



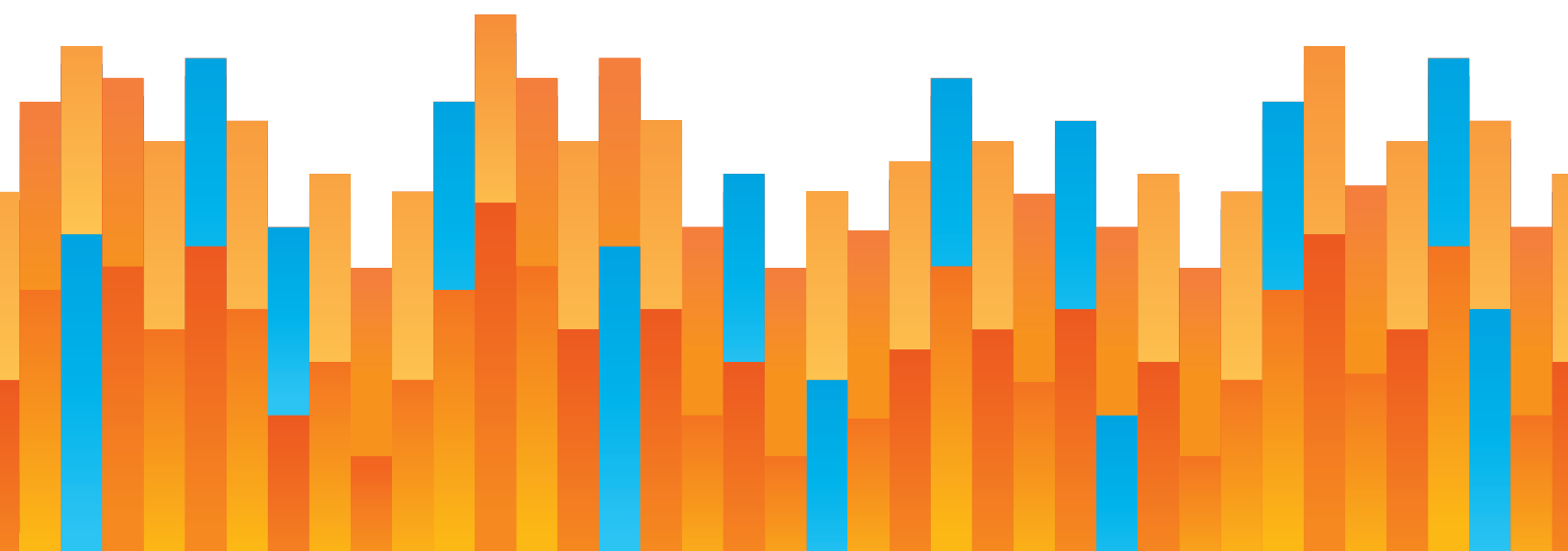
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IS PRIVATE EQUITY A PUBLIC FINANCIAL HAZARD? ANSWERING QUESTIONS ON THE IMPACT OF PRIVATE EQUITY INVESTMENTS ON PUBLIC PENSIONS

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EXECUTIVE SUMMARY

Private equity—ownership stakes in businesses that are not traded on an exchange—has become a favored asset class of U.S. public pension plans. It promises extraordinary returns and added diversification of the investment portfolio. Allocations continue to grow, currently comprising about 13% of public plan assets.¹ And it's a two-way street, with public pension plans in the U.S. and abroad providing 35% or more of the capital invested in private equity.² But private equity investing has its challenges.

Contrasted with publicly traded equities, private equity funds have higher fees, lower regulation, and more restrictions on selling shares. Private equity funds lack clear return and risk metrics, making it difficult to assess performance before investments are redeemed, often a decade or more after the initial investment. These difficulties imply a responsibility for trustees and investment officers to ensure that: (a) private equity provides something not attainable with publicly traded stocks and bonds, and (b) investing in private equity is prudent and consistent with plan officials' fiduciary obligations.

¹ Public Plans Data, Center for Retirement Research at Boston College (CRR), updated 28 Jul 2023. <https://publicplansdata.org/quick-facts/national/> (accessed 11 Aug 2023).

² Jessica Hamlin, "The SEC Is Bearing Down on Private Equity. Blame Public Pensions." Institutional Investor, 25 Jan 2022. <https://www.institutionalinvestor.com/article/2bstoaurgvddtkq830idc/corner-office/the-sec-is-bearing-down-on-private-equity-blame-public-pensions>; Vrinda Mittal, "Desperate Capital Breeds Productivity Loss: Evidence from Public Pension Investments in Private Equity" (22 Nov 2022). Available at SSRN: <https://ssrn.com/abstract=4283853> or <http://dx.doi.org/10.2139/ssrn.4283853>

The recent rise in market interest rates after years at depressed levels creates new challenges, especially for existing holdings. Higher interest rates make it more difficult for private equity portfolio companies to service their often-significant debt. High interest rates also decrease the discounted present value of each dollar of future profits, lowering the value of portfolio companies.

All these factors should give investors pause. Higher interest rates, the increasing use of nontraditional transactions to return investor funds, and an ever more crowded field of investors are signs that the highly touted extraordinary returns in the past may not continue. In his 2012 letter to Berkshire Hathaway shareholders, Warren Buffett talks about “extraordinary excesses that can be created by combining an initially sensible thesis with well-publicized rising prices” in warning that “[w]hat the wise man does in the beginning, the fool does in the end.”³

³ “Public Pension Quarterly | 2Q 2023, Longing for Liquidity,” Goldman Sachs Asset Management (Published Aug 2023); “GP-Led Secondary Transactions and Continuation Funds: Structuring Options and Tax Considerations,” Cooley.com, Cooley (law firm). 31 Jul 2023. <https://www.cooley.com/news/insight/2023/2023-07-31-gp-led-secondary-transactions-and-continuation-funds> (accessed 11 Sep 2023); Antoine Gara, “Apollo chief warns private equity industry ‘in retreat’ as rates rise,” Financial Times, 3 Aug 2023. FT.com. <https://www.ft.com/content/7d24db29-9046-42d3-a221-efb9e54db702?shareType=nongift> (accessed 19 Sep 2023).

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PART 1

INTRODUCTION

Equity investing means owning stakes (shares of stock) in one company or a portfolio of several companies. Most equity investors own shares that can be bought and sold on an open public exchange like the New York Stock Exchange. Those shares are often called “publicly traded equity” or just “public equity.” Investing in public equity is easy and inexpensive for individual retail investors and institutions like pension plans. There are many pre-packaged portfolios in the form of mutual funds and ETFs (exchange-traded funds) to facilitate investing in broad or narrow segments of the public equity market.

“Private equity” investing typically involves participating in a complex legal structure called a “limited partnership” (see **Q3**: What is a “Limited Partnership”?) that owns shares of stock in companies. Unlike public equity, those shares are generally not traded on an exchange but are “privately held.” Private equity investments cannot be bought and sold at will like public equity shares on an exchange—they are less “liquid”—and investors’ money is generally tied up for long periods (see **Q5**: What is the typical life cycle of a private equity partnership?). Private equity investing is generally possible only for institutional investors (e.g., pension plans and university endowments) and wealthy individuals, and not for ordinary retail investors.

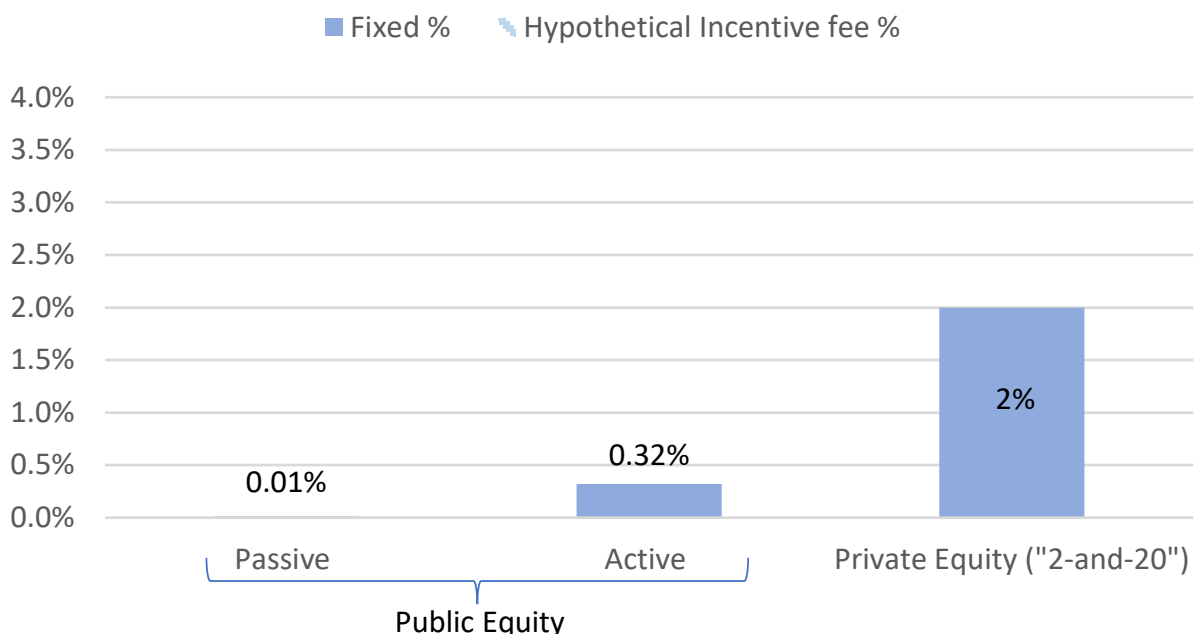
Public equity portfolios may be “passively managed” (or just “passive”), where the investments represent a large portion of the public equity market or a particular segment. A common example is the popular S&P 500 index fund. Alternatively, a public equity

portfolio may be “actively managed,” in which case its composition reflects the views of a portfolio manager as to which specific publicly traded stocks she expects to appreciate more or less than the overall market.

Private equity portfolios, by definition, are actively managed. There is no private equity analog to an index fund, for example.

The annual fees that institutional investors like pension plans will pay for public equity strategies will largely depend on whether they are actively or passively managed. For private equity, the “2-and-20” structure—2% of assets per year plus 20% of profits—is prototypical (see [Q6](#): What are the typical fee structure and levels and how are returns allocated between the GP and LP in a typical LPA?).

FIGURE 1: TYPICAL FEES FOR U.S. EQUITY PORTFOLIO STRATEGIES



Source (Public Equity figures): 2023 Investment Management Fee Study—*Callan Institute*. The figures shown are weighted averages.

As shown in Figure 1, the cost of equity investing, from least expensive to most expensive, is in this order:

1. Passive diversified portfolios of publicly traded securities

If one desires to invest in the U.S. stock market in its entirety, buying a Russell 3000 fund is a very inexpensive way to do that. It represents 97% of the value of all U.S. public equities.⁴ The only expenses are trading, which is minimal, and administration and recordkeeping, which are automated and thus also small. It does not require anyone to research and choose individual stocks. The stocks can be bought and sold easily (they are liquid).

Investing in a stock index like the Russell 3000—or the S&P 500, which consists of 500 large companies—represents, over the long term, participation in the overall growth of the U.S. economy without having to predict where it might come from.

2. Actively managed portfolios of publicly traded securities

These portfolios, relative to the overall market or a chosen benchmark index, are invested disproportionately in specific securities, sectors, etc., as chosen by the portfolio manager. One well-known example in the form of a mutual fund is the Fidelity Magellan Fund.⁵

Because such a portfolio consists of liquid publicly traded securities, trading costs may be low. But the cost of a highly educated, well-compensated team to identify undervalued securities to buy—and which currently held securities to sell—at any given moment can be significant.

