1 Private Equity Market Landscape

The growing interest in private equity investing has arisen in part as a result of its superior historical long-term returns when compared to those of public equities, and by the diversification benefits it provides. Investments in private equity funds offer access to privately-held companies not available in the traditional investor landscape and expertise in creating value by proactively influencing the management and operations of the invested firms.

Institutional investors typically focus on the organized private equity market, where professional management is provided by intermediaries. There is also an informal private equity market, which is composed of angel capital and, not without justification, which is often called family, friends and fools. Companies can also get funding from the founder's savings and efforts, commonly referred to as blood or sweat equity. The number of investments made in the informal private equity market is probably several times larger than the organized private equity market, but it is difficult for institutional investors to gain the information necessary to invest in these markets effectively.

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MAIN STRATEGIES

Private equity funds refer to a multitude of investment strategies with varying risk profiles, liquidity requirements and returns. The primary, and most important, three types of funds are: venture capital (VC), buyouts and mezzanine funds. These funds form the bulk of a typical institutional investor's private equity portfolio.

Venture capital funds invest alongside management in young and/or potentially fast-growing companies and are often active in technology sectors such as telecommunications, life sciences and clean-tech. Venture capital has two sub-categories depending on the stage of development of the funded company:

- **Early stage.** Early stage companies are riskier because of their small size and unproven ability to generate profits. This stage is further split into seed[1] and start-up stages.
- **Expansion stage.** Companies in this stage have already established the technology and market for their product, but require further financing to allow greater, or more rapid, growth.

VC investments are not comparable with traditional financial investments and have characteristics that make it difficult to apply traditional portfolio management techniques. These investments are still generally in their cash-burning stage and may be several years away from an exit.

Buyout funds[2] invest in established businesses (generally privately held or spin-offs from public companies) that need financial capital in connection with a change of ownership. Buyout is a generic term that comprises notably: management buyouts (MBO), where the current management acquires the company; management buy-ins (MBI), where new managers come from outside the company; and public-to-private transactions where companies are de-listed when a private equity company acquires their shares. In all of these cases, a buyout fund may intervene as an intermediary owner,

[1] The seed stage takes place before there is a real product or the company is organized.

[2] Some investors in the investment industry use the term "private equity" to refer only to buyout fund investing, while others, as we do in this book, refer to both venture and buyout investing as "private equity" investing.

usually alongside the management. In buyout funds, portfolio companies are established, have tangible assets and are normally beyond the cash-burning stage, which allows the use of debt to finance part of the transaction. In these cases, buyouts are referred to as leveraged buyouts (LBO).

Mezzanine funds invest in established companies (usually privately held and/or below investment grade) seeking expansion or transition capital through the issuance of subordinated debt with warrants or conversion rights to purchase the common stock. Mezzanine financing is halfway between equity and secured debt. While mezzanine financing gives a more predictable cash flow profile, it is unlikely to provide capital returns comparable to other private equity financing forms.

MAIN DIFFERENCES BETWEEN VC AND BUYOUT FUNDS

VC and buyout funds differ in several significant aspects, notably in terms of their business model, deal structuring, roles of the general partner and valuation. These and other differences are summarized in Table 1.1 and discussed below.

The classic argument presented for diversifying among private equity classes, and especially between buyout and VC funds, is that they often exhibit negative correlations and differ in terms of growth and value investing. To begin with, buyout transactions are largely debt-financed and tend to perform well during depressed public equity market periods, when debt is cheap. However, if depressed equity prices are accompanied with a widening of credit spreads (e.g. the financial crisis of 2008–2009), then leveraged buyout transactions may not be feasible. Second, VC relies on the stock market as the main exit route and therefore close to exit, often shows strong correlation with small-cap indices. Consequently, VC would be expected to do better during equity bull markets. Historically, buyouts have provided more stable returns with an orientation towards minimizing risk, while VC occasionally produces higher rates of return in certain markets but also the possibility

