

Introduction and History

This chapter provides a broad overview of the private equity industry, exploring its definitions, origins, and evolution. We begin by examining the various ways private equity is defined and understood before tracing its historical roots—stretching as far back as Christopher Columbus—and focusing on its development, particularly from the latter half of the twentieth century onward.

Next, we examine the diverse landscape of private equity investors, analyzing what drives their investment decisions as well as the constraints they face. We then explore the different stages of private equity investment and how these map onto a company life cycle. In doing so, we examine how private equity funds work: who runs them, how do they make money, and how are they set up and structured. As we answer these questions, we examine the roles of both limited partners (LPs) and general partners (GPs) in the investment process.

Beyond its general principles, private equity has played a significant role in the healthcare sector. We identify key investment trends in healthcare and life sciences, exploring why the sector has been attractive to private equity firms and how different investment models have evolved over time. We also analyze the resilience of healthcare investments through various economic crises.

Finally, we present case studies of landmark transactions like STADA Arzneimittel that highlight key lessons, strategic approaches, and challenges in private equity investments within healthcare. Alongside this, we examine key metrics that provide insights into the current state of the private equity industry worldwide and how it has evolved over time.

1.1 AN INITIAL DEFINITION

There is often confusion when it comes to defining private equity. It was once simple:

Any equity investment in a company which is not quoted on a stock exchange.

However, as Guy Fraser-Sampson once pointed out in 2007, this definition is no longer sufficient. Before we explore why, we start with an alternative definition provided by the BVCA, now renamed British Private Equity & Venture Capital Association:

Private equity provides long-term, committed share capital, to help unquoted companies grow and succeed. If you are looking to start up, expand, buy into a business, buy out a division of your parent company, turnaround or revitalize a company, private equity could help you to do this.

An alternative definition was provided by the American Investment Council is even longer:

Private equity invests capital in companies that are perceived to have growth potential and then works with these companies to expand or turnaround the business. This capital is contributed by large institutional investors and is organized into a fund. After three to seven years of ownership and working with the company, the fund manager will seek to “exit” the company by taking the business public or selling it for a higher valuation than it was purchased. This exit distributes profits from the sale (“returns”) to the investors in the fund and the fund manager. At the end of this process, private equity investments usually result in better jobs, stronger companies, and healthier communities.

Why do we rely on such long definitions? Obviously, there are many concepts to include, and it is easy to overlook an element. Some definitions in other books, in their pursuit of brevity, miss key components. While it is true that private equity can be defined in opposition to public equity—simply as equity not listed on an exchange—this does not capture the full picture, if only because private equity often acquires public companies, taking them private.

It is important to keep in mind the difference between **profitability** and **cash generation**: profitability measures the surplus of revenues over expenses, including non-cash items, while cash generation reflects the actual movement of cash in and out of the business, determining its liquidity.

For example, a healthcare startup in the United Kingdom might report **annual revenues** of £500,000 from providing health services, with **expenses** of £400,000 (including staff salaries, equipment, and facility costs). On paper, this results in a **profit** of £100,000. However, if only £300,000 of the revenue was collected in cash during the year (due to delayed payments from clients or insurance providers), while the company paid out £380,000 in cash for expenses, its **cash flow** would be **negative** £80,000, despite being profitable. This shows how cash generation and profitability can diverge, especially in industries like healthcare, where payment delays are common.

Private equity was once described as providing capital to companies that do not have access to traditional capital markets (such as debt capital markets [DCM] and equity capital markets [ECM]).

***Debt capital markets** (DCM) involve raising funds by issuing bonds, notes and large loans offered to investors, while **equity capital markets** (ECM) involve raising funds by selling ownership shares in the company to institutional investors and to the wider public.*

Debt creates a repayment obligation with interest, whereas equity gives investors ownership stakes without requiring repayment. Small or young firms often struggle to access debt capital markets due to limited credit history and higher perceived risk, while equity capital markets can be out of reach because

these firms may lack the scale, track record, or investor confidence necessary for public listings or significant equity investment.

Hence, private equity is not just about “equity,” and it is not necessarily “private” either! Before we can provide a more appropriate definition of private equity, it is important to delve into its history.

1.2 ORIGINS AND HISTORY OF PRIVATE EQUITY

Let’s explore the history and origins of private equity. In reality, much of what is considered historical private equity is actually venture capital, i.e., private equity investment in early-stage companies.

The history of private equity dates back centuries, even millennia, evolving alongside the changing needs of entrepreneurs and financiers.

In ancient Persia, India, and China, wealthy individuals, including merchants and aristocrats, often funded trade expeditions and business ventures, much like the early European merchant families. The Silk Road, for instance, was a major network for trade, with financiers backing traders and explorers in the hope of receiving profits from goods transported between China and the rest of the world. These early investments were highly speculative but could yield large rewards, similarly again to a venture capital model.

This pattern of private financing in China continued during the Tang Dynasty (618–907 AD) and later in the Ming Dynasty (1368–1644), when wealthy financiers supported commercial and industrial ventures. The funding, often informal and based on personal relationships, was particularly prominent in industries such as silk, tea, and ceramics. These early forms of financing, though not structured like today’s private equity, also shared similarities with modern-day venture capital.

Similar patterns can be observed in medieval Europe, where merchant banks began providing capital for trade expeditions, setting the stage for modern venture investment with more structured financial mechanisms. The Silk Road laid the groundwork for risk-sharing trade models, but structured venture capital as we understand it today—with formalized investments, stock issuance, and equity partnerships—emerged much later in Europe. For example, wealthy families, such as the Medicis in Italy, were early pioneers in the private financing of businesses and trade ventures.

Moving into the late fifteenth century, Queen Isabella of Spain could be considered one of the earliest Western venture capitalists when she financed Christopher Columbus’s voyages.¹ By providing capital in the form of money, ships, supplies, and crew, Isabella took on a significant risk to support Columbus’s expedition to find a westward route to Asia. Given the widespread belief at the time that the venture would fail, her investment was seen as highly speculative. However, if successful, the rewards—such as control over new trade routes and riches from uncharted territories—would be disproportionately high compared to the initial investment, embodying the high-risk, high-reward nature of venture capital. Spain would ultimately keep nearly 90% of the profits from the successful expeditions.

¹<https://msh.councilforeconed.org/documents/978-1-56183-758-8-activity-lesson-18.pdf>.

Fast forward to the eighteenth century, wealthy investors were instrumental in the financing of the Industrial Revolution. For example, Britain's 65-kilometer-long Bridgewater canal, which was inaugurated in 1761, is named after its financier, the Duke of Bridgewater, while the Liverpool and Manchester Railway, dating back to 1830, was funded by a group of merchants and industrialists including George Stephenson. In the early nineteenth century again, the American whaling industry provides another example of a financial structure strikingly similar to modern venture capital.² Whaling agents in New Bedford raised capital from wealthy individuals, local merchants, and even small investors much like today's venture capitalists pool funds from limited partners. These agents then financed high-risk whaling voyages, hoping for substantial returns, similar to the way venture capitalists invest in startups. Crew members were compensated through a system of "lays," where they earned a share of the voyage's profits, which is analogous to modern stock options. This method ensured that everyone, from the lowest ranked crew members to the ship's captain, had aligned incentives, fostering a shared interest in the success of the venture. Much like today's entrepreneurs who transition into venture capitalists, successful whaling captains often reinvested their earnings into future voyages, further aligning their interests with the agents and the crews they led. Whaling agents also provided more than just funding; they acted as mentors, guiding captains through the challenges of running high-risk ventures, much like venture capitalists do for startup CEOs today. Though there are differences between the two models, the lay/agent structure of the whaling industry serves as an early precursor to the venture capital system, with its similar dynamics of aligning risk, reward, and leadership for navigating uncertain and potentially lucrative undertakings.

As the Industrial Revolution progressed, the increasing demand for private capital to fund new technologies and businesses led to a rise in private partnerships for financing industrial ventures. By the late nineteenth century, during a period of significant industrial development, wealthy families and individuals, like J.P. Morgan, were investing directly in private companies. This era also saw the rise of "merchant banking,"³ where banks invested their own capital in businesses.

In the early twentieth century, groups of wealthy investors would create investment syndicates, pooling resources to fund private companies. The 1920s brought the popularity of holding companies, which controlled stakes in other companies, while investment trusts, similar to modern closed-end funds, provided a way for smaller investors to access private investments.

During the Great Depression in the United States, the Securities Act of 1933 and Securities Exchange Act of 1934 were enacted, increasing regulation of public markets. This, in turn, indirectly spurred the development of private investment vehicles. During this time, some investors specialized in buying and reorganizing distressed companies, a practice that can be seen as an early form of "turnaround investing" in private equity.

It is worth noting that the term "private equity" was not used during this period. These historical practices, while distinct from modern private equity in terms of structure, regulation, and scale, laid the foundation for the industry as we know it today.

²<https://nha.org/research/nantucket-history/history-topics/short-lays-on-greasy-voyages-whaling-and-venture-capital>.

³The topic of merchant banking actually traces back to the Medici family, who established one of Europe's first and most influential banking empires in the fifteenth century.

Before World War II, it was referred to as “development capital” and primarily involved wealthy individuals and families.

The industry as we know it today began to take shape in the aftermath of World War II. Here we list the defining moments in the modern history of private equity:

- In 1946, French General Georges Doriot and his two partners at Harvard created the American Research and Development Corporation (ARDC). It was a pioneering venture capital firm that played a key role in the development of private equity. Unlike previous family-funded investment ventures, ARDC was unique in raising capital from institutional investors and the public, specifically to fund early-stage companies, particularly in technology. ARDC aimed to support the commercialization of innovations, contribute to economic growth in New England, and demonstrate that venture capital could be profitable. Its success, particularly its early investment in Digital Equipment Corporation (DEC), which grew to be a major company, established ARDC as a model for modern venture capital practices, even though it eventually struggled to compete with newer models like the limited partnership.⁴
- Starting in the 1960s, there was a surge in attempts to acquire companies, particularly conglomerates, with the goal of asset stripping. Asset stripping involved selling off the valuable parts of a company while shutting down the less profitable or nonessential segments, thereby unlocking value from the idea that the whole company was worth less than the sum of its individual parts. While this approach generated significant returns for some, it also led to several disastrous outcomes, as the long-term sustainability of the business was often compromised in the pursuit of short-term profits.
- A defining moment occurred in 1968 with the first attempt to raise money on a deal-by-deal basis when funds such as AEA, one of the most prominent private equity firms of its time, began investing alongside founding families in a deal-by-deal investing structure, called AEA Investment Programs.⁵ AEA's strategy allowed them to raise capital only when a specific investment opportunity arose, instead of locking in capital for a set fund duration. This flexibility became increasingly popular in the years that followed, particularly after the 2000s credit crisis.
- Founded in 1966, Warburg Pincus was one of the earliest PE firms to raise institutional capital into a committed fund rather than relying solely on deal-by-deal financing. By the 1970s, it had already moved away from the merchant banking tradition of funding one deal at a time, securing capital upfront from investors for multiple investments, focused on growth capital and venture investments, rather than purely LBOs,⁶ which would later become the dominant segment of PE.
- In 1974, Thomas H. Lee Partners set up the first dedicated LBO fund, marking a significant development in the private equity landscape. LBOs or leveraged buyouts are acquisitions heavily financed with expensive debt. The firm became

⁴https://kenney.faculty.ucdavis.edu/wp-content/uploads/sites/332/2018/03/Organizing-Venture-Capital_-The-Rise-and-Demise-of-American-Research-and-Development-Corporation.pdf.

⁵<https://www.aeainvestors.com/our-history>.

⁶A leveraged buyout (LBO) is a transaction where a company is acquired using a higher proportion of debt than would typically be used for such a company, with the expectation that the acquired company's cash flows will service the debt.

highly influential over the next 30 years, pioneering and perfecting the LBO model. This innovative approach allowed Thomas H. Lee Partners to acquire companies with relatively little upfront equity, enabling higher returns on investment. One of the firm's most notable early successes came in the 1980s with the leveraged buyout of Snapple Beverage Corporation. Acquired for \$135 million in 1992, Snapple was sold just two years later to Quaker Oats for \$1.7 billion, generating a staggering 32 times return on equity. This deal became a landmark in private equity history, solidifying Thomas H. Lee Partners' reputation as a leader in the field.

- In 1978, perhaps the most famous name in the private equity history, Kohlberg Kravis Roberts (KKR), set up the first institutional LBO fund of investor commitments with several insurance companies, pension funds, and other institutional investors pooling their resources together to invest in private equity. This structure provided a more formal and scalable way for private equity to grow, moving further away from the earlier deal-by-deal model.
- The 1970s saw the end of the era of asset stripping. After about 10 years of widespread use, many developed countries began to outlaw asset stripping, making it illegal or at least significantly more difficult to acquire companies solely to liquidate their most valuable assets. This shift forced private equity firms to reconsider their investment strategies, as the focus moved toward long-term value creation rather than short-term profits from dismantling companies.
- In the 1980s, several significant legal developments shaped the landscape of private equity. One key piece of legislation was the introduction of laws related to financial assistance, which allowed for the rescue of viable companies. In the United Kingdom, the 1981 Companies Act required directors to make a statutory declaration stating that, as far as they knew, the company would remain solvent for at least 12 months after the completion of the transaction. If the declaration was knowingly false, it would become a criminal offense. This legal framework becomes particularly relevant in the context of private equity transactions, where the acquiring company often uses the target company's assets as collateral for the acquisition financing. The laws surrounding financial assistance and solvency were crucial in ensuring the integrity of such transactions and protecting both creditors and investors.

ASSET STRIPPING IN HEALTHCARE: A COMPLEX PRACTICE WITH ONGOING IMPACTS ON COMMUNITIES

A notable real-life example of asset stripping in healthcare is the case of **Hahnemann University Hospital** in Philadelphia. In 2018, the hospital was purchased by a private equity firm, Paladin Healthcare, led by Joel Freedman. After acquiring the hospital, the new owners sold the valuable real estate on which the hospital sat, while the hospital itself faced severe financial issues. The stripping of assets, including the sale of the property, contributed to the closure of the

171-year-old hospital in 2019, leaving thousands of healthcare workers without jobs and limiting healthcare services for the local community, particularly for low-income patients. This example has been widely criticized as a case of private equity prioritizing profits over patient care and community health needs. In all fairness, it is not clear what would have happened to the hospital had it not been acquired. The extant debate on the impact of private equity on business and society is particularly vivid in the healthcare sector and will be the subject of Chapter 8.

From then on, the history of private equity can perhaps be better demonstrated through the accelerated development of LBOs, which represent the bulk of private equity in value.

For this we need to go back in time again. Depending on what are considered “true” LBOs, their prehistory arguably goes back to 1919 with Henry Ford’s leveraged transaction to regain control of his company, buying out minority shareholders. Other examples include the buyout of UPS by its founder, which occurred during the Great Depression in 1933, or the takeover more than 20 years later of Pan-Atlantic Steamship Company by its management using a publicly traded holding company, McLean Industries, in 1955. We consider the modern LBO to have taken shape in the 1960s and 1970s, with Jerome Kohlberg, and two cousins, Henry Kravis and George Roberts, pioneering the LBO model at Bear Stearns before founding KKR in 1976. KKR launched many of the first modern LBOs including the takeover of Houdaille Corp in 1979. A significant milestone came in 1982 with the buyout by Wesray Capital Corporation, led by US Treasury Secretary William E. Simon and Ray Chambers, of Gibson Greetings, for \$80 million, contributing only \$1 million in equity and financing the rest through debt. In just 18 months, they took the company public, generating more than \$290 million in proceeds. This equated with a 200-time return on their initial equity investment, making it one of the most profitable LBOs of its time. It consequently showcased the potential for high returns and helped popularize the LBO strategy.

In the 1980s, Michael Milken, the famous junk bond king, helped develop that activity further by providing financing to investors. Before Michael Milken’s influence, LBOs were primarily funded through traditional bank loans or private equity, limiting them to well-established, low-risk companies. Milken, working at Drexel Burnham Lambert, revolutionized the industry by popularizing the use of high-yield (junk) bonds, allowing companies with lower credit ratings to secure financing in exchange for higher returns to investors. This innovation expanded LBO opportunities to a wider range of highly leveraged, undervalued, or underperforming companies that had previously been overlooked.⁷

The historical takeover of RJR Nabisco by KKR happened in 1989 and would remain the largest LBO for two decades, becoming the subject of the international

⁷Nicholas, T. and Preble, M. G. (2016, rev. 2021). *Michael Milken: The junk bond king*. Harvard Business School Case 816-050.

bestseller book *Barbarians at the Gate*. The RJR Nabisco deal featured an intense bidding war between KKR, the company's management, and other contenders, epitomizing the aggressive tactics of 1980s private equity. It became a public symbol of the excess and risks of LBOs, even earning a *Time Magazine* cover titled "A Game of Greed." Despite its mixed financial outcomes, the deal significantly influenced the private equity industry by demonstrating the viability of large-scale LBOs and solidifying private equity's role in corporate takeovers. It also drew increased scrutiny of the sector, highlighting both the substantial rewards and the inherent risks of highly leveraged acquisitions.⁸

During the 1980s, the junk bond market expanded dramatically, surging from just \$10 billion in 1979 to an astonishing \$189 billion by 1989. In that year, Milken's legal issues, coupled with the growing instability of the junk bond market and associated default rates, provoked the collapse of Drexel Burnham Lambert (Hurdzeu and Popescu, 2015). The US congress ended the ability of savings and loans to invest in lower than investment grade securities, ending the era of junk-bond-driven LBOs.⁹

The modern era of private equity started in the 1990s and was marked by a decisive shift from purely financial engineering toward value creation through operational improvement.¹⁰ One of the emblematic transactions of this era was Bain Capital's 1997 leveraged buyout, with co-investors, of Sealy Corporation, the world's largest bedding manufacturer. The deal, valued at approximately \$300 million, was notable not only for its structure but also for the strategic transformation that followed.

Bain Capital implemented a hands-on operational approach that involved streamlining Sealy's manufacturing footprint, optimizing its distribution channels, and professionalizing its management. Rather than relying solely on financial leverage to generate returns, Bain focused on improving supply chain efficiency and product innovation, helping Sealy regain market leadership. Over the course of the investment, EBITDA increased substantially, driven by margin expansion and cost control, not just revenue growth.

The transaction reflected the broader evolution in private equity toward "operational alpha"—the ability to drive performance through active governance, strategic oversight, and performance monitoring. When Sealy was eventually sold to KKR in 2004 for approximately \$1.5 billion, it delivered strong returns to Bain's investors and set a precedent for later buyouts in the consumer and manufacturing sectors.

This deal exemplified the private equity industry's transition from the high-leverage strategies of the 1980s to a more hands-on, value-creation model that would come to define the asset class in the decades that followed.

⁸Nicholas, T. and Masko, J. (2021). *Barbarians at the gate or turnaround gurus? Private equity and the rise of the LBO*. Harvard Business School Case 821-016.

⁹H.R.1278—Financial Institutions Reform, Recovery, and Enforcement Act of 1989. <https://www.congress.gov/bill/101st-congress/house-bill/1278/text>.

¹⁰Capital Dynamics & Center for Entrepreneurial and Financial Studies (CEFS), Technische Universität München (2009). "Value Creation in Private Equity."

The turn of the millennium ushered in the mega-buyout era, with deals like the \$33 billion acquisition of HCA in 2006 by Bain Capital, KKR, and Merrill Lynch setting new records. The 2007 buyout of TXU (Energy Future Holdings) for \$45 billion by KKR, TPG, and Goldman Sachs Capital Partners marked the peak of this trend. The 2008 financial crisis temporarily halted mega LBO activity, but the industry's resilience was proven by deals like the \$27 billion Heinz buyout in 2013 by 3G Capital and Berkshire Hathaway. Post-crisis, new strategies emerged, such as the \$67 billion acquisition of EMC by Dell and Silver Lake in 2015, blurring the lines between strategic and financial buyers.