It turns out that the effort and expense associated with actively managed public equity portfolios are rarely worthwhile. That is, passively managed index funds outperform most actively managed public equity funds over long periods. John Bogle, known as the father of the index fund and founder of The Vanguard Group, famously said: “Don’t look for the needle in the haystack. Just buy the haystack.”⁶

⁴ “Russell 3000 Index,” Article, Wikipedia, updated 28 Jun 2023. https://en.wikipedia.org/wiki/Russell_3000_Index (accessed 22 Sep 2023).

⁵ “Fidelity Magellan Fund,” Article, Wikipedia, updated 21 Aug 2023. https://en.wikipedia.org/wiki/Fidelity_Magellan_Fund (accessed 8 Nov 2023).

⁶ Jeff Sommer, “Mutual Funds That Consistently Beat the Market? Not One of 2,132,” *The New York Times*, 02 Dec 2022. [NYTimes.com. https://www.nytimes.com/2022/12/02/business/stock-market-index-funds.html](https://www.nytimes.com/2022/12/02/business/stock-market-index-funds.html) (accessed 08 Nov 2023); Financial Times Editorial Board, “Can stock pickers fight the rise of passive investors?” *Financial Times*, 1 Mar 2024. [FT.com. https://on.ft.com/3SZEnR4](https://on.ft.com/3SZEnR4) (accessed 2 Mar 2024).

3. Actively managed portfolios of privately held securities

Private equity funds are, by their nature, actively managed. The companies are handpicked by fund managers. The number of securities in a fund is small and reflects an investment theme (like technology, green energy, car washes, or veterinary clinics—see **Q9**: What types of companies and industries are represented in typical buyout investment portfolios?). There is no haystack one can buy to participate in a broad private equity market.

Investing in private equity funds means accepting both (a) a fund manager claiming to be able to deliver superior returns through access to opportunities and exceptional skill in choosing which to invest in, and (b) significant expense, as it is costly to find and transact in companies that are not publicly traded. Fees are significantly larger than for most other types of investing (except possibly hedge funds—see **Q13**: What’s the difference between private equity funds and hedge funds?).

Legal fees are high and may account for 4% of committed capital.⁷ Those and other large up-front expenses typically result in negative returns (losses) in the early years of private equity funds. The hope is that returns eventually exceed those expenses, and then some, to deliver the promised extraordinary returns (see **Q5**: What is the typical life cycle of a private equity partnership?).

As noted earlier, private equity limited partnership stakes are illiquid. They require the investor to commit funds for 10 or so years, and if an investor wishes and is able to cash out early, it will likely be at a significant discount to the then-reported values of the assets held (see **Q5**: What is the typical life cycle of a private equity partnership? and **Q11**: What are secondary funds/transactions and continuation funds?). These investments are also mostly “blind pools,” meaning that the portfolio companies have not yet been determined when the commitment to invest is made. Investing entails having faith in the manager, not assessing the portfolio, which is impossible.

The illiquidity and absence of observable market data mean that reported portfolio values before fund termination are estimates (appraisals), making it difficult if not impossible to know how the investments are faring prior to the end of a fund’s term.

⁷ John Gapper, “Private equity lawyers are taught to eat what they kill,” *Financial Times*, 18 Aug 2023. FT.com. <https://www.ft.com/content/e673c1f8-b23f-40ac-874c-cf58d038e657?shareType=nongift> (accessed 22 Sep 2023).

And those appraisals are usually reported on a lag of three months versus the reporting of other assets.

Private equity is facing significant market headwinds from higher interest rates and other economic developments. The CEO of Apollo, one of the largest private equity firms, declared the “end of an era.”⁸ Regulatory headwinds associated with increased SEC and FTC scrutiny add to the challenges (see [Q33](#): What’s happening on the regulatory front?). Notwithstanding recent, and likely future, difficulties, private equity remains popular because of the promise of extraordinary returns, with some public pension funds planning to ramp up their investments.

The goal of the following Q&As is to explain private equity. The descriptions are general; each private equity fund will have unique aspects not captured here. This article is informational only and should not be considered investment advice.

⁸ Antoine Gara, “Apollo chief warns private equity industry ‘in retreat’ as rates rise,” *Financial Times*, 3 Aug 2023. FT.com. <https://on.ft.com/3sSU3Mo> or <https://www.ft.com/content/7d24db29-9046-42d3-a221-efb9e54db702?shareType=nongift> (accessed 19 Sep 2023).

PART 2

WHAT IT IS AND HOW IT WORKS

Q1: WHAT EXACTLY IS PRIVATE EQUITY?

“Private equity” is an ownership stake (shares of stock) in companies, the shares of which are not traded publicly on an exchange (like the NYSE or NASDAQ).

Private equity is classified as an “alternative” investment, meaning it does not involve publicly traded stocks or bonds or cash. Other alternative investments include venture capital (often considered a subset of private equity), real estate, hedge funds, infrastructure, private debt (non-bank loans other than bonds), and commodities.

Q2: IF PRIVATE EQUITY ISN'T TRADED IN A PUBLIC MARKET, HOW CAN A PLAN INVEST IN IT?

Plans typically invest in private equity through a “limited partnership” (see [Q3](#): What is a “Limited Partnership?”). “Direct investing” or “co-investing” (see [Q14](#): What is “direct investing” or “co-investing?”) is becoming more popular as another way to invest in non-public companies.

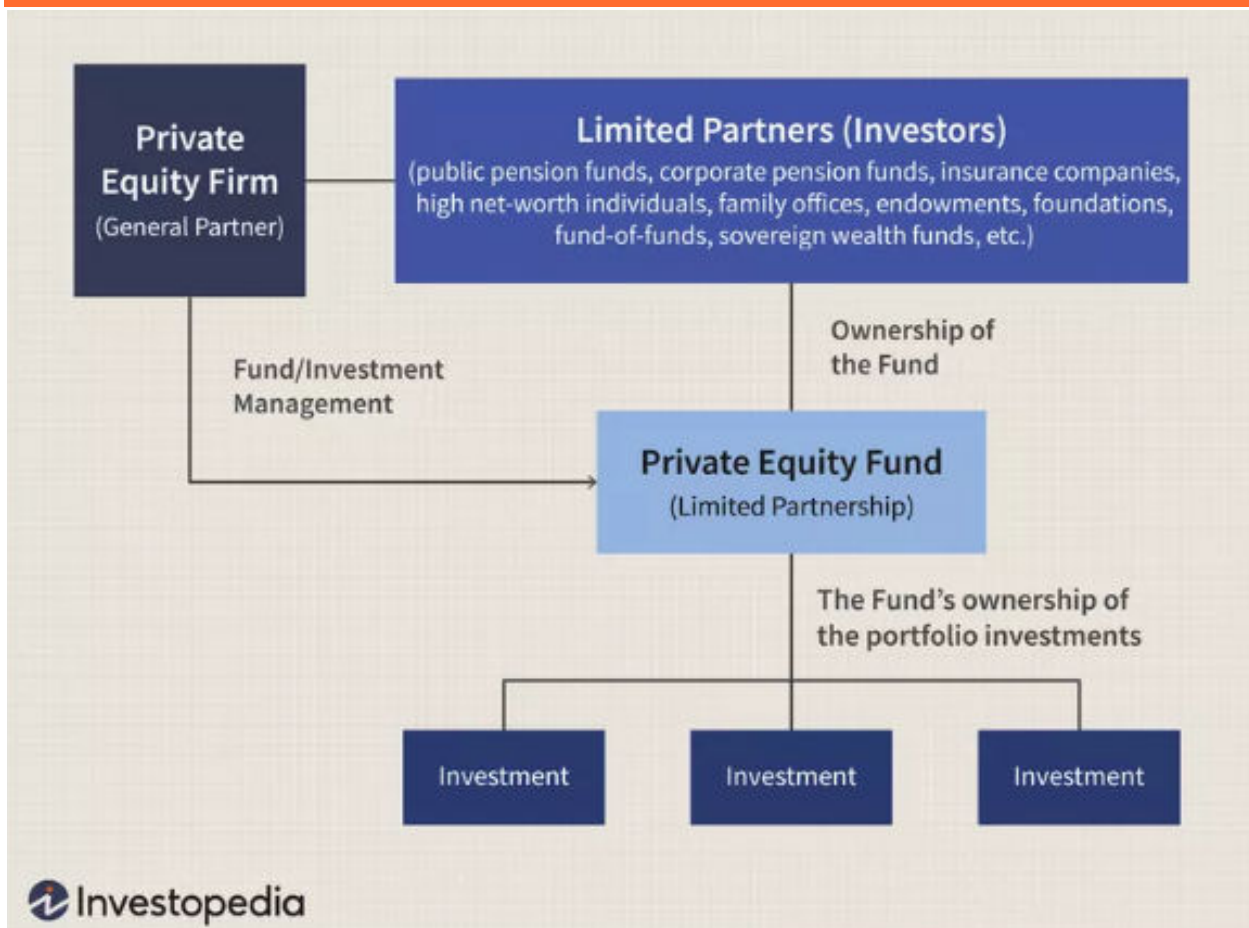
Q3: WHAT IS A “LIMITED PARTNERSHIP”?

A “limited partnership” is a legal arrangement between a “general partner” (e.g., a private equity firm) and, usually, more than one “limited partner” (e.g., a pension trust).

A private equity fund is considered to be “closed-end,” meaning that there are defined time periods in the limited partnership agreement for raising funds, investing, and making distributions.

A prototypical structure would look like the following:

FIGURE 2: TYPICAL STRUCTURE OF A LIMITED PARTNERSHIP



Source: James Chen, “Private Equity Explained With Examples and Ways to Invest,” *Investopedia*, 31 Mar 2023. <https://www.investopedia.com/terms/p/privateequity.asp>

Limited partners (LPs) commit to providing a specified amount of money (“capital”) in exchange for a share of the fund’s proceeds as investments are sold. The general partner (GP) controls the fund and often invests some of its own capital (though a small portion of the total). The entitlements of the GP and LPs are defined in the limited partnership agreement (LPA) into which the parties enter.

The LPA stipulates that capital will be returned within a fixed period, e.g., 10 years. It defines the allowable investments with respect to size, company types, geography, and fees. It includes a distribution “waterfall” (see **Q7**: What is the LPA “waterfall?”) that specifies how returned capital and profits are ultimately distributed to the LPs and the GP.

Q4: ARE ALL LIMITED PARTNERS TREATED EQUALLY?

No. The use of “side letters” has become common. These are agreements between an individual LP and the GP that add rights or duties to the LPA or modify provisions that would otherwise apply. Examples of side letter provisions include:

- Fee waivers or adjustments
- Confidentiality provisions for the LP and/or the GP. For example, this may prevent an LP from knowing the identity of other LPs
- “Most favored nation” (MFN) provisions specifying that the GP will provide the LP with specified rights at least as favorable as those granted to any other LP (e.g., lowest fees)
- Enhanced reporting
- Enhanced liquidity rights for the LP, e.g., to sell their interest in the partnership
- Ability to co-invest with the GP (see **Q14**: What is “direct investing” or “co-investing”?)⁹

The future use of side letters may be restricted under new rules issued by the SEC (see **Q33**: What’s happening on the regulatory front?).

⁹ “The top 10 terms in side letters,” Ontra.ai, 22 Dec 2022. <https://www.ontra.ai/blog/the-top-10-terms-in-side-letters/> (accessed September 4, 2023).

Q5: WHAT IS THE TYPICAL LIFE CYCLE OF A PRIVATE EQUITY PARTNERSHIP?

A typical lifespan, which would be defined in the LPA, would be 7-10 years. LPs may invest in several funds sponsored by the same GP concurrently and/or sequentially. It is typical for an LP to participate in later fund “vintages” of a GP with which the LP already invests, resulting in a long-lasting relationship.

The lifespan of a particular fund vintage consists of the following stages, which may overlap. For example, some investments may be sold even as others are being acquired.

