absolute return	0%	20%*	24.3%	19%
Domestic equity	65%	30%	7.5%	7%
Fixed income	15%	20% <sup>†</sup>	4.0%	X <sup>‡</sup>
Foreign equity	10%	10%	9.8%	9%
Private equity	0%	10%	24.3%	33%
Real assets <sup>§</sup>	10%	10%	32.0%	28%
Cash	0%	0%	1.9%	4% <sup>‡</sup>

Source: Yale Endowment Annual Reports and *Yale Daily Bulletin*. Endowment was valued at \$16.7 billion as of June 30, 2010.

\*In 1995, Yale defined absolute return asset class as hedge funds.

<sup>†</sup>In 1995, the fixed income asset class was categorized as U.S. bonds.

<sup>‡</sup>In 2010, bonds and cash are lumped into one category at 4 percent. No allocation was defined in fixed income.

<sup>§</sup>Real assets include holdings of real estate, oil and gas, and timber.

Data has been clubbed within the asset class for clarity and consistency of presentation.

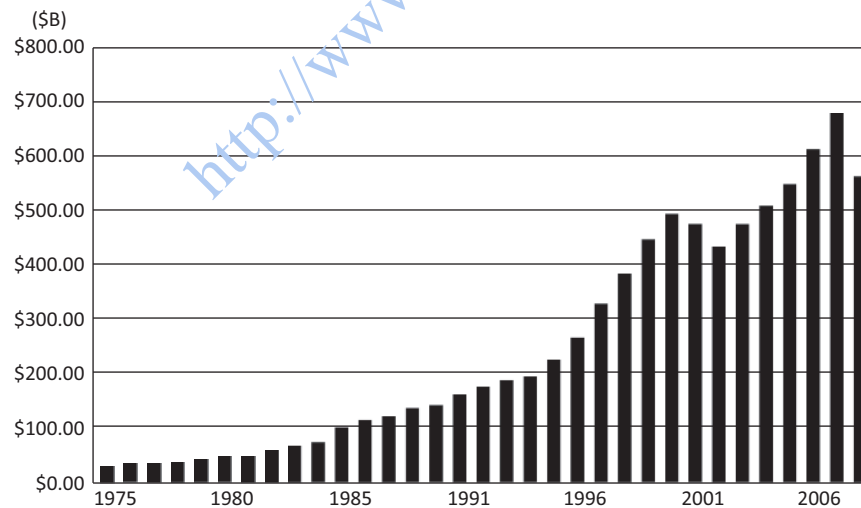
outlays, endowments are better suited for investments in alternative strategies. In comparison with pension funds, *endowments have invested as much as four times the percentage of their assets in alternative assets*. In a perfect world, endowment funds can potentially last forever, while pension funds can run out of money due to existing liabilities.

### Foundations

Like endowments, foundations are a significant force in the world of private equity. Foundations exist to support charitable and nonprofit causes. Governed by federal laws and regulated by the Internal Revenue Service (IRS), foundations are managed by their trustees and they aid programs such as childcare, arts and education, health care, climate and environment, and religious and social causes. Foundations support programs that are likely not supported by federal or state grants. The emphasis placed on health care by the Bill and Melinda Gates Foundation is one such example. Foundations offer grants to various nonprofit organizations to conduct these programs.

As of 2008, over 75,000 foundations in the United States manage over \$583 billion in assets.<sup>11</sup> Foundation assets have grown 20 times as large over the past three decades, as shown in Figure 1.7.

The majority of these are independent or private foundations. The 10 largest foundations are listed in Table 1.8.<sup>12</sup> Private foundations are established and endowed by corporations (e.g., Ford Foundation, W. K. Kellogg



**FIGURE 1.7** Growth in Foundation Assets

Source: The Foundation Center, Foundation Yearbook, 2010.