Table 1.1 Buyout–Venture Capital comparison

	Buyout	Venture capital
Sector	Established industry	Cutting-edge technology or rapidly growing sectors
Stage	Stable growth and mature	Seed, start-up and expansion
Approach	Financial engineering, corporate restructuring	Industry know-how, product development and commercialization
Uncertainties	Risk is measurable	Risk is difficult to measure
Source of returns	Leverage, company building, multiple arbitrage	Company building, finding follow-on investors
Selection	Intensive financial due diligence	Limited financial due diligence but extensive sector/product due diligence
Valuation constraints	Cash flow projections overlooked by credit lenders	None; often no non-VC third party oversight
Business model	High percentage of success with limited number of write-offs	A few winners with many write-offs
Financing/deal structure	Club deals and large investments	Limited syndication with several investment rounds
Monitoring	Cash-flow management	Growth management
Success factor	Backing experienced managers	Backing entrepreneurs

of higher losses. Thus, investors seeking long-term stable returns would be inclined to overweight buyout funds, while those seeking higher returns would do so through increased exposure to VC.[3]

Business model

Attractive VC investment opportunities can be difficult to assess and are usually concentrated in a few high technology sectors, which often results in a relatively high number of small investments being done initially. Returns stem from taking large risks to develop new businesses and concentrating efforts and capital through several incremental funding rounds. The goal is to build companies that can be sold or taken public with a high multiple of invested capital.[4] These few big wins need to compensate for many failures. VC-funded companies can be seen as works in progress, with intermediate stages of completion. These stages of completion are often distinguished by milestones such as rounds of financing (e.g. rounds A, B, C, . . .) or, in the case of a biotech company, perhaps phases of clinical trials (Phases I, II, III and IV). In this respect, they are development projects that cannot be prematurely exited without risking the loss of most, if not all, of one's invested capital. Thus, VC funds should be viewed as long-term investments, which explains why fund managers often impose rigid restrictions on the transferability of interests in their funds.

Large capital requirements and lower risk levels result in most buyout firms making a smaller number of investments compared to VC. There is also a multitude of different approaches that can be combined in a transaction, such as divestment of unrelated businesses, financial engineering, company turnaround, and vertical or horizontal integration through acquisition. Buyout managers need to give extensive strategic and business planning advice. They tend to focus on consistent rather than outsized returns. Because they target established enterprises, buyout firms experience fewer outright failures but have more limited upside potential.

Deal structuring

VC funds typically utilize no debt and gain control of a company over time through a series of equity investments. Returns stem from building companies and from managing growth. Valuation is complicated by the lack of appropriate comparisons, and explains why venture capitalists carry out only limited financial due diligence. They typically provide not only financing for building businesses, but also industry know-how and management expertise. The investments can be relatively small[5] and are overwhelmingly equity or quasi-equity financed with little or no leverage.[6] Successful exit strategies require VC managers to secure follow-on investors or syndications.

Buyout funds, on the other hand, typically use debt financing to purchase all or most of a company's equity. Assets of the acquired company are used as collateral for the debt and the cash flow of the

[3] There exist more "rules of thumb" for determining the private equity allocation that best positions investors with regard to risk and return. According to Venture Economics, between 1990 and 2000, the commitment ratio of buyouts compared to venture capital was somewhere between 3:1 and 2:1. Because of the costs involved, institutional investors who are looking to put large amounts of money to work into the private equity sector should consider committing 75% of their private equity allocation to buyout funds and 25% to VC funds (Giacometti, 2001).

[4] The term "multiple" is defined as the return earned by investing in early stage companies expressed as a *multiple* of the original investment. For example, a multiple of 2x means that investors receive a return of two times their original investment.

[5] Initial stakes in the area of €100,000 are not uncommon.

[6] One could argue that there is implicitly "leverage" through the intensive use of option-like mechanisms and through the fact that there is constrained financing: Start-ups are never fully financed and seldom do funds have the financial resources to fund all their investments.