FIGURE 3: THREE STAGES OF PRIVATE EQUITY PARTNERSHIPS



Stage 1: Capital Calls

By signing onto an LPA, an LP commits to investing a specified amount during the fund’s lifetime. Private equity limited partnerships are generally “blind pools,” meaning that LPs commit to invest based on the stated fund strategy, etc., without knowing what the specific investments will be. The GP notifies the LP when funds are needed for an investment and/or administrative expenses. The notification is known as a “capital call.” Funds that LPs have committed to invest but have not yet been called are referred to as “dry powder.”

Because capital calls are made early to cover start-up and acquisition expenses before investments are made, LPs will generally experience a negative return until the fund has made investments that have appreciated. The expected pattern of profitability is referred to as the “J-curve” because graphing profitability over time results in a line that resembles the letter “J”—it dips below zero for a time, and then, it is hoped, rises well above zero as the fund matures.

Stage 2: Investment and Portfolio Management

The GP uses the “paid-in capital,” the amounts that GPs have collected from LPs as commitments, to acquire companies and possibly intervene in their business operations and management to increase their value.

Stage 3: Harvesting and Exits

The GP exits the investments and distributes funds in accordance with the terms of the LPA (see **Q10**: How does a private equity GP close out a private equity fund toward the end of its term and pay off LPs and itself?). LPAs frequently allow for some extension of the fund term, usually for a limited time (e.g., two years) to maximize profitability and facilitate investments being liquidated in an orderly way. The ability to extend the term of a fund arguably makes the GP conflicted as it allows for the collection of fees for a longer period than initially contemplated.¹⁰

Q6: WHAT ARE THE TYPICAL FEE STRUCTURE AND LEVELS AND HOW ARE RETURNS ALLOCATED BETWEEN THE GP AND LP IN A TYPICAL LPA?

Fees are high and their structures are complicated, having evolved to compensate LPs for risk, incentivize GPs to perform, and cover administrative and operational expenses, which are much higher than for funds of publicly traded equities. The GP is typically entitled to an annual investment fee of 1.5%-2.0% of the LP capital committed (even if not yet called and put to work) for each year of the fund’s term. The management fee may be decreased at specified times, e.g., once the investment stage is over. The GP also will be entitled to a percentage of the fund’s profits, typically 20%, which is called “carried interest” or “carry” or the “incentive fee.”

LPs are entitled to an annual “preferred return” or “hurdle” on invested capital of, typically, 8%. The LP will receive all profits until the hurdle is reached, after which the GP receives a share. Often, the GP’s share will be higher than 20% of the excess over the hurdle rate for a time, called a “catch-up,” so that the GP’s share of the total profits will end up at 20% (with

¹⁰ Heather Hays and Michael Gallagher, “How term extensions can impact the investor economically,” Colmore.com, *Colmore from Preqin*. Aug 2023. <https://www.colmore.com/how-term-extensions-can-impact-the-investor-economically/> (accessed 7 Sep 2023).

the LP getting at least the 8%/year return on its capital). A 2% management fee combined with a 20% share of profits is where the phrase “2-and-20” comes from in describing a typical fee structure.

There are many nuances and variations—who pays which administrative expenses, how the catch-up works, step-downs in management fees, etc.—that will be specified in an LPA, and that are important for LPs to understand.¹¹ Also, LPs should be cognizant that the performance on which the “incentive fee”—the “20” in “2-and-20”—is based can be more the result of overall market performance than GP skill in picking portfolio companies, restructuring them, and/or improving their operations. For example, if a broad stock market index returns 75% over the 10-year life of the fund, and the private equity fund returns 70%, the manager of the latter would collect 14% (20% of 70%) in addition to the annual management fee, despite having earned less than could have been earned by investing passively in public equities at a much lower management cost (and without sharing the gains). The 2-and-20 fee structure remains predominant despite calls for change.¹²

Q7: WHAT IS THE LPA “WATERFALL”?

The waterfall describes the amount and timing of the distributions to the LPs and the GP when investments start being harvested. Under a “European” waterfall, the proceeds are allocated to LPs until the preferred return on the entire investment (including investments not yet harvested) is paid, and only then does the GP receive carried interest. Under an “American” waterfall, the accounting is done investment by investment; the preferred return on just the harvested investments needs to be paid for the GP to start receiving carried interest, so the GP generally receives carry earlier than under a European waterfall.

Although the amounts received over a fund’s life are the same under either waterfall type, an LP’s rate of return will be higher (and the GP’s rate of return will be lower) under a European waterfall because the LP receives its share of proceeds earlier. Under an American waterfall, the return on the fund may dip below the hurdle rate after the GP has received some carry, so there is often a clawback provision in the LPA along with a

¹¹ Hilary Wiek, “The Fine Print: Unraveling Fund Fees and Terms Digging into financial implications of terms in limited partnership agreements,” *PitchBook*, 10 Sep 2020. https://files.pitchbook.com/website/files/pdf/PitchBook_Q3_2020_Analyst_Note_The_Fine_Print_Unraveling_Fund_Fees_and_Terms.pdf (accessed 20 Sep 2023).

¹² Avi Turetsky, et. al., “Calculating Outperformance in Dollars: Introducing the Excess Value Method,” *The Journal of Portfolio Management* Vol 47 Issue 6 (May 2021). 194-215. (Aug 2023)

requirement that a portion of the pre-term carry be held in escrow. In practice, a private equity fund's specified waterfall may reflect a complicated combination of concepts embodied in both types.¹³

Q8: WHAT ARE THE DIFFERENT TYPES OF INVESTMENT STRATEGIES (FUND TYPES) REPRESENTED IN PRIVATE EQUITY?

The nomenclature varies, but broadly:

Buyouts are the most prevalent and largest type by “assets under management” (AUM), the total amount that an asset manager invests on behalf of client investors.¹⁴ “In a buyout investment, the investor often has complete or majority ownership and control of the company. Frequently, investors ‘shake up’ or replace the management teams and are relatively involved in operational decision-making... The investor controls investments in the equities of mature private companies using a combination of equity and debt.”¹⁵

Venture capital may be what most people think of when they hear “private equity.” It consists of investments in young, often not-yet-profitable, companies, in the hope of realizing an extraordinarily large return. It involves the substantial risk of investing in a company that might not ultimately be a viable business.

Other strategies center on distressed company turnarounds, or providing “growth equity” for young companies that have shown promise, or are “secondary” or “continuation” funds that buy private equity fund stakes, usually at a discount to previously reported values, from LPs that want to exit at or before the fund term (see **Q11**: What are secondary funds/transactions and continuation funds?).

¹³ “Distribution Waterfalls The definitive guide for limited partners,” CSC, 2023. <https://www.cscgfm.com/en/resources/reports/distribution-waterfalls/> (Downloaded 11 Sep 2023).

¹⁴ Tim Clarke (lead analyst, private equity), “US PE Breakdown Q2 2023”, PitchBook Data, Inc. (Published 11 Jul 2023, 32). <https://pitchbook.com/news/reports/q2-2023-us-pe-breakdown>; “Private Equity & Venture Capital,” Preqin.com, *Preqin Academy*. <https://www.preqin.com/academy/lesson-4-asset-class-101s/private-equity-venture-capital> (accessed 11 Sep 2023).

¹⁵ “Private Equity & Venture Capital,” Preqin.com, *Preqin Academy*

Q9: WHAT TYPES OF COMPANIES AND INDUSTRIES ARE REPRESENTED IN TYPICAL BUYOUT INVESTMENT PORTFOLIOS?

Companies owned privately are not predominantly cutting-edge and are sometimes household names. Examples include PetSmart, Arby's, and Ancestry.com (which was publicly traded from 2009-2012).¹⁶ Industry examples include nursing homes, dentist offices, auto-repair shops, dry cleaners, and car washes.¹⁷

For the first half of 2023, “middle market” funds—roughly involving companies worth between \$25 million and \$1 billion, in funds ranging from \$100 million to \$5 billion—were predominant in the buyout market, comprising about 88% of U.S. buyout capital raised as compared with 45.4% in 2022.¹⁸ Recent economic conditions, including higher interest rates and depressed company valuations, favor these smaller-sized favorably priced deals requiring less borrowing.

Q10: HOW DOES A PRIVATE EQUITY GP CLOSE OUT A PRIVATE EQUITY FUND TOWARD THE END OF ITS TERM AND PAY OFF LPS AND ITSELF?

There are several ways for a GP to wind down a fund at the end of its term. Portfolio companies may become public through the sale of shares on a stock exchange by an “initial public offering” (IPO). They may be sold to publicly traded or privately owned strategic buyers, i.e., companies in the same or a complementary industry that hope to achieve economies of scale, additional customers, or “vertical integration” through owning parts of their supply chain, for example. Companies may be taken private by their management teams. Finally, companies may be sold to another private equity firm (a “secondary

¹⁶ Kelly Knickerbocker, “What is private equity and how does it work,” *PitchBook blog*, 22 Dec 2022. <https://pitchbook.com/blog/what-is-private-equity>, (accessed 2 Sep 2023).

¹⁷ Miriam Gottfried, “Private Equity Wants to Wash Your Car,” *The Wall Street Journal*, 20 Aug 2022. https://www.wsj.com/articles/private-equity-wants-to-wash-your-car-11660968031?st=cs2maf81nghij79&reflink=share_mobilewebshare.

¹⁸ Madeline Shi, “Investors take fancy to middle-market buyout funds,” *Pitchbook.com*, 16 Jun 2023. <https://pitchbook.com/news/articles/middle-market-buyout-funds-1Q-2023> (accessed 11 Sep 2023); Maria Armental, “Middle-Market Firms Shine in a Subdued Private-Equity Landscape,” *The Wall Street Journal*, 14 Sep 2023. https://www.wsj.com/articles/middle-market-firms-shine-in-a-subdued-private-equity-landscape-4d84fd53?st=bjo9hcsu3255n8l&reflink=desktopwebshare_permalink

transaction”) or to another fund (a “continuation fund”) at the same firm (see **Q11**: What are secondary funds/transactions and continuation funds?).

Q11: WHAT ARE SECONDARY FUNDS/TRANSACTIONS AND CONTINUATION FUNDS?

Sometimes LPs may wish to exit an investment before a fund’s term ends, or the fund’s term is coming to a close and the GP does not wish to liquidate, either because the market is not favorable or the GP believes there is more value to be realized by holding onto the companies.

An active market for “secondaries” has developed and is growing, allowing LPs to sell their interests in a fund, often at a discount to the reported net asset value.

GPs may also lead a fund restructuring, for example, through a “continuation fund.” Some of the portfolio’s assets are transferred to a successor fund led by the same GP, possibly cashing out LPs who do not wish to participate and/or bringing in new investors. In this type of transaction, there are conflicts of interest to overcome concerning how the assets are priced because the GP is both the buyer and the seller.¹⁹ Other creative solutions have emerged to allow LPs to recover invested capital and/or minimize investment write-downs.

Q12: HOW ARE THE REPORTED VALUES OF A PRIVATE EQUITY FUND'S HOLDINGS DETERMINED BEFORE DISTRIBUTIONS ARE MADE?

The value of a publicly traded stock can be known with certainty during all hours it is traded, i.e., hours the relevant exchange is open. The values of companies within a private equity fund that are not traded can only be estimated based on a valuation model and assumptions. Two appraisers working independently will likely come up with different values. Determining values is said to be more art than science. Models for estimating the

¹⁹ “GP-led Secondary Fund Restructurings Considerations for Limited and General Partners,” *Institutional Limited Partners Association*, Apr 2019. <https://ilpa.org/gp-led-restructurings/> (20 Sep 2023).

value of a portfolio company include referencing comparable publicly traded companies or discounting estimated future cash flows.²⁰

Q13: WHAT'S THE DIFFERENCE BETWEEN PRIVATE EQUITY FUNDS AND HEDGE FUNDS?

