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When the Tailwind Stops

The Private Equity Industry in the New Interest Rate Environment

Victoria Ivashina

LTI Report I

CENTRE FOR ECONOMIC POLICY RESEARCH

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LTI Report 1

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Victoria Ivashina
Harvard Business School and CEPR

CENTRE FOR ECONOMIC POLICY RESEARCH

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The think tank takes supports independent research, promotes education on long-term investing and organizes events to bring together the perspectives of long-term investors, regulators and policymakers.

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Foreword

This is the first LTI Report, an initiative of the Long-Term Investors (LTI@UniTO) think tank launched by the University of Torino and hosted by Collegio Carlo Alberto since 2017. LTI@UniTO is supported by key financial institutions in northern Italy including Compagnia di San Paolo, Equiter, Intesa SanPaolo, Fondaco, Ersel, Reale Mutua Assicurazione and Banor.

The goal of the LTI Report series is for leading scholars to address key research topics in the area of long-term investment and to make their findings accessible to broader audiences. It is a great honour to start the series with a report prepared by Professor Victoria Ivashina of Harvard Business School and CEPR, which focuses on the link between the evolution of the private equity industry and interest rate dynamics. Indeed, the growth of the relevance of long-term alternative assets in the portfolios of institutional investors over the past decades on both sides of the Atlantic was associated with a secular decline in interest rates. This strong 'tailwind' is bound to diminish in the years ahead should the interest rate environment change, and the report thus covers a highly timely phenomenon.

The report was produced following the "1st LTI Report Conference Presentation" held at Collegio Carlo Alberto on 23 November 2021, and also includes the comments of two academic discussants and three panelists.

LTI gratefully acknowledges the support of its sponsors, as well as support from its distinguished Scientific Committee, chaired by Jean Charles Rochet. We also thank Gian Maria Ajani for chairing the Sponsor Committee and Marco Albericci, Luca Regis, Sara Levi Sacerdotti and all the LTI staff for their excellent work in the preparation of both the conference and this report.

The views expressed in the report are those exclusively of its authors and do not represent those of CEPR, which takes no institutional positions on economic policy matters. CEPR and LTI@UniTO are delighted to provide a platform for an exchange of views on this important topic.

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February 2022

Executive summary

The consistent growth of long-term alternative asset managers in the past four decades coincided with the secular decline in interest rates. This has been an important tailwind for the industry's development as debt markets became increasingly cheaper and, at the same time, institutional investors were searching for ways to offset the shrinking yields on their fixed income portfolios. These forces have been essential to understanding the industry's growth despite the rise in competition, valuations and, relatedly, the private equity industry's shrinking returns. The past decade, however, has marked the new monetary policy regime: short-term rates (the traditional monetary policy tool) have been trapped at zero. While the rates might start to rise again, what is clear is that the favourable dynamic of declining rates that for decades drove capital into the alternative space will no longer be there. This development is likely to redefine the role and economic significance of the private equity industry in the decades to come. This report expands on the dynamics at play that shape the development of the global long-term investments industry and its interaction with monetary policy and explores the consequences of deceleration in its growth.

The central takeaways of the report are as follows:

- Interest rates are an important driver of pension funds' investment in long-term asset classes, and private equity in particular. The growth of private equity in the past two decades has been driven not so much by the industry's performance, which, on average, has been modest, but instead by the growth of long-term pools of capital, the maturity of the asset class and the declining interest rate environment that has continuously pushed capital into the industry.
- Unlike other financial markets, the relationship between private equity and the interest rate environment is not contemporaneous. Due to the structure of the private equity industry, the history of limited partners' capital flows to this asset class is best understood as a set of overlapping waves jumpstarted by just a handful of significant strategic shifts in allocations that took a decade to fully unravel.
- The latest wave began in response to the near-zero rate environment that surrounded the Global Financial Crisis and the recovery period that led to a significant structural revision in the allocation of alternatives for pension funds and other institutional investors. The argument in this report is that a new, and this time less favourable adjustment for private equity capital flows is already in motion and can accelerate. The private equity industry developed and its growth substantially accelerated in the context of a continuous search for higher returns. Some of the segments of the industry, such as private debt, that are reaching a trillion dollars in assets, have developed since interest rates fell to zero. Over the

next several decades, the interest rate environment will be dramatically different. While the timing of the rise in interest rates is uncertain, it is unambiguous that the rates will either continue lingering close to their zero lower bound or will start to increase.