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company is used to pay off the debt. Buyout managers conduct intensive financial due diligence and rely occasionally on sophisticated financial engineering. The ability to analyze a company's balance sheet and extract operational efficiencies, as opposed to the implementation of financial legerdemain, are the primary drivers of a successful transaction. Generally, there are few limitations to investment size, given the high number of stable growth and mature companies that can be targeted.

Role of general and limited partners

General partners are the managers of private equity funds but depending on the type of fund, their role can differ dramatically. Venture capitalists look to launch new or emerging companies while buyout funds focus on leveraging an established company's assets. Venture capitalists back entrepreneurs whereas buyout funds deal with experienced managers. General partners of VC funds often play an active role in the companies in which the funds invest, either by sitting on the board of directors or becoming involved in the day-to-day management of the company. Investors in funds assess how much value general managers can add to the portfolio of companies. Thus, in VC, the choice of general manager is a key driver of returns.

In buyout funds, a greater proportion of time and manpower is spent analyzing specific investments and adjusting the business model. Buyout partners look to leverage their expertise in turning around underperforming businesses, to improve profitable businesses, or to optimize the balance sheet and the financing of the companies. General partners typically engage in hiring new management teams or retooling strategies. In an operating company it is easier to give guidance to a seasoned management team, while in early-stage investments one often needs to build and coach the management team from the ground up.

Limited partners are simply investors with little or no influence on the day-to-day management of the fund. The interests of the limited partners are aligned with those of the general partners through a shared financial commitment to the fund, including the **carried interest**[7] (or profit share) of the manager.

Valuation

The valuation of VC investments can pose significant problems given their often limited operating history, and is compounded in cases where the company has yet to generate a profit. Traditional valuation methods can only be applied to VC by making numerous assumptions often using unreliable information. The valuation of a VC investment is mainly based on the analysis of intangibles, such as patents or the founders' entrepreneurial skills, competence and experience; as well as the assessment of the expected market size for the portfolio company's products or the presumed exit value relative to existing comparable public companies. Thus, investment valuation is usually based not on cash flow or earnings but rather on multiples where comparable companies exist. Where they do not, valuation becomes even more difficult to quantify.

There are relatively few investors (i.e. sources of capital) and little or no consensus on valuation. A lack of third-party oversight can make venture capital prone to losses from overvaluation. In addition, because the value placed on a young company cannot be verified except through future rounds of investment,[8] it may take years to uncover overinflated and unsustainable valuations.

[7] Carried interest is a share in the fund's profits received by the fund manager.

[8] While for later stage private equity the investors' relationship to the portfolio company may have little influence on its valuation, this is clearly not the case for venture capital investments: Their realizable "value" is heavily influenced by the

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Buyout funds typically use debt financing with significant leverage to purchase all, or most, of a company's equity. Assets of the acquired company are posted as collateral for the debt while the company's cash flow is used to service the debt. In buyout funds, valuation risk is more limited. First of all, the valuation of portfolio companies is more straightforward enabling one to draw upon a rich toolbox of accepted instruments for quantitative analysis, such as discounted cash flow projections. The leverage required for the transactions leads to scrutiny from a syndicate of commercial lenders and often due diligence by underwriters of a high-yield bond offering. The influence of these credit providers eliminates some of the potential risks inherent in the leverage. There will be restrictions on the amount of leverage they provide which implicitly sets an upper boundary on the total valuation for the targeted business.

THE RELATIONSHIP LIFECYCLE BETWEEN LIMITED AND GENERAL PARTNERS

There is a symbiotic relationship between limited and general partners. A limited partner's investment strategy is built around a small number of general partners who focus on specific segments, such as stages or sectors, of the market. This specialized focus can often limit the scalability of a particular fund, particularly in the case of VC, where limited partners may find it difficult to identify and access additional fund managers of comparable quality.