Because each is considered risky and is less regulated than public market investments, both are restricted to investors considered sophisticated (“accredited”). They both aim for superior returns and/or to diversify a portfolio beyond traditional investments. Both generally are legally structured as limited partnerships and have similar fund manager fee structures that include an ongoing management fee (e.g., 2% of assets) and profit participation (e.g., 20%) for the fund managers.

Unlike private equity, hedge funds generally operate in public markets and often involve a proprietary trading strategy—maybe including derivatives (options, futures, etc.) and short-selling (borrowing publicly traded shares of stock and selling them, hoping to profit when, as they expect, the price decreases)—in the hope of exploiting perceived market inefficiencies.

Because they operate in public markets and may involve short-term trading, hedge funds are generally more liquid than private equity, and while there may be a required waiting period or other restrictions on investors cashing out, more frequent redemptions are possible.

Another difference is that in hedge funds money is put to work immediately. With private equity, the commitment is made but resulting “capital calls” happen gradually over time.²¹

However, the lines between the two are blurring somewhat. Although hedge funds have traditionally operated mostly in public markets, there is a trend of hedge funds investing in privately held investments, similar to private equity funds, especially venture capital. As of November 2021, hedge funds were on track to account for about 25% of invested private

²⁰ Chris B. Murphy, “How to Value Private Companies,” Investopedia.com, *Investopedia*. 30 Nov 2021. <https://www.investopedia.com/articles/fundamental-analysis/11/valuing-private-companies.asp> (accessed 12 Sep 2023).

²¹ Tim Vipond, “Private Equity vs Hedge Fund Guide,” corporatefinanceinstitute.com, *Corporate Finance Institute*. Updated 15 Jun 2023. <https://corporatefinanceinstitute.com/resources/equities/private-equity-vs-hedge-fund/> (accessed 6 Sep 2023).

capital, according to S&P Global Market Intelligence. But there are some notable differences in their approach versus private equity funds:

As hedge funds increasingly chase the same private investments as PE [private equity] and VC [venture capital] firms, their differentiated investment approach is changing the fundraising paradigm for companies. Hedge funds are often willing to invest at higher valuations, and in some cases they are leading or acquiring entire rounds [of venture capital fundraising], streamlining the due diligence process and getting checks to the companies faster. Hedge funds also tend to be less involved in portfolio companies' operations, rarely seeking board seats or strategic changes.

Their [hedge funds'] focus is squarely on the investment opportunity, which has grown sharply as private companies stay private longer by increasingly raising more capital—and creating more value—prior to seeking an IPO.²²

Q14: WHAT IS “DIRECT INVESTING” OR “CO-INVESTING”?

Direct investing is the term for plan investments in private companies through direct arrangements with the individual companies as opposed to a limited partnership with a GP. Sometimes, a plan that invests through a limited partnership will be afforded an opportunity in the LPA or a side letter agreement (see **Q4**: Are all limited partners treated equally?) to directly invest in some of the partnership's portfolio companies alongside the partnership (“co-investing”). Co-investment may result in reduced management and performance fees for the plan. The GP that thus forgoes fees may allow this as a way to strengthen the long-term relationship so the LP is more likely to invest in future funds sponsored by the GP. It also allows the partnership portfolio to diversify to a greater extent; with a given amount of total capital commitments to a limited partnership's private equity fund, the partnership portfolio can hold smaller stakes in more companies.

²² “Three considerations for hedge funds investing in private assets,” Blog post, S&P Global Market Intelligence, *S&P Global*, 10 Nov 2021. <https://www.spglobal.com/marketintelligence/en/mi/research-analysis/three-considerations-hedge-funds-when-investing-private.html> (accessed 10 Sep 2023).

PART 3

SIZE AND INFLUENCE OF PRIVATE EQUITY

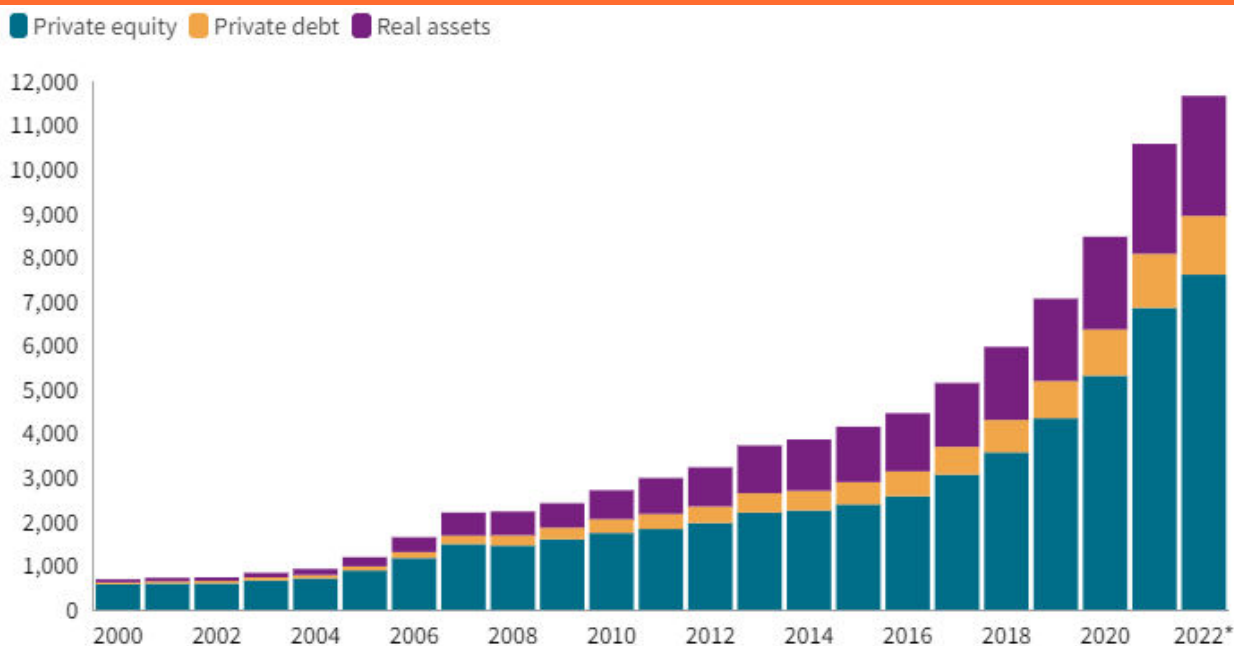
Q15: HOW BIG IS THE MARKET FOR PRIVATE EQUITY IN TOTAL?

As of June 2022, there was about \$7.6 trillion in private equity, comprising most of the \$11.7 trillion in total private AUM. For context, the value of stocks traded on U.S. stock markets as of June 30, 2023 was about \$46 trillion.²³ Investments in private assets have grown exponentially in recent years.²⁴

²³ “Total Market Value of the U.S. Stock Market,” *siblisresearch.com*, *Siblis Research*. <https://siblisresearch.com/data/us-stock-market-value/> (accessed 13 Sep 2023).

²⁴ Evan Gunter and Ruth Yang and Leon Sinclair, “Private Markets: Still Waters Run Deep,” *spglobal.com*, *S&P Global*. 18 Apr 2023. <https://www.spglobal.com/en/research-insights/featured/special-editorial/look-forward/private-markets-still-waters-run-deep> (accessed 9 Sep 2023).

FIGURE 4: ASSETS UNDER MANAGEMENT TREND OF ALTERNATIVE ASSETS, 2000-2022 (\$B)



Data compiled Feb. 24, 2023.

* As of end-June 2022.

Assets under management represents the total value of dry powder and unrealized value. Real assets includes real estate, natural resources and infrastructure funds.

Source: Preqin Pro.

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Source: <https://www.spglobal.com/en/research-insights/featured/special-editorial/look-forward/private-markets-still-waters-run-deep>

Q16: HOW SIGNIFICANT ARE PRIVATE EQUITY AND OTHER ALTERNATIVE INVESTMENTS FOR PUBLIC PENSION PLANS?

For reporting year 2022, private equity accounted for 13% of \$5.3 trillion of U.S. public pension plan assets, up from less than 4% in 2001.²⁵ Alternatives other than private equity account for another 21% of assets, the largest being real estate (10%) and hedge funds (7%).²⁶

²⁵ Public Plans Data, Center for Retirement Research at Boston College (CRR), updated 28 Jul 2023. <https://publicplansdata.org/quick-facts/national/> (accessed 11 Aug 2023).

²⁶ Ibid.

Q17: AND HOW SIGNIFICANT ARE PUBLIC PENSION PLANS FOR THE PRIVATE EQUITY INDUSTRY?

A Bloomberg article cited figures from a recent paper estimating that public pension plans account for “31.3% of all investors to private equity funds and ... 67% of their [private equity] capital.”²⁷ A 2022 *Institutional Investor* article cited 35% of capital,²⁸ and a recent Preqin article referenced a June 2023 dollar amount of \$1.41 trillion (probably including non-U.S. plans together with U.S. plans).²⁹

According to Private Equity International, of the top 20 investor commitments to private equity during 2023, 17 were U.S. public pension plans accounting for 75% of the dollar amount of commitments (the largest, not a U.S. public pension plan, was the Abu Dhabi Investment Authority comprising 16% of the total).³⁰ It would be fair to say that public pension plans have significantly driven the evolution of the private equity industry.

²⁷ Allison Schrage, “Pension Funds Share Blame for Private Equity’s Horror Stories,” Bloomberg.com, 8 May 2023. https://www.bloomberg.com/opinion/articles/2023-05-08/to-fix-private-equity-s-problems-start-with-pension-funds?utm_source=website&utm_medium=share&utm_campaign=copy; Vrinda Mittal, “Desperate Capital Breeds Productivity Loss: Evidence from Public Pension Investments in Private Equity (22 Nov 2022). Available at SSRN: <https://ssrn.com/abstract=4283853> or <http://dx.doi.org/10.2139/ssrn.4283853>

²⁸ Jessica Hamlin, “The SEC Is Bearing Down on Private Equity. Blame Public Pensions,” *Institutional Investor*, 25 Jan 2022. <https://www.institutionalinvestor.com/article/2bstoaurgvddtkq830idc/corner-office/the-sec-is-bearing-down-on-private-equity-blame-public-pensions>; William W. Clayton, “How Public Pension Plans Have Shaped Private Equity,” 81 *Md. L. Rev.* 840 (2022) Available at: <https://digitalcommons.law.umaryland.edu/mlr/vol81/iss3/3>

²⁹ “Trending Data: Public pension funds are a key investor for private equity,” Preqin.com, 25 Aug 2023. <https://www.preqin.com/insights/research/reports/trending-data-public-pension-funds-are-a-key-investor-for-private-equity> (Accessed 4 Sep 2023).

³⁰ Carmela Mendoza and Wassyl Abdessemed, “Investor Report Full Year 2022,” *Public Equity International*, 2023.

PART 4

POPULARITY OF PRIVATE EQUITY

Q18: WHY DO PUBLIC PENSION PLANS INVEST IN PRIVATE EQUITY?

Proponents claim many virtues that boil down to high expected returns, low risk, and portfolio diversification of publicly traded assets. The assumed higher expected return of private equity leads to the plan actuary being able to justify a higher discount rate than would be possible without it, which in turn leads to lower reported liabilities and therefore lower near-term contribution requirements (see [Q31](#): How does private equity affect reported plan liabilities and funding?).

Professed reasons for the higher returns include:

- GP carried interest and its investment alongside the LP aligns the interests of GPs with those of LPs and incentivizes GPs to earn high returns that they presumably have the skills to achieve.
- Private equity has a theoretical “illiquidity premium.” Rational participants in properly functioning financial markets would require illiquid investments like private equity, which cannot be bought and sold at will, to provide higher expected returns than comparable publicly traded investments, all else equal. Another way to say this is that an illiquid investment should cost less than a comparable publicly

traded investment, which results in the higher expected return for the illiquid investment. An illiquidity earnings premium is thus equivalent to an illiquidity price discount.