- The current private equity environment is highly competitive on the deal front. Nevertheless, the illiquid and long-term nature of the private equity asset class, significant dispersion in returns across fund managers, as well as bilateral and relationship-driven fundraising, create scarce access to individual funds, giving private equity funds the bargaining power when splitting the returns. Management fee structures for large funds remain a significant source of incentive misalignment with respect to limited partners. As the flow of funds into private equity stabilises and as the industry growth slows down, the fee structure will compress and compensation will shift to be more contingent on performance.
- History indicates that the private equity industry will likely push against this disruptive trend. Further broadening of the investor base, improvements in liquidity of the asset class and the push into new, truly longer-term investments are likely to be the trends that will be fighting the adverse pressures. On the other hand, regulatory actions aimed at disclosure transparency for the industry's fees and cost structure will make cost structure adjustments harder to escape.
- The adverse pressure emanating from a different rate environment will be easier to withstand for larger firms, and market consolidation will follow. Overall, in the stable, depressed interest rate environment we would expect aggregate growth of the private equity industry to be in line with the growth of pension funds' assets. But in this process, divergence in the growth rates of younger and smaller firms and more established firms is very likely.

Introduction

Private equity is a unique form of long-term capital that plays a significant economic role. As such, it is pivotal to understand how developments in the private equity industry interact with macroeconomic trends and monetary policy, in particular. Tracing a connection from macroeconomic trends to private equity, however, is hard, and few have attempted it. The structure of the industry is such that investors update and react very slowly. What we see playing out in the private equity market today was set in motion nearly a decade ago. In this report, I outline these connections and reflect on the future of the industry as it relates to developing macroeconomic trends. Beyond filling a gap in the public debate, a discussion of the interaction between the interest rate environment and the state of the private equity industry's development is urgent as interest rates can fall no further and could potentially start to rise. On its own, this development is likely to put adverse pressure on the industry through multiple channels, and it is a goal of this report to examine these in detail.

SOME BASICS

Private equity is characterised by unique institutional features, and some basic explanations are in order before we can proceed with more complex issues.

The focus of this report is on the private equity industry broadly speaking. The bulk of funds directed to private equity include venture capital and growth and buyout investments (that is, traditional equity strategies), but the private equity industry has long outgrown its name. Private debt, infrastructure, real assets and secondary funds have all been aggressively on the rise in the past decade. Many of the alternative strategies today have a traditional closed-end fund structure used in private equity for decades. So, we will use the term 'private equity' to refer to a wide range of alternative investment strategies characterised by investing in illiquid assets over a multi-year horizon.

Investors in private equity – a group composed of large, typically long-term oriented investors like pension funds, sovereign wealth funds, endowments and family offices – are generally referred to as 'limited partners' (LPs). The limited partners' base for private equity includes a diverse group of institutional investors, but, for simplicity, in what follows let us anchor our view on pension funds.[1] Private equity firms are referred to as 'general partners' (GPs) or, when talking about an individual investment, as 'sponsors'.

1 This focus will not change the conclusions of the report, but it is worth mentioning that the liability structure, institutional constraints and governance of different limited partners group is often dramatically different. Their different practices are highlighted in Ivashina and Lerner (2019). This report abstracts from these considerations.

Although it became relatively common for large limited partners to partially pursue direct (i.e., disintermediated) investments of some sort, the bulk of allocations to private equity still happen through the fund structure, which will be the default set up for this report.

Beyond the basics of common practices in the private equity industry, we should reflect, at a high level, on what private equity does. We can easily agree that the source of capital in private equity (i.e., the *form* of capital) is different, but does private equity bring a unique source of value creation to the economy? There might be a temptation to assert that because of the longer holding horizon of an average investment (slightly above five years), private equity is longer-term focused capital. However, private equity is not the only form of long-term capital (even in the non-government investment space). Indeed, it is a common misconception that because private equity funds have longer-term equity funding, they are therefore better positioned to fund longer investments than, say, public firms. Expounding this point is beyond the scope of this report. It suffices to say that we should focus on the private equity industry because this is an *important* form of long-term financing, but not because it is the *primary* form of long-term financing.

Rather than the investment horizon of the portfolio position, what distinguishes private equity as an asset class is that – in its mature form – it is a deeply informed source of capital that has an 'active' operational component. Public markets might be chasing growth stocks and special-purpose acquisitions companies (SPACs) that tend to back entrepreneurs at a relatively early stage, but public investors are not active investors. For example, in the buyout context, being an active investor means private equity is able to quickly act on an experimental and agile business plan. Consistently, the common uses of buyout capital tend to be businesses undergoing a restructuring or transformation and businesses in industries undergoing consolidation.[2] Examples of fund managers actively influencing firms' operations can be easily found in other private equity strategies, including venture capital and private debt.