General partners, on the other hand, want financially strong, dependable, knowledgeable and long-term limited partners. Limited partners should have industry expertise and familiarity with the nuts and bolts, particularly valuations and benchmarking, of the private equity business. Adverse selection exists in the private equity market. Poor quality funds, be they inexperienced ones or old dog firms in decline, will court inexperienced investors. Because of the bad results, both will sooner or later exit the market.

To maintain continuous investment in portfolio companies, general partners need to raise new funds as soon as the capital from the existing partnership is fully invested (or reserved for follow-on investments), which means about every three to five years. Therefore, relationships between limited and general partners follow a lifecycle and are forged through various rounds of investment, eventually resulting in a virtuous circle of growing experience and fund size.

Investors as well as fund managers depend on forging long-term relationships. Anecdotal evidence suggests that experienced market players profit over protracted time periods from these relationships. Initial criteria are very stringent and fund managers usually cannot get rich through their first funds. A favorable track record and experience is an asset in itself. Fundraising is less costly for more reputable funds. To minimize their expenses, fund managers generally turn first to those who invested in their previous partnership, provided that the fund's performance was satisfactory.

While it is obvious that fund managers greatly benefit from a loyal and reliable investor community, long-term relationships can also be advantageous for limited partners as well:

- In the opaque private equity market, the search for and due diligence of funds is a costly exercise and often limited partners prefer familiar fund managers to unproven investment proposals.
- For an investor it is especially desirable to hold on to good fund managers, as the best teams will have an established investor base which may eliminate the need to seek out new funding sources.

bargaining power of their venture capital investor. Only a financially strong investor can sustain longer negotiation periods. A weak VC fund is in no position to "shop around" for several months while its portfolio burns the remaining liquidity.

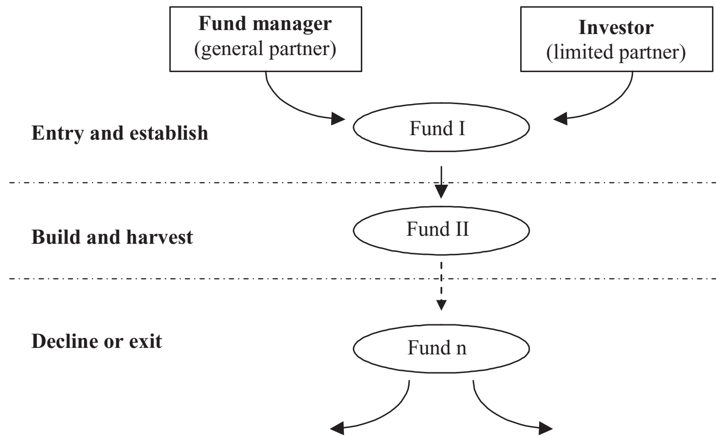

Figure 1.1 Fund manager–investor relationship lifecycle

- There is likely to be better planning, as limited partners make clear their intentions to participate in follow-on funds. As limited partners form a network, even if they do not have the means to continue, they often refer other investors to a good team. Predictable closings put money to work more efficiently.

The lifecycle of the fund manager–investor relationship (see Figure 1.1) can be divided into three phases: 1) entry and establish; 2) build and harvest (or growth and compete); and 3) decline (lost competition), exit (gave up or made it), or transition to new managers (spinouts). The main differences between these phases are summarized in Table 1.2.