- GPs are thought to be skilled investors and professional managers who add value by choosing investments with generally unrecognized potential and often by improving their business operations.

The claimed additional diversification is because private equity theoretically comprises an expanded set of investment opportunities versus those available only in public markets. According to CapitalIQ data, as of January 2022, about 87% of companies with over \$100 million of annual revenue are private, and in recent years, companies are staying private for a longer period before going public, and the number of publicly listed companies has been shrinking over time.³¹ Further, the supposed lack of correlation with other asset classes should in theory lead to improved portfolio diversification resulting in more efficient portfolios.

Q19: WHY ARE SO MANY COMPANIES GOING OR STAYING PRIVATE LONGER?

Explanations for the growing prevalence of companies remaining private instead of going public, either indefinitely or for longer periods than in recent history, include:

- Companies—especially those being restructured, and young companies that are not yet profitable but are expected to be in the future—are, it is claimed, more difficult to manage in the public eye where financial results must be reported quarterly. The public market reaction to day-to-day news and developments is thought to be too extreme. Officers of publicly traded companies are, it is said, thus forced to have a short-term focus. Private equity investors, in contrast, are theoretically more long-term oriented.³²
- Quarterly reporting and other regulatory compliance for public companies is expensive.

³¹ “Private Market Investing: Staying Private Longer Leads to Opportunity,” HamiltonLane.com, Hamilton Lane. 14 Apr 2022. <https://www.hamiltonlane.com/en-us/insight/staying-private-longer>(accessed 5 Sep 2023).

³² Christopher Schelling, “Why Private Equity Gets Valuations Right,” InstitutionalInvestor.com, 14 Dec 2022. <https://www.institutionalinvestor.com/article/2bstolqfnrubgolg5zj0g/opinion/why-private-equity-gets-valuations-right> (accessed 12 Sep 2023).

- There is ample investment capital available for private companies from public pension plans, endowments, and other institutional and high-net-worth investors looking for the financial benefits of investing privately.

Q20: WHAT PERFORMANCE METRICS ARE USED TO EVALUATE RETURNS ON PRIVATE EQUITY?

There are three common metrics:

1. **Internal rate of return (IRR):** Based on the amounts and timing of the actual investments made and the money received from them, including the value of remaining investments, IRR is the single rate that, if earned throughout the investment period, would account for the amounts received. Before all investments are liquidated, the value of the remaining fund investments used in the IRR calculation is the GP's estimate (see **Q12**: How are the reported values of a private equity fund's holdings determined before distributions are made?). IRR can be expressed either as gross of fees (before GP fees are removed) or as net of fees (after fee removal, reflecting what is actually received by an LP). For most purposes, net-of-fees IRR is more relevant.
2. **Total Value to Paid-In Capital (TVPI):** The ratio of (a) amounts received from the fund to date plus the estimated residual value of assets remaining, to (b) the total amounts contributed to the fund.³³
3. **Public Market Equivalent (PME) indicators:** There are several varieties of PMEs, all of which are used to compare actual fund returns against those that would have been received if money had instead been invested in a public market index.

The final performance of an LP's private equity investment can only be known with certainty after its interest is liquidated. Reported values and performance during the long period between committing funds and when the investment is closed out are, at best, educated guesses.³⁴

³³ This is one term in the conceptual family of "multiples"—value, realized or unrealized, divided by amounts invested. Another term in this family is "multiple on invested capital" (MOIC). As an example, an investment that has doubled one's money would have a multiple of 2.

³⁴ Alexandra Albers-Schoenberg, "Measuring Private Equity Fund Performance," *INSEAD*, 2019. https://www.insead.edu/sites/default/files/assets/dept/centres/gpei/docs/Measuring_PE_Fund-Performance-2019.pdf

PART 5

NOT SO FAST— QUESTIONING THE CLAIMS

Q21: WHAT REASONS ARE THERE TO DOUBT THE CLAIMS OF HIGHER RETURNS, LOWER VOLATILITY, AND ADDITIONAL DIVERSIFICATION?

There is nothing inherent in the form of ownership that should affect the value, volatility, or portfolio diversification from owning shares in a business, all else equal. At a fundamental level, a private business that is taken public with no significant changes in management or strategy should be worth the same except for second-order issues like the cost of compliance with SEC rules (higher for public companies).

If an investment in a private equity portfolio of companies that are similar to one another, e.g., all are in the same industry, displaces what would otherwise be an investment in a portfolio of diversified public equity, then the investment in private equity may in fact make the overall portfolio less diversified.

While publicly traded companies should be worth more by virtue of being liquid, private equity's purported illiquidity return premium (additional gains) comes at the cost of high management fees and forfeiting 20% of returns to the GP. And the illiquidity premium will only be realized when the company eventually goes public.

If instead the company remains private, e.g., in a secondary private equity fund, there is no reason for the redeeming LP to expect to realize an illiquidity premium, as the successor LPs will similarly demand an illiquidity return premium, which would require a lower transaction price. (see **Q11**: What are secondary funds/transactions and continuation funds?).

Another reason for skepticism is that there is a relatively short history of widespread institutional investments in private equity, and market conditions have changed to the disadvantage of private equity. There is more money chasing private assets from more private equity firms that need to put large amounts of dry powder to work, so the assumption that past returns of the asset class can be matched is questionable.

Also, the reported historical returns themselves are suspect. Almost every article or paper that attempts to assess private equity's returns notes the lack of standardized measurements, and the ability of GPs to manipulate them.³⁵

The claim of both higher expected returns and lower volatility is inherently suspect, as financial markets demand higher returns for *higher* volatility. The likely basis for the claim of lower volatility is the infrequency of observable data—quarterly for private equity as opposed to daily for publicly traded companies—creating an artificial appearance of low volatility even in the absence of any manipulation or inaccuracies.³⁶

Q22: WHY HAVE PRIVATE EQUITY RETURNS APPEARED TO EXCEED THOSE OF PUBLICLY TRADED EQUITY?

The benchmarks against which private equity returns are being compared, e.g., the S&P 500, likely do not reflect the characteristics of private equity funds and thus may be inappropriate benchmarks. For example, while the S&P 500 is a diversified basket of large publicly traded companies (“large-caps”), the companies in a private equity portfolio are

³⁵ Antti Ilmanen et. al., “Demystifying Illiquid Assets: Expected Returns for Private Equity,” *The Journal of Alternative Investments* Winter 2020, Volume 22 Issue 3. <https://www.aqr.com/-/media/AQR/Documents/Whitepapers/Expected-Returns-for-Private-Equity.pdf>; Cliff Asness, “Why Does Private Equity Get to Play Make-Believe With Prices?” *Institutionalinvestor.com*, *Institutional Investor*, 6 Jan 2023.

³⁶ Matt Levine, “Private Markets Are Slower Than Public Ones,” *Bloomberg*, 27 Jul 2023. https://www.bloomberg.com/opinion/articles/2023-07-27/matt-levine-s-money-stuff-private-markets-move-more-slowly?utm_source=website&utm_medium=share&utm_campaign=copy (Accessed 18 Sep 2023).

likely smaller and carry more debt (leverage), which increases appreciation in favorable markets and losses in unfavorable markets. That is, higher volatility and risk (often hidden—see **Q21**: What reasons are there to doubt the claims of higher returns, lower volatility, and additional diversification? and **Q27**: How do private equity reporting lags distort plan accounting to make private equity appear to reduce total portfolio return volatility?) are likely hidden costs for the higher expected return.

As described in a 2020 journal article by three members of AQR (a hedge fund manager):

*...over the period 1986 to 2017, PE outperformed large-caps by 2.3%, looking at arithmetic means (AM). But when compared to a 1.2× leveraged small-cap index, this falls to just 0.7%, and PE actually underperformed a basket of small-cap value stocks by 1.6%... Nevertheless, for many investors, the bottom line is that PE firms have delivered clearly higher net-of-fee returns than the S&P 500 over the past 30 years, **even if those excess returns could be largely accounted for by using more representative publicly traded benchmarks.**³⁷ [Emphasis added.]*

That is, compared to the S&P 500, private equity looks to have performed well. But compared to a more appropriate benchmark, the performance is less impressive.

Q23: WHAT HAS OUTPERFORMANCE BEEN FOR PRIVATE EQUITY AS A WHOLE?

There seems to be a consensus that return premiums over public equities were better before the 2008 Great Financial Crisis (GFC) than in more recent years. For example, using public market equivalents (PMEs, see **Q20**: What performance metrics are used to evaluate returns on private equity?), Ilmanen, et. al., find that recent performance relative to publicly traded equities has dropped considerably. Performance after 2006 was about on par with the S&P 500 and below that of a constructed benchmark they consider to be more appropriate (see **Q22**: Why have private equity returns appeared to exceed those of publicly traded equity?).³⁸ They surmise that the decline in post-2006 investment performance was due to “increasing investor demand”—that is, more investors bidding on a given company increasing purchase prices and lowering ultimate returns—and declining (though still significant) leverage.

³⁷ Antti Ilmanen et. al., “Demystifying Illiquid Assets: Expected Returns for Private Equity.”

³⁸ Ibid.

Richard Ennis, cofounder of EnnisKnupp, has been sharply critical of the “Endowment Model” in wide use by public pension plans, a large part of which involves the use of alternative investments (“alts”) like private equity. He similarly notes a “golden era” of alts running from 1994 to 2008 and attributes the subsequent decline to “the flood of money that poured into private markets and hedge funds.” For the post-2008 era, he concludes that:

...stock and bond indexes have captured the return-variability characteristics of alternative investments in composites of institutional funds for all intents and purposes. Alternative investments did not have a meaningful impact on [public funds’ and endowments’] risk-return signature. Rather, alternative investment returns simply blend in with broad market returns in the context of standard portfolio analysis. As a result, the [public pension plan and endowment] composites earned market returns minus their respective margins of cost.³⁹

That is, alternative investments, including private equity, have not enhanced portfolio investment results after 2008 beyond what could have been obtained in the public equity and bond markets, and have in fact earned less after subtracting the higher costs.

Q24: WHY NOT JUST PICK A TOP-QUARTILE MANAGER?

Starting with David Swensen—the late Chief Investment Officer (CIO) of the Yale Endowment and originator of the Yale Model (or “Endowment Model”) on which many institutions, including public pension plans, try to base their approach to investing—the conventional wisdom has been that, because the performance of private equity varies widely from the best to the worst managers, one should pick top quartile managers. McKinsey estimated that the difference in returns between top quartile and bottom quartile private equity managers is 18.4% (2009-2019 vintage funds).⁴⁰ An earlier study by RVK “found that the spread between top and bottom quartile funds in private equity is a

³⁹ Richard Ennis, “Failure of the Endowment Model,” blog post, richardmennis.com, 26 Nov 2020. <https://richardmennis.com/blog/failure-of-the-standard-model-of-institutional-investment> (accessed 19 Sep 2023).

⁴⁰ “Private markets turn down the volume; McKinsey Global Private Markets Review 2023,” (McKinsey & Company, Mar 2023). 12. Available at: <https://www.mckinsey.com/industries/private-equity-and-principal-investors/our-insights/mckinseys-private-markets-annual-review>

whopping 12.9 percentage points compared to 1.5 percentage points for public equities funds.”⁴¹

But picking a top-quartile manager is not that simple:

It’s hard to determine who is top quartile: Picking a top-quartile manager is much harder than it sounds. As described in an article accompanying a recent *PitchBook* report:

“The question is: Do managers have some sort of innate skill that leads them to continually outperform?” said Andrew Akers, coauthor of the report. “The problem is that you’re not able to evaluate that at the time that LPs are making actual investment decisions.”... Even with the benefit of a bird’s-eye view on fund data, the report found no performance persistence [in being a top-quartile performer] for PE funds and funds-of-funds and ever-so-slight performance persistence for VC and real estate funds.... All managers want their funds to fall in the top quartile of those rankings, but in practice, far more alternative asset managers tend to claim top-quartile status than could be statistically possible, Akers said.