EVERYTHING IS SLOW IN PRIVATE EQUITY

The central argument of this report is tied to the direction and intensity of fund flows into private equity. Take a mutual fund that invests in stocks or bonds – the flow of funds into such a fund is highly sensitive to performance and macroeconomic shocks. If the monetary authority raises the rates, we would see nearly instant funds outflows from

2 In terms of capital allocation, buyouts are a dominant strategy in the private equity industry. According to Private Equity International, about half of capital raised in 2020 was for buyouts, as compared to 15% for venture capital (the second largest strategy).

high-yield mutual funds.[3] This is far from the frequency at which the capital moves in and out of private equity, a point that is important to understand as we reflect on the interaction between interest rate regimes and monetary policy and the broader industry dynamic.

A unique feature of private equity, as opposed to other asset classes, is that any changes are slow to be incorporated. It is not uncommon to hear in the industry the analogy of changes in industry practice being equivalent to turning an oil tanker: any changes are slow to materialise and equally slow to be undone. As I will elaborate below, this is rooted in the predominant funding structure of the industry, lack of real-time visibility of fund performance and constraints on access to individual funds.

First, you cannot scale up allocation to private equity in a significant way over a short period of time. For example, say you are the CIO of a European pension fund coming out of the Global Financial Crisis and its aftermath in Europe. In 2015, you finally decide that you are ready to deploy a significant fraction of your capital to private equity. Unfortunately, many of the most recognised private equity firms are currently not taking capital commitments. For instance, CVC Capital Partners closed its sixth flagship buyout fund in 2014 (and with the benefit of hindsight, we know that fund VII will not be closed until 2018). BC Partners European Capital IX closed in 2011, and its fund X will not close until 2017. Of course, some funds might be in the fundraising stage, and this appears to be the case of Ardian LBO Fund VI, but it is easy to see that access to private equity is constrained. A relatively small position in a public asset can be purchased (or sold) at any point in time, whereas private equity opportunities are discrete and move at a low frequency.[4]

Similarly, decisions to exit or scale down private equity allocations are equally slow because a private equity firm needs to raise the next fund before it runs out of money on the existing fund. This means that maybe as few as one exit would be secured before you (the pension fund) are asked to commit the capital to the next fund, the rest of which would be held in an illiquid position. The standard model for a private equity fund has conventionally followed a ten-year model. [5] So, about five years into the fund, there is very little information about your private equity investment, and this is the point in time when you are asked to commit money to the next fund. With little additional information, why would you decide to scale down your allocation to private equity? Indeed, the

3 For example, in August 2014, after a prolonged period of low policy rates, it was reported that investors pulled a record $7.1 billion from junk-bond funds in one week in relation to an anticipated tightening move by the US Federal Reserve. "Many investors have been pulling back from the market amid concerns that the bonds are overvalued and that a strengthening US economy could prompt the Federal Reserve to raise interest rates sooner than the market currently expects" ("Junk-Bond Fund Exit Sets Weekly Record", *The Wall Street Journal*, 8 August 2014).

4 In a 2019 book (Ivashina and Lerner 2019a), Josh Lerner and I focus on challenges of the private equity industry on both sides of the financial intermediation chain of private equity. While half of the book is spent tackling issues related to general partners (the private equity firm), the book intentionally starts with issues that firmly sit on the limited partners side, as practices rooted in limited partners institutional constraints, lack of coordination and just plain 'agency' can often be found as contributing forces to some of the most criticised practices in the private equity industry.

5 The 2019 Private Equity Fund Terms Research survey by MJ Hudson indicated that 84% of its sample had an initial fund life of ten years.

information that you might have to date is likely to have a positive bias, as fundraising success is heavily dependent on early exits, especially for younger private equity firms or firms that might have recently faced some adversities. (Thus, fund early exit decisions are not exactly made at random (e.g., Barber and Yasuda, 2017; Chakraborty and Ewens, 2018; Brown et al., 2019)). In addition, part of the reason why your pension fund was selected as a limited partner by the private equity firm was due to the expectation that this will be an ongoing relationship in future fundraising. Breaking this relationship is not inconsequential. In sum, long-dated holding periods and illiquidity result in the fact that you might be at least ten years into investing (but likely more) before you feel that you are well positioned to assess the performance of your allocations to private equity.[6], [7]

Essential to the previous two points is that investing at a fundraising stage – as opposed to secondary market funds or fund of funds (that is, intermediary structures that can facilitate access, liquidity, and faster deployment of capital known in the industry as 'J-curve moderation')[8] – continues to be the dominant form of investing in private equity.