**TABLE 1.8** Top 10 Foundations by Asset Size

Rank	Foundation	Assets (\$B)
1	Bill & Melinda Gates Foundation (WA)	33.9
2	Ford Foundation (NY)	10.7
3	J. Paul Getty Trust (CA)	9.3
4	The Robert Wood Johnson Foundation (NJ)	8.4
5	W. K. Kellogg Foundation (MI)	7.2
6	The William and Flora Hewlett Foundation (CA)	6.8
7	The David and Lucile Packard Foundation (CA)	5.6
8	The John D. and Catherine T. MacArthur Foundation (IL)	5.2
9	Gordon and Betty Moore Foundation (CA)	5.2
10	Lilly Endowment Inc. (IN)	5.1

Source: The Foundation Center, as of December 2009.

Foundation) or families or individuals (e.g., Bill & Melinda Gates Foundation) and fund programs that are important to the donors. To meet IRS eligibility, private foundations have to give away as grants, as much as 5 percent of their assets each year. The balance, 95 percent, is invested using asset allocation strategies. Foundations have to report their assets and grants information publicly, as IRS guidelines mandate this disclosure.

Besides private foundations, other types of foundations include community foundations, which attract a large number of individual donors from a geographic region, and corporate foundations. Corporate foundations exist to further the cause established by the donor corporation and are funded from the corporation's profits. Over 2,000 corporate foundations in the United States hold approximately \$11 billion in assets.<sup>13</sup> Other forms of foundations include operating foundations, which conduct research or provide services, as opposed to grant-making activities.

To understand a foundation's asset allocation strategy, let's consider an average allocation plan (as of 2010) of 850 foundations and endowments (see Table 1.9).

Compared to an endowment, the short-term cash needs of a foundation are not as significant. Hence the allocations toward long-term assets, such as alternative assets (which includes VC), tend to be higher in comparison to those of a pension fund or an insurance company.

### Finance Companies

Within the LP universe, finance and insurance companies provide as much as 25 percent of capital for venture capital and private equity. Finance

**TABLE 1.9** Average Asset Allocation Plan of 850 Foundations: VC Attracts a Small Portion of Overall Assets

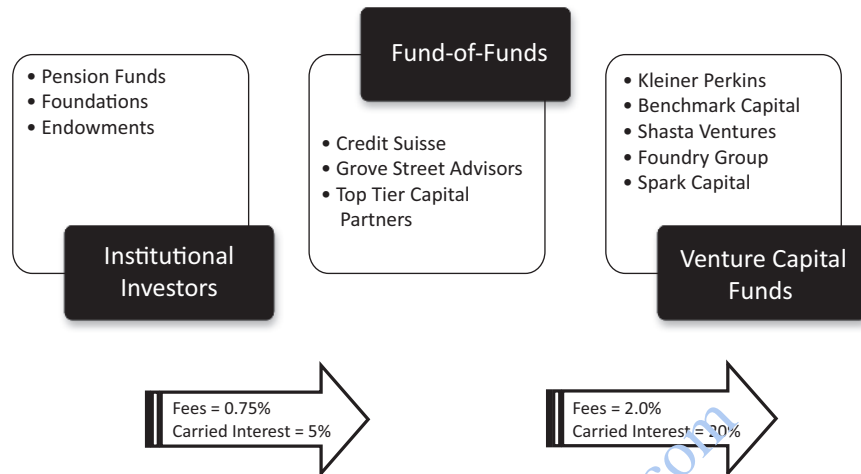
Asset Class	Allocation (%)	Alternative Strategies	Allocation (%)
Domestic equity	15	Private Equity	24
Fixed income	12	Marketable Alternatives (Hedge Funds)	41
International equity	16	Venture Capital	6
Alternative Strategies	52	Real Estate	10
Short Term Cash	5	Energy	14
		Distressed Debt	5

Source: 2010 NACUBO Commonfund Study of Endowments

companies are treated as a catch-all category to ensure clarity of presentation in this book. These include banks, nonbank financial companies, fund-of-funds, and other entities like TIAA-CREF funds, investment trusts in which assets are pooled for investment purposes. Operating methods, combined with internal criteria (e.g., cash, target returns, time horizon), define each finance company's asset allocation plan.