During the "entry and establish" phase, significant entry barriers into the private equity market exist for both general and limited partners. Lacking a verifiable track record, new teams find it difficult to raise their first fund. Furthermore, analysis of historical benchmark data supports the hypothesis that new teams suffer from higher "mortality" than established or institutional-quality

Table 1.2 Fund manager–investor relationship lifecycle model

Fund's characteristics	Entry and establish	Build and harvest	Decline or exit
Investment strategy	Differentiation	"Star" brand	Unexciting
Fundraising	Difficult fundraising	Loyal limited partner base	Limited partners leave and are replaced by other types of investors (secondary plays, new entrants in market)
Performance	Unknown: either "top" or "out"	Likely "top" performer	Not "top" but consistent performer
Size	Fund is too small	Fund size is right	Fund size too large/too many funds
Economies of scale	Fund is too small to get rich	Best alignment of interests	Senior managers made it
Management team	Management team forming	Management team performing	Succession issues, spinouts

fund management. First-time funds note the importance of differentiation as it applies to fundraising and thus often pursue specialized investment strategies.[9]

New limited partners also face entry barriers. They normally suffer from the initial informational disadvantages that afflict all limited partners and make it extremely difficult for them to identify or gain access to the best managers, particularly where managers are oversubscribed. For limited partners, it takes the disciplined execution of a long-term investment strategy to build up a portfolio of funds that gives attractive and sustainable returns.

Since investors are mainly interested in the cash returned, the fund manager–investor relationship tends to be relatively stable throughout the "build and harvest" phase. Lerner and Schoar (2004) presented evidence on the high degree of continuity in the investors of successive funds and the ability of sophisticated investors to anticipate funds that will have poor subsequent performance.

It is an oversimplification to assume that investors only invest in top performers and that below-average funds are unable to continue.[10] As in most relationships, there is a certain degree of tolerance for mistakes and failures, at least over some time. It is clear that there are limits to disappointing results but, all things being equal, investors will tend to go with fund managers they already know or who have been referred to them through their network even if their performance at times is sub-par.

Eventually the relationship ends in the decline or exit phase. Not surprisingly, the terms marriage and divorce are often used in the context of relationships between fund managers and their investors. A gradual decline may occur as a result of past successes which potentially decrease the financial motivation of senior fund managers, or perhaps due to an improperly planned succession which leads to the departure of middle management. Also, the limited partners eventually may end the relationship if they lose confidence or trust in the team, for example if the team becomes arrogant or fails to deliver. Some limited partners do not invest in follow-on funds and may be replaced by less deep-pocketed investors, or by secondary investors who choose to invest as a one-off financial play.

THE J-CURVE

One of the first private equity fund concepts that investors will encounter is the (in-)famous "**J-curve**" – also referred to as the "hockey stick" (see Figure 1.2). The European Venture Capital and Private Equity Association (EVCA) defines the J-curve as the "curve generated by plotting the returns generated by a private equity fund over time (from inception to termination)". The common practice of paying the management fee and start-up costs out of the first drawdowns causes book value to be lower than the sum of the contributions. As a result, a private equity fund will initially show a negative return. When the first realizations are made, the fund returns start to rise quite steeply. After about three to five years the Interim IRR (IIRR) will give a reasonable indication of the definitive IRR.[11] This period is generally shorter for buyout funds than for early stage and expansion funds.

[9] See Thompson (1999).

[10] See Hellman and Katz, 2002: "Just as one fight shouldn't wreck a marriage, one bad fund should not ruin a long-standing relationship between a fund manager and an investor. But, in order to strengthen the relationship, both sides need to be able to recognize and discuss what went wrong and how things will change going forward to maximize the chance of success for all."

[11] The (traditional) IRR is the implied discount rate that makes the net present value of all cash flows zero. The interim IRR (IIRR) is the IRR of unliquidated funds, as it considers fund distributions during each period t, the net asset value of the fund at the end of period T, and capital contributions or drawdowns during each period t. Therefore, IIRRs are only estimates rather than realized rates of returns. The IIRR is the rate of return of a fund before the final termination date. It can also be thought of as the IRR that is calculated assuming that the residual value of the private equity fund is the final cash outflow. Chapter 7 presents the formal definition and an example of the calculation of this important concept.