These mega deals resulted from a combination of macroeconomic and industry-specific forces. Key drivers included low interest rates making debt financing cheaper, abundant private equity and corporate cash reserves, slow economic growth pushing firms to seek inorganic growth, high levels of competition, strategic attempts at consolidation, tax arbitrage opportunities, and the search for innovation. Companies facing weak demand and limited organic growth looked to large acquisitions for scale, efficiency, and access to new markets. We will discuss more recent developments in Chapter 10.

In Europe, private equity truly took off in the early 1980s, initially fueling the rise of venture capital. This was followed by the emergence of dedicated buyout funds in the 1990s, which later led to increasing sector specialization and market consolidation by the mid-1990s. The next phase was characterized by rapid globalization, a trend that continued until the initial disruptions brought by the COVID-19 pandemic.

It is interesting to note how private equity has expanded significantly over time. We have already discussed this in part, but a good metric to illustrate the growth of the private equity sector is the number of participants in the sector.

The evolution of the members of Invest Europe (formerly the European Venture Capital Association) sheds light on how the private equity industry has evolved in Europe. Private equity has matured over a period of about 25 years during which the number of participants went from 37 in 1983 to more than 600 in 2008, a number that has remained stable since then (although the balance has shifted from venture capital to private equity).

Taking these historical developments into perspective, it appears that as for other areas in finance such as mergers and acquisitions or venture capital, private equity experiences cycles. To illustrate, we propose five phases to understand the evolution of private equity in modern history (Figure 1.1). Note that each of the last four phases lasts approximately 10 years:

- 1946–1981: Setting the scene of modern private equity
- 1982–1992: First boom and bust cycle
- 1993–2002: Technology boom and bust. Separation of venture capital and LBO segments
- 2003–2012: Credit boom and bust, hangover
- 2013–2022: Buildup of *dry powder* and integration of private capital

The sixth phase, which likely started in 2022, will be discussed in the last chapter.

THE PRIVATE CAPITAL INDUSTRY BECAME GLOBAL IN THE 1990s

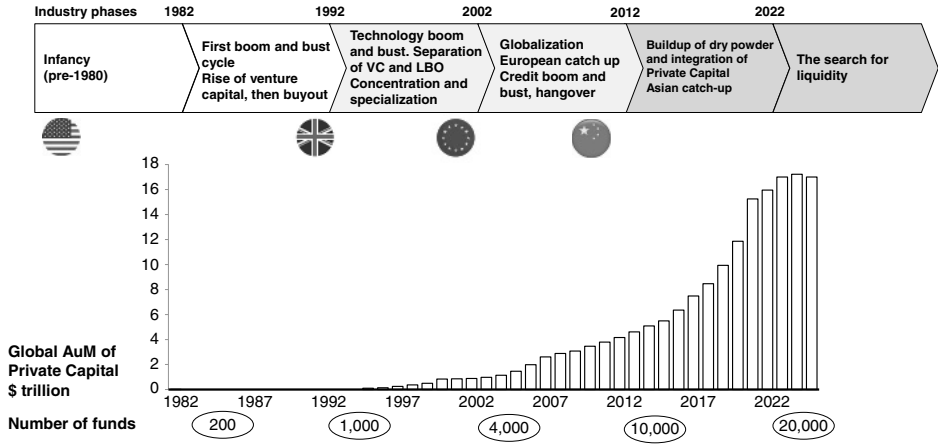


FIGURE 1.1 History of private capital.
Source: Authors' research.

1.3 DEFINITIONS AND SEGMENTATIONS

While **formal private equity (PE)** is a segment that is well documented with thousands of firms accounting for most industry statistics, the **informal segment** of investments financed by family members and/or business angels, is difficult to track as there is no official reporting. The distinction between the two is increasingly difficult to track with easier access to technology and the professionalization of many informal players. In venture capital, which we will define later, there is now a significant quasi formal segment of early-stage investors: super angels, angel clubs, and family offices.

We consider five main approaches to PE segmentation that can help us better understand what PE is about.

1.3.1 By Stages of Financing

Figure 1.2 illustrates the company life cycle that usually ranges from a startup phase to a stable, slower growth, mature position in the market. We distinguish between a private capital first phase and a subsequent capital markets one. Although most companies never go public and some private companies issue bonds (debt securities), the usual path of development is such that, traditionally, most successful companies, i.e., reaching a significant market value, would opt to sell some of their shares in a stock exchange through an initial public offering (IPO) and get continuous access to capital markets.

Within private capital, it is important to distinguish between the initial stages and the subsequent stages of principal investing (see Figure 1.3). Note that the expression *principal investing* has been—mostly—gradually replaced with *private equity*. They do overlap, but venture capital starts from a very early stage, with seed capital, and then goes on to the first, second, and third stages, also called Series A, B, C ..., and sometimes include bridge capital. These stages are relevant to companies that start being merely an idea on paper, or startups, which may create revenue and ultimately become profitable.

DEFINING FROM THE FIRM LIFE CYCLE POINT OF VIEW

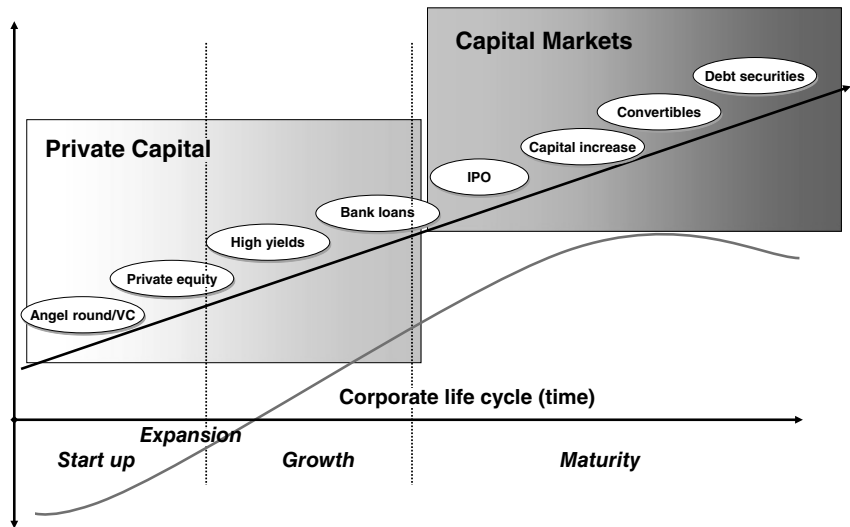
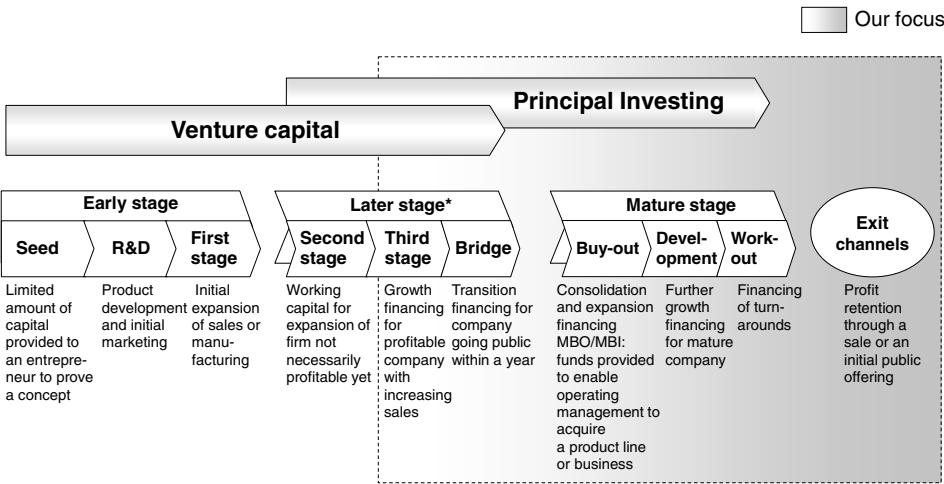


FIGURE 1.2 Financing stages from firm life cycle point of view.
Source: Adapted from Paul Achleitner in Frank Bancel—Investment Banking—January 2004.

PRIVATE EQUITY HISTORICALLY HAS TWO MAIN SEGMENTS



*Includes: Mezzanine (form of financing with junior debt and an equity component), expansion, replacement

FIGURE 1.3 Venture capital vs. principal investing.
Source: Candescic analysis.

STARTUP COMPANY LIFE CYCLE

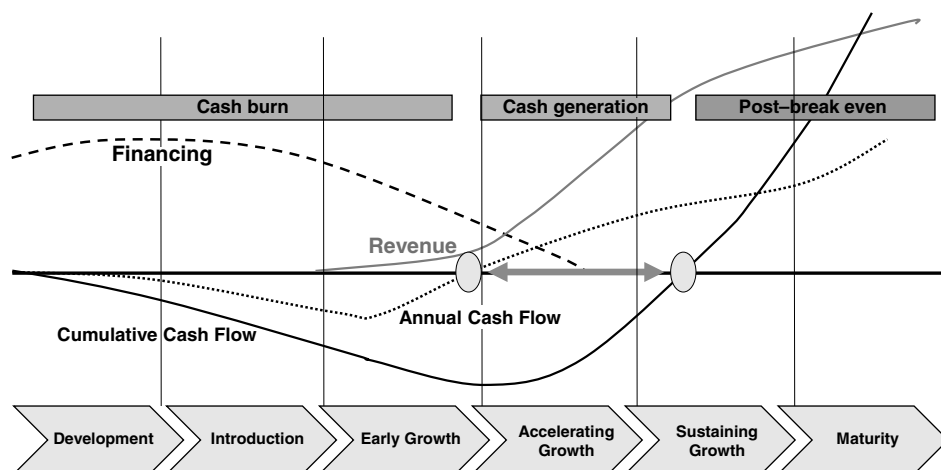


FIGURE 1.4 Startup company life cycle.

Figure 1.4 focuses on the early stages of a company's life cycle, from inception to maturity. We distinguish **revenues**, as the total income from sales in a given year, **cash flow** as the net movement of cash in and out of the business in a given year, and **cumulative cash flows** as the overall total of these net cash movements accumulated over time. When mapping the evolution of revenue and cash flows, we identify some key moments. The first one is when the annual cash flow turns positive, marking the transition from cash burn to cash generation. The second one is when the cumulated cash flows turn positive, sort of making it break even. The distance between the two points is a period of accelerating growth that is critical to the success and value of the company. This period demonstrates the viability and scalability of the business model. Many successful companies, especially in technology sectors, go through longer periods of high growth before reaching cumulative positive cash flows. They prioritize scaling and market dominance over early profitability.

Principal investing, however, is relevant to companies that are at later stages (sustaining growth to maturity), ultimately called growth capital. These companies are expected to be profitable and they may reach a more mature stage that may lead to a buyout—often an LBO—but also some other forms of development capital, as well as the very particular stage known as the work-out, which means financing with private equity companies that are in financial difficulty.

Figure 1.5 illustrates the typical rounds of financing associated with each phase of development from inception to maturity, associating an indicative expected return (the IRR or internal rate of return) to each phase. The IRR, which is certainly the most common performance measure in private equity, represents the discount rate that an investor would apply to the free cash flows. Note this describes mostly the rounds of financing in venture capital (VC) but is essential to understand the relationship between business maturity and return expectations.

In simple terms, a **discount rate** is used to estimate how much future money is worth today. When investing in a startup, in particular in healthcare, the future can be particularly uncertain, and a discount rate is used to estimate the value of potential future earnings in today's terms.

ILLUSTRATIVE IRR REQUIRED BY STAGE OF INVESTMENT

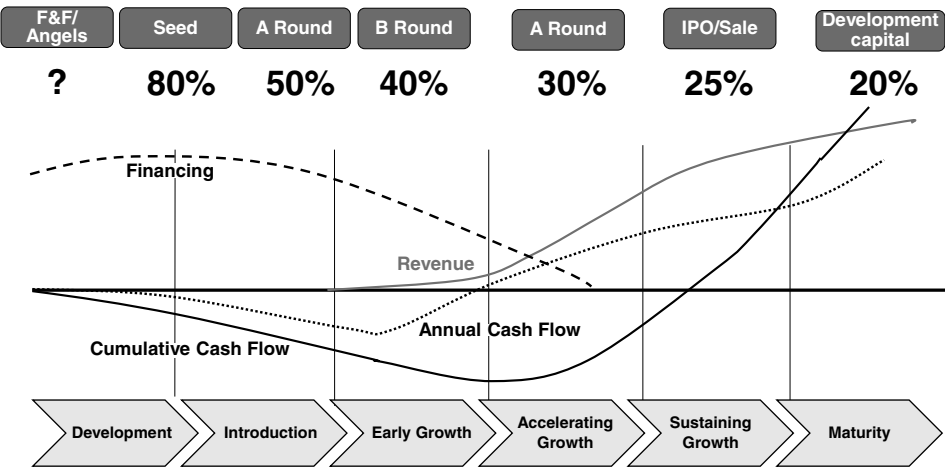


FIGURE 1.5 Illustrative IRR required by stage of investment from early stage.

Different phases of a company’s growth, such as early development and product testing (development) or market launch (introduction), are associated with different risks so the discount rate changes across phases. Early on, when the startup is merely an idea, the discount rate is higher because the risk is higher—there is a bigger chance the company will not succeed. As the company evolves toward later stages and becomes more stable, the discount rate becomes lower because the risk decreases and future earnings are less uncertain.

The internal rate of return or **IRR** attempts to measure the profitability of an investment, with some limitations that we will develop in Chapter 3. It is the discount rate at which the present value of future cash flows from the investment equals the amount of money initially invested. In other words, the IRR is the break-even discount rate, and investors use it to evaluate whether an investment will be profitable—if the IRR is higher than the required discount rate, the investment is likely to be a good one. However, as we will explain later, it is not the return on investment.

You are considering investing in the development of a new drug that requires an initial investment of \$10,000. The project is expected to generate annual cash inflows of \$2,500 for 10 years from the sale of the drug.

- Initial Investment (Year 0): −\$10,000
- Annual Cash Inflows (Years 1–10): +\$2,500 each year

STEP 1: USING THE DISCOUNT RATE

You set your required rate of return, or **discount rate**, at 10%, which reflects the risk of investing in drug development and your cost of capital.

(Continued)

(Continued)

To calculate the **net present value (NPV)** at this discount rate, you discount each of the annual cash inflows back to the present value:

$$NPV = \sum_{t=1}^{10} \frac{2,500}{(1 + 0.10)^t} - 10,000$$

After calculating the discounted cash flows for each year and summing them up:

- **NPV at a 10% discount rate** $\approx$ \$5,361

Since the NPV is positive, the project is expected to generate more than your required 10% return, making it an attractive investment based on your criteria.

STEP 2: CALCULATING THE IRR

The **IRR** is the rate that makes the NPV of the project equal to zero. This is found by solving for the rate that satisfies the following equation:

$$NPV = \sum_{t=1}^{10} \frac{2,500}{(1 + IRR)^t} - 10,000 = 0$$

Using a financial calculator or Excel, we find that the **IRR** for this project is approximately **21.4%**.

Interpretation:

- The **discount rate** of 10% represents your required return for investing in the new drug. Since the NPV at this rate is positive (\$5,361), the project is expected to meet your required return and add value.
- The **IRR** of 21.4% indicates that the project is expected to generate an annual return of 21.4%, which is significantly higher than your required 10%. This makes the project even more attractive.

In summary:

- Your **discount rate** (10%) is a benchmark for deciding if the investment is worth pursuing.
- The **IRR** (21.4%) shows a possible actual return on the project, which is higher than your required rate, suggesting that the investment in the drug development project is financially sound. Note that it generously assumes that you can reinvest all intermediary cash flows at this rate, which can be a misleading assumption in some cases. We will discuss this important point later.

The discount rate varies with market conditions and company specificities. The earlier and less proven the business opportunity, the higher the risk associated with the future cash flows and the lower the net present value. A pre-seed company that plans

to IPO in 10 years at a valuation of, say, \$100 million, may be worth surprisingly little. The present value of the business when applying a rather fair discount rate of 80% is a mere \$280,000. Raising millions of dollars on that basis is highly unlikely.

1.3.2 By Asset Class Differentiation

Many investors hold primarily traditional asset classes such as stocks and bonds. PE (and VC) investments belong to the segment of “traditional alternative investments,” together with real estate and commodities. Other alternatives include hedge funds, infrastructures, and digital assets. Refer to Figure 1.6.

Alternative investments differ significantly from traditional investments—public equity, bonds, and cash equivalents—in terms of asset types, liquidity, risk-return profiles, regulatory oversight, and accessibility. Traditional investments are widely accessible, highly liquid, and subject to strict regulatory and transparency requirements. These factors provide investors with clear insights into potential risks and returns.

In contrast, alternative investments encompass a diverse range of assets, including private equity (and venture capital), real estate, commodities, and hedge funds (and more recently, cryptocurrencies, with total capitalization of around \$4 trillion at the time of writing). These investments are often **illiquid**, requiring long holding periods with limited opportunities for early exit. While they are expected to offer the potential for **higher returns**, they also come with **greater risk and return volatility** due to their complex structures and exposure to less conventional markets. Additionally, alternative investments are typically subject to **less regulation and transparency**, making risk assessment more challenging.

Access to these investments is generally **restricted** to accredited—mostly high net worth individuals and families—investors or institutions with substantial capital, limiting participation from retail investors. Despite these challenges, alternative investments play a crucial role in **portfolio diversification**, offering opportunities for **enhanced growth** and acting as a hedge against market volatility.

1.3.3 By Acquisition Motives

Barber and Goold (2007) proposed an intriguing framework (Figure 1.7), mapping the intention (keep or sell) against the nature of the involvement in the target company (from investing passively to investing to influence and build synergies). This allows us

DEFINING PE AS AN ASSET CLASS

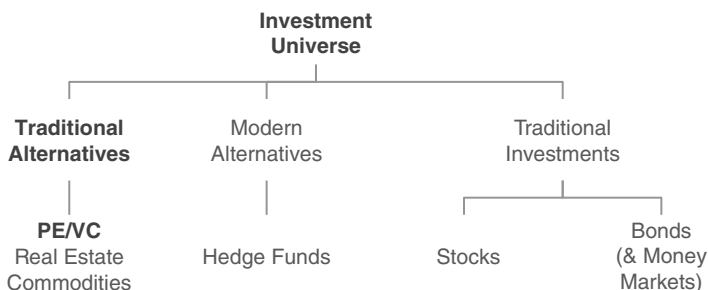


FIGURE 1.6 Asset classes.