With this as background, when we study the impact of monetary policy on public securities or the availability of credit, our expectation is that any effects will be more or less instant. For example, a common empirical approach to detecting the impact of monetary policy shocks on the availability of bank credit is to look at the quarters immediately following such a shock. This makes sense because banks issue credit continuously, and if they tighten credit standards or stop lending, the effects will appear quickly. This is simply not possible in the context of private equity. Needless to say, tracing causal connections over a longer period of time is a hard exercise, as the chances of confounding effects increase. In Chapter 1, we will spend some time thinking about other core trends in the industry and their interactions. The general approach to tracing connections between monetary policy and the interest rate regime in the private equity space will have to be different from the standard approach and rely on understanding the fundamental mechanisms at play and that their tangible manifestation will be slow to show up. Yet, by the same token, the structural changes will be equally hard to undo once they happen.

6 Korteweg and Sorensen (2017) argue that it is hard to credibly disentangle skill and luck in private equity even if you have been investing with the same firm for decades.

7 Ten years into it, the chances are that there is a new CIO with new priorities in place. While that might change the course of private equity allocations, this is a separate, investment governance issue that is discussed extensively in Ivashina and Lerner (2019). Similarly, there might be macro considerations (other than monetary policy stance or the interest rate environment) that could make a pension fund reconsider its initial commitment to private equity, but here I am abstracting from these factors.

8 In private equity, there is a gap between capital being committed and capital being deployed. Moreover, after the fund is closed, limited partners are consistently charged management fees. Thus, cumulative net cash-flows to limited partners follow a 'J-shaped' pattern: it is increasingly negative in the first years of the fund but starts to recover once realisations and dividends from investments start to come in.

THE STRUCTURAL SHIFT

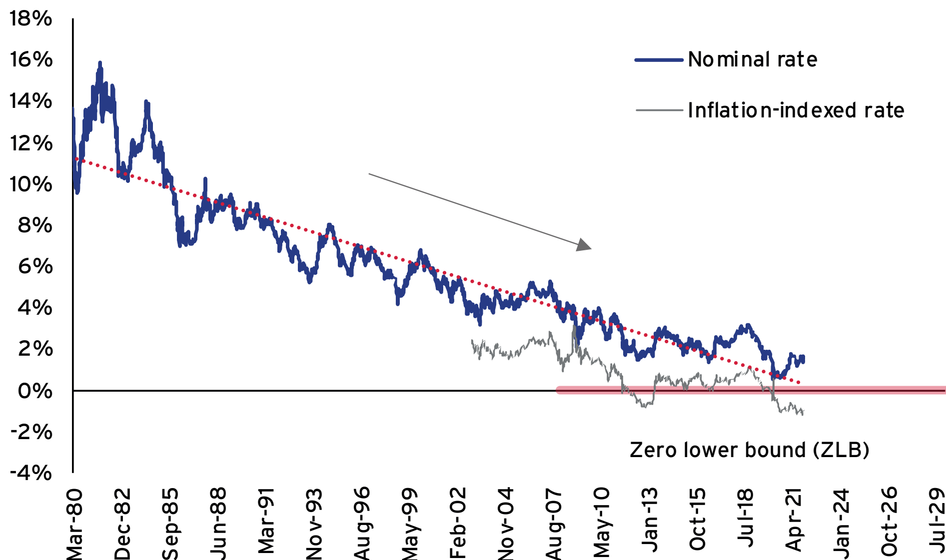
In Chapter 2, we will focus on identifying the mechanisms that connect monetary policy and the interest rate environment to the evolution of the private equity industry. We should clarify that monetary policy is a tool and not a goal in itself. A typical monetary authority mandate is to maintain price stability and maximum sustainable employment. Thus, changes in the federal fund rate, the use of reserve requirements or unconventional monetary policy tools are endogenous to these goals. When, in early 2020, monetary authorities around the world lowered interest rates, they did so in response to a major economic shock in the form of the Covid-19 pandemic. Hence, any impact on private equity activity in 2020 is likely to also be traced back to the economic shock and not necessary to monetary policy actions. That said, and speaking more generally, first, policy tools are imperfect. This point is well illustrated by recent fears of inflation or the fact that, historically, the exact target inflation has been hard to achieve. Second, these are also tools that can have unintended consequences for financial markets and often trigger market practices and trends that undermine financial fragility, such as reaching for yield behaviour.

The forces operating in private equity through the economic cycle are well-known. In a nutshell, the private equity industry is dependent on broader market conditions. A booming credit market ties to the buyout activity, and a booming public market facilitates private equity exits. There are some interesting additional effects as private equity is not a simple consumer/'price-taker' in the debt market. Instead, given its expertise and scale, private equity often leads to the erosion of credit terms, making them more borrower-friendly (and, in turn, facilitating the survival of highly levered portfolio companies through the economic downturn). But all of these effects are constrained within the credit cycle. They are important for understanding different pressures on returns within this framework, and I will discuss them, but ultimately they do not speak to the longer-term trajectory of the industry.