“That’s kind of a running joke,” he said. “You’ve never met a manager that’s not top quartile.”⁴²

From the report:

*[A]n allocator picking from the group of top-quartile families would only have a 35% to 45% chance of selecting a family whose next fund is also top-quartile—meaning that even with future information at your disposal, more than half the time you would still miss out on the best cohort of successor funds... For GPs, the poor performing dropouts also mean that the competitive landscape is constantly shifting, making it **progressively more difficult for the exceptional performers to stay exceptional.** [emphasis added]⁴³*

An earlier study by Cambridge Associates noted: “Funds can shift significantly among quartiles, with 80% to 90% of funds landing in at least three different quartiles through the

⁴¹ Andrés Ramos, “Why top quartile is more than a buzzword for LPs,” *privatemarkets.evestment.com*, *Evestment*, 2020, <https://privatemarkets.evestment.com/blog/why-top-quartile-is-more-than-a-buzzword-for-lps/> (accessed 18 Sep 2023).

⁴² Emily Burlison, “Fund performance data unhelpful for LPs when it counts,” *Pitchbook.com*, *Pitchbook*. 31 Aug 2023. <https://pitchbook.com/news/articles/fund-performance-persistence-private-markets-allocators-lps> (accessed 18 Sep 2023).

⁴³ Zane Carmean and Andrew Akers, “Allocator Solutions Q3 2023 Evaluating Persistence in Fund Performance”, Pitchbook Data, Inc., 24 Aug 2023

course of their lives.”⁴⁴ One of the seminal studies on this topic found that far more than 25% of funds can lay claim to being top quartile on some performance measure or other.⁴⁵

Q25: HOW COULD A PRIVATE EQUITY MANAGER (GP) MANIPULATE REPORTED RETURNS?

Fudging the appraised value of portfolio companies: Before a fund terminates, progress is generally measured using IRR, which depends in significant part on the interim estimated value of investments (the “net asset value” or NAV) remaining at the time of measurement. Because reported NAVs are generally determined under GP models and assumptions (since they cannot be observed in markets), there is ample opportunity to nudge results in a desired direction through model parameters.

For example, to mute return volatility, a GP’s model might set the values of portfolio companies at a fairly constant multiple of earnings instead of fully reflecting volatile “market multiples” (the factors which, when multiplied by revenue or earnings, yield price).⁴⁶

Managing capital calls and the timing of company acquisitions and sales: Inflating IRR can also be accomplished by managing cash flows, the other significant determinant for IRR, for example:

- Using borrowed funds to purchase portfolio companies instead of calling capital from LPs. This delays the start of the IRR calculation period until after the investment has been made, which increases the IRR measurement.⁴⁷

⁴⁴ Jill Shaw, “A Framework for Benchmarking Private Investments,” Cambridgeassociates.com, *Cambridge Associates*. Mar 2014. <https://www.cambridgeassociates.com/insight/a-framework-for-benchmarking/> (accessed 18 Sep 2023).

⁴⁵ Robert Harris and Rüdiger Stucke, “Are Too Many Private Equity Funds Top Quartile?,” *Journal of Applied Corporate Finance* Vol. 24, No. 4, (Fall 2012), 77-89, Available at SSRN: <https://ssrn.com/abstract=2193855> or <http://dx.doi.org/10.1111/j.1745-6622.2012.00402.x>

⁴⁶ Christopher Schelling, “Why Private Equity Gets Valuations Right,” Institutionalinvestor.com, *Institutional Investor*, 14 Dec 2022. <https://www.institutionalinvestor.com/article/2bstolqfnrubgolg5zj0g/opinion/why-private-equity-gets-valuations-right> (accessed 13 Sep 2023).

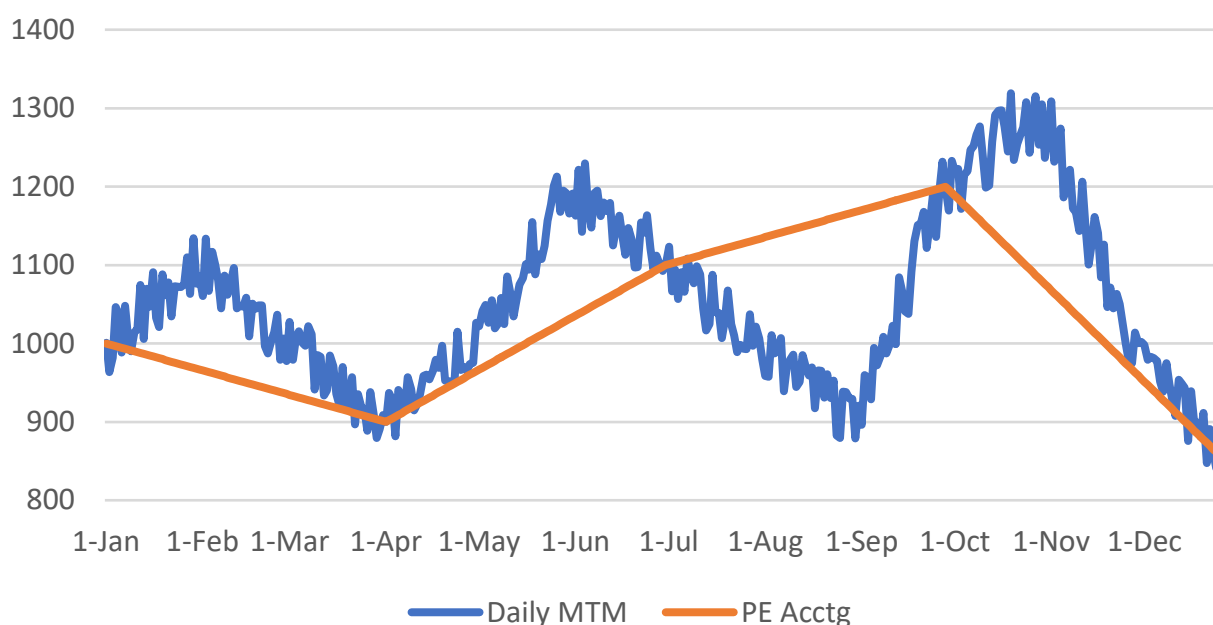
⁴⁷ Erick Podwill, “Private Equity: A Deep Dive Into Subscription Lines,” canterburyconsulting.com, *Canterbury Consulting*, 26 Sep 2019. <https://www.canterburyconsulting.com/blog/private-equity-a-deep-dive-into-subscription-lines/> (13 Sep 2023).

- Prematurely selling portfolio companies that can be sold at a high price (even if the long-term prospects seem favorable).
- Holding onto underperforming portfolio companies longer than is optimal to avoid having to mark those assets to market, or, more generally, just delaying a markdown that would be appropriate based on market conditions.⁴⁸

Q26: HOW DOES QUARTERLY APPRAISAL MASK VOLATILITY?

If a private equity fund buys a very volatile asset that is publicly traded and starts reporting its values quarterly, much of the volatility will of course be hidden. To illustrate, the graph in Figure 4 shows the market values of an illustrative (made-up) volatile asset, and how much less volatile the same asset would appear if acquired by a private equity fund (ignoring fees):

FIGURE 4: DAILY MARK-TO-MARKET VS. PE QUARTERLY ACCOUNTING



Source: Author's calculations (hypothetical example for illustration only)

⁴⁸ Blake Jackson, David C. Ling, and Andy Naranjo, "Catering and Return Manipulation in Private Equity," 11 October, 2022, Available at SSRN: <https://ssrn.com/abstract=4244467> or <http://dx.doi.org/10.2139/ssrn.4244467>

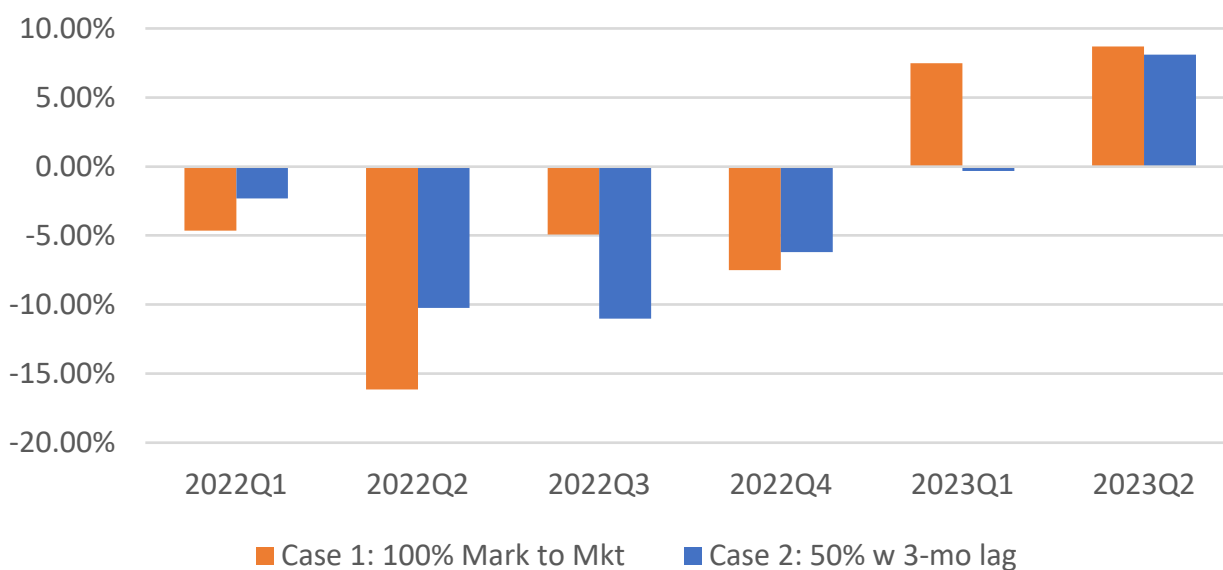
Q27: HOW DO PRIVATE EQUITY REPORTING LAGS DISTORT PLAN ACCOUNTING TO MAKE PRIVATE EQUITY APPEAR TO REDUCE TOTAL PORTFOLIO RETURN VOLATILITY?

The S&P 500 lost 16% during the second quarter of 2022. If reporting were on a similar basis to private equity, a plan's investment in an S&P 500 index fund would be overstated at June 30—a common fiscal-year-end for public pension plans—by 19% ($= 100 / 84 - 1$).

The graph in Figure 5 compares quarterly returns of a portfolio that consists solely of the S&P 500 accounted for in two ways:

1. In Case 1 (orange), the entire portfolio is marked to market (“marked”) daily.
2. In Case 2 (blue), 50% is accounted for under private equity conventions with a three-month lag and the other 50% is marked to market as in Case 1.