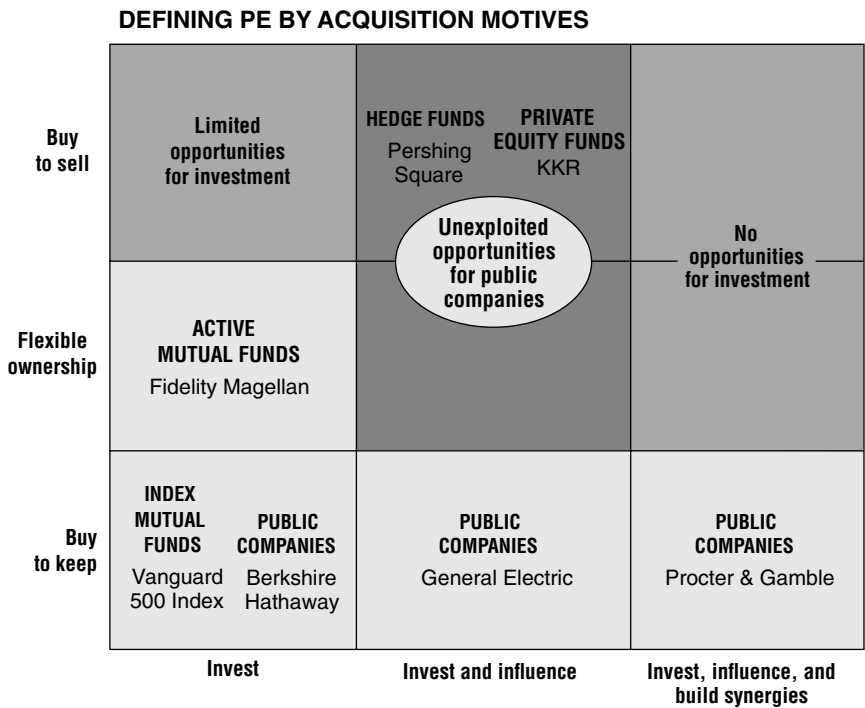


FIGURE 1.7 Influence vs. intent.
Source: HBR, the strategic secret of private equity, by Felix Barber and Michael Goold (2007)

to position different types of investors in their specific position, with private equity at the intersection of “*buying to sell*” and “*investing to influence*.”

While hedge funds appear adjacent to private equity funds in Barber and Goold’s segmentation, this proximity primarily applies to activist hedge funds, which may seek to influence management or strategy. However, the majority of hedge funds—including macro, quantitative, and arbitrage funds—tend to invest passively, diversify across many assets, and focus on capitalizing on market movements or inefficiencies rather than engaging directly with company operations. Even activist hedge funds, while sometimes influential, rarely become as operationally involved as private equity sponsors, whose value creation is rooted in hands-on management and long-term transformation. Moreover, for obvious liquidity reasons, they tend to invest in listed companies. First Light Asset Management is an example of such a healthcare specialist hedge fund investor.

1.3.4 By Characteristics of the Investment Vehicle

As we will establish later, private equity funds are set up in a very specific way that distinguishes them from mutual funds, hedge funds, and most other specialist funds. We identify four main characteristics of a direct private equity fund:¹¹

¹¹ As opposed to funds of funds and secondary funds.

- The fund serves as a financial intermediary, directly investing capital into companies that become **portfolio companies (PortCos)**.
- It exclusively invests in private companies or acquires public companies with the intention of immediately privatizing them.
- The fund takes an active role in overseeing and providing support to the PortCos.
- Its main objective is to optimize investor returns through either selling the invested companies or guiding them through an IPO process.

1.3.5 By Investment Constraints

A discussion we regularly hold in our classes consists of asking which type of investor invests in which asset class and why. To that end it is helpful to list all types of investors, institutional and retail. A possible list includes the following:

- Insurance companies
- Pension funds
- Endowments and foundations
- Corporates
- Mutual funds
- Other institutional asset managers
- Family offices
- Sovereign funds
- Funds of funds
- HNWI (high net worth individuals)
- Retail investors
- Central banks

The next step is to list common investment constraints:

- Regulatory and ethical constraints
- Access or control
- Return (level and nature)
- Risk profile
- Diversification (hence risk reduction)
- Liquidity
- Timing of payouts

Finally, we can match investors and investments for each type of constraint (Figure 1.8)

- Regulatory and ethical constraints (e.g., tobacco, weapons, gambling, North Korea ...) will affect all investors in various combinations
- Control: Corporate M&A, sometimes a HNWI who wants to be a decision-maker
- Return: Family offices and endowments tend to look for absolute returns
- Risk profile: Retail investors may need to protect their capital
- Liquidity: Mutual funds in particular may face large immediate redemptions
- Timing of payouts: Insurance companies want reserves of non-taxed profits ...

SENSITIVITY TO CONSTRAINTS BY TYPE OF INVESTOR

Sensitivity to constraints							
Investors	Regulatory & Ethical Constraints	Access or Control	Return (Level & Nature)	Risk Profile	Diversification (Risk Reduction)	Liquidity	Timing of Payouts
Insurance	High	Medium	Medium	High	High	High	High
Pension Funds	High	Low	High	High	High	Medium	Medium
Endowments	High	Low	High	High	High	Medium	Medium
Corporates	High	High	Medium	Medium	High	Medium	Low
Mutual Funds	High	Low	High	Medium	High	High	Low
Other Institutional	High	Low	High	Medium	High	Medium	Low
Family Offices	Medium	High	High	Medium	Medium	Low	Medium
Sovereign Funds	High	Medium	Medium	Medium	High	Low	Low
Funds of Funds	Medium	Low	High	Medium	High	Medium	Low
HNWI	Medium	High	High	Medium	Medium	Low	Low
Retail Investors	Medium	Low	Medium	High	Medium	High	Low
Central Banks	High	Low	Low	Low	Medium	High	Low

FIGURE 1.8 Mapping investors constraints.

Source: Candesc analysis

What does PE offer to investors with regard to these constraints? This will be the subject of the next chapters, but it will not be a surprise that PE investment is first and foremost defined by its lack of liquidity.

1.3.6 By Relationship to Liquidity

Many investors view private equity investment as an opportunity to seek superior returns, as discussed earlier, and to diversify from public equity markets. While private equity does provide diversification benefits, some sectors, e.g., infrastructures, offer lower correlation with stock markets than others, especially in well-developed markets. For all the previous investor types, PE offers access to investments not easily accessible through public equity markets. That can be the case, for example, because the number of—and the industry diversification among—listed firms in Western countries has declined significantly in the past decades, or because the number of listed firms is limited, e.g., in emerging markets. As the highly regulated IPO process and stringent information disclosure requirements in public markets have pushed the cost of being public higher, firms tend to be increasingly funded by private equity and tend to go public at later stages of their development than a few decades ago. Institutions such as insurance companies, pension funds, and endowment companies face regulatory constraints inherent to their needs to invest to meet current and future liabilities. For example, while early researchers such as Black (1991) pointed out that pension funds had to invest in fixed income to take advantage of their tax exemption, it is now well established that they need to invest in public and private equity that are correlated with wage growth in the long run (Lucas and Zeldes, 2006; Atanasova and Chemla, 2026).

Another way of understanding private equity is that it involves sacrificing liquidity, which selects investors who are patient, informed, and able to bear the risks associated with information risk—where one party, typically the seller, has more or better information than the buyer (investor) (Lerner and Schoar, 2004). As pointed out by Kaplan and Stromberg (2003, 2009), PE contracts design cash flow, control, and liquidation rights so that control rights vest as information is revealed. By sacrificing liquidity, PE firms

engage in deep due diligence and develop long-term relationships with the companies they invest in (Gompers and Lerner, 2001). The illiquid nature of PE gives investors the time to conduct thorough investigations into the company's operations, finances, and market position, thereby reducing the information asymmetry. They may gain access to internal data, meet with management frequently, and even take active roles in shaping the company's strategy. This intensive involvement helps PE firms gather better information, monitor the company more closely, and ultimately make more informed investment decisions. This also implies that they should expect an illiquidity premium. Although this leads us directly to the intricacies of performance measure in private equity, there is some evidence of such an illiquidity premium (Franzoni et al., 2012), although the presence of non-monetary benefits, e.g. for informal private equity investments, can also challenge this view (Moskowitz and Vissing-Jorgensen, 2002).

In the healthcare sector, private equity firms often face significant information asymmetry due to the complex nature of medical technologies, regulatory landscapes, and market dynamics. Here is a specific example illustrating how a private equity firm might sacrifice liquidity to solve information asymmetry in a healthcare context.

SCENARIO: INVESTMENT IN A BIOTECH COMPANY

Company Background: Consider “BioInnovate,” a biotech company that specializes in developing gene therapies for rare genetic disorders. BioInnovate has developed a promising new therapy that has shown potential in early-stage clinical trials but needs substantial funding to proceed through the costly and lengthy process of late-stage clinical trials and regulatory approvals.

Private Equity Firm: “HealthVenture Capital” is a private equity firm with a focus on innovative healthcare solutions. HealthVenture recognizes the potential in BioInnovate's new therapy but understands the risks associated with the biotech field, particularly the regulatory hurdles and the scientific validity of the treatments in larger, diverse populations.

SOLVING INFORMATION ASYMMETRY THROUGH STRATEGIC INVESTMENT

Due Diligence and Expert Engagement: HealthVenture Capital conducts extensive due diligence, involving scientific experts who assess the validity and reproducibility of the clinical trial results. They also engage regulatory consultants to evaluate the likelihood of obtaining FDA approval.

Equity Investment and Board Involvement: To mitigate the information asymmetry, HealthVenture decides to invest a significant amount of capital in exchange for a major equity stake in BioInnovate. This investment includes conditions that allow HealthVenture to place its members on BioInnovate's board of directors. This board involvement ensures HealthVenture has a say in strategic decisions, closer oversight of the operational progress, and better access to internal data.

(Continued)

(Continued)

SACRIFICING LIQUIDITY

Capital Lock-up: The investment in BioInnovate is highly illiquid. HealthVenture's capital is locked up in the biotech firm, with no easy or immediate exit strategy. The funds are committed through the various stages of clinical trials, which can take several years, and until a liquidity event such as an IPO or acquisition by a pharmaceutical giant occurs.

POTENTIAL OUTCOMES

Successful Therapy Launch: If BioInnovate's therapy successfully passes through clinical trials and receives FDA approval, its value could skyrocket. HealthVenture might see a significant return on investment during an IPO or acquisition, rewarding their patience and risk.

Regulatory or Clinical Failure: If the therapy fails to meet clinical efficacy or safety standards or does not receive regulatory approval or is outperformed in the market by a superior product, HealthVenture could face substantial financial losses. This risk is inherent in biotech investments and represents the trade-off for the potential high rewards.

Conclusion: In this healthcare example, HealthVenture Capital sacrifices liquidity to address the information asymmetry by gaining an insider's perspective through board involvement and direct influence over BioInnovate's operations. This strategic placement helps it manage the risks associated with the high-stake biotech investment, aligning its interests closely with the success of BioInnovate, and leveraging its expertise to guide the company toward achieving regulatory and commercial milestones. This is a common approach in healthcare private equity, reflecting a balance between high risk and potentially high returns in a sector where outcomes are highly uncertain but can be transformationally profitable.

Thinking about which businesses need private equity provides additional insight into the nature of the industry. As mentioned by BVCA, *“many small companies are ‘lifestyle’ businesses whose purpose is to provide a good standard of living and job satisfaction for their owners. These businesses are not generally suitable for private equity investment as they are unlikely to provide the potential growth and financial returns to make them interesting to an external investor.”* We agree with this statement with three caveats:

First, a business with limited growth opportunities can still provide a platform for operational and financial engineering with value creation opportunity, it is a question of buying it at the right price. Second, many less attractive stand-alone businesses become appropriate if they bring synergies to an existing portfolio company. Third, the new owner may be able to create the conditions for value creation. This may happen, for example, in some “take-privates,” when acquiring a listed company that is underperforming.

As many other financiers, PE investors are constantly looking to create value, including by being at the forefront of financial innovation. This may include, for example,

financing projects through securitization, the issuance of tradable securities granting their holders cash flow rights attached to pooled illiquid assets, or investing in innovative projects co-funded or previously successfully funded on crowdfunding platforms. Chapters 6 and 7 will describe these innovative forms of financing in greater detail.

1.3.7 Private Markets and Private Capital

1.3.7.1 Private Capital: A New Name for the Industry? Private credit has recently emerged as another significant segment of formal activity, with \$3 trillion AuM by 2025. David Rubenstein, cofounder of the Carlyle Group, was among the first to acknowledge the expanding landscape of private investments beyond traditional private equity. He has highlighted the significant opportunities presented by noninstitutional and private wealth capital pools, describing them as “gigantic.” This perspective aligns with the industry’s broader shift toward embracing the term “private capital,” which encompasses a range of investment strategies, including private equity, venture capital, private credit, real estate, and infrastructure.

1.3.7.2 The Diverging Paths of Private Markets: Traditional Enterprises and Technologically Enabled Capital Markets The term “private markets” has historically referred to a wide range of economic activity outside the scope of public exchanges, from family-owned businesses and informal lending to sophisticated private equity vehicles and institutional alternative asset platforms. However, this broad label increasingly obscures an important structural divergence. As private capital markets mature and absorb new technologies, a fork is emerging: one branch will remain resolutely traditional, relationship-based, and illiquid; the other will evolve rapidly toward greater standardization, accessibility, and market-like liquidity. It is the “private capital” universe we have introduced here.

At one end of the spectrum lies traditional private markets, including many family-owned healthcare businesses such as local clinics, specialist practices, and regional long-term care operators. These entities rely heavily on personal relationships, historical ownership, and reinvested earnings. Their capital structures are simple, and their legal and reporting frameworks are not designed for external scrutiny or fluid investment. While some have started using digital tools to improve operations—such as electronic medical records or cloud-based payroll systems—these technological advances rarely translate into greater participation in formal capital markets. For these businesses, illiquidity is often deliberate, preserving control and community ties. They typically remain outside the reach of professional private equity except in cases of consolidation or generational transition.

In contrast, sophisticated private capital markets—which include private equity, private debt, infrastructure funds, and the secondary markets that support them—are on a clear path toward partial convergence with public market dynamics. This trajectory is being driven by three forces: the institutionalization of capital, the digitization of assets, and the rising demand for liquidity among both asset owners and allocators. In the healthcare sector, for example, large private equity-backed hospital groups, diagnostics chains, health IT platforms, and biopharma services are increasingly structured with levels of financial and operational transparency that resemble publicly listed firms. Fund administrators, data providers, and regulatory bodies are progressively imposing frameworks that facilitate valuation, benchmarking, and risk management, all of which are prerequisites for liquidity.

Technological advances—particularly in tokenization, blockchain-based registries, AI-enhanced due diligence, and digitally native secondary trading platforms—are enabling a transformation in how private assets are issued, owned, and exchanged. These tools promise to reduce friction in capital formation, enhance price discovery, and allow for fractional ownership that could bring in a broader range of investors. In this sense, private capital markets are converging with public markets not in governance or regulation, but in function: capital becomes more mobile, pricing becomes more responsive, and information becomes more accessible.

However, this convergence is neither total nor inevitable. Structural barriers remain that limit the extent to which private markets—even technologically advanced ones—can mimic the full liquidity of public markets. For instance, the underlying assets in PE remain illiquid: hospitals, clinics, life sciences service firms, and even healthtech platforms are not easily bought or sold without considerable transaction costs, operational disruption, and in some cases regulatory approvals. Even where tokenization is feasible, the lack of homogeneous assets and the complexity of underwriting in healthcare make continuous pricing and real-time trading difficult to sustain. Moreover, legal frameworks governing investor protections, disclosures, and fiduciary responsibilities in private markets are still fundamentally different from those of public exchanges, and for good reason. Investors in PE remain exposed to higher risk and lower liquidity, and this asymmetry cannot be fully mitigated by technology alone.

In sum, the future of private markets in healthcare will not be uniform. A meaningful subset—those aligned with institutional capital and technological infrastructure—will *likely* increasingly exhibit characteristics associated with public markets, including faster capital rotation, broader access, and more responsive pricing. Others will remain deeply rooted in traditional private ownership structures, with capital flows defined by trust, local knowledge, and long-term control rather than market mechanisms. Understanding this bifurcation will help assess both the opportunities and the constraints in the evolving financial landscape of healthcare.

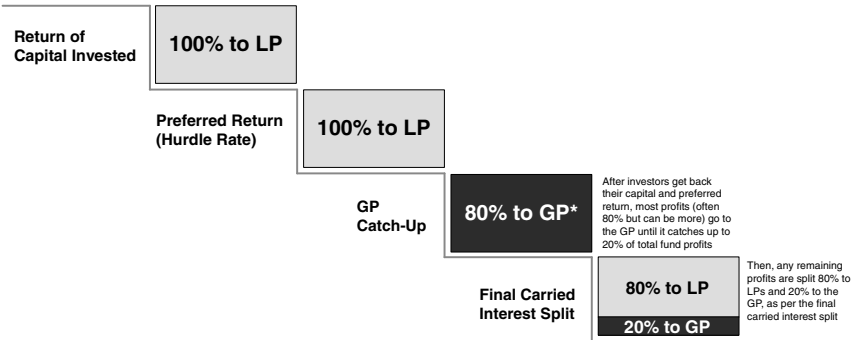
1.4 GP AND LP

PE investments are typically made through an investment fund organized as a limited partnership. In this structure, the general partner (GP)—also known as the investment manager—is responsible for managing the fund and investing capital on behalf of the limited partners (LPs). Common LPs include pension funds, life insurance companies, funds of funds, and high-net-worth individuals or families. Historically, pension funds account for just under half of the total capital committed to these funds. The next largest contributors are financial institutions and endowments/foundations, each comprising approximately one-sixth of the overall capital. The balance of capital is provided by individuals, families, and corporations, whose investment activity tends to fluctuate more than that of other investor groups.

Managers use operational improvement, synergies, and/or leverage to create profit. LPs are not actively involved and receive a percentage of the profits. GPs receive compensation in two main forms: an **annual management fee**, typically set at approximately 2% of committed capital, and a share of the realized investment gains, known as **carried interest** or **carry**. This carried interest usually amounts to 20% of the profits, provided that returns exceed a predefined **hurdle rate**. Figure 1.9 provides a simplified

ILLUSTRATIVE ALLOCATION OF PRIVATE EQUITY DISTRIBUTIONS

European design (fund level)



* The GP's catch-up rate can be more than 80%—often even 100%—in some fund agreements. It depends entirely on how the waterfall is structured and what is negotiated between the GP and the LPs. If the sponsor wants to accelerate their carried interest, they may insist on a 100% catch-up rate after LPs receive their preferred return and capital back. Real estate funds sometimes use a 50/50 catch-up if they want to be slightly more friendly to LPs, but PE funds tend to go higher when they can get away with it.

FIGURE 1.9 Simple European waterfall.
Source: Candestic analysis.

PRIVATE EQUITY INVESTORS

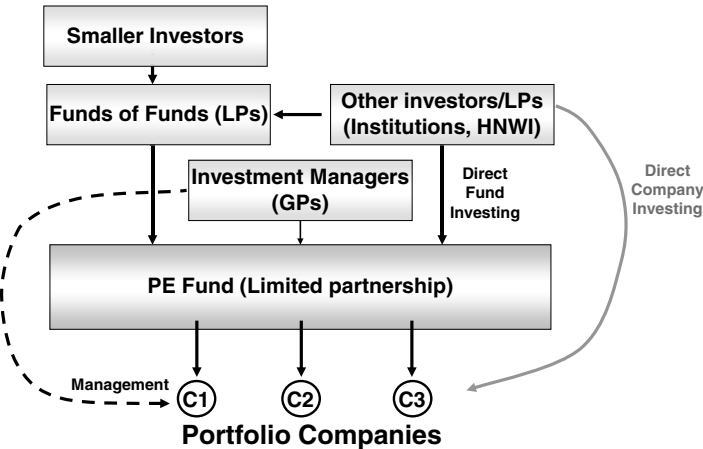


FIGURE 1.10 Investors in PE.

view of the allocation of the profits between GPs and LPs, in a European waterfall allocating at fund level. These concepts will be explored in greater detail in subsequent sections.

LPs invest in the fund with committed capital, which the GP then draws down as needed to make investments. Returns to the LPs are distributed proportionally as they are realized, typically following a liquidity event or exit, such as a trade sale or an IPO. Distributions to the LPs include the original purchase cost plus the gains net of the carry, so typically 80% of the gains.