For example, Citibank has invested \$321 million in private equity.<sup>14</sup> Or consider GE Capital, Equity—the financial arm of General Electric that positions itself as an entity that “maximizes the return on GE’s investment capital by combining deep equity investing experience with GE’s industry expertise, operating experience and global reach.” GE Capital, Equity has invested in over 500 LP funds and currently has over \$5 billion of assets under management.<sup>15</sup> Other examples within this category include One Equity Partners—the private equity arm of J.P. Morgan Capital Partners, Banc of America Capital, and Société Générale (France). A fund-of-funds is considered as a subclass within the finance company universe.

**Funds-of-Funds** In the 1980s, the fund-of-funds model (FoF) emerged to meet the asset allocation and diversification demands of larger financial institutions. Three decades later, a diverse set of FoFs has developed—from large, diversified global funds offered by Adams Street Partners, Credit Suisse, and Pantheon, to sector-focused investment vehicles from HarbourVest and Horsley Bridge, to smaller funds such as LGT’s FoF that targets middle market buyouts in Europe, and emerging manager FoFs, such as Parish Capital.<sup>16</sup> FoFs typically attract about 10 percent to 12 percent of all capital within the PE alternative asset class, which is about \$25 billion in any given year.



**FIGURE 1.8** The Fund-of-Funds Model

The concept underlying FoFs is essentially a variant of the type of collective investment approach that undergirds mutual funds. Individual investors seek to invest in mutual funds using an indirect investment approach, as opposed to researching and investing in various company stocks directly. A private equity FoF can be construed as a mutual fund that invests in a variety of private equity and venture funds: in other words, a superfund whose portfolio is made up of other funds. The FoF model is depicted in Figure 1.8.

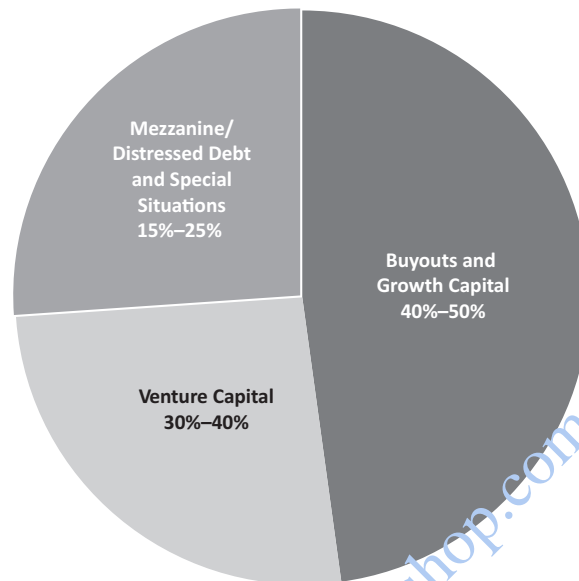
FoFs are categorized by region (e.g., United States, Europe, Asia) and subasset classes (e.g., venture, buyout, distressed, secondary markets). Some of the largest FoFs are listed in Table 1.10.

All these FoFs raise capital from various institutions previously mentioned and invest across all the regions and subasset classes previously men-

**TABLE 1.10** Top Fund-of-Funds by Assets under Management

Position	Name	Total AUM (\$M)
1	Goldman Sachs Asset Management, USA	33,952.00
2	HarbourVest Partners, LLC, USA	31,294.60
3	Credit Suisse Asset Management, LLC, USA	30,791.02
4	Pantheon Ventures, Ltd, UK	22,004.80
5	Adams Street Partners, LLC, USA	18,434.20

Source: Towers Watson; Global Alternatives Survey 2010, June 2010.