FIGURE 5: S&P 500 QUARTERLY RETURNS: 100% MARKET VALUE VS. 50% WITH THREE-MONTH LAG

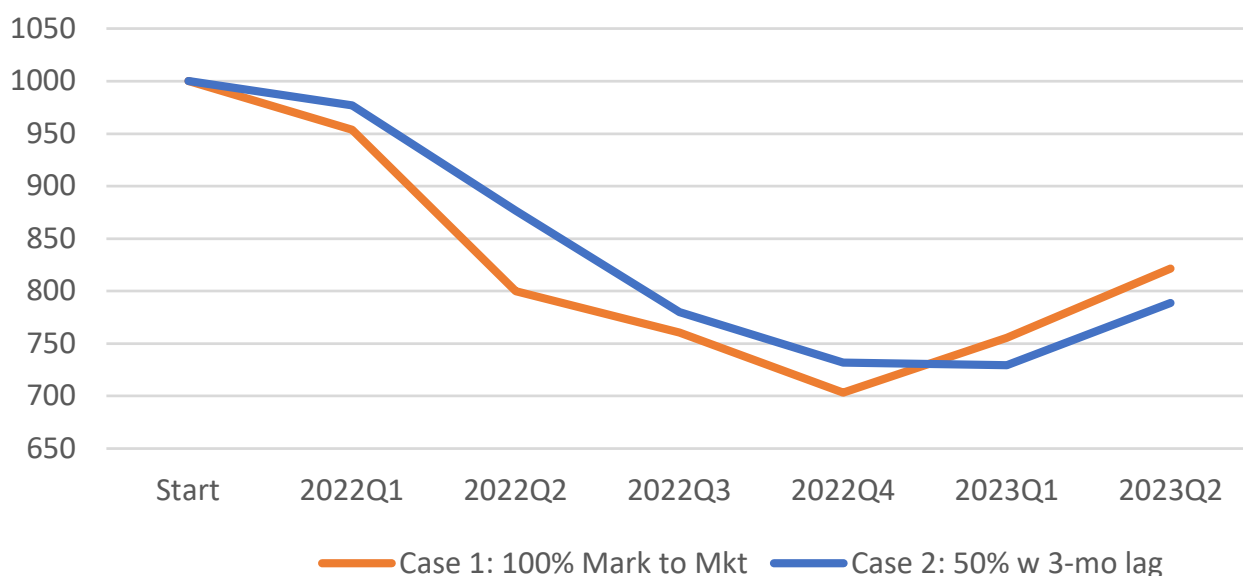


Source: Author's calculations from publicly available sources

Note that the two sets of bars represent the exact same investment. The only difference is that the blue bars account for half of the portfolio with a three-month lag. The difference in apparent returns illustrates the distortion caused by the reporting conventions that apply to private equity investments.

Similarly, if the portfolio started out at \$1,000 and was held for the six quarters illustrated, reported end-of-quarter values would compare as shown in Figure 6.

FIGURE 6: S&P 500 INVESTMENT: 100% MARKET VALUE VS. 50% WITH THREE-MONTH LAG



Source: Author's calculations from publicly available sources

Q28: WHAT IS LEVERAGE AND HOW DOES IT AFFECT PORTFOLIO RETURN AND RISK?

In finance, leverage is another word for debt. The term “leverage” indicates that using debt financing instead of raising the same amount of equity means that an increase (decrease) in the total value of a company results in a larger increase (decrease) in the value of invested equity.

Most if not all publicly traded companies carry some debt on their balance sheet. Besides amplifying potential return (and risk), debt is generally more tax-advantaged than equity.⁴⁹

Going back to the 1980s, private equity firms (not as common then as they are today) would execute a “leveraged buyout” of a large company using mostly debt of the acquired

⁴⁹ Buttonwood, “Why the bias for debt over equity is hard to dislodge,” *The Economist*, 22 Jan 2022. Economist.com. <https://www.economist.com/finance-and-economics/2022/01/22/why-the-bias-for-debt-over-equity-is-hard-to-dislodge> (accessed 14 Dec 2023)

company to pay for the purchase. For example, if a private equity company wanted to buy a company for \$100, it could put up only \$25 of its own money and have the acquired company borrow \$75 to make the full payment to the sellers.

The leverage in private equity today is not as extreme as then. Nevertheless, private equity funds frequently involve significant debt held either by the individual companies in the portfolio or at the portfolio level.

Leverage magnifies returns or losses of the underlying investment, increasing equity investment risk. Antti Ilmanen, et al., note: “Studies indicate that PE firms take on 100%–200% debt for every dollar of equity (down from the 300%–400% D/E ratios in the 1980s), whereas publicly listed firms, on average, add 50% of debt for every dollar of equity.”⁵⁰

The impact of leverage can be significant. If the operations of a company that is worth \$200 (debt plus equity) is funded with \$200 of shareholder money (equity), and the company value increases to \$250, shareholders have earned 25% on their investment ($=\$50 / \200). If the operations had instead been funded by \$50 of shareholder money and \$150 of debt, then shareholders would have earned 100% ($\$50 / \50).

During a period of rising markets, a leveraged investment may thus appear to “outperform” a non-levered investment. Leverage in private equity portfolios is thought by many to explain a good portion of the observed historical “outperformance” of private equity.⁵¹ If true, then it might be inappropriate to attribute such outperformance to manager skill or some other characteristic inherent in the asset class.

That is, if a high private equity return in a rising market resulted from taking on risk (adding leverage) that paid off, then, unless taking on that risk was an intentional bet based on strong market conviction, the resulting “outperformance” relative to a similar but less-levered investment is properly attributable to luck and not skill. The flip side of that outperformance is that, when market conditions reverse, the downfall will be harder and faster than for the less levered investment.

⁵⁰ Antti Ilmanen et al., “Demystifying Illiquid Assets: Expected Returns for Private Equity.”

⁵¹ Ibid.

PART 6

INCENTIVES: BAD MEASUREMENTS, ACCOUNTING, AND PLAN MANAGEMENT

Q29: WHY WOULD LPS ACCEPT, AND EVEN EMBRACE, QUESTIONABLE MEASURES AND UNEXCEPTIONAL PERFORMANCE?

Attracting new LP investors and influencing current LPs to invest in a follow-on fund is the straightforward reason for GPs to paint a rosy picture of return and volatility. Private equity relationships are often long-term, with LPs investing in several successive funds of a GP. But why would LPs accept this?

One theory growing in popularity and being taken seriously is that LPs, as agents of their principal taxpayers and plan members, know or suspect that NAVs and IRRs are being manipulated, but prefer the manipulated data to more honest reporting. Researchers at the

University of Florida have analyzed the possibility and provide evidence for this theory. They refer to GPs as “catering” to LPs with the manipulation of results.⁵²

As described in their paper, in 2015, the chief investment officer (CIO) of Idaho’s Public Employee Retirement System, Bob Maynard, with rare and admirable candor, described Idaho as “skeptical” of private equity but referred to the “phony happiness” that results from actuaries and accountants accepting numbers that “actually do have consequences for actual [near-term] contribution rates.” He stated that “even if [Private Equity] just gave public market returns, we’d be in favor of it because it has some smoothing effects on both reported and actual risks.”⁵³

Cliff Asness, the founder of hedge fund manager AQR, asks, “What if investors are simply smart enough to know that they can take on a lot more risk (true long-term risk) if it’s simply not shoved in their face every day (or multi-year period!)?” Importantly: “Attractive smoothness of returns may not come for free. If illiquidity is more positive than negative to many investors, it could easily mean paying a higher price and accepting a somewhat lower return to obtain it.”⁵⁴

In other words, he suggests that investors in private equity are not getting superior returns versus public assets, but possibly *worse* returns, and that they pretty much know it and like it, *and are possibly paying extra for it*. He has coined the term “volatility laundering” to describe the manipulation of NAVs and IRR. Elsewhere, he describes the principal-agent problem:

*...a principal–agent problem where the PE managers get paid a ton so intermediaries can then report unrealistically rosy assumptions [see Q31: How does private equity affect reported plan liabilities and funding?] and unrealistically calm returns. The chickens come home to roost only if long-term returns no longer beat public markets (i.e., no bear market needed here...) or, even scarier, a real long-term bear hits and the portfolio’s risk was seriously underestimated. But both parties involved, principal and agent, may be assuming that in ten-plus years that’ll be someone else’s problem.*⁵⁵

⁵² Blake Jackson, David C. Ling, and Andy Naranjo, “Catering and Return Manipulation in Private Equity”

⁵³ Bob Maynard. (2015). CalPERS 2015: Investment Committee Private Equity Workshop. <https://www.youtube.com/watch?v=iKSNMYfCJgc&t=2020s> at 1h:28m:50s (accessed 13 Sep 2023)

⁵⁴ Cliff Asness, “The Illiquidity Discount?” AQR.com, AQR, 19 Dec 2019. <https://www.aqr.com/Insights/Perspectives/The-Illiquidity-Discount> (accessed 13 Sep 2023).

⁵⁵ Cliff Asness, “Why Does Private Equity Get to Play Make-Believe With Prices?,” Institutionalinvestor.com, *Institutional Investor*, 6 Jan 2023. <https://www.institutionalinvestor.com/article/2bstqfcskz9o72ospzlds/opinion/why-does-private-equity-get-to-play-make-believe-with-prices> (accessed 13 Sep 2023).

The recently departed CIO of CalPERS “made investing in private equity a central plank of her strategy” during her short tenure. If CalPERS’ recent private equity investments turn south, it will in fact be “someone else’s problem,” i.e., it will be California’s taxpayers’ and possibly plan members’ problem.⁵⁶

Q30: HOW DOES INACCURATE PRIVATE EQUITY REPORTING DISTORT PUBLIC PENSION PLAN INVESTMENT PORTFOLIO CONSTRUCTION?

Models that determine the set of economically efficient investment portfolios (the “efficient frontier” showing the maximum expected return for a given level of risk) use expected returns, volatilities, and correlations between asset classes as inputs. If any are mismeasured, the efficient frontier model will be less reliable as a guide to constructing an optimal portfolio.

Also, if private equity is effectively equivalent to leveraged small-cap equities (see **Q22**: Why have private equity returns appeared to exceed those of publicly traded equity?) then there may be leverage, and the associated risk, in the investment portfolio that is not acknowledged or known, along with a higher exposure to small-cap equities. The upshot is that investors might have a riskier portfolio than they realize. If understood and desired, these exposures could likely be realized at a lower cost to the plan.

Q31: HOW DOES PRIVATE EQUITY AFFECT REPORTED PLAN LIABILITIES AND FUNDING?

Reported liabilities used for funding and accounting calculations are based on discounting future benefit payments using a “discount rate” equal to the so-called “expected return” of the portfolio, generally the median of the assumed probability distribution of projected returns. Under this expected-return discounting approach, because higher discount rates result in lower reported liabilities, anything that increases the portfolio’s expected return increases reported funded status and lowers contributions. (The higher risk associated with higher expected returns is not reflected in reported liability and funding calculations.) A

⁵⁶ Rod James, “Departure of Calpers’ Musicco Casts Pall on Its Private-Equity Push,” *The Wall Street Journal*, 19 Sep 2023. WSJ.com. https://www.wsj.com/articles/departure-of-calpers-musicco-casts-pall-on-its-private-equity-push-b17cc050?st=do49tb1o25cnkn6&reflink=desktopwebshare_permalink (accessed 21 Sep 2023)

high discount rate based on a high portfolio expected return is thus often a major goal when selecting investments.

In practice, the desire for a high discount rate will drive a plan to invest greater amounts in private equity because private equity is assumed to have high returns, which increases the discount rate. It doesn't matter for discount rate setting whether that assumption is realistic. It just has to be plausible so that actuaries and auditors will sign off.⁵⁷

Bloomberg columnist and financial economist Allison Schrager has even suggested that changing the calculation of public pension plan discount rates would go a long way toward correcting objectionable aspects of the private equity industry. She criticizes the convention of expected-return discount rates—it “enrages financial economists”—and notes that the resulting incentives have “created a big market distortion that resulted in a lot of money flooding into subpar private equity funds...that’s been turbo-charging the private equity market.”⁵⁸

In summary, investing in private equity is a good way to lower reported liabilities and required funding. The ability to justify a higher discount rate is a strong incentive to invest in private equity, even if it means a greater risk that future generations of taxpayers and plan members will have to make larger contributions, and/or that plan benefits will have to be reduced—fortunately, on someone else’s watch.

⁵⁷ Bob Maynard. (2015). CalPERS 2015: Investment Committee Private Equity Workshop.

⁵⁸ Allison Schrager, “Pension Funds Share Blame for Private Equity’s Horror Stories,” Bloomberg.com, 8 May 2023. https://www.bloomberg.com/opinion/articles/2023-05-08/to-fix-private-equity-s-problems-start-with-pension-funds?utm_source=website&utm_medium=share&utm_campaign=copy

PART 7

PROSPECTS

Q32: WHAT IS THE LIKELIHOOD OF PRIVATE EQUITY DELIVERING FUTURE EXTRAORDINARY RETURNS FOR LPS AND GPS?