Figure 1.10 shows the different types of investors and partners who are involved. Numerous stakeholders interact with the investment managers. The GPs manage the

PE fund, which is itself invested in several portfolio companies, sometimes directly, sometimes partially. GPs invest the money of various interested investors and sometimes invite them to invest directly into the portfolio companies too.

At Eckuity Capital for example, LPs benefit from guaranteed co-investment capacity across all portfolio companies, on a no-fee, *pari passu* basis with their fund commitments.

While access may vary slightly depending on participation timing or check size, they make every effort to ensure equitable and consistent participation—especially when the fund reaches its 10% concentration threshold and cannot allocate more capital. This structure has become a cornerstone of their LP relationships, aligning interests and reinforcing transparency.

THE CANADIAN MODEL

Canadian pension funds are globally distinctive because they can invest directly in private markets (Chemla, 2004a)—an ability that sets them apart from most US pension funds, which generally rely on external asset managers or fund investments. This approach, known as the “Canadian model,” allows major funds such as CPP Investments, CDPQ, and Ontario Teachers’ to act more like PE firms, deploying large pools of patient capital directly into assets like infrastructure, real estate, and private equity deals.

Their structure combines internal investment teams, independent governance, and long-term funding horizons, enabling them to build in-house expertise and bypass the high fees associated with traditional private equity partnerships. This combination of autonomy and scale has made Canada’s “Maple Eight” pension funds some of the world’s most sophisticated institutional investors—effectively operating hybrid models that bridge public pension management and PE investing (World Bank, 2017).

Lastly, it is important to be familiar with the main metrics and industry statistics used to measure and evaluate the performance of private equity firms. The three main metrics relate to fundraising, activity, and assets under management. Within fundraising, we need to distinguish between two key terms: commitments versus called-up capital. When talking about activities, we’ll distinguish between deals, investments, and exits. And when talking about assets under management (AuM), we should understand the difference between unrealized value and “dry powder” versus distributed capital.

The **unrealized value** represents the portion of the fund’s investments that have not yet been exited (sold or liquidated). This value is based on the current valuation of these investments, but no actual returns have been realized. It is subject to change until the investments are liquidated. The **dry powder** refers to the capital reserves that a private equity firm has raised but has not yet invested. Essentially, it is unallocated capital that is available to fund new investments or follow-on investments in existing portfolio companies. **Distributed capital** represents the cash or profits that a private equity firm has returned to its investors after exiting investments. This is the portion of capital that has been realized and paid out to investors, typically in the form of distributions or dividends.

1.5 THE PE CYCLE

We now introduce the PE cycle: fundraising, investing, and exiting to return the capital invested (Figure 1.11). In today's environment, PE fund managers continuously consider all three phases as part of their strategy.

In the realm of philosophy, the meaning of life has often been described as the ability to fully appreciate three dimensions of experience: the anticipation of future joy, the enjoyment of the present moment, and the recollection of past happiness. True fulfilment, it is argued, lies in holding these three experiences in dynamic tension, each enriching the other—not merely enduring them in a linear sequence, but savoring them simultaneously.

This model, oddly enough, bears a striking resemblance to the rhythms of PE.

At first glance, PE may appear to be a straightforward sequence where one first, raises a fund (anticipation), then invests the capital raised (enjoyment), and then exit investments and distribute returns (fond memory with some IRR manipulation for good measure). But as any seasoned practitioner will confirm, PE life is far from linear. It is cyclical, overlapping, and best appreciated when all phases are considered in tandem.

To illustrate, **fundraising** is the hopeful stage—the equivalent of dreaming about a perfect future holiday while sitting in a rainy office. A PE firm tells a compelling story of its investment philosophy, team cohesion, and track record, all designed to awaken a sense of anticipation in LPs. The mood is optimistic, forward-looking, and often painted in the soft-focus glow of past successes. Yet good fundraising is not just about the future; it requires tangible signs of present competence and reassuring echoes of past wisdom.

Next, **investing**—the present-tense action—is the thrill of doing deals, supporting portfolio companies, deploying capital with strategic flair, hopefully not overpaying. If fundraising is the dream of the meal, investing is the dinner itself. But beware: just as overeating at a banquet leads to indigestion, reckless investing leads to subpar returns and awkward investor updates. Successful GPs are those who remain mindful of the exit even as they take their first bite. They invest not simply for today's returns, but with an eye toward tomorrow's value creation.

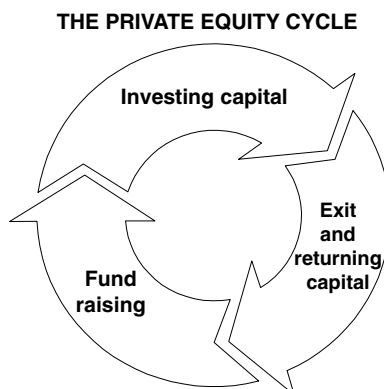


FIGURE 1.11 The PE cycle.

Finally, when **exiting**—the reflective phase—memories are monetized. The GP looks back on the journey with a mix of nostalgia and spreadsheet precision, crafting narratives for the investment committee and IR deck alike. This is the time for harvesting the rewards of foresight and hard work. Yet even at this stage, the seeds of the next cycle are sown: the strength of an exit fuels the credibility of the next fundraise.

Just as life is best lived when we can dream about tomorrow, savor today, and reflect fondly on yesterday—all at once, so too is PE best practiced with continuous attention to all three phases: fundraising, investing, and exiting. Each informs the other. Exits shape fundraising narratives. Fundraising determines investment firepower. Investments affect exit outcomes. The most successful firms do not compartmentalize these phases but weave them into a coherent and simultaneous strategy.

While PE may not provide the ultimate answer to the meaning of life, it certainly mirrors the structure of a well-lived one—just with more spreadsheets.

To summarize. When we look at definitions of PE, PE touches on several interesting topics. PE is related to growing unquoted, unlisted companies. It relates to equity but is not listed on an exchange. It is also meant to support companies that tend to not have access, or have limited access, to capital markets. It is a very precise moment in the life cycle of most companies. It is typically given with the intent of reselling the company after influencing its development, so it is quite hands-on. It is also managed by a certain type of fund, for the formal part. It can be considered as an asset class, and it is characterized by a limited liquidity.

To conclude, we propose the following definition:

“Private Equity” refers to institutional equity and equity-linked investments in unlisted companies or companies that will be delisted.

1.6 EUROPE AND THE GLOBALIZATION OF PE

Relative to the United States, Europe, led by the United Kingdom, was a latecomer to the PE market, with a slow start in the 1990s, but it has become a very mature market since then. Asia followed another 15 years later, albeit less integrated so far. Other parts of the world, which will be covered in Chapter 9, are less developed to date. The global number of funds with more than \$1 billion in assets under management illustrates that competition in the PE industry has grown (Figure 1.12). The number of such funds increased from five in 1989 to 14 six years later to more than 100 by 2005 and about 800 PE and infrastructure funds in 2025 (VC not included). Further, the metric by then had changed as PE firms had multiplied the number of funds they would launch and there were more than 2,000 PE and infrastructure firms with this amount under management according to Pitchbook.

A macroeconomic metric, the proportion of GDP, illustrates the economic importance of PE.

Over 2015–2020, the United States remained the largest market with 1.5% of GDP invested in PE (Figure 1.13), considerably more than the EU average of 0.3%. Israel has been an anomaly due to the oversized VC activity, while Luxembourg manages funds for other countries. In Europe, the United Kingdom has had the strongest historical exposure and culture of PE, not far behind the United States.

The “addition” of Europe to the already sizable US PE market was the first step in the globalization of the industry. The next development in the 1990s was mostly

GROWING COMPETITION IN THE PE INDUSTRY

PE funds raised > USD 1bn*

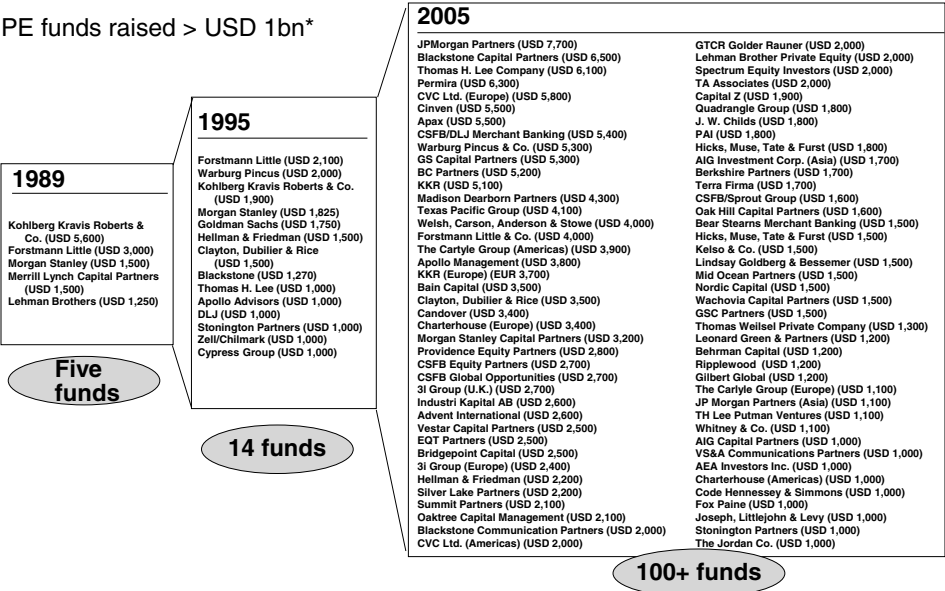


FIGURE 1.12 Large funds in history.

ALL PE ANNUAL INVESTMENT AS A PERCENTAGE OF GDP ACROSS EUROPE

Average 2015–2020, by country of portfolio company

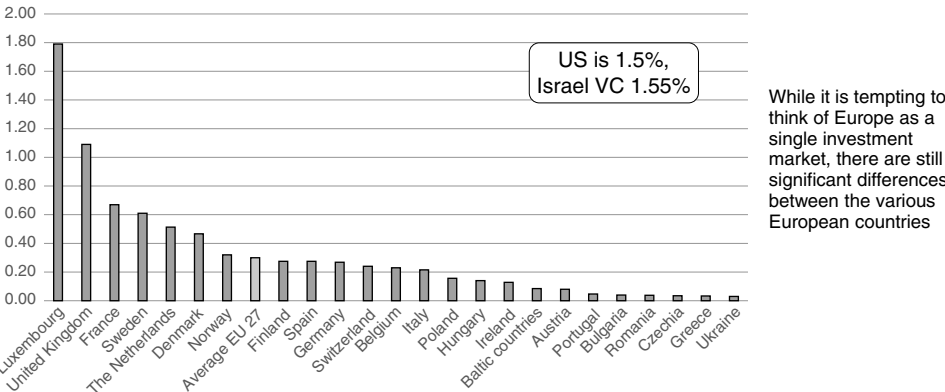


FIGURE 1.13 PE investment as percentage of GDP.

Source: Candestic research.

in Asia. However, the region’s development has been markedly uneven, with China emerging as the standout success story while Japan has remained a persistent laggard.

China’s PE transformation began slowly but accelerated dramatically after joining the World Trade Organization (WTO) in 2001. The sector experienced tremendous growth over the next 15 years, driven by two pivotal factors: WTO membership and financial market liberalization. By 2007, when China Investment Corporation

invested \$3 billion for nearly 10% of Blackstone, the country signaled its commitment to understanding and embracing private equity.

Numbers are remarkable. Dominated by China, Asian PE investments grew from \$4 billion annually in 2000–2004 to more than \$60 billion in 2010–2015, achieving a 15-year CAGR of 19%—double the global average of 9%. The Asian-Pacific market grew further and is forecast to reach \$3 to 5 trillion by 2030. This growth reflects not just China’s expansion but increasing sophistication across the region.

In stark contrast, Japan has long remained the “sleeping giant” of Asian PE. Despite being Asia’s second-largest economy with sophisticated corporations and abundant capital, several structural factors have constrained this development, including cultural barriers, a preference for cash, and regulatory and structural hurdles. Since 2020 however, Japan has experienced record and growing PE activity.

Asia’s uneven PE development reflects broader economic and cultural differences. China’s rapid embrace of market mechanisms and foreign capital contrasted sharply with Japan’s gradual, consensus-driven approach. Southeast Asia followed China’s path but with a 5- to 10-year lag, while countries like India developed significant growth equity markets by the mid-2000s.

The result is an Asian PE landscape where China dominates deal flow and innovation, Japan offers compelling but complex opportunities, and smaller markets like Southeast Asia provide growth-stage investment platforms. This fragmentation—unlike the more integrated US and European markets—continues to characterize Asian PE, though increasing cross-border activity and regional fund strategies are gradually building connections across the diverse markets. Chapter 9 will further explore the development of PE in Asia and in the rest of the world.

While private equity was once a small asset class compared to traditional ones, it has grown fast and has captured adjacent areas (such as infrastructure, private credit, and even real estate funds) and brought them into what is now called private capital, which altogether grew from \$600 billion in 2000 to \$15–20 trillion AuM in 2025, depending on what we take into account.¹²

As a comparison, Figure 1.14 shows that pension funds managed about \$55 trillion and mutual funds managed \$60 trillion. Without counting the dry powder, i.e. the part that is not yet invested, or the adjacent segments, PE was almost \$7 trillion in 2024. Overall, PE amounts to 6% of the world’s assets under management in traded securities and 13% of all stock markets.

One of our students once observed that the growth of aggregate private capital assets under management was broadly similar to the average returns of its main segments, wondering if the industry’s growth was simply the compounding of its returns. Starting from less than \$1 trillion in 2000, private capital achieved a CAGR of about 13% over the next 25 years (Figure 1.15). This view suggests that funds paid out over time were broadly in line with new funds invested.

However, this apparent similarity with typical private equity returns is misleading for several fundamental reasons. First, AuM growth combines two distinct components: returns on existing investments (value creation) and net new capital flows (new

¹²Typically, this will not even include a growing portion of co-investments in large buyouts, and, of course, the informal market of private transactions not conducted by professional firms. Dry powder is sometimes omitted.

PE NOW A VISIBLE SEGMENT OF GLOBAL ASSETS UNDER MANAGEMENT

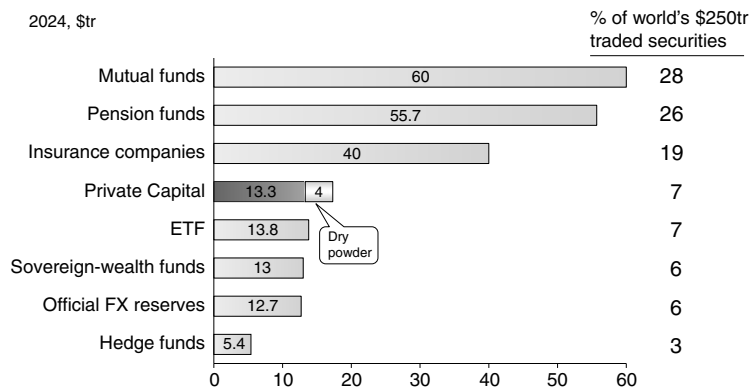


FIGURE 1.14 Global AuM by investor category.
Source: Candestic research.

HAVE PRIVATE CAPITAL AuM GROWN AT ABOUT THEIR RATE OF RETURN?

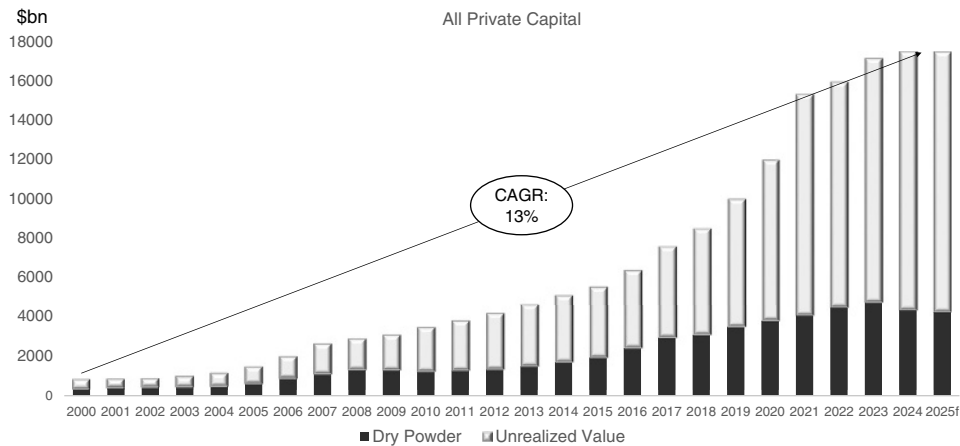


FIGURE 1.15 Historical growth of private capital.
Source: Preqin (part of Blackrock) (Global PE including RE and infrastructure).

fundraising minus distributions to investors). Second, even when considering returns alone, the relationship between AuM growth and returns is complex: a 2× multiple can represent very different annual returns depending on the investment period, and high IRRs can coexist with modest money multiples due to shorter holding periods. Moreover, reported AuM includes unrealized returns that may not materialize. Finally, structural industry factors have significantly influenced AuM growth, including increasing allocations to private markets by institutional investors, expansion into new strategies like private credit and infrastructure, and longer holding periods in some segments affecting capital recycling. Therefore, the industry’s growth reflects a much more complex dynamic than simple return compounding, including increasing

allocations to private markets by institutional investors, expansion into new strategies like private credit and infrastructure, and longer holding periods in some segments affecting capital recycling.

Why has PE grown so much? Kaplan and others list four main reasons:

1. Strong performance of the buyout segment relative to the stock market
2. Diversification opportunities
3. Less regulation and compliance
4. A business model that is better suited to managerial talent

We will discuss each of those in later chapters.

Analyzing performance by vintage year (the year in which the fund was first raised) is crucial, especially in private equity, because it helps account for varying market and economic conditions at the time investments are made. It allows investors to compare funds launched in the same year, offering a fair assessment of managers' abilities under similar market environments. Vintage year analysis also highlights how well funds navigate risks related to specific periods and provides insights into the effectiveness of investment strategies. Additionally, it clarifies the timing of cash flows, enabling a more accurate understanding of returns over the life cycle of the fund.

A snapshot of recent years and developments up to 2022 (Figure 1.16) shows that most of the capital raised three years earlier, in 2019, has been deployed—though not entirely. Some funds remained uninvested for various reasons (the dry powder). This is a normal occurrence, as it takes time to identify the right opportunities, and the life cycle of private equity funds is structured to accommodate this process.

EXAMPLE: PE AuM BY VINTAGE YEAR AS OF JANUARY 2022

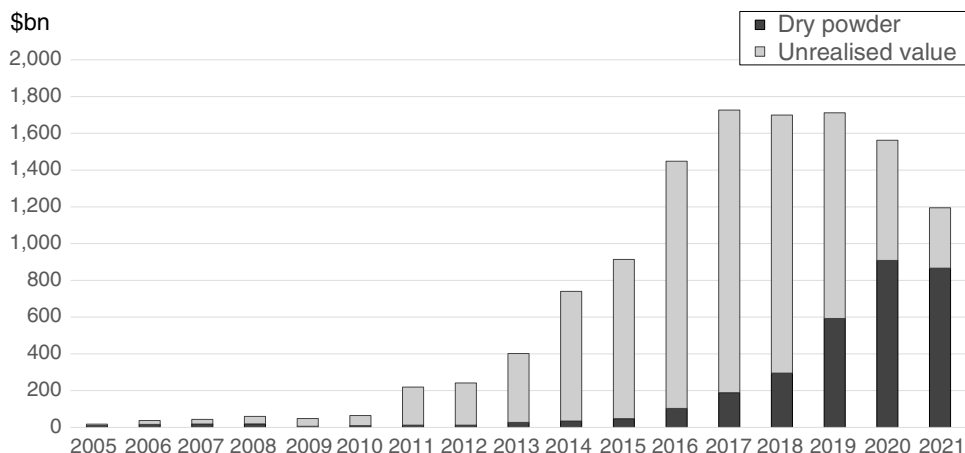


FIGURE 1.16 Evolution of PE AuM by vintage year.