**FIGURE 1.9** Typical Fund-of-Funds Asset Allocation

tioned. Consider Figure 1.9, which shows typical asset allocation strategy for a leading fund-of-funds.<sup>17</sup>

Despite the tumult of the past several years, experienced institutional investors continued to invest in private equity and are making new commitments to FoFs. To investors, FoFs offer the following features:

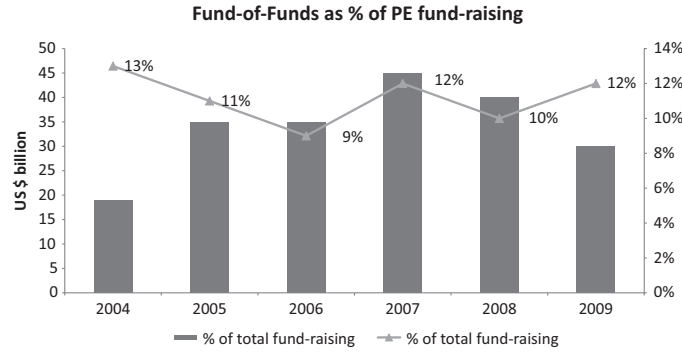
- *An efficient mechanism to access various asset classes/venture funds.* Institutional investors have optimum resources to research or manage certain asset classes. In context, a \$50 billion pension fund may have less than 10 percent of its assets in private equity. This could be further sliced into mezzanine, buyouts, and VC. Apply another set of layers of risk diversification—sectors, geography, size, and vintage year—and what you have is a fairly complex matrix of relatively small investments. FoFs allow for larger institutions to efficiently participate in the PE/VC asset class without substantially increasing their overhead. Thus, a smaller venture firm has a lower probability of attracting capital from a large institution such as a state pension fund, but has a higher probability with targeted FoFs.
- *Access to high performing managers.* FoFs offer access to elite funds and knowledge of emerging funds that have the highest potential growth performance in the market. Leading FoFs offer to transfer the relationship to the institutions as the GPs raise future funds. Thus,

an institution may use a FoF to gain access to a tier-one fund and then directly invest in the future funds. This is beneficial for the institution in the long run provided it can manage the relationship effectively.

- *Diversification.* The universe of the private equity and VC managers evolves with the ebb and flow of economic trends and opportunities: venture, distressed, real estate, sector-focused funds; turnaround funds; and foreign funds. FoFs are attractive investment strategies because they enable investors to diversify and spread out risk over a range of different assets (e.g., a typical FoF will invest in 10 to 20 underlying funds, which in turn are investing in hundreds of portfolio companies). In effect, FoFs provide increased access with decreased risk. For example, many private equity funds have a minimum commitment of \$5 million to \$25 million—amounts that can be inefficient for a larger institutional investor that manages \$50 billion.
- *Research and proactive relationship development.* While institutional investors may be experienced in private equity, they often lack the abilities or resources to conduct research and proactively build relationships. FoFs also offer specialized expertise to track and monitor industry trends, identify leading funds, build relationships with key managers, and stay abreast of GP-LP investment terms.
- *Cost structure.* FoFs are cost-effective solutions for institutional investors because the due diligence, negotiations, and post-investment portfolio management is outsourced to the FoF managers. A typical FoF fee structure is 5 percent carried interest combined with approximately 0.75 percent annual management fee. Institutional investors pay two layers of fees in such a structure: one at the FoF level and another at the PE/VC fund level.