The CEO of Apollo, one of the world's largest private equity firms, thinks traditional buyout private equity, the largest private investment of public pension funds, is on the decline:

A lucrative age for private equity buyouts has ended, prompting an abrupt shift in the \$4tn industry where returns will no longer be fueled by rising valuations, the chief executive of Apollo Global Management warned ... "In the [private] equity business, this year has really marked the end of an era," said Marc Rowan, whose Apollo is one of the world's biggest private equity groups with \$617bn in assets. A decade of "money printing," fiscal stimulus and low interest rates that had pulled forward economic demand "is in retreat," he added... Private equity firms would be forced "to go back to investing in the old-fashioned way. They'll actually have to be very good investors," Rowan said.⁵⁹

⁵⁹ Antoine Gara, "Apollo chief warns private equity industry 'in retreat' as rates rise," *Financial Times*, 3 Aug 2023. *FT.com*. <https://on.ft.com/3sSU3Mo> or <https://www.ft.com/content/7d24db29-9046-42d3-a221-efb9e54db702?shareType=nongift> (accessed 19 Sep 2023).

A recent *Bloomberg* article noted:

*In the past 12 months, the industry has hit a sand trap. New deals and exit sales have dropped off a cliff. Initial public offerings on stock markets have almost completely disappeared. New fundraising has become extremely difficult with even big names such as Apollo Global Management and BC Partners Holdings Ltd. failing to reach targets for recent funds.*⁶⁰

In the shorter term, there are significant pressures on current private equity portfolios, including:

1. High Market Interest Rates

The 10-year Treasury rate as of December 31, 2021 was 1.5%, and as of October 31, 2023 it was 4.9%. Many of the firms in private equity funds have significant debt (leverage) with either variable interest rates that are increasing or fixed interest rates that will soon have to be refinanced at higher rate levels. High interest rates increase the possibility that firms will have difficulty servicing their debt. In any case, profits will decrease as interest expense increases. Increasing interest rates also decreases the present value of each dollar of a firm's future net cash flows, which forms the basis for its valuation.

PitchBook notes: "The industry continues to battle through a stubbornly high interest rate environment that makes the cost of borrowing and servicing floating rate debt prohibitively expensive for deals that would otherwise get done."⁶¹

S&P Global Market Intelligence noted: "Private equity portfolio companies in the US are on course in 2023 to post the highest number of annual bankruptcy filings since 2010, as credit tightening and interest rate hikes push highly leveraged companies toward nonperforming status."⁶²

⁶⁰ Paul J. Davies, "The Private Equity Machine Will Be Tough to Unjam," *Bloomberg*, 4 Jul 2023. Bloomberg.com. <https://on.ft.com/3sSU3Mo> or <https://www.ft.com/content/7d24db29-9046-42d3-a221-efb9e54db702?shareType=nongift> (accessed 22 Sep 2023).

⁶¹ Tim Clarke, "2023 US Private Equity Outlook: H1 Follow-Up," PitchBook Data, Inc., 6 Jul 2023. <https://pitchbook.com/news/reports/2023-us-private-equity-outlook-h1-follow-up> (20 Sep 2023).

⁶² Muhammad Hammad Asif and Annie Sabater, "Bankruptcies among private equity portfolio companies on track for 13-year high," SPGlobal.com. *S&P Global Market Intelligence*. 4 Aug 2023. <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/bankruptcies-among-private-equity-portfolio-companies-on-track-for-13-year-high-76865450> (accessed 20 Sep 2023)

2. Markdowns of Private Equity Portfolio Values

From PitchBook: “Given the large cumulative performance gap [from delayed PE valuation markdowns] that remained at the end of 2022, along with the poor exit environment so far this year, we are expecting further underperformance from PE funds relative to public equities.”⁶³

3. Exit Opportunities Are Drying Up

As private equity funds approach the end of their term, they will need to return funds to investors. PitchBook notes: “The exit environment remains abysmal. With persistent headwinds that have carried into 2023, GPs are electing to hold on to assets and wait for more favorable selling conditions while actively putting capital to work on the buy side.” Further: “Looking ahead, sponsor-to-sponsor exits [secondary funds] will likely soldier on through the rest of the year as those on the sell side adjust to lower valuations and those on the buy side seek opportunities to spend down their ample supply of dry powder....”⁶⁴

4. A Crowded Field: Larger Amounts of Investment Capital from More Firms

With the growing popularity of private investments attracting increasing amounts of investment capital, the market is becoming more crowded and the high profits earned by early movers are likely no longer possible. With more competition, it costs more to buy into attractive companies, which means that returns will necessarily be lower.

Barry Ritholtz refers to a “paradox of skill”—as more smart people go into a type of investing, fewer will be able to outperform (or earn “alpha”). He notes: “Jim Chanos of Kynikos Associates pointed out that 30 years ago there were only about 100 hedge funds and just about all of them created alpha. Today, there are more than 10,000 hedge funds, and it still seems as if only about 100 of them generate alpha.”⁶⁵

⁶³ Clarke, “2023 US Private Equity Outlook: H1 Follow-Up.”

⁶⁴ Ibid.

⁶⁵ Barry Ritholtz, “How Reproducible is Alpha?” Blog post, *The Big Picture*, 26 May 2016. <https://ritholtz.com/2016/05/how-reproducible-is-alpha/> (accessed 21 Sep 2023).

Cliff Asness notes: “...there are more bidders for the same deal, credit is less investor-friendly than previously (I believe “covenant light” is the term), etc. Maybe this ain’t David Swensen’s PE market anymore.”⁶⁶

5. The “Denominator Effect”

The so-called denominator effect refers to a situation where other assets in a plan’s portfolio have decreased more than private equity, causing private equity as a percentage of the investment portfolio to exceed the plan’s targeted allocation. A plan will thus face pressure to sell private equity (at a loss) or at least delay further buying. Ironically, the reporting lag in marking private assets to market contributes significantly to the denominator effect. The denominator effect may therefore self-correct over time as private equity valuation markdowns allow them to catch up to public equity valuations.

In summary, as of September 2023, there are significant pressures for holders of private equity portfolios that do not bode well for the near term or the long term.

Q33: WHAT'S HAPPENING ON THE REGULATORY FRONT?

There are two significant developments:

1. The Securities and Exchange Commission (SEC) has issued new rules, being challenged in a lawsuit, that would increase disclosure to LPs and audit requirements for GPs of private equity funds.
2. The Department of Justice (DoJ) and the Federal Trade Commission (FTC) are cracking down on and monitoring private equity portfolio company mergers and acquisitions (M&A).

New SEC Rules

In a January 27, 2022 “Risk Alert,” the SEC detailed areas of concern from examinations it conducted of private fund advisors.⁶⁷ On August 23rd, the SEC voted to approve a series of

⁶⁶ Cliff Asness, “Why Does Private Equity Get to Play Make-Believe With Prices?” *Institutionalinvestor.com*, *Institutional Investor*, 6 Jan 2023.

⁶⁷ “Observations from Examinations of Private Fund Advisers,” Securities and Exchange Commission Department of Examinations—Risk Alert, SEC.gov, 27 Jan 2022. <https://www.sec.gov/files/private-fund-risk-alert-pt-2.pdf> 20 Sep 2023).

rules that would significantly increase regulatory compliance burdens on GPs. On September 1st, a coalition of hedge fund and private equity trade groups sued the SEC to block the new rules.

According to an SEC Fact Sheet: “The new rules require private fund advisers registered with the Commission to:

- Provide investors with quarterly statements detailing information regarding private fund performance, fees, and expenses;
- Obtain an annual audit for each private fund; and
- Obtain a fairness opinion or valuation opinion in connection with an adviser-led [i.e., GP-led] secondary transaction.”⁶⁸

The rules also limit special treatment for some investors through side letters and regulate the allocation of various fees and expenses among investors (LPs). At this point, the impact on LPs, positive or negative, is difficult to determine, and how the resolution of the legal challenge might play out adds uncertainty.

FTC and DOJ Antitrust Crackdown

The Biden administration, led by Lina Khan at the FTC and Jonathan Kanter at the DOJ, is increasing antitrust regulatory scrutiny of private equity. One area of concern is interlocking directorates, where boards of directors of ostensibly competing companies in the same industry have some of the same people on them (including private equity firm GPs). Another concern is “roll-ups” or “add-ons,” where private equity firms buy and merge companies within a particular industry (one recent case involved veterinary clinics).⁶⁹

This activity has the potential to limit the ability of private equity firms to exercise market power through ownership of multiple portfolio companies in the same industry, which in turn may decrease investment returns from those companies.

⁶⁸ “Private Fund Adviser Reforms: Final Rules,” Securities and Exchange Commission, SEC.gov, 23 Aug 2023. <https://www.sec.gov/files/ia-6383-fact-sheet.pdf> (20 Sep 2023).

⁶⁹ Stefania Palma, et. al., “US private equity faces extra scrutiny under new merger review rules,” *Financial Times*, 2 Jul 2023. FT.com. <https://www.ft.com/content/8ebb0ade-0672-4196-878b-960aa6195b24?shareType=nongift> (20 Sep 2023); Stefania Palma, “FTC lawsuit targets serial acquisitions by private equity,” *Financial Times*, 21 Sep 2023. FT.com. <https://on.ft.com/3rwh8UN> (21 Sep 2023); Lina Khan, “It’s time to halt roll-up schemes that violate antitrust laws,” *Financial Times*, 21 Sep 2023. FT.com. <https://on.ft.com/3PN0euo> (21 Sep 2023)

PART 8

CONCLUSIONS AND TAKEAWAYS

While private equity may have seemingly performed better than public markets in some well-known cases back when the private equity market was smaller, those apparently superior returns appear to have dissipated since the Great Financial Crisis of 2008-2009. The market has grown significantly since then and there is more money chasing deals, making it less likely that such superior returns can resume. Much-touted diversification benefits are likely an artifact of reporting lags and incomplete marking to market, and not economics.

The reasons public pension plans are attracted to private equity appear to be:

- Investors (LPs) are paying for the portfolio's apparently less volatile returns, even as they may realize that the absence of volatility is illusory.
- Rationalizing a high liability discount rate based on inflated portfolio expected returns results in understated actuarial liabilities, overstated reported funded status, and lower contributions.

A private equity portfolio typically consists of a small group of actively managed, risky, illiquid, and highly indebted companies, the identities of which are not known at the time of investment. The privilege of investing in these portfolios is costing LPs extraordinary annual management fees and, assuming success, 20% of the upside.

In other words, there is good reason to expect private equity to disappoint going forward. The full extent of the disappointment, however, may not be apparent for many years, long after those deciding to invest are gone.

At the 2016 Berkshire Hathaway annual shareholder meeting, Warren Buffett spoke against the notion of chasing outperformance with alternative assets:

It seems so elementary, but I will guarantee you that no endowment fund, no public pension fund, no extremely rich person wants to believe it...They just can't believe that because they have billions of dollars to invest that they can't go out and hire somebody who will do better than average. I hear from them all the time...

I've talked to huge pension funds, and I've taken them through the math, and when I leave, they go out and hire a bunch of consultants and pay them a lot of money... and they say, "well you can only get the best talent by paying 2-and-20," or something of the sort...

There are a few people out there that are going to have an outstanding investment record. But very few of them. And the people you pay to help identify them don't know how to identify them. They do know how to sell you.⁷⁰

⁷⁰ Erik Holm, "Warren Buffett's Epic Rant Against Wall Street," *The Wall Street Journal*, 2 May 2016. WSJ.com. http://blogs.wsj.com/moneybeat/2016/05/02/warren-buffetts-epic-rant-against-wall-street/?reflink=desktopwebshare_permalink (23 Sep 2023).

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