Source: Preqin (part of Blackrock).

1.7 THE INVESTMENT CASE FOR HEALTHCARE AND LIFE SCIENCES

1.7.1 Investing in Health

We now turn to the second component of this book: health, which we view as health-care (services) and life sciences (products and services).

Healthcare and life sciences present PE investors with a structurally resilient but intricately complex sector. Demand is inelastic and growing, yet exposed to technology shifts and political disruption, making it hard to forecast. Value creation requires deep regulatory and go-to market expertise, long-term capital commitment, resilience to delays and setbacks, and alignment across fragmented stakeholder groups. From patient demand to payer dynamics, each layer of the sector presents unique risks and structural barriers—requiring deep domain expertise and close proximity to industry realities.

- **An industry serving a fundamental, unpredictable, and irreplaceable need**

The healthcare sector addresses a unique issue: human health. This comes with inherent characteristics:

- Unpredictable: No one can predict the timing or severity of a pathology.
 - Nondiscretionary nature: Getting sick is not a choice, nor are the treatment options always voluntary.
 - Complex: Each patient and treatment involves biological, psychological, social, economic—and at times, ethical—dimensions.
- For the investor: demand in healthcare is structurally strong, often price-inelastic, and on a long-term growth trend, but it is difficult to model in the short term.

- **Pooled and heavily regulated care mechanisms**

This inherent characteristic leads directly to the following:

- The need for expert intervention: for diagnosis, treatment, and patient support
 - Risk pooling through public or private insurance systems
 - Guaranteed access to safe, effective treatments, regardless of individual financial means
- For the investor: the patient (end user) is rarely the payer or decision-maker. Business models depend on buy-in from multiple parties—physicians, insurers, and regulators—resulting in longer sales cycles but more durable revenue stream once established.

- **High demands for science-based evidence and evaluation**

To operate in this environment, companies—and health systems—the following are required (to varying degrees depending on geography):

- Strong clinical evidence: efficacy, safety, and comparator data
 - Health-economic rationale: demonstrating system-wide value
 - Strict regulatory oversight: to ensure safety, uphold ethical standards and effective access to treatment
- For the investor: these demands create formidable barriers to entry driven by high fixed costs. Obtaining reimbursement or regulatory approval—requiring significant investment with no short-term revenue—becomes a critical inflection point in value creation.

- **A capital-intensive industry, with long cycles, high risk, and high volatility**

These structural demands shape the industry's operations:

- Heavy investment requirements in R&D and infrastructure (CapEx)

- Extended development timelines: from trials to approval to market adoption
- High uncertainty: in success rates, access, and product diffusion
- For the investor: value is tied to managing long timelines, mastering regulatory and go-to market turning points, and executing disciplined, risk-aware strategies.
- **A fragmented ecosystem with diverging interests**
Finally, treatment decisions involve multiple stakeholders:
 - Patients and families (need, acceptance, adherence)
 - The medical community (clinical relevance and prescription behavior)
 - Public and private payers
 - The State (ensuring equitable access, safety—and often acting as financier)
- For the investor: the value chain is decentralized, asymmetric, and highly political. Success depends not just on technical merit, but on demonstrated and perceived value across all these constituencies.

Building on these industry fundamentals, investment in healthcare and life sciences is driven by multiple long-term growth levers—demographics, innovation, and new models of care—that directly exploit the structural context described above.

1.7.1.1 Demographic and Macroeconomic Drivers Demographic shifts, particularly aging populations in developed economies, reinforce the sector’s structural growth and nondiscretionary character. With increasing life expectancy, the prevalence of chronic diseases such as diabetes, cardiovascular conditions, and neurodegenerative disorders is rising, necessitating sustained medical intervention. Concurrent with this, healthcare spending has expanded significantly: Annual per capita healthcare expenditure in the United States increased from \$8,877 in 2012 to \$13,493 in 2022,¹³ demonstrating both the scale and upward trajectory of financial flows into the sector. Emerging markets also present diversified investment opportunities due to rising middle-class populations, urbanization, and expanding access to care.

1.7.1.2 Innovation as a Growth Catalyst Beyond demographics, continuous technological innovation is amplifying both the complexity and potential for value creation within healthcare. Advances in biotechnology, genomics, telemedicine, AI-driven diagnostics, and personalized medicine are reshaping both patient care and operational efficiencies. Given high barriers to entry and regulatory complexity noted previously, these innovations are capital and expertise intensive—playing to PE’s strengths in strategic investment, operational scale-up, and risk management. By investing in companies capable of integrating new technologies, PE firms can both drive and benefit from the sector’s transformation.

Rapid growth of healthcare expenditures has become one of the main challenges for the sustainability of public finances worldwide (Meskarpour Amiri et al., 2021). As traditional models strain under these costs, private investors—including PE—expand their role in supporting shifts toward value-based care, digital health, and new service models emphasizing patient outcomes and cost-efficiency. This transition presents investment opportunities in data-driven healthcare platforms, digital health solutions, and outpatient care models, directly aligned with PE strategies geared toward

¹³ Source: www.healthsystemtracker.org.

performance optimization and market expansion. These shifts also illustrate how PE supports both sustaining innovations (such as operational optimization) and disruptive ones (such as digital therapeutics or AI-enabled diagnostics).

1.7.1.3 Operational Efficiencies and Market Consolidation The sector's fragmentation—see earlier—creates scope for consolidation and operational professionalization. Subsectors such as diagnostics or outpatient clinics offer distinct opportunities for streamlining processes, integrating platforms, and professionalizing management—core elements of the PE playbook. By doing so, PE firms can unlock value beyond financial engineering, transforming fragmented systems into scalable and efficient networks.

1.7.1.4 Regulatory Complexity and Competitive Advantages Although the regulatory landscape is complex, it creates a “moat” favoring experienced sector specialists. PE firms with deep sector expertise are able to navigate reimbursement structures, licensing processes, and data privacy requirements, translating compliance mastery into deal-sourcing and execution advantages. As governments increasingly turn to public-private partnerships to modernize healthcare systems, PE's combination of capital, operational rigor, and regulatory awareness positions it as a valuable partner in healthcare infrastructure and modernization initiatives.

We should add that a strong sense of mission permeates the healthcare industry. It is not merely a commercial field but one deeply anchored in purpose, empathy, and public service. This pervasive ethos is evident across physicians, entrepreneurs, executives, and investors, who often share a conviction that their work contributes meaningfully to human well-being. In our discussions with healthcare investors, we have repeatedly encountered deeply personal testimonies describing how individual experiences have shaped their professional motivations, reinforcing the idea that healthcare investing is as much about purpose as it is about performance. Thomas Goudriaan at Gimv shares that sense of a mission: “We believe that private equity can be part of the driving force to make healthcare more accessible, affordable and of higher quality. This will be essential to provide sustainable solutions to the challenges in healthcare today, but also for the next generations. Gimv is proud to be a part of the solution.”

For many healthcare investors, the motivation that extends beyond financial returns includes personal experiences that shape their professional mission. Youssef Sebban, co-founder of Eckuity Capital, a growth investor in healthcare, explains: “I lost my father at a young age to a cancer that, today, would have been easily detected and treated. That experience shaped my commitment to ensuring that the future of healthcare is more equitable, efficient, and preventive. Having grown up in a developing country where care standards lag far behind, I built Eckuity around three pillars—improving efficiency, democratizing access, and lowering the cost of care. My mission is to leave a tangible mark on the future of health—across prevention, diagnosis, treatment, and monitoring.”

This example reflects a broader trend among healthcare investors whose strategic focus is anchored in purpose-driven goals. Beyond performance metrics and deal structures, many view their role as advancing systemic progress—helping shape a more inclusive, sustainable, and high-impact healthcare environment. Such alignment between personal conviction and investment purpose is a distinctive characteristic of the sector, perhaps even stronger than in education and environment.

1.7.2 A History of PE in Healthcare and Life Sciences

The relationship between PE and healthcare has evolved from early venture capital investments in medical technology to today's sophisticated ecosystem of buyouts, growth equity, and sector-specialist funds.

1.7.2.1 Early Capital Formation (1925–1970s) The intersection of private equity and healthcare is a relatively young phenomenon, given the complex regulatory environment and high-risk, long-term nature of life sciences investments. The roots of this relationship can be traced back to the early twentieth century, though it was not recognized as “private equity” at the time. At a stretch, one of the earliest examples was the creation of IG Farben in 1925, a conglomerate of German chemical and pharmaceutical companies, which could be seen as an early form of industry consolidation and private investment.

In the United States, in 1946, the ARDC made one of the first venture capital investments in the medical field by funding Digital Equipment Corporation (DEC), which would later become a player in medical imaging technology, among other technologies.

The 1950s and 1960s saw the emergence of more formalized venture capital, with significant implications for healthcare. In 1959, Fairchild Semiconductor laid the groundwork for Silicon Valley and future medical technology innovations. Two of its senior executives went to launch Kleiner Perkins and Sequoia Capital.

The 1960s and 1970s witnessed the emergence of specialized venture capital firms that focused on the burgeoning field of biotechnology. The establishment of Kleiner Perkins in 1972, for instance, marked a significant development in the financing of healthcare innovations. The firm's investment in Genentech in 1976 is often cited as a groundbreaking moment for biotech venture capital. Genentech's success not only demonstrated the potential of recombinant DNA technology but also validated the role of venture capital in accelerating medical advancements. Genentech's 1980 IPO thus marked a turning point for venture capital in life sciences. Venture capital actually had many specialized players early on, like Sofinnova Partners in France (1972), Abingworth in the United Kingdom (1973), and Healthcare Ventures in the United States (1985). The Bayh-Dole Act of 1980, which allowed universities to patent and retain ownership to inventions developed with federal funding, was a pivotal moment in fostering innovation and creating opportunities for private investment. Increasingly more venture-backed biotech companies emerged in the 1980s, focusing on areas such as recombinant DNA technology and monoclonal antibodies.

1.7.2.2 Emergence of Healthcare LBOs and Specialized PE (1980s–2000s) The 1980s saw an explosion of activity. Notably, in 1989, the \$5.1 billion management-led take-private of Hospital Corporation of America (HCA) in response to two successive hostile takeover attempts signaled private equity's growing interest in large-scale healthcare deals. This interest in consolidation of hospitals in particular was driven in the United States by federal legislation pushing for adoption of health IT solutions to facilitate more consistent and scalable delivery. The adoption of DRG-based payment systems reinforced this trend with the need for economies of scale, streamlined operational efficiency, and increased market power (Ma et al., 2024).

The late 1980s saw the emergence of specialized healthcare investment teams. Notably, Ampersand Capital Partners was established in 1988 and began investing in life sciences companies in the early 1990s. Ampersand's healthcare focus originated

from their relationship with Fisher Scientific, who served as an LP in 1992. Fisher Scientific requested the creation of a dedicated lab product-focused fund in 1994, making Ampersand one of the first healthcare specialists in the field. Their early success in focused niches of laboratory tools, diagnostics, and pharmaceutical services demonstrated the value of deep sector expertise, particularly in complex segments requiring scientific and regulatory knowledge. Under private ownership, Ampersand has maintained this specialized focus, reaching close to \$3 billion AuM.

The 1990s brought further sophistication to healthcare private equity. In 1993, Welsh, Carson, Anderson & Stowe (WCAS) raised the first private equity fund dedicated exclusively to healthcare and have since then stuck to healthcare and technologies.

The 1990s marked a significant expansion in healthcare private equity, with large firms like Carlyle, TPG, and VC-veteran Warburg Pincus developing dedicated healthcare teams. This period saw increased interest in pharmaceutical services, medical devices, and healthcare providers, driven by the sector's defensive characteristics and fragmented nature. DLJ Merchants Banking Partners (now MidOcean) emerged as another significant player, particularly in pharmaceutical services and medical devices. Meanwhile, Bain Capital started looking into healthcare services during the 1990s, leveraging its expertise in operations to improve efficiency in acquired companies.

The European healthcare private equity market developed later than its American counterpart, due to stronger public healthcare systems and less developed private markets but gaining momentum in the late 1990s and early 2000s. Nordic Capital became one of the first European firms to develop a strong healthcare focus, followed by EQT, Permira, and Cinven. These firms benefited from Europe's diverse healthcare systems and the opportunity to consolidate fragmented markets across different countries, also targeting pharmaceutical companies and medical device manufacturers as privatization and market liberalization created opportunities.

The late 1990s and early 2000s saw increased LBO activity in healthcare. The 2000s witnessed the era of mega-buyouts, including in healthcare. We mentioned in the introduction the pivotal moment that came in 2006 with the massive \$33 billion buyout of US hospital group HCA Healthcare, by then with 176 hospitals and 92 surgery and outpatient centers,¹⁴ by KKR, Bain Capital, and Merrill Lynch. It was then the largest and remains one of the largest healthcare LBOs in history.¹⁵ Part of the equity story was the opportunity to raise prices in markets where they would be the sole player. The 2007 \$4.5 billion take-private of Bausch & Lomb by Warburg Pincus marked a significant move in the medical device and eye care space. In 2007, KKR defeated rival Terra Firma and took Alliance Boots private for £11.1 billion (\$22 billion), the largest LBO ever in Europe at the time.

This period also witnessed increased specialization, with, on one hand, the launch of PE firms focusing exclusively on healthcare and life sciences while, on the other hand, traditional generalist firms expanded their healthcare teams significantly, with firms like Bain Capital and Advent International building substantial healthcare portfolios.

¹⁴ Following its first LBO in 1989, HCA went public again in 1992 and later combined with Columbia Healthcare.

¹⁵ An analysis by *Fortune* conducted shortly after the 2011 IPO found that Bain Capital ultimately realized approximately \$1.2 billion from an initial equity investment of just \$64 million.

Venture capital in healthcare also evolved, with firms like New Enterprise Associates, Kleiner Perkins, and OrbiMed making significant investments in healthtech startups. Years later, the complete sequencing of the human genome in 2003 spurred a new wave of investments in genomics and personalized medicine.

1.7.2.3 The Modern Era: Digital Health, Global Expansion, and a New Reality (2010s–Present) The 2008 financial crisis temporarily slowed activity, but healthcare proved resilient. Post-crisis, interest in healthcare services renewed, exemplified by the 2011 \$6.3 billion acquisition of Kinetic Concepts by Apax Partners. Buy-and-build strategies were by then ubiquitous, and it is worth noting that, by February 2011, PE firms owned 10 of the 15 largest for-profit hospital chains in the United States.

Ma et al. (2024) identify three key reasons for the increased attractiveness of healthcare for PE during this period: economic resilience, growing need for capital and management expertise, and regulatory shifts. These regulatory shifts have collectively created an environment ripe for innovation and investment, enabling PE firms to explore diverse opportunities and play a significant role in reshaping the healthcare landscape (see Chapter 7).

The 2010s also saw a boom in healthtech investments. The Affordable Care Act in the United States passed in 2010 spurred investments in health insurance technology and value-based care models. The 2018 \$5.7 billion take-private of Athenahealth by Veritas Capital and Elliott Management represented a major private equity move into healthcare technology.

Venture capital in digital health exploded, with companies like 23andMe (\$860 million over nine rounds of financing before IPO by SPAC in 2021 and later collapse), Noom (\$624 million over 12 rounds), Guardant Health (\$557 million over six rounds before IPO), Amwell, Flatiron Health, Doctolib, and Oscar Health raising hundreds of millions of dollars. Some of these companies would later reach profitability and attract growth capital.

The decade also saw the rise of corporate venture capital, with pharmaceutical giants like Novartis, Johnson & Johnson, and Roche launching their own CVC arms, some of them adding digital health to their portfolio. While Johnson & Johnson Innovation—JJDC, Inc.—has invested \$3.5 billion across all segments of life sciences, many of the other CVCs are approaching \$1 billion AuM: Novartis Venture Fund has more than \$750 million of committed capital and made 346 investments between 2007 and 2025; Roche Venture Fund is a \$850 million evergreen fund investing in life science companies in pharmaceuticals, diagnostics, and digital health; Pfizer Ventures is a \$600 million fund focused on potentially transformative therapeutics; while Sanofi Ventures recently increased its fund to \$650 million.¹⁶

In Asia, healthcare private equity developed later but has grown rapidly since the 2010s. Firms like Hillhouse Capital and PAG from Hong Kong have built significant

¹⁶ Most large pharmaceutical companies now run a CVC fund, including Amgen Ventures; AstraZeneca's BioVentureHub; Baxter Ventures; Boehringer Ingelheim Venture Fund; J&J Development Corp; Leaps by Bayer; Lilly Ventures; M Ventures (Merck KGaA); MP Healthcare Venture Management (Mitsubishi Tanabe); MRL Ventures Fund (Merck & Co), Novartis Venture Fund, Novo Ventures, Pfizer Ventures, Roche Venture Fund, Sanofi Ventures, SR One Capital Management (GSK), and Takeda Ventures.

healthcare expertise, focusing on opportunities in China’s expanding healthcare market. However, the region has fewer pure-play healthcare investors compared to North America and Europe. It is telling that one of the most significant Chinese healthcare LBOs was the \$3.3 billion take-private in 2015 of WuXi PharmaTech, an open-access R&D capability and technology platform serving the pharmaceutical, biotechnology, and medical device industries. While headquartered in Shanghai, the company was actually listed on the NYSE. It was acquired and delisted by a consortium composed of Ally Bridge Group, Boyu Capital, Temasek Life Sciences, and Ping An Insurance, as well as existing investor Hillhouse Capital.

The 2020s experienced a frenzy of mega deals, with significant concentration in 2021 (Figure 1.17). Hellman & Friedman and Bain Capital took over Athenahealth from Veritas and Elliott, this time for \$17 billion. It also included one of the two largest healthcare private equity deals in history—the Medline acquisition for some \$34 billion by a consortium including Blackstone, Carlyle, and Hellman & Friedman. This transaction not only set a new scale benchmark but also highlighted the growing importance of medical supply chain assets. One mega deal fell through though: Swedish Orphan Biovitrum AB (Sobi) agreed to be acquired by Advent International and GIC for nearly \$8 billion, but the deal was torpedoed when AstraZeneca decided to withhold its 8% stake from the buyout offer, probably to keep the option to increase its investment later.

The COVID-19 pandemic in 2020 accelerated major trends in telemedicine and digital health, exemplified by Teladoc’s \$18.5 billion merger with Livongo, which created a combined entity valued at \$37 billion, and the \$4 billion SPAC listing of British firm Babylon Health. While neither transaction was a leveraged buyout, both highlighted the growing strategic and financial importance of digital health solutions. The pandemic also spurred unprecedented investment in vaccine development and biotechnology.