Over the next decades, however, the macroeconomic context, and specifically the interest rate environment, will be dramatically different. While the timing of the rise in interest rates is uncertain, it is abundantly clear that the nominal rate will either continue lingering close to its zero lower bound or start to increase. Nearly a decade of experience indicates that interest rates are incredibly unlikely to continue to decline. (Figure 1 shows the evolution of the 10-year US Treasury Bond through the history of the private equity industry in its modern form;[9] Figure 2 shows the evolution of fundraising through the same period.)

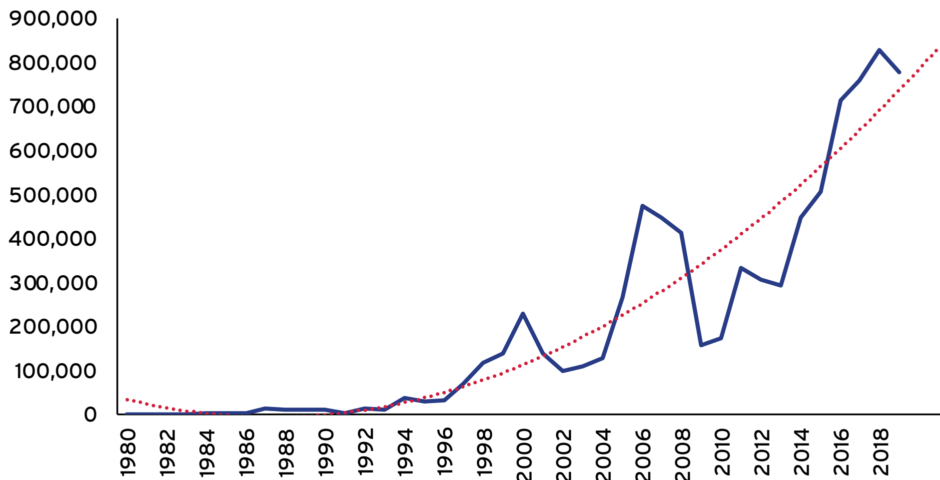
9 All non-public equity is private equity, by definition. In that sense, we can trace the history of private equity as far back as we want. But the industry in its modern form – that is, private equity as a standardised form of financial intermediation – really took off in the 1980s.

FIGURE 1 **HISTORICAL EVOLUTION OF 10-YEAR US TREASURY BOND, 1980-2021:Q1**



Note: Data correspond to the daily 10-year Treasury rate, not seasonally adjusted.
Data source: https://fred.stlouisfed.org.

FIGURE 2 **HISTORICAL PRIVATE EQUITY FUNDRAISING, 1980-2019 (MILLION USD)**



Note: Data correspond to the global fundraising for equity strategies.
Data source: Preqin.

At least pension funds effectively target real rates. For example, the California Public Employees' Retirement System (CalPERS) states on its website that it uses cost-of-living adjustment, a benefit that ensures that the value of money at retirement keeps up with the rate of inflation. However, as I will discuss later, the current expectations of inflation in the United States and European Union beyond 2022 are close to their historic targets.

This is in line with the evolution of inflation-indexed rates plotted in Figure 1. While real rates are technically not bound by the zero lower bound, looking ahead there is little that points to a significant divergence between nominal and real rates in the developed counties.

This macroeconomic change shown in Figure 1 will likely stabilise the flow of funds into private equity (unless the rates start to rise significantly, which would put private equity under severe adverse pressure). So, what should we expect once the fundraising for private equity becomes more challenging? This is where we have to acknowledge the industry's own limitations. Put simply, it is an expensive asset class, with the net returns to limited partners lacking consistency.[10] All this is punctuated with many instances of questionable practices, ranging from the use of subscription lines, to 'window-dressing' for the purposes of fundraising, to flashy displays of personal wealth. Against this background, the tailwind of falling interest rates has been central in pushing capital in search of diversification and 'yield' (or, more appropriately for this context, 'alpha') into the alternative space. But this force is expected to temper out, and a bigger weight falls on the industry to address its shortcomings.

More concretely, the central remaining tension in the private equity industry is the high fee structure for large funds. This typically runs at 1.5% to 2% of *committed* capital for the first five years of the fund life.[11] Say a fund raises $10 billion (and many large funds have long passed this mark). Even if the fee structure is 1.5%, this means the fund will charge $150 million in fees for the first five years – that is, $750 million in fees ($1 billion if the fee is 2%) just in the first half of the life of the fund – irrespective of fund performance. Moreover, these fees are as certain as taxes, which only accentuates the disconnect between a core component of the private equity firm's income stream and its fund performance.