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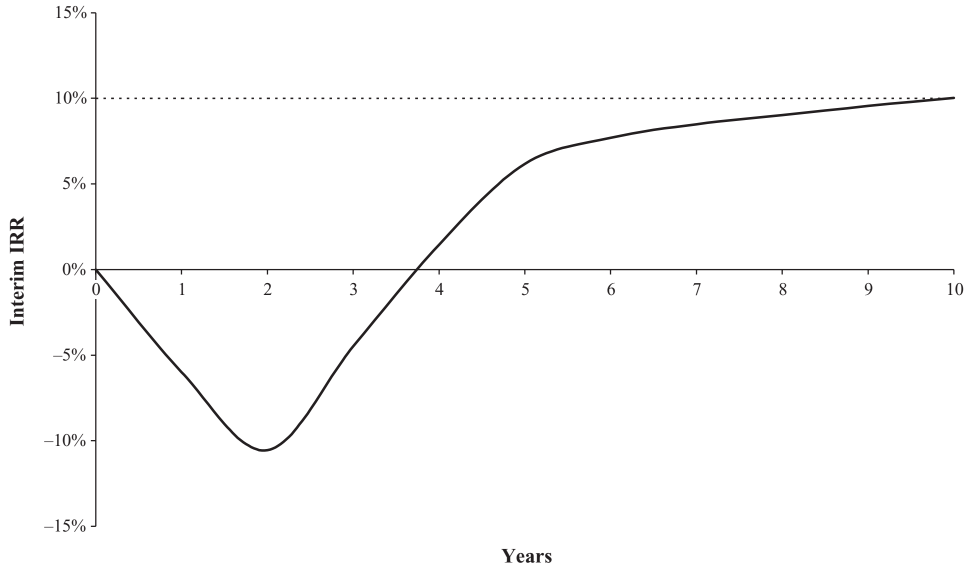

Figure 1.2 Fund standard J-curve

The classical fund performance J-curve is mainly caused by the fact that valuation policies followed by the industry and the uncertainty inherent in private equity investments prevent revaluing promising investments upwards until quite late in a fund's lifetime, while fees, costs and expenses are quickly deducted. As a result, private equity funds tend to demonstrate an apparent decline in value during the early years of existence, the so-called "valley of tears", before beginning to show the hoped-for positive returns in the later years of the fund's life.

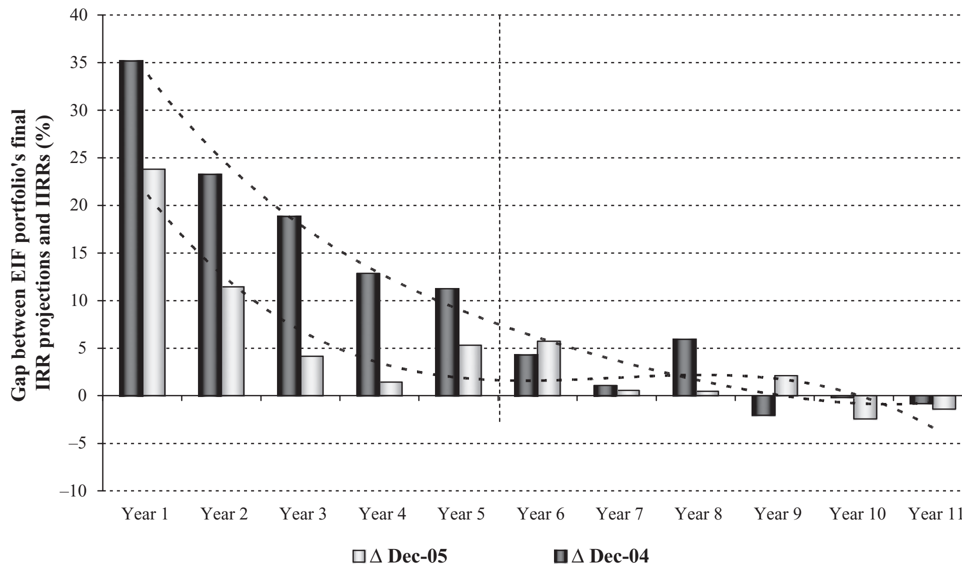

Figure 1.3 Old vs. new J-curve. Gap between the European Investment Fund (EIF) portfolio's final IRR projections and IIRRs as of December 2005 vs. December 2004 (Source: Mathonet and Monjanel, 2006 and EIF)