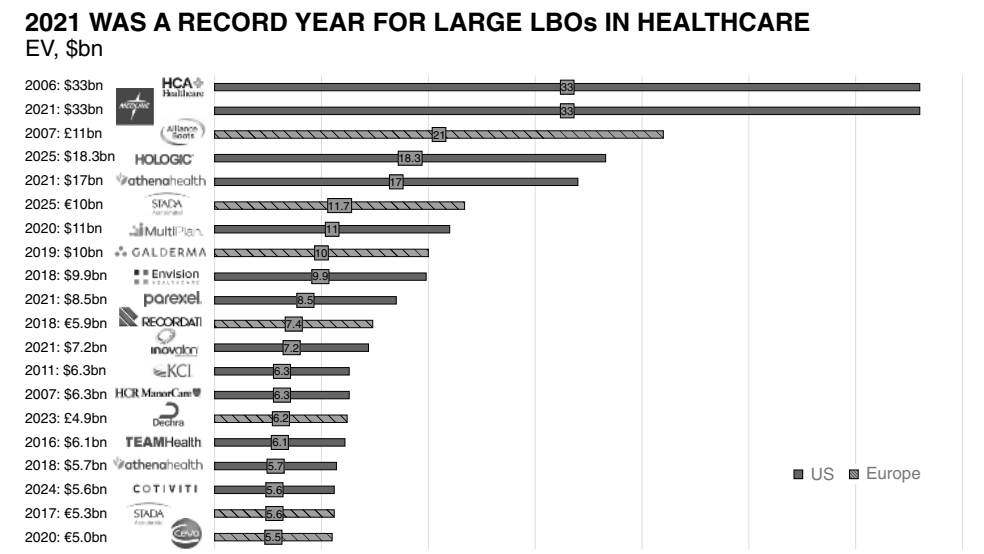


FIGURE 1.17 Largest LBOs in healthcare as of 2025.
Source: Candescic research.

This period was further characterized by a low-interest rate environment that facilitated a wave of roll-up activity in healthcare services, as cheap financing and fragmented markets made consolidation particularly attractive.

In the years that followed, private equity interests increasingly took on board broader societal concerns. Impact investing gained momentum, with attention turning to health equity, climate resilience, and access to care. Meanwhile, advancements in machine learning and artificial intelligence (AI) have created new investment opportunities in areas such as drug discovery, diagnostics, and personalized medicine.

By 2022, the return of inflation and rising interest rates began to reshape investment strategies. Investors increasingly favored asset-light, digital-first business models and sought shorter holding periods, often at the expense of capital-intensive sectors such as biotechnology and hospitals. A notable exception was digital imaging, where adoption of teleradiology and AI-driven analysis supported continued investment despite broader market pressures. In healthcare services, the post-COVID-19 shift also marked a turning point in private equity's roll-up playbook: investors became less willing to rely solely on multiple expansion and demanded tangible operational improvements, platform integration, and realized synergies to justify value creation. In Chapter 10, we will review later developments and industry outlook.

The evolution of PE investment represents a fascinating journey of increasing specialization and sophistication, especially over the past four decades. Throughout this history, PE in healthcare and life sciences has evolved from simple stand-alone leveraged buyouts to a complex ecosystem of venture capital, growth equity, buyouts, and specialized investment strategies, playing a crucial role in funding innovation and shaping the healthcare landscape. These transactions also contribute to bringing together healthcare and life sciences—services and products—reflecting accelerating shifts in technology, regulation, and market dynamics over the last five decades.

1.7.3 Enduring Themes in Healthcare PE and Strategic Implications

The historical evolution of PE in healthcare reveals several enduring themes that continue to shape investment strategy today.

First, the preceding analysis demonstrates that healthcare's sheer scale and noncyclical demand make it a resilient cornerstone for PE portfolios. Accounting for 10–20% of GDP in many developed economies, the sector provides stable demand for essential services, a quality that has proven invaluable during economic downturns.

Second, history highlights that healthcare's complexity is both a challenge and an opportunity. The intricate interplay among providers, payors, and patients, combined with long development timelines and a highly regulated environment, demands deep expertise. This complexity creates a high barrier to entry, allowing specialist investors to carve out defensible niches and generate alpha. This has driven the rise of pure-play healthcare firms with the domain knowledge to navigate these challenges effectively.

Third, private capital has repeatedly acted as a catalyst not just for individual companies, but for entire new markets. The archetypal example is Genentech (Figure 1.18). Early venture funding from Kleiner Perkins came when the biotech sector barely existed. Genentech's subsequent success validated the entire field of genetic engineering, fueled massive VC interest, and laid the groundwork for the genomics revolution. Its eventual \$46.8 billion acquisition by Roche in 2009 illustrates the complete life cycle of how private capital can identify, fund, scale, and ultimately institutionalize a new healthcare paradigm.

PRIVATE CAPITAL CAN HELP CREATE NEW MARKETS

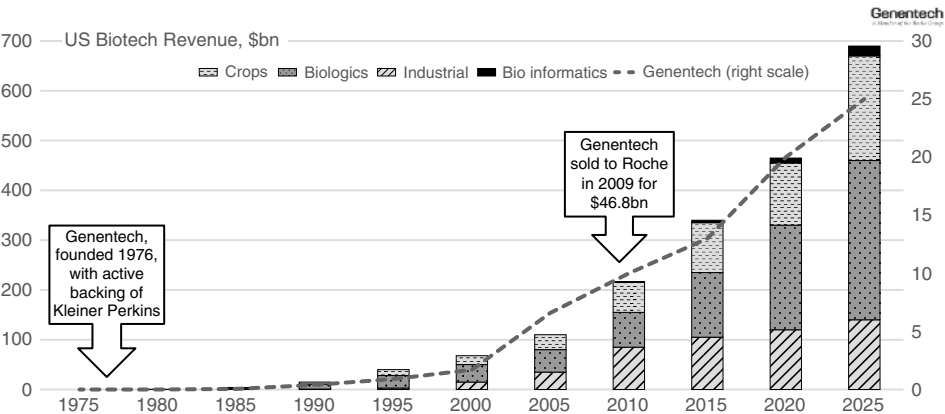


FIGURE 1.18 Evolution of US biotech industry.
Source: Nature; Candesic research (estimates).

GLOBAL HEALTHCARE BUYOUT ACTIVITY BY REGION
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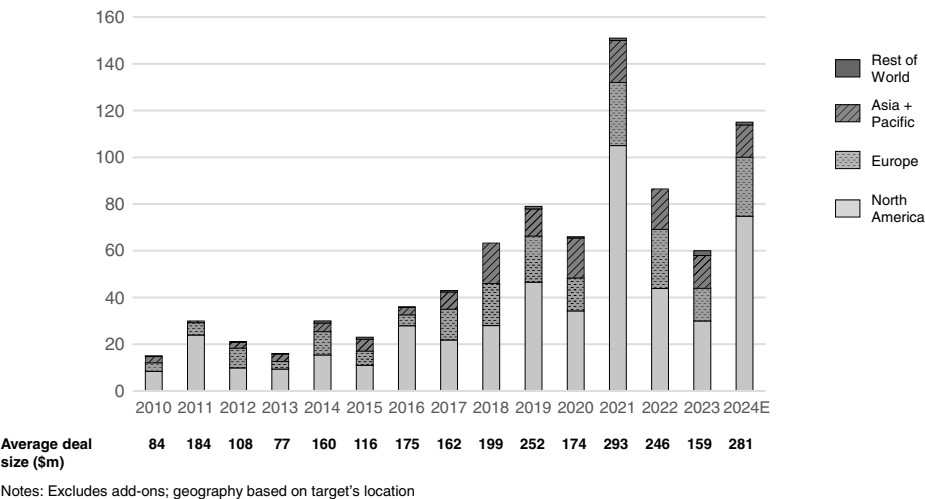


FIGURE 1.19 Global healthcare buyout activity by world region.
Source: Dealogic.

Fourth, healthcare is increasingly being treated as a strategic national priority. Disruptions to global supply chains, public health threats, and geopolitical tensions have led many governments to rethink healthcare infrastructure, access, and innovation—often opening new avenues for public-private collaboration.

1.7.4 Geographical Patterns of Growth

Significant differences exist across regions in how private equity engages with the healthcare and life sciences sectors (Figure 1.19).

The United States remains the most developed and dynamic PE healthcare market. Its predominantly private healthcare system, robust biotech ecosystem, and deep exit markets via IPOs or strategic sales have long attracted domestic and global investors. Specialized firms and diversified platforms thrive in both healthcare services and life sciences.

Europe, while slower to develop, has focused more on life sciences, medtech, and health services consolidation. Strong public healthcare systems and supportive R&D environments have fostered specialized mid-market firms like GHO and ARCHIMED. European markets tend to favor cross-border consolidation and investment in capital-efficient models.

Asia is still an emerging PE healthcare market but has grown rapidly in the last decade. The focus is largely on healthcare infrastructure and delivery, with increasing interest in digital health and insurance platforms. Growth is driven by demographic trends, rising middle-class demand, and underdeveloped public health infrastructure. Significant investors include Hillhouse Capital, PAG, and TPG. While Asia still lacks the density of specialized healthcare PE players seen in the United States or Europe, firms like TPG and KKR have targeted hospital networks and insurance platforms, addressing the region's structural healthcare deficits. Among other examples, TPG Growth established AHH (Asia Healthcare Holdings) as a platform to manage and expand its healthcare investments across Asia. In 2019, KKR, alongside GIC, Singapore's sovereign wealth fund, invested \$680 million in Metro Pacific Health, the largest private healthcare provider in the Philippines, operating 24 hospitals and numerous outpatient centers, growing the value to over \$3 billion.

Other regions, such as Africa and Latin America, present significant long-term healthcare investment needs, but lower PE penetration. Challenges include political risk, fragmented health systems, and smaller deal sizes. However, these regions may become more important as impact investing and blended finance gain momentum globally.

Looking forward, while the sector has proven its resilience, it is not immune to market pressures. Subsectors reliant on essential, reimbursed services tend to be more durable than those driven by elective procedures or consumer spending. In a high-interest-rate environment, capital-intensive areas like hospitals become more challenging, while investors increasingly favor businesses where AI and data can enhance clinical or operational performance. As capital becomes more selective, investors are demanding tangible improvements and strategic synergies, not just multiple expansion. This shift underscores the continued evolution of PE in healthcare as a dynamic and complex ecosystem of innovation, specialization, and value creation.

1.7.5 The Role of Private Equity in Pharma¹⁷

1.7.5.1 Where PE Plays Across the Pharma Value Chain

R&D Finance and Risk-sharing At the upstream end, investors use asset-centric and virtual models to ring-fence one or two programs, reducing organizational overhead while aligning capital to decision gates. Pharmas complement this with corporate venture capital (CVC) and portfolio constructs that externalize early risk while preserving

¹⁷ A contribution by Philipp Khokhlov, DBA candidate and visiting lecturer at UCL GBSH.

options to reacquire or codevelop later. Academic work shows CVC activity rises when incumbents' internal innovation wanes, consistent with pharma's use of mirror funds and optioned collaborations. Royalty and revenue-interest financings—traditional and synthetic—have matured into a nondilutive toolkit spanning clinical- to commercial-stage assets. These structures let developers trade a slice of future sales for upfront capital, often with downside protection and milestone-based step-ups.

CRO/CDMO/Tools In development and manufacturing, PE concentrates on scaled platforms that monetize outsourcing and regulatory complexity. Reviews document the rise of end-to-end CDMOs (contract development and manufacturing organizations) and preferred-provider CRO (contract research organization) models; value creation comes from specialization (biologics DS/DP, sterile operations), right-first-time quality systems, and commercial focus on top accounts. Modality specialization—encompassing antibodies, ADCs, cell and gene therapy—raises barriers but rewards capacity and expertise.

Drug Delivery and Containment Fill-finish, device components, and primary containers have become chokepoints—most visibly for GLP-1s, where demand spikes meet pen assembly and aseptic bottlenecks. Academic and regulatory sources note persistent GLP-1 shortages and the implementation of targeted mitigation measures, while the bioprocess literature highlights the capital-intensive and compliance-heavy nature of sterile operations. These dynamics underpin PE theses in delivery systems, containment, and capacity debottlenecking.

Branded/Consumer/Specialty Carve-outs of noncore portfolios (e.g., consumer health, legacy brands, standalone plants) create focused growth stories. Governance resets, separation capital expenditures, and bolt-ons can unlock mix and margin. Empirical finance literature generally finds positive announcement effects for carve-outs/spin-offs, with improved focus and capital allocation as mechanisms—a rationale that translates well to pharma's fragmented adjacencies.

Clinical-trial/Provider IT Workflow software (eSource/eClinical, site enablement), e-prescribing infrastructure, and payment-integrity analytics are asset-light wedges with recurring revenue and data moats. Peer-reviewed studies and guidance chronicle the steady adoption of eSource and e-prescribing, improving safety, auditability, and cycle time. Meanwhile, health-system research quantifies waste and improper payments as durable cost pools for analytics platforms.

1.7.5.2 Why Pharma Attracts PE Now Private equity has reasserted itself as a structural force across pharma post-COVID-19. After a 2021 risk peak and a 2022–2023 slowdown amid inflation and rate hikes, global healthcare PE rebounded in 2024 to about \$115 billion—the second highest on record—driven by megadeals in biopharma, manufacturing, and enabling infrastructure. Europe outpaced its 2021 surge with record activity in cross-border CDMO, CRO, and medtech platforms offering compliance moats and operational levers. In Asia-Pacific, India's expanding CDMO/API capacity and hospital platforms drew record capital, reflecting "China-plus-one" strategies and domestic demand. The PE playbook remains operational—quality upgrades, capacity debottlenecking, disciplined pricing, and mix optimization—underwritten by

GLOBAL HEALTHCARE BUYOUT DEAL VALUE BY REGION

%, 2019–2024

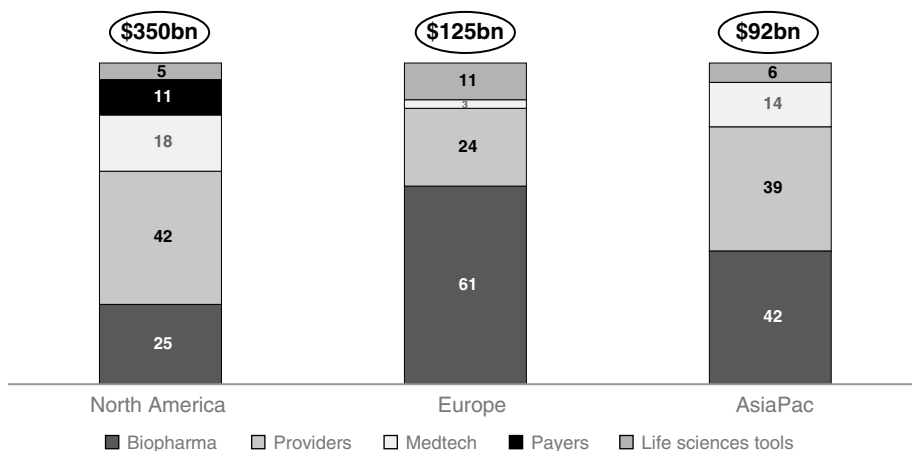


FIGURE 1.20 Six-year global healthcare buyout deal value by region.

Source: Dealogic.

tailwinds in biologics, GLP-1s, and ADCs. Pharma’s structural pressures—Eroom’s law, patent cliffs, and capacity bottlenecks—continue to fuel deal activity, with the largest share in Europe, followed by AsiaPac regions, and the third one in North America (Figure 1.20). Cyclicity affects timing, not thesis: PE continues to monetize complexity through scale, quality, and execution.¹⁸

1.7.5.3 PE Strategies, Playbook, and Business Models in Pharma PE has become a defining force in reshaping the pharmaceutical industry’s structure and value creation playbook. Through buy-and-build platforms, carve-outs, and growth-equity investments, sponsors are scaling specialized CDMOs, CROs, and healthcare information-technology (IT) tools, unlocking value via operational excellence, utilization gains, and commercialization discipline. Modality specialization—particularly in biologics, antibody-drug conjugates (ADCs), and sterile injectables—drives pricing power and scarcity value, while royalty and revenue-backed monetizations offer creative, nondilutive funding for innovation. Carve-outs and partnerships with Big Pharma illustrate how governance resets and focused incentives can rejuvenate legacy assets, as shown by case studies such as Novo Holdings–Catalent, Clayton Dubilier & Rice (CD&R)–Opella, and Warburg Pincus–Simtra. Across transactions, a distinct “PE operating playbook” emerges: regulatory readiness, quality-system reinforcement, pricing discipline, throughput acceleration, and rapid bolt-on integration. The coming decade will see deeper integration of data, sustainability, and patient-access imperatives into PE’s

¹⁸ Eroom’s law observes that the inflation-adjusted cost of developing a new drug doubles approximately every nine years, despite advances in technology—making drug discovery slower and more expensive over time. The term is “Moore’s law” spelled backward and was coined by Jack Scannell et al. in 2012.

approach—aligning financial engineering with scientific rigor. These themes, strategies, and case studies will be developed in Chapter 7.

1.8 LESSONS FROM THE CRISES AND HEALTH SECTOR RESILIENCE

This section examines how the private equity industry has fared during a few crises.

Private equity has been impacted and shaped by crises going all the way back to the eighteenth century. Here, our focus will be on some more recent crises, including the global financial crisis of 2007–2012, which was a defining moment for the economies of the developed world, but in particular for private equity and its LBO segment. In addition, we will consider the impact of the COVID-19 pandemic on private equity in the early 2020s.

Finally, taking into account the various crises considered, we will try to draw some lessons for the future, and in the process consider some related issues of ethics and regulation.

1.8.1 Junk Bonds and Michael Milken

Though this topic does not represent a crisis per se nor directly address healthcare resilience, it is essential to include as a defining moment in private equity's history. Michael Milken's pioneering development of the high-yield bond market in the 1970s and 1980s at Drexel Burnham Lambert fundamentally transformed the financing landscape, establishing the capital structures and investment practices that underpin modern private equity.¹⁹ By championing high-yield bonds, commonly known as "junk bonds," Milken created a powerful new financing mechanism for high-growth but high-risk firms expanded access to capital for smaller and less established technology companies that were often excluded from traditional financing avenues.

This innovation proved particularly valuable to early-stage life sciences and biotech firms, which typically lacked both revenues and tangible assets, making them ineligible for traditional bank loans or investment-grade debt. Groundbreaking companies such as Genentech, Amgen, and Cetus Corporation were able to tap the high-yield market to fund costly R&D programs and scale manufacturing. These firms, despite their scientific potential, faced significant capital constraints prior to Milken's intervention. In parallel, companies like Biogen and Immunex also benefited from this evolving capital market architecture, enabling them to accelerate clinical development and expand commercial capacity.

Milken's innovation thus helped catalyze the emergence of the modern biotechnology sector, laying the financial groundwork for VC participation.

This innovation was also beneficial to PE, as high-yield bonds became a critical tool for funding LBOs. With this financing option, PE firms could raise substantial amounts of debt capital to fund acquisitions, significantly increasing the size and scale of potential deals. The rise of high-yield bonds enabled the era of mega-buyouts, allowing PE to target much larger acquisitions than previously possible.

¹⁹We strongly recommend reading *Den of Thieves*, by James B. Stewart (Simon and Schuster, 1992).

Milken's efforts also enhanced liquidity in the high-yield debt market, making these instruments more appealing for LBO financing. His innovative financing structures supported more complex and flexible transactions, later on offering PE firms new opportunities for structuring acquisitions. Additionally, Milken's advocacy attracted institutional investors to the high-yield bond market, effectively expanding the capital pool available for PE investments.

The accessibility of high-yield debt was instrumental in fueling the leveraged buy-out boom of the 1980s, which included high-profile transactions like the RJR Nabisco buyout. Milken's contributions also shifted corporate perspectives on debt, normalizing leveraged transactions as a strategic business approach.

Milken further propelled the PE industry through his famous "Predators' Ball" conferences, which served as networking hubs for PE professionals, corporate raiders, and institutional investors. These gatherings helped strengthen relationships within the industry and facilitated deal-making. Moreover, Milken's work reshaped risk assessment and pricing in the financial markets, leaving a lasting influence on how PE transactions were evaluated and structured.