These lucrative incentives to large funds, particularly the economics of founders and top management of the private equity firms, have been attracting severe criticism of the industry, more so than its modest returns (for example, most recently, see Phalippou, 2020.) As I will elaborate, the structure of the industry, with its differential access to funds, preferential terms for large commitments, complexity often paired with a lack of sophistication on the limited partners' side and disperse incentives of limited partners, for the most part, puts the bargaining power on the side of the private equity firms. But instances such as the aftermath of the Global Financial Crisis or the disruption of the fund of funds industry indicate that a shift in bargaining power for limited partners is

10 This is not to say that some private equity funds have not been successful in generating a consistent pattern of returns. These are easy to spot, as they are frequently rewarded with high capital flows.

11 Once the investment period is passed (usually set at five years), the fee base typically shifts to remaining invested capital and gradually shrinks to about 1%.

possible. In the fund of funds industry, which came under stress due to being perceived as a double-fee structure in an environment of easier access to alternative investment, we have already seen a shift away from high fee structures towards performance-based compensation.

As will be discussed in Chapter 3, the consequences of the slowdown of the alpha-searching capital flow into the industry should put pressure on the allocation of economics among general partners and limited partners. Central to the narrative is a reflection on the crisis and the adjustment that the funds of funds industry experienced about a decade ago. This segment – which, for the most part, is also characterised by the slow response – offers an important window into the unravelling of an industry crisis and will help gauge expectations.

In Chapter 4, I discuss some of the ongoing innovation trends in the industry and whether some of these might reinstate the balance of power in the industry, which has historically not been favourable to limited partners. Overall, the potential 'silver lining' of adverse macro pressures and their consequences is that they could allow for a more active capital flow beyond traditional strategies and horizons, opening a door for true long-term investments.

In sum, there are two main predictions for the evolution of the private equity industry that emerge from this analysis. First, the pendulum of bargaining power will start to shift to limited partners, but this time more permanently than what we saw during the Global Financial Crisis. It will likely lead to greater standardisation and transparency of practices among limited partners. Second, these pressures will push the industry to reinvent itself. And one big frontier for private equity is longer-holding horizons. As I will point out, there are significant cross-sectional differences in the consequences of adverse economic scenarios for large and small private equity firms.

CHAPTER 1

Understanding the industry's moving parts

It might be helpful to reiterate the fundamental challenges of drawing firm conclusions when connecting macroeconomic policy actions to their effects in the private equity space. Identification of monetary policy effects is premised on the short-term response in market prices and bank credit behaviour. The beauty of market prices is that they reflect expectations about the present value of all future cash flows, and – in the absence of constraints on capital movement – capital reallocation that we see in the short-run responds not only to immediate effects of policy actions, but also to its long-term consequences. If we are armed with a monetary policy 'shock', the attribution of policy effects in this setting is very reasonable. This would be very challenging if prices are not adjusting fast enough (because assets are illiquid), the capital is locked and thus cannot move, or both, which is the case of the private equity industry. It is not that things do not adjust, but they adjust very slowly.

What makes the discussion of the monetary policy effects on private equity industry difficult is that even in the absence of changes in macroeconomic trends, the industry would not stand still. The problem, therefore, is that as we move away in time from the policy shift, it becomes harder to retrace the causal connection between the initial policy shock and its consequences. Before we consider the effects of a changing interest rate environment, there are some core trends that are relevant to outline several separate coalesced dynamics. I divide this discussion in two parts. In this chapter, I focus on elements that are deemed to change with time, scope and size of the industry, such as performance assessment, regulation and competition. In the last chapter, I will return to the changes proactively initiated and pushed by the industry itself, such as the democratisation of access to private equity and lengthening of the investment horizon. The potential impact of the former trends is easier to grasp, as they unravel gradually. The impact of industry innovations is something that has a more (positive) disruptive potential: the industry might shift in its essence, and such reinvention might bring new potential for growth. As an example, expansion by large private equity firms into adjoined asset classes, and into credit and secondary markets in particular, has been an important development of the last decade that has absorbed a significant fraction of capital flow into alternative space.

There is another, perhaps more practical way to organise one's thoughts around confounding trends in the industry. The end of 40 years of falling nominal interest rates will lead to adverse pressure on the private equity asset class. Simply put, the macroeconomic environment and potential monetary policy actions will no longer be helpful to the private equity industry. Thus, we can also group other developments in the private equity segment of the financial market that are likely to offset ('positive pressures') and those that are likely to put on further adverse pressure ('negative pressures').