### **CURRENT FUND-OF-FUNDS TRENDS**

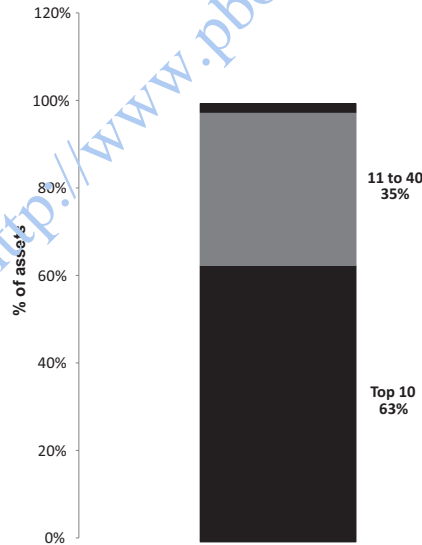
FoFs raised approximately \$30 billion in 2009, as fund managers managed to attract capital from both institutional investors and wealthy individuals. The first FoF, a firm that would eventually become Adams Street Partners, raised a mere \$60 million in 1976. Today, Adams Street Partners manages \$20 billion and raises about \$2 billion each year to be deployed in 15 to 30 new partnership commitments. Its target allocation typically includes 30 to 40 percent in venture capital, with the largest slice allocated to buyout and growth at 40 to 50 percent and the rest of 15 to 25 percent being set aside for mezzanine and distressed debt funds.\*



Fund-of-Funds Growth Trends

Source: Preqin, 2010.

The capital is fairly concentrated in the hands of top firms. In 2002, the top five FoFs accounted for more than 50 percent of the total capital raised by managers. As of 2010, the top 10 FoFs have cornered 63 percent of the total pie.<sup>†</sup> The top 50 FoFs control \$186 billion and the top 10 control as much as 65% of these assets.



Concentration of Assets in Top 10 FoFs

Source: Towers Watson © “Global Alternatives Survey,” June 2010. Reprinted with permission.

Emerging markets are the new darlings of FoF managers, particularly in light of the robust Asian recovery from the crisis and sluggish growth in developed economic markets. Since 2007, the trend among firms such as Asia Alternatives Management, Axiom Asia Private Capital Pte Ltd., and Squadron Capital is to raise FoFs exclusively built on Asian and other emerging markets.<sup>‡</sup>

\*Adams Street Partners, “About Us,” accessed December 29, 2010, [www.adamsstreetpartners.com/about-us.html](http://www.adamsstreetpartners.com/about-us.html).

<sup>†</sup>Dow Jones Private Equity Analysis, “Credit Crisis: Prime Time for Some Funds of Funds, but Curtains for Others,” <http://fis.dowjones.com/products/fundsoffunds.html>.

<sup>‡</sup>Ibid.

### Insurance Companies

Like pension funds, insurance companies manage a large amount of cash inflows and outflows. Any insurance company is in the business of managing risk. An insured party pays a premium at a fixed time interval—say, monthly, quarterly, or annually. Insurance companies invest the premiums, but the underlying driver is to meet a potential obligation that may occur in the future. If an accident occurs, the insured receives compensation. The business model of any insurance company can be reduced to inflows via premium payments and investment income. Underwriting expenses and incurred losses are primary outflows. The scope of the insurer’s business and required guarantees drives the target rate of return. These factors determine an asset allocation strategy for any insurance company. A sample is presented in Table 1.11.

**TABLE 1.11** Asset Allocation for the Insurance Industry

Asset Class	Life and Health Insurance (%)	Property and Casualty Insurance (%)
Bonds	63.4	64.8
Equity	26.0	16.1
Cash	4.7	8.0
Other	5.8	11.1

*Source:* 2010 Institutional Investment Report, The Conference Board (2009 data).

Insurance companies have a unique advantage as a business model: The customer pays up front and eventually, at some point in the future, may receive benefits. In some cases, all a customer may ever get is the proverbial peace of mind. The primary mechanism to generate investment income for insurance companies is management of “float”—the amount of money that “floats” with the insurance company as premiums arrive and sit around, waiting to be used in the event of any claims.<sup>18</sup>

Insurance companies need to maintain certain levels of capital; if they fail, regulators can swoop in. Solvency requirements are an important factor; hence the need to maintain a certain level of cash is important. Thus, insurance companies have to model their cash needs based on an actuarial assessment of risk and liabilities. In any insurance company, the accounting and actuarial teams develop the overall plan that determines cash inflows and outflows. Inflows are predictable, but outflows are not entirely predictable.