Although Milken's career ended amid controversy, his contributions to the high-yield market and the PE industry remain enduring. The financial frameworks and markets he helped establish have evolved into essential components of today's financial landscape, continuing to play a vital role in private equity long after his direct involvement ended.

1.8.2 Global Financial Crisis

The Global Financial Crisis—referred to as the GFC—profoundly impacted the private equity industry across several key areas. First and foremost, the crisis triggered a severe credit crunch, which sharply curtailed the availability of new loans essential for leveraged buyouts. A simultaneous decline in asset values meant there was less available collateral, further restricting access to credit. For existing portfolio companies, their debt became highly problematic as declining earnings led to widespread breaches, or near-breaches, of loan covenants.

The collapse in public market valuations—with indices like the S&P 500 and MSCI Europe falling by 37% and 46%, respectively—directly reduced both the volume and value of new PE deals. This market turmoil also limited exit opportunities, which in turn restricted cash distributions back to LPs.

Finally, institutional investors such as pension funds experienced the "denominator effect." As the value of their listed assets plummeted, their allocation to PE as a percentage of their total portfolio rose above target levels. This unintended overallocation forced many LPs to halt new commitments and rebalance their portfolios, further straining the PE ecosystem.

Were there any signs of the incoming crisis and how it was going to impact the PE industry? With the perspective provided by time and history, we can identify several signs that, in retrospect, should have told us that something bad was looming.

First, there was the increasing number of large PE funds. Back in 1996, there were just 19 PE funds with more than \$1 billion under management, but we had 170 of them in 2006.

Another warning sign was the surge in IPOs of private equity and hedge funds themselves. The annual number of such IPOs, which had been between one and three from 1996 to 2003, jumped to 15 in 2006 alone. This trend indicated a strong appetite

to source capital from any available channel, perhaps signaling that market discipline was weakening.

A further indicator was the growth of the global capital overhang: an excess of dry powder (committed but uninvested capital) relative to the number of quality investment opportunities. The growth of this overhang was clearly visible: it grew from nearly zero in 1998 to almost \$100 billion by 2000. After remaining stable for two years, it surged to nearly \$150 billion in 2004 and continued to climb thereafter.

Additionally, the nature of typical private equity acquisitions shifted between 2000 and 2007. While in 2000 and 2001 most deals were corporate divestitures of business units, by 2007 the majority had become public-to-private transactions. This shift suggested an excess of capital competing for a limited pool of opportunities, ultimately targeting the most accessible assets: entire public companies.

The escalating size of leveraged buyouts (LBOs) also pointed to a potential loss of market discipline. Before 2000, LBOs with an enterprise value exceeding \$10 billion were virtually nonexistent, yet by 2006, five to six such deals were occurring annually. Post-2006, the market saw the emergence of \$20 billion and then \$30 billion transactions, culminating in at least two attempted deals valued at more than \$50 billion between 2007 and 2008. In total, approximately 25 deals exceeding \$10 billion were completed between 2005 and 2008, representing an unprecedented scale of activity.

The onset of the global financial crisis dealt a particularly severe blow to the buyout segment. Once the downturn took hold, the industry's structural dependence on readily available leverage became starkly evident. Buyout fund managers customarily follow a sequential investment rhythm—typically closing a new transaction every 6–12 months—because they lack the operational capacity and capital to acquire and oversee multiple targets simultaneously.

When credit markets froze, the supply of acquisition financing contracted sharply, curtailing the managers' ability to deploy committed capital. At the same time, the valuations of portfolio companies purchased at the market peak deteriorated markedly. Public-equity indices declined by approximately 35–50%, offering a rough proxy for the magnitude of unrealized losses within private-equity portfolios.

Consequently, limited partners—many of whom had aggressively increased their allocations to the asset class in the preceding expansion—reassessed the risk-return profile of private equity. Faced with declining net-asset values and heightened liquidity concerns, they deferred or reduced new commitments, exacerbating the industry's short-term funding constraints.

Figure 1.21 shows the impact the crisis had on the deal value in 2007 for global lending to LBOs, which fell from more than \$600 billion to \$144 billion, a decrease of 77%.

Another metric is provided by the number of deals, the deal volume. Industry went from 712 deals in 2007 to 281 in 2008, a 60% decrease, and the banks were finding it increasingly difficult to lend to buyouts because their own capital position was endangered and constrained, so they would shy away from lending money.

The hung loans—debt that banks had underwritten for leveraged transactions but were unable to syndicate to other investors—were also quite enormous. Citygroup especially suffered quite a lot at the time, with \$43 billion of hung loans in early 2008. There was about \$200 billion of leverage loans held by the syndicating banks in July 2007, and the crunch lasted beyond 2010, even though the crisis started more or less in 2007 with a peak in 2008.

GLOBAL LENDING TO LBOs FELL STRONGLY IN 2008

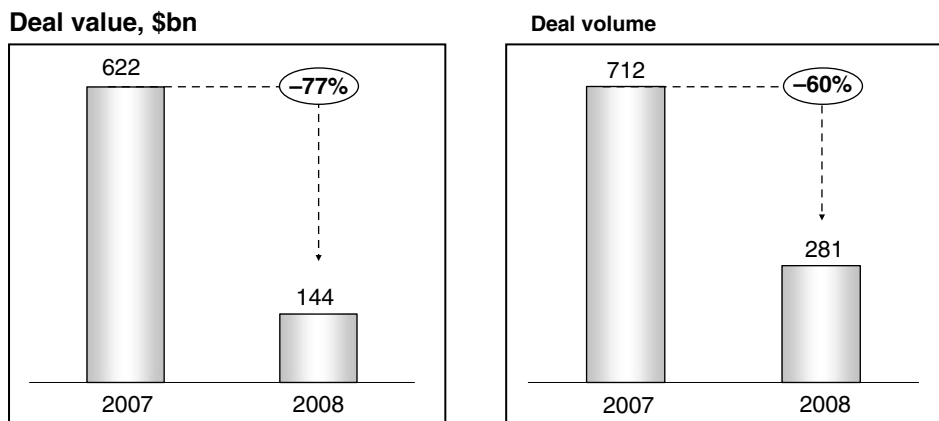


FIGURE 1.21 Global lending to LLBOs in 2007 and 2008.

Source: Dealogic.

Another important metric is the average write-down, the adjustment of book value for unrealized loss in marked downturns, of private portfolios, which was 44% in 2008. According to *Financial News*, 550 redundancies were announced by buyout firms globally between September 2008 and March 2009. The Boston Consulting Group, together with IESE, produced an alarming report announcing that almost 50% of the companies in the portfolios of private equity companies could default within three years (Boston Consulting Group, 2008). Credit rating agencies Moody's and Standard and Poor's also predicted that the default rate would rise significantly during the recession.

When the largest US LBO funds showed their performance in June 2009, six to nine months after the peak of the crisis, actually only 20% of them at most had incurred strong difficulties; not as severe as what had been predicted. In early 2010, the Private Equity Council²⁰ argued that companies backed by private equity demonstrated superior resilience during the financial crisis. According to their research, among more than 3,200 PE-backed firms acquired in the 2000–2009 period, the annual default rate reached just 2.8% during the recession, significantly below the 6.2% rate observed among comparable non-PE companies with similar financing structures.²¹ However, it is undeniable that the overall performance had declined sharply.

Figure 1.22 illustrates this with the State Street private equity index. Even though it is not representative of the entire industry, it gives us a useful benchmark, and the quarterly IRR for all private equity that used to perform at between 5% and 10% in their sample became negative in 2008. It was at -8% in September 2008.

²⁰The American Investment Council (AIC), formerly the Private Equity Growth Capital Council (PEGCC), is a lobbying, advocacy, and research organization based in Washington, DC, that was launched by a consortium of leading private equity firms in February 2007.

²¹https://www.investmentcouncil.org/private-equity-backed-companies-weathered-great-recession-better-than-peers-new-pec-study-finds/?utm_source=chatgpt.com.

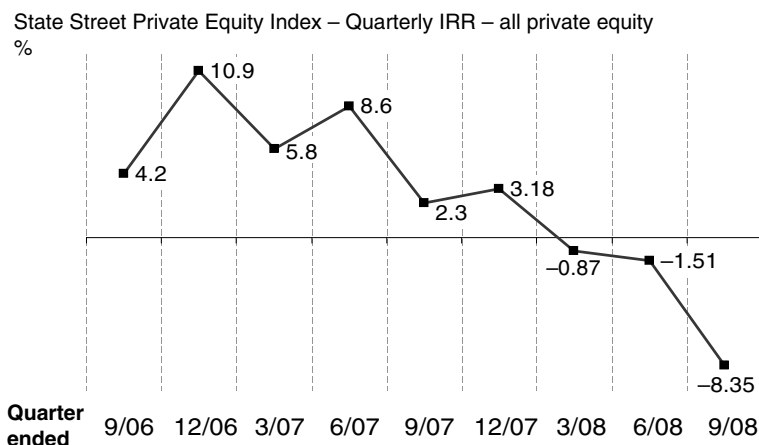
PERFORMANCE FELL STRONGLY

FIGURE 1.22 State street private equity index during the global financial crisis.

Source: State street.

There was still a huge, immediate impact, and several agreed deals were aborted at that time. The terms were renegotiated, break-off fees of up to 1% were incurred, and a few potential investors invoked the so-called Material Adverse Change (MAC) clause to renege from the deals and that included what would have been the largest deal ever. In effect, the symbolic end of the pre-crisis “golden age” of mega-buyouts was the collapse of the proposed acquisition of BCE Inc. (Bell Canada). Announced in June 2007 at the peak of the market, the transaction was valued at approximately \$52 billion and was set to be the largest leveraged buyout in history, led by a private equity consortium that included the Ontario Teachers’ Pension Plan (OTPP). The deal ultimately became a direct casualty of the Global Financial Crisis. By the time it was scheduled to close in late 2008, the seizure of global credit markets made its massive debt structure untenable, leading auditors to conclude that the new, heavily indebted entity would fail to meet legal solvency requirements. Its cancellation definitively signaled that the era of abundant, cheap debt that had fueled ever-larger LBOs was over.

While trailing the United States by a far margin, European activity had benefited a lot from the boom years of the 1990s. Buyouts and buy-ins in Europe went from less than \$30 billion in transactions in 1996 to about 200 billion in 2007. As in the United States, Europe was hit hard by the crisis. At Candestic, we saw the overall LBO market divided by 10 in Europe. While that was not the case in Candestic’s core industry sector of healthcare, the next two years were very difficult ones, particularly for advisors. As for the investment banks that had once ridden high on the wave of lucrative PE mandates, they suddenly faced the stark reality of being unable to cover their basic fixed costs.

Most stakeholders were hit severely by the crisis. Investors in PE funds particularly struggled if they needed to exit. Many funds went bust. An unusually large number of portfolio companies went bust—nothing like the 50% that was predicted by BCG,²² but still enough to make the life of PE investors difficult.

²² See report published by the Boston Consulting Group and IESE in 2008.

The GFC uncovered several ethical issues motivated by greed. Excesses that test the legal limits—fraud, collusion, and manipulation—were not new but were starkly revealed under the heightened scrutiny of the crisis, with LBO transactions attracting particular attention. We will discuss them in Chapter 8 and extend the discussion to other controversies in the relationships among stakeholders.

1.8.2.1 After the Financial Crisis After the financial crisis, many were left with the same question. As Joe Rice, chairman of CD&R, a major operating player, put it: “Is private equity just about financial engineering, or is it really an ownership model able to produce sustainable improvement in business?”

The financial crisis blurred people’s perspective by bringing lots of companies to the verge of bankruptcy, companies that might otherwise have had a bright future. Any form of debt was suddenly toxic, masking, or undoing the operational improvements achieved by many portfolio companies, temporarily highlighting the financial engineering side of private equity.

Four major factors should be considered when understanding the credit crisis. First, increasing public scrutiny: as individuals suffered financial losses, fears of further deterioration mounted, prompting demands for tighter regulations and higher taxes on those who had benefited from historically favorable tax conditions. The second factor was a severe freeze in the LBO market following the credit crunch, which sharply restricted access to financing for large transactions, effectively halting deal activity for a significant period. Third, the collapse of multiple stock markets exacerbated economic instability, contributing directly to the onset of a global recession by eroding household wealth and corporate investment appetite. Finally, many potential sellers in the market were reluctant to divest their holdings during this turbulent period, recognizing that market conditions were too unfavorable to realize optimal value.

In spite of those challenges, private equity was still a great model for owning businesses, with a great track record of creating value over the long term. But it became affected by short-term events, and it needed more governance.

With regard to the credit crunch, the LPs had become more cautious (and who wouldn’t), but their initial objective of increasing or at least maintaining their allocation to PE remained firmly in place.

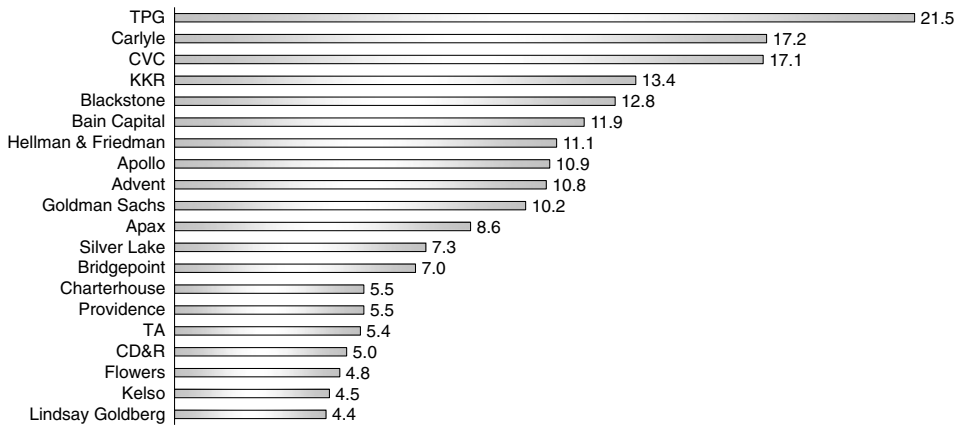
Regarding the stock market collapse, two factors guaranteed that the credit markets would recover, perhaps not to the conditions of 2007 before the crisis but to something more like normality, if any year would be indicative of normality. First, there was a substantial influx of capital seeking high-yield investment opportunities, and second, there were low historical default rates in PE.

Regarding the issue with vendors not being ready to sell, well, private equity represented only one or two trillion dollars of assets under management back in 2007, compared to \$60 trillion in stocks.

Importantly, there were winners as well as losers: it is all a question of timing. Those who had raised enough money but not invested it just before the crisis were the clear winners; those who had invested everything, especially just before the crisis, and who had paid high multiples and now needed to raise the next fund, they were the clear losers. Those who were cash rich were ready to seize all the best opportunities—they might have had to wait a year or two until things settled a little bit, but it was a time when they had little competition. The other funds were unable to raise money into 2009 and 2010.

TOP 20 BUYOUT FIRMS BY DRY POWDER AFTER THE CRISIS

\$bn, 2010

**FIGURE 1.23** Top 20 buyout firms by dry powder after the global financial crisis.*Source:* Candesic research.

The funds, like TPG, Carlyle, CVC, KKR, Blackstone, Bain Capital, who had more than £10 billion each in dry powder right after the crisis, were the cash kings of the after crisis (Figure 1.23). They may or may not have been the best investors, but their timing was perfect, and their timing was perfect partially because they were so big, so there is again an advantage for the largest players.

In 2009, Guy Hands, CEO of buyout firm Terra Firma, famously said: “Private equity should not expect sizeable leverage in new deals until 2011–2012. Deals in 2009 will be like picking claret in 2003—a lot will look promising but end up disappointing with only a few stars. 2010 deals will, however, be like 1982 clarets, difficult to find a poor one and with a lot of stars.”

Some evidence suggests that the best deals are done during downturns such as this. In this study (Figure 1.24) that shows the net IRR of US-focused buyout funds in vintage years during the decades before the crisis, a clear correlation is shown between downturn periods and increased returns. This illustrates the advantage that can be gained by having cash available when the crisis strikes.

1.8.3 COVID-19 and Disruptions of the Supply Chain

We now discuss some effects of the COVID-19 pandemic on PE.

First, private equity often becomes a target of political scrutiny during episodes of turmoil or societal disruption. In the United States, for example, in the spring of 2020, a number of senators from the left of the Democratic Party, such as Elizabeth Warren and Alexandria Ocasio-Cortez, stated that they wanted to go after or even ban some private equity firms for profiting excessively from businesses hit hard by COVID-19. They aimed to combat predatory mergers during this period. Although their efforts did not lead to significant immediate changes, this sort of scrutiny is sometimes justified, given the documented abuses and predatory behaviors of some private equity players.

THE BEST DEALS ARE DONE IN DOWNTURNS

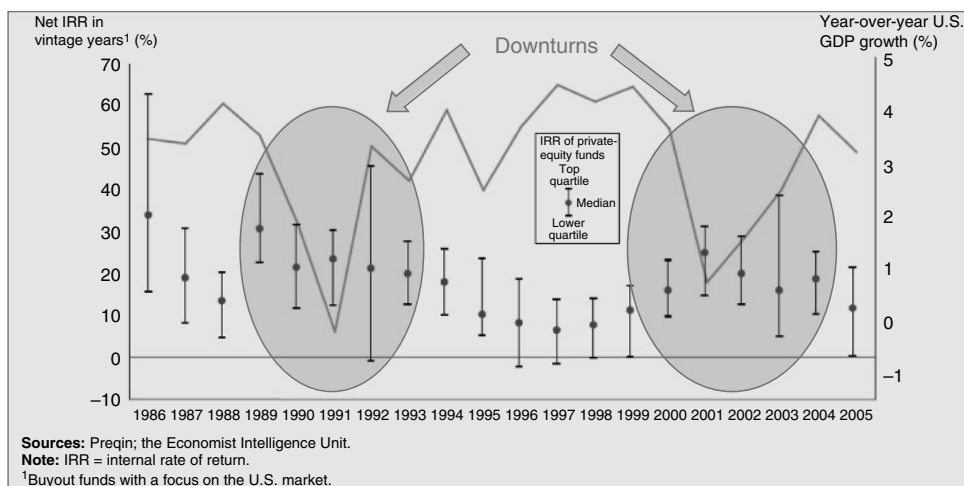


FIGURE 1.24 IRR of PE funds by quartile in 1986–2005.

Source: IESE-BCG report (2008).

More significant than the politics, however, was the disruption to supply chains. These were impacted more than they had been for many years and not just by the pandemic but also subsequently by a combination of other disruptions, including transport disruptions in many parts of the world, such as the blockage of the Suez Canal and issues around Iran, the Indian Ocean, and the South China Sea with lots of skirmishes between China and its neighbors. And in addition to all that, the increasing costs of energy affect global transportation.

An awful lot of oil was needed to move the 20,000 tankers that cross the world daily and which themselves transport a significant part of that same oil. If these supply chains are disrupted, we do not really have a good alternative. If we cannot transport that oil, the economy ceases to function, or at least a very large part of it cannot function anymore. This affects PE portfolio companies and other small to medium-size enterprises (SMEs), which often have fewer alternatives or resources to adapt than large multinationals.

Other global challenges that impact private equity include the rise of autocracies, the rivalry between the United States and China, and the establishment of new currency zones with several parts of the world essentially trying to eradicate the hegemony of the dollar. These events had various consequences, including the strategic repatriations in areas like microchips, vaccines, APIs (active pharmaceutical ingredients), and ammunition for the defense industry. And it has also highlighted the long-term need to reduce transport costs and enhance geographical proximity. It no longer makes sense to transport pretty much everything, including sand and water, across the entire world.