1.1 IS PRIVATE EQUITY A UNIQUE ASSET CLASS?

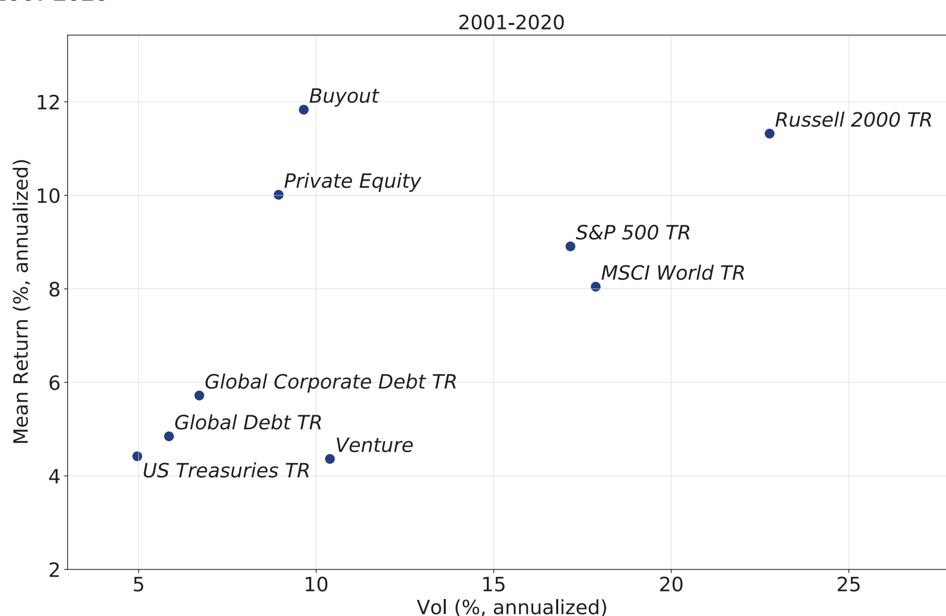
The private equity industry of the 2020s is substantially more mature and competitive than it was in the era of 'barbarians at the gate' (Burrough and Helyar, 1989). I would even say that much of the compression of returns due to increased competition is behind us. Looking at valuations as we approach the end of 2021, it is hard to imagine that the large-cap or even mid-cap buyout space could get any more competitive; proprietary deals are an anomaly for even growth equity, not to mention large-cap buyouts.[12] Yet, the right allocation to private equity is still a heavily debated matter that will continue to evolve for many years to come. As a result, the amount of capital that is being deployed to private equity will continue to change.

Is private equity a unique asset class? That is, does it have a distinct historic risk-return profile? This is the central question that underpins the allocation to private equity and any other asset class. If it is (which, to be clear, is the view supported in this report), then a simple mean-variance portfolio approach would suggest that some allocation to private equity is desirable for any diversified portfolio. This basic idea typically underpins the marketing materials for private equity, with charts and tables similar to Figure 3 and Table 1.

The correlations are also in order and these appear favourable as well, with the 2001–2020 correlation between returns on the S&P500 and the Preqin Index being only 0.54 for venture capital and 0.76 overall. Given these numbers, the question of whether private equity should be treated as a distinct asset class might appear to be settled. The caveat is that this is an expensive and illiquid asset class with differential access to the funds industry. This is why the returns to private equity and, consequently, its place in an average institutional portfolio have been a source of debate and a not fully settled matter.

12 In the modern industry, proactive sourcing often refers to information advantage due to, for example, previous experience in a similar industry that allows one to 'gain conviction' about the feasibility of the investment thesis *despite* high valuation prices.

FIGURE 3 **HISTORIC PERFORMANCE OF PRIVATE EQUITY VERSUS THE PUBLIC MARKET, 2001-2020**



Note: The numbers for private equity are compiled from Preqin. Mean returns and volatilities are calculated from quarterly returns. The returns for "Private Equity", "Buyouts", and "Venture" correspond to returns on *Quarterly Index – Private Equity, Quarterly Index – Buyout, and Quarterly Index – Venture*, respectively. "Global Corporate Debt" corresponds to the Bloomberg Global Aggregate Corporate Total Return Index (USD, unhedged). "Global Debt" is the Bloomberg Global-Aggregate Total Return Index (USD, unhedged). "US Treasuries" is the Bloomberg US Treasury Total Return Index.

TABLE 1 **HISTORIC PERFORMANCE OF PRIVATE EQUITY VERSUS THE PUBLIC MARKET**

	2001-2020		2010-2020	
	Mean (%)	Vol (%)	Mean (%)	Vol (%)
Private equity	10.01	8.94	13.99	6.15
Buyout	11.83	9.65	14.63	7.01
Venture	4.36	10.39	13.23	7.26
MSCI World	8.05	17.87	11.51	15.79
S&P 500	8.91	17.16	14.5	15.41
Russell 2000	11.32	22.77	14.47	22.14
Global Corporate Debt TR	5.72	6.71	4.76	5.73
Global Debt TR	4.85	5.85	3.16	4.98
US Treasuries TR	4.42	4.96	3.61	4.41

Note: Similar to Figure 3, private equity returns correspond to Preqin Quarterly Indices. Public market indices correspond to total returns.