Actuaries invest an enormous amount of time in modeling demographic patterns of fire, floods, accidents, and other acts of God to derive a correlation between premiums and claims—or risks and rewards. Hence, insurance companies attempt to manage their cash positions and liquidity effectively, as unanticipated events could occur and affect their solvency. Thus, asset allocation for insurance companies is heavily weighted in low-risk investments such as bonds. Venture capital investments are lower on the totem pole and fall in the “Other” category for most insurance companies.

### **Family Offices and High-Net-Worth Individuals**

As much as 10 percent of PE and VC assets come from family offices and HNWI's. A family office is a private company owned and run by a single wealthy family. The family office manages the investments and trusts of the family. A single-family office (SFO) or a multifamily office (MFO), as their names suggest, are professionally managed investment services companies that serve wealthy families. One of the primary functions of a traditional family office is to consolidate financial management with a view to preserving wealth, generating returns, and minimizing the tax impact for any family's fortune. Small teams of confidants, including professional investment managers, are responsible for managing the family's assets and the family office. Among the other major tasks handled by the family office are the management of taxes, property management, accounting, payroll processing, and other concierge-type services such as travel arrangements.

Family offices are classified as Class A, B, or C depending on their administrative structure. Class A family offices are operated by an independent company with direct supervision from a family trustee or an appointed administrator. Class B family offices are operated by an accounting firm, bank, or a law firm, and Class C family offices are directly operated by the family with a small support staff.

MFOs consolidate activities for several wealthy families with the objective of minimizing operational costs. The Family Wealth Alliance estimates there are approximately 3,000 U.S.-based SFOs and 150 MFOs. SFOs manage assets ranging from \$42 million to \$1.5 billion. Total assets under advisement by MFOs are upward of \$357 billion, with an average client relationship size of \$49 million. Median asset size at any MFO is close to \$1 billion.<sup>19</sup>

According to a study conducted at the Wharton School, the most important objective for the SFO is transgenerational wealth management.<sup>20</sup> The second is to consolidate accounting, tax, and estate planning services. Having an SFO also allows the family members to pursue their own careers, while enjoying the benefits of cost-effective money management. As the wealth comes from family business, 58 percent choose to focus on their strengths and remain involved in operating the businesses, and 77 percent are majority stakeholders in their holding companies.<sup>21</sup> This has implications from an investment decision-making perspective. In Table 1.12, Cap Gemini World Wealth Report reports typical asset allocation for HNWIs and family offices. In comparison to endowment and foundation allocations, this LP category is conservatively slanted, with only 8 percent in alternatives. However, some family offices have a strong propensity to invest heavily in venture capital asset class. The Hillman family office of Pittsburg, PA, played a significant role in the launch of Kleiner Perkins Caufield Byers KPCB Fund I in the early seventies by investing as much as half of the entire fund. KPCB Fund I invested \$8 million in seventeen companies (including Applied Materials,

**TABLE 1.12** Typical Asset Allocation for HNWIs and Family Offices

Asset Class	Allocation (%)
Equity	35
Fixed income	30
Real estate	14
Cash	13
Alternatives	8

Genetech, Tandem Computers and one called “Snow-Job”) and returned \$345 million to its investors, making the Hillmans very happy, thank you very much.

SFOs have partnered with banks for better access to information technology and tools. On average, the study found that European SFOs are inclined to outsource fewer activities related to wealth management, especially investment-related activities. In Europe, 63 percent of SFOs perform asset allocation in-house versus 47 percent of SFOs in the Americas. Thus, investment decisions and process may differ if professionals manage the office. Due to the size of assets, and the conservative undertones, the decision-making cycle for investment in PE and VC is comparatively longer.