So, that will all have an impact on private equity, but private equity can also play a positive role in that transformation of the world. We should assume PE owners are sophisticated and run well-connected organizations, good not only at lobbying, but able to help their companies adapt faster and better to a changing world.

1.8.4 Silicon Valley Bank

Silicon Valley Bank (SVB) was a prominent bank that primarily served the technology startup ecosystem, accounting for up to 70% of the venture debt market. Its collapse in March 2023 was a shock to the financial industry (Figure 1.25). Several factors contributed to its downfall, starting with significant concentration risk. SVB had a highly concentrated customer base, primarily tech startups. When most of these companies suddenly faced funding challenges and withdrew their deposits, the bank faced a liquidity crisis. This was coupled with interest rate risk: as interest rates rose, the value of SVB's bond holdings declined significantly. This mismatched asset-liability position exacerbated the bank's financial troubles. Some argue that less stringent regulations on banks, particularly those deemed to be less risky, also contributed to the crisis.

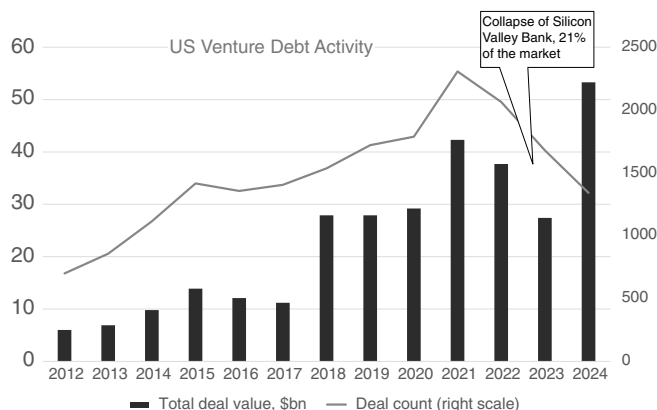
The collapse of SVB had significant implications for the private equity industry, but more specifically in the VC segment. It led to reduced debt funding for startups and increased scrutiny. As a primary lender to startups, SVB's collapse temporarily restricted the flow of capital to this relatively small but crucial segment of the economy. This had the potential to slow down the creation of new, disruptive businesses. The crisis also highlighted the risks associated with the factors we mentioned. This led to increased regulatory scrutiny of financial institutions, including those serving the private equity industry.

The implications were particularly significant for the health sector, considering SVB had worked with three quarters of all US healthcare-related IPOs since 2020. Many companies involved in clinical trials or drug development were unable to access their funds and faced difficulties in paying suppliers and employees, potentially disrupting ongoing research and development activities. Large banks that were called to fill the gap often lacked the specialized services and understanding of the unique needs of healthcare startups that SVB provided. It was less of an issue in other sectors.

The collapse of SVB created opportunities for private credit firms to fill the financing gap left by traditional banks, especially in the startup and growth equity space, but HSBC, JPMorgan, Stifel, and other banks moved fast to hire SVB's employees and

WHEN IS IT GOOD TO BRING VENTURE DEBT?

- Good to avoid dilution when the company is profitable and pays tax
- But don't force a startup to service debt payments when it is still burning cash
- Note it is a niche business* (<5% of all VC?)



* By the way, they are not banks. Banks are in the business of lending you your own money first off. Banks are not your partners but service providers

FIGURE 1.25 US venture debt activity.

Source: Candestic analysis.

capture part of the business. Many of SVB's assets and deposits were transferred to the Federal Deposit Insurance Corporation (FDIC) for management. The FDIC then facilitated the transfer of certain assets and liabilities to other banks. Two years later, while the market had not fully returned to its pre-SVB state, the absence of a single dominant player had led to a more diversified and balanced ecosystem, with both traditional banks and nonbank lenders coexisting and offering unique debt solutions. Against all odds, 2024 was marked by a historical record of venture debt, more than \$50 billion, still a very marginal component of VC and PE financing.

1.8.5 High Inflation

Inflation in 2022 was a “long-awaited surprise” and a major headache for the private equity industry. Central banks responded to rising prices by increasing interest rates, which substantially elevated the cost of debt financing. This environment rendered LBOs more complex to execute. Concurrently, the escalating inflationary pressures eroded the valuation of target companies, complicating exit strategies.

Portfolio companies grappled with increased operational costs and the pressure to adjust pricing without deterring customers. These factors, combined with ongoing supply chain disruptions, further strained profitability. Investor sentiment was impacted as well, with a growing preference for less risky assets.

The industry demonstrated resilience. Firms adapted by prioritizing operational efficiency, diversifying investment strategies, extending investment horizons, and enhancing risk management practices. But the distress frontier had shifted, and the firms that had undergone an LBO with variable debt prior to 2022 were now struggling.

1.8.6 The Impact of Tariffs and Trade Policy Under Trump's Second Term

Trade policies, particularly tariffs and regulatory barriers, have become significant factors shaping private equity strategies in healthcare. Trump's second presidency, launched in 2025, revived and intensified protectionist measures, including steep tariffs, reshoring mandates, and executive orders affecting pricing and manufacturing. For PE-backed healthcare companies operating across borders or reliant on global supply chains, these policies altered cost structures, investment strategies, and exit valuations. They translated into higher diligence thresholds, longer holding periods, a trend toward continuation vehicles capturing approximately half of all PE deal flow, and a clear strategic shift toward domestic, digital, or vertically integrated assets, and assets that were not exposed to government reimbursement or global supply chain risks. Trade policy, once peripheral to healthcare investment, became a core consideration in portfolio construction, value creation planning, and exit timing.

1.8.6.1 Tariffs and Supply Chain Disruption In the United States, renewed tariffs—including (initially) 10% on Chinese imports and 25% on selected products from Mexico and Canada—raised input costs for medical device manufacturers, pharmaceutical firms, diagnostics companies, and CDMOs. Many of these firms rely on imported APIs, reagents, packaging materials, or electronic components. As a result, cost inflation compressed EBITDA margins, especially for mid-market portfolio companies lacking vertical integration.

These effects were particularly acute for PE-owned firms assembling devices or pharmaceuticals in the United States but sourcing critical components abroad. Longer lead times, higher compliance burdens, and pricing volatility disrupted product launch

timelines and regulatory filings. This, in turn, delayed value creation milestones and heightened execution risk.

CROs and manufacturers also faced increased prices on imported lab equipment and consumables. Combined with new FDA inspection fees for foreign facilities and customs delays, these pressures contributed to operational unpredictability—a critical concern for investors targeting margin expansion or rapid scale-up.

1.8.6.2 Onshoring, Industrial Policy, and Capital Expenditure Pressures In parallel with tariffs, Trump’s May 2025 Executive Order (EO) directed the FDA and EPA to fast-track permits and reviews for new US-based drug manufacturing facilities, in an effort to “restore a robust domestic pharmaceutical base.” These policy shifts supported PE theses focused on domestic infrastructure build-out but introduced capital intensity and timeline risks incompatible with shorter fund cycles.

While long-term reshoring may benefit firms able to invest in US API or device manufacturing, construction lead times of 5–10 years, skilled labor shortages, and CapEx intensity pose significant hurdles. For many sponsors, the near-term implication is a strategic pivot: investing in contract manufacturers, logistics firms, and supply chain visibility platforms that support localization, rather than owning manufacturing assets outright.

1.8.6.3 Sector Rotation and Portfolio Repositioning Faced with rising material costs and regulatory volatility, US-based PE funds increasingly reoriented toward subsectors with minimal tariff exposure—such as domestic healthcare services, healthcare IT, AI-enabled platforms, and IP-driven biotech ventures in early-stage R&D. For these assets, geopolitical risk is lower, and digital scalability remains intact.

Still, growth equity investments in life sciences at the scale-up stage—where clinical development converges with manufacturing—became more exposed to trade risk. This forced PE sponsors to conduct deeper diligence on component sourcing, regulatory pathways, and pricing models in anticipation of ongoing trade policy turbulence.

1.8.6.4 Drug Pricing and Distribution Disruption In parallel with trade frictions, Trump’s 2025 Executive Order (EO) targeting PBMs (pharmacy benefit managers) and drug pricing intermediaries added uncertainty to the pharmaceutical value chain. The EO instructed Health and Human Services and the Department of Labor to enforce greater transparency in PBM fee structures and to accelerate generic and biosimilar approval pathways, aiming to “knock out the middleman” and reduce patient drug prices.

For PE investors in specialty pharma, generics, or distribution platforms, these reforms created a dual dynamic: potential margin compression for intermediaries, but also new investment opportunities in cost-efficient or vertically integrated models aligned with lower out-of-pocket drug costs.

Additionally, the planned implementation of a “Most-Favored Nation” (MFN) drug pricing model, benchmarking US drug prices against Organisation for Economic Co-operation and Development (OECD) countries, created downward pricing pressure on branded drugs. Although legal and regulatory hurdles remain, this direction of travel affected revenue forecasting, particularly for PE-owned commercial-stage biopharma firms reliant on US pricing power.

1.8.6.5 European Impacts and Retaliatory Risks In Europe, the implications were different but equally disruptive. Many European portfolio companies in life sciences and medical technology serve US markets through exports or licensing arrangements.

Retaliatory tariffs, customs friction, and regulatory divergence under the revived Trump trade agenda raised operational risks.

For example, a PE-backed biotech firm in Germany or France licensing to a US distributor could face pricing renegotiations or delayed regulatory clearance if tariff burdens increase end-user costs. Exporters of diagnostics or imaging equipment also encountered new FDA review protocols and import delays, creating liquidity strains and disrupting cash flow forecasts.

Moreover, European firms reliant on Asian supply chains—particularly for APIs and electronic subcomponents—found themselves indirectly affected by US-China tensions. In response, several PE sponsors initiated reshoring or nearshoring initiatives, albeit cautiously, as these typically required fresh capital injection and longer payback periods.

1.8.6.6 Implications for Exits and Portfolio Valuation Across regions, the compounded uncertainty—tariffs, PBM reform, price controls, and geopolitical tension—slowed down M&A exits. Public markets began discounting companies with high exposure to global supply chains, while strategic acquirers applied deeper scrutiny to potential CapEx liabilities and sourcing fragility.

Exit valuations were revised downward for firms with exposure to tariffed goods or requiring significant supply chain restructuring. Value creation shifted away from multiple expansion and toward operational resilience, integration, and localization. Sponsors with a playbook focused on efficiency, self-sufficiency, and digital transformation were better positioned to withstand this phase.

1.8.7 Key Learnings

What have past crises taught us? Setting aside the 1720 South Sea Bubble, private-equity shocks appear roughly every decade: junk-bond turmoil in the late 1980s, the internet bubble in 2000, the Global Financial Crisis in 2008, and the COVID-19 disruption in 2020.

First, it helps to distinguish “accidents” from structural shifts. The dot-com crash was an accident—including too much internet-capacity built too quickly—whereas the post-2008 leverage unwind reflected deeper changes in credit markets.

Second, the best PE deals often happen in downturns. Seasoned sponsors deploy dry powder to buy high-quality assets at distressed prices. As a result, senior investors with crisis experience tend to outperform during market turmoil.

Third, crises spark a race between regulation and technology, especially when innovation enables new abuses. From insider-trading booms to AI-driven fraud, each wave of disruptive tech triggers a regulatory response. Private-equity firms that anticipate when rules will tighten or loosen can ride these cycles to their advantage.

Finally, recent events suggest the era of ever-expanding globalization may be ending. Geopolitical tensions, energy-security risks, and climate shocks are pushing toward regionalization—a world divided between free-market democracies and controlled autocracies. Private equity, which thrives on entrepreneurial dynamism and open capital flows, must adapt to invest in regions that uphold transparent rule-of-law and market freedoms.

We started out by looking at some historical crises, which demonstrated that such events are nothing new but rather come round periodically in some form or another, and the private equity industry needs to be prepared for when they do.

We then looked in some detail at the events of the financial crisis that hit in 2007–2008. We saw that, although private equity was perhaps not hit as hard as some predicted at the time, there were both winners and losers, and the crisis uncovered several issues around greed, excess, and regulation.

Lastly, we looked at some more recent crises, particularly those triggered by the COVID-19 pandemic and other geopolitical events that followed it.

This review of crises that have impacted private equity over the years can help anticipate what could happen again and how best to deal with such crises when they do occur.

1.9 CASE STUDY: STADA ARZNEIMITTEL TAKE-PRIVATE LBO

1.9.1 Case Study: STADA Arzneimittel—Reinvigorating a German Pharmaceutical Icon

The STADA case study highlights how two PE firms successfully collaborated to take private and transform the company into a leading healthcare platform through strategic acquisitions and operational improvements. Although the anticipated IPO did not materialize, the partnership between the investors culminated in the sale of a majority stake to a specialist healthcare investor, ensuring continuity and positioning STADA for further growth. This example illustrates the effectiveness of PE collaboration in driving long-term value creation and operational excellence in the healthcare sector.

1.9.2 From Pharmacists' Cooperative to European Powerhouse

Founded in 1895 in Dresden, STADA Arzneimittel began life as a cooperative of German pharmacists committed to ensuring affordable access to standardized medicines. Over the twentieth century, the company transitioned into a leading producer of generic prescription drugs and over-the-counter (OTC) products. By the early 2000s, STADA had become a recognized name across Germany and parts of Europe, particularly for its branded generics and consumer health lines, including cold and flu remedies, pain relievers, and cardiovascular treatments.

As it expanded internationally through organic growth and acquisitions, the company built a strong commercial presence in Central and Eastern Europe. However, despite a broad portfolio and solid market presence, STADA remained fundamentally a volume-driven generics business, with limited pricing power and few innovation-led growth levers.

1.9.3 Losing Ground: Margin Pressure and Strategic Drift

By the 2010s, STADA faced a challenging environment. Germany's statutory health insurers imposed increasing cost constraints, while price competition across Europe intensified. Global players like Teva and Mylan applied pressure on margins, and STADA's own operational structure remained fragmented.

Between 2014 and 2016, the company listed on the Frankfurt stock exchange entered a period of drift. Revenue growth slowed, earnings came under pressure, and strategic initiatives lacked cohesion. Shareholders began losing patience, and activist investors, led by Active Ownership Capital, initiated campaigns to restructure the

board and improve governance. STADA's long-serving management resisted at first but eventually conceded to a strategic review process. What had once been a stable, if unspectacular, pharmaceutical stalwart was now openly considering a change in ownership.

1.9.4 A Bold Bet: Bain Capital and Cinven Take Control

In 2017, a consortium formed by Bain Capital and Cinven acquired STADA for €5.3 billion EV in one of the largest healthcare buyouts in Germany's history. The deal followed a competitive process and closed at €66 per share, representing a premium of nearly 50% over the company's preannouncement share price.

To the new owners, STADA represented a classic value opportunity: a strong brand with consistent revenues but underwhelming profitability, burdened by operational inefficiencies and outdated systems. By taking the company private, Bain Capital and Cinven could implement the transformation without public scrutiny. The private equity thesis centered on cost optimization, portfolio rationalization, and growth through select acquisitions, particularly in the less price-sensitive OTC segment.

1.9.5 Operational Overhaul and Targeted Expansion

Following the buyout, the PE firms moved quickly. A new CEO and senior management team were brought in, tasked with executing a wide-reaching operational reset. Manufacturing was consolidated, redundant facilities were shuttered, and procurement processes were overhauled. Investments in automation and digitization further improved the company's cost base.

Meanwhile, STADA began shifting emphasis away from low-margin generics toward branded consumer health. This included a few well-timed acquisitions: Takeda's European OTC portfolio, GSK's off-patent brands, and Walmark, a Central European supplements manufacturer. Each acquisition expanded the company's footprint in defensible, high-margin categories with strong brand loyalty.

These changes paid off. By 2023, EBITDA had more than doubled, rising from approximately €364 million in 2017 to over €800 million, while the company's product mix became more resilient and strategically focused. Though revenue growth remained modest, the margin expansion created significant enterprise value.

1.9.6 A Return to Market: Preparing for IPO

By early 2024, with the operational turnaround largely complete and financial performance substantially improved, Bain Capital and Cinven began preparing STADA for a public listing. Reports suggested then that a Frankfurt IPO could value the company at close to €10 billion, nearly double its 2017 acquisition price. In parallel, they were negotiating a sale to another PE firm, CapVest, but as reported by Bloomberg, the discussions broke down over differences in valuation and the structure of the bid.

The timing aligned with renewed investor appetite for profitable mid-cap healthcare companies, and STADA's streamlined structure, consistent earnings, and growth story made it an attractive listing candidate. The IPO market window was favorable in mid-2025, with STADA positioned as a prime candidate alongside other German mid-caps like Ottobock. While the exact exit structure had yet to be

finalized, it was clear that the PE owners were preparing for a monetization event that could mark one of Europe's more successful healthcare turnarounds of the past decade.

On August 31, 2025, after eight years of active ownership, Bain Capital and Cinven announced the sale of a majority stake in STADA to CapVest, valuing the enterprise around \$10 billion. The two firms would retain a minority stake in the company. They seem to have executed a dual-track process exceptionally well, using IPO preparation as negotiating leverage.

A back-of-the-envelope calculation indicates they achieved an estimated IRR below 14%, which is modest by PE standards, but in line with the real average performance of the industry. They are likely to have extracted interim dividends, though specific amounts are not disclosed. The initial 2017 takeover offer included paying shareholders the 2016 dividend of €0.72 per share. The debt reduction strategy near exit was partly financed through "shareholder equity contribution," which could indicate either additional equity injections or foregone distributions.

The debt story reveals a more complex strategy than simple reduction. Initially, leverage likely increased as the sponsors executed more than 25 targeted acquisitions during their ownership. The debt reduction was primarily executed near the exit to enable the sale, not as a consistent deleveraging strategy throughout ownership. The timing suggests this was primarily an exit preparation strategy rather than consistent deleveraging. They refinanced debt earlier in 2025 with a portability clause, meaning CapVest wouldn't need to refinance again, smoothing the transaction path.

1.9.7 Lessons from the STADA Deal

STADA illustrates the kind of platform that PE firms favor in mature European markets: an operationally sound company with brand strength and scale, but with untapped potential due to inertia, inefficiencies, or strategic misalignment. Bain Capital and Cinven's approach, based on disciplined execution, strong governance, and focused M&A, created a more competitive and profitable business without relying on radical transformation or speculative growth.

CapVest's willingness to pay full IPO valuations in a private transaction reflects the scarcity value of scaled healthcare platforms. This represents a "strategic buyer premium" where PE buyers pay public market multiples to avoid execution risk and market volatility.

While it may not have generated the headlines of a high-multiple tech exit, the STADA deal reminds us that PE investors can create real value in established, low-glamour sectors like generics and OTC health, and do so with relatively low risk.

1.10 CHAPTER SUMMARY

In summary, we have seen various definitions of private equity. We have considered a number of these definitions to grasp an overall idea of what PE is about.

We have discussed who invests in PE, what their general motives are, and the constraints that shape the investment decisions of different types of investors. We have considered the importance of LBOs, which constitute the main and most discussed

segment of the PE world, though not the only one. We have also explored the history of PE, from the twentieth century to more recent times.

In addition, we have examined the various stages of PE investing and considered the way in which PE funds are typically set up and structured. We have also discussed the distribution of PE commitments and PE deals, and the tight relationship between the three phases of the PE cycle: fundraising, investment, and exit.

We have introduced the investment case in healthcare and reviewed the impact of the crises of the last 50 years, before wrapping up with the case of the STADA LBO.