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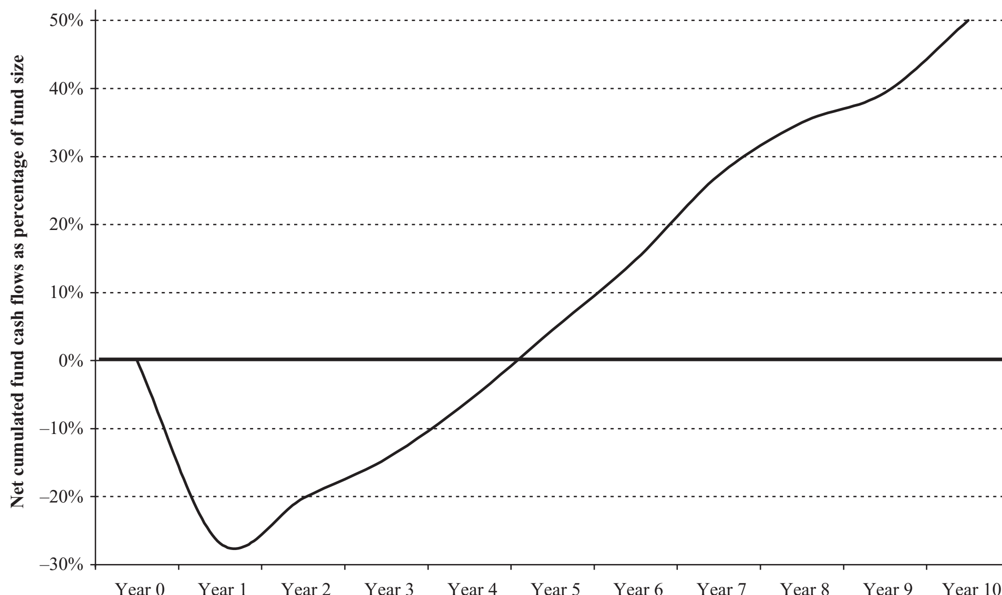

Figure 1.4 Fund cash flows J-curve

Some time ago,[12] it was postulated that the introduction of the new International Private Equity and Venture Capital Valuation Guidelines (IPEV guidelines)[13] in 2005 would drive the J-curve to extinction as a truly fair value for funds would eliminate the conservative bias caused by early expensing of costs and deferred recognition of increases in the values of promising investments. Instead, Mathonet and Monjanel (2006) found that the gap between the final IRR (or the expected in Figure 1.3) and the IIRR narrowed in years one thru five, after which the IIRR became on average a reasonably reliable estimator of the final performance (see Figure 1.3).

But other J-curves can also be observed in private equity funds: the **cash flow J-curve** and the **net asset value** (**NAV**) J-curve.[14] The **cash flow J-curve** is a representation of the evolution of the net accumulated cash flows from the limited partners to the fund, which are first increasingly negative during the early years of existence before making a U-turn and becoming positive in the later years of the fund's life. This is explained by the fact that, in standard private equity fund structures, commitments are drawn down as needed, or just-in-time. When realizations are made, after having successfully developed these newly-found companies, they are distributed as soon as practical (see Figure 1.4).

[12] See Meyer and Mathonet (2005).

[13] Available on www.privateequityvaluation.com [accessed October 2007].

[14] The net asset value (NAV) of a fund is calculated by adding the value of all of the investments held in the fund and dividing by the number of outstanding shares of the fund. The NAV J-curve is a representation of the evolution of the NAV versus the net paid-in (NPI), which first decreases during the early years of existence before improving in later years of the fund's life.