Family offices and HNWIs are a significant source of capital for venture funds. According to a Cap Gemini Merrill Lynch World Wealth Report, worldwide, wealthy families and individuals control about \$42.2 trillion.

More than 100,000 individuals in the United States are estimated to have assets in excess of \$10 million. HNWIs have assets worth at least \$1 million, while ultra-HNWIs have at least \$30 million in investable assets. A typical asset allocation strategy for HNWIs.

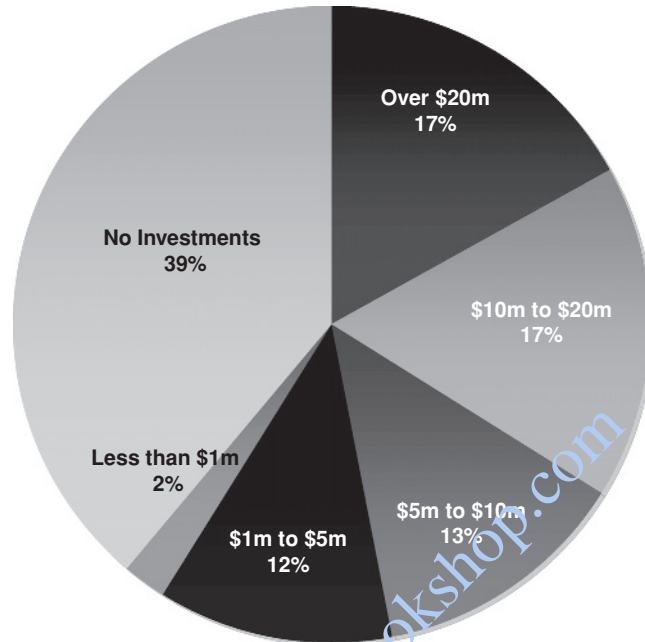
North America remains the single largest home to HNWIs, with its 3.1 million HNWIs accounting for 31 percent of the global HNWI population. In terms of the total global HNWI population, it remains highly concentrated, with the United States, Japan, and Germany accounting for 53.5 percent of the world’s HNWI population. The fastest growth of HNWIs is in Asia or “Ch-India.”<sup>22</sup>

### **Corporate Operating Funds**

Corporate operating funds make up a bare whisper of 2 percent of all capital flowing into venture funds. A number of corporations invest as LPs in externally managed venture funds. Others establish internally managed “corporate VC funds,” such as Intel Capital. The source of capital is primarily operating funds (as opposed to corporate pension funds).

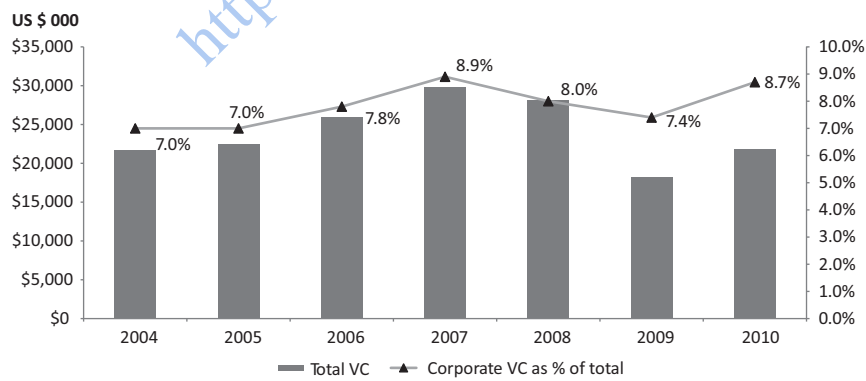
At the PE/VC fund level, corporations actively invest significant amounts of capital. In a brief survey, between 2004 and 2006, approximately half of the companies surveyed had invested \$5 million or more in VC funds (see Figure 1.10).

Investments via corporate venture capital (CVC) in start-ups and VC-backed companies are as much as 6 percent to 8 percent of all venture capital investments in the United States, or approximately \$1 billion each year (see Figure 1.11). Corporate VCs invested as much as 20 percent of all capital in the biotech sector, the largest sector by far, followed by software at 13 percent.<sup>23</sup>



**FIGURE 1.10** Limited Partner Commitments Made by Corporations

Source: Corporate Venture Capital Study, National Institute of Standards and Technology (NIST), June 2008. Survey included 48 corporations; total investments made between 2004 and 2006.



**FIGURE 1.11** Corporate Venture Capital Investments

Source: PricewaterhouseCoopers, NVCA, Thomson Reuters.

## **COMPARISON OF LIMITED PARTNERSHIPS**

In comparing the various LPs in Table 1.13, the allocation to alternatives varies, as does their primary driver for investments. Any venture practitioner seeking to raise capital needs to consider the size of an LP's alternative asset pool, decision-making criteria, time lines, and the investment process of each LP.

### **SUMMARY**

For any venture practitioner, it is imperative to know and understand the universe of investors. These LPs come in a variety of shapes and sizes, and each has its own set of constraints. The largest percentage commitment of capital to VC comes from endowments and foundations due to their relatively lower short-term cash needs. The smallest percentage commitment comes from insurance companies.

As discussed earlier, Chris Douvos, co-head of private equity investing at The Investment Fund for Foundations (TFF), draws an interesting and humbling analogy. "If public markets are like an ocean—multi-trillions of dollars at work—and private equity is a bath tub . . . say \$300 billion a year . . . venture capital is like a small sink."<sup>24</sup> Dick Kramlich, founder of NEA, once said, "As an industry we are only raising 20–30 billion dollars, while private equity as an industry is raising 300 billion dollars. And there's two trillion dollars worth of hedge funds. All of these resources are within the same purview . . . and there's a whole different definition of how rates of return are obtained and who you compete with."<sup>25</sup>

While VC has gained interest and allocation has increased over the years, the asset class faces fierce competition from other classes within the alternatives universe. As Timothy Recker, chairman of Institutional Limited Partners Association, says, "The investment options for institutional investors are growing. Venture practitioners tend to be an insular group and negotiate their place within the private equity/VC category. I think they could easily price themselves out of the alternative class if they put the blinders on and do not aim to compete with other alternatives."<sup>26</sup> Any competitive class that offers better liquidity, a lower fee structure, and equal or higher returns can easily displace VC. Chris Douvos extends the competition beyond alternatives in different geographies. "As an asset allocator—in the eighties and nineties, venture capital asset class was like 'emerging growth' asset class, wrapped in an easy to understand legal and regulatory structure.

**TABLE 1.13** Comparing the LP Universe

Investor Type	Typical Percentage of Assets in Alternatives	Decision Maker(s)	Drivers	Constraints
Pension funds	14%	Portfolio manager, CIO, investment committee; state treasurer may be the final signatory	Financial returns	Liquidity and risk management, size of investment staff, regulatory, political perspectives
Insurance companies	6%	Chief investment officer (CIO)	Capital conservation	Liability, liquidity, solvency, regulatory
Endowments and foundations	51%	Chief investment officer (CIO)	Financial returns	Size of investment staff; social and political views
HNWIs/family offices	8%	Managing director; family member may be the final signatory	Returns and relationships	Limited bandwidth; strategy and allocations are highly fluid
Corporations' operating funds	Opportunistic	Corporate development, CFO, or CEO	Insights into developing technologies and new revenue streams	Limited percentage allocation, board approvals; long-term participation is unlikely

And there was no choice but venture. Today, I could commit to emerging markets and generate good returns—the monopoly of venture has gone.”<sup>27</sup>

For most institutional LPs, venture capital is a subasset class, a small percentage of their entire portfolio. Now that we know where the biggest pools of capital lie, let us understand an institutional LP’s investment criterion. It starts with the people!

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