Let us list some facts.

A. On the average returns

- We generally look at the returns on a risk-adjusted basis, otherwise a higher return could simply be associated with a higher risk ('beta' in a diversified portfolio). This is straightforward with liquid securities, but not for private equity investments. Kaplan and Schoar (2005) came out with an ingenious way of adjusting private equity returns, called the public market equivalent (PME), which has been widely adopted by limited partners since then. The idea is to discount the cash flows on an investment using the market return over the same period. According to the most recent Burgiss update, the net-of-fees PME that is the market-adjusted return for the 2000–2016 fund vintages was positive.[13,14] Simply put, those who committed money to private equity between 2000 and 2016, on average, beat the S&P500 (in 2005–2021). This is also consistent with the return data presented in Table 1. However, several nuances quickly become evident.

- First, we look at past returns as they are our window into future returns, which are what we care about most. However, the returns have been far from stable over time. As the industry grew, so did the competition, putting significant pressure on returns. An increase in competition is certainly something that defined the compression of returns in the first two decades of the industry (e.g., Harris et al., 2014). Competition will likely continue to erode the returns further, although probably at a less aggressive pace. But, already, the idea of looking at the past to predict the future is brought into question. For example, according to S&P LCD, the par amount of private equity-backed leveraged loans outstanding in 2000 was $52.0 billion. It was $723.1 billion at the end of 2020 – a cumulative annual growth rate of over 14%, illustrating commoditisation of access to debt financing in the large-cap buyout space.

- A common scepticism about the PME calculation is that benchmarking the buyout industry against the S&P500 is incorrect since private equity investments, and particularly buyouts, rely heavily on leverage to acquire a controlling position. As a result, the average buyout and even late-stage growth equity investments have twice the leverage of a public company. Therefore, it is typical to adjust the market benchmark upward to reflect higher leverage, or to speak of buyouts as a levered stock index position.[15] The problem, however, is that the S&P500 – or

13 Since the average investment holding period in private equity is about five years, a typical private equity fund does not get to significant realizations until half of it is life. Hence, when we look at private equity performance in 2021, the fund vintages are cut off at 2016 (= 2021 – 5).

14 These numbers are taken from Tim Jenkinson's presentation at the IPC Oxford Private Equity Research Symposium on 27 May 2021 (Jenkinson, 2021). The proceedings of this symposium can be found in the Summer 2021 issue of the Journal of Applied Corporate Finance.

15 See, for example, the series of columns entitled "What's So Great about Private Equity?" published in the *Financial Times* in September 2021.

any other diversified index – is probably not the right index to start using. In the introduction, I emphasised the active nature of private equity investments. If we are to take the position that buyouts specialise in turnarounds, a selection of companies that are being pursued are probably not those of the S&P 500.

- This idea of adjustment for risk can be taken further since this is an illiquid asset class, and illiquidity commands a premium for investors in the public market. This is a fair point, and we can agree that illiquidity risk should not be held for free, but pinning down the exact magnitude is another nuanced (not to say imprecise) exercise which suffers from a similar criticism as the leverage adjustment, and that is whether a wide stock index is representative of a private equity portfolio.[16]
- All this might sound complex, if not confusing, and that is precisely the point: private equity returns are a moving target, and it is very hard to adjust returns for risk. At the same time, for deploying money through a traditional fund structure, a pension fund is guaranteed to pay in fees of 1.5% to 2% of the amount of committed capital. Although we look at the returns net of fee (fixed) and carry (performance-based) components that constitute private equity compensation, the common saying among limited partners is that the returns are uncertain, but the high expenses for investing in private equity are certain.

Leaving other parameters aside and focusing solely on average performance, if the historical performance profile for private equity were as reliable as that of stocks or bonds, portfolio allocation for this asset class would be largely sorted out. And eventually, it will be. But given the facts above, how we think about the performance of private equity will continue to change and, consequently, so does its place in the portfolio. For example, all these caveats around performance measurement are at the root of a still prevalent rudimentary practice of changing (performance) top quartile funds. Similarly, even before the Global Financial Crisis many large limited partners tried to imitate the success of the 'Canadian model', where a set of Canadian pension funds, including the Ontario Teachers' Pension Fund and the Caisse de Dépôt et Placement du Québec, were able to establish a successful direct investment programme (therefore circumventing the high cost structure of the fund industry). But running a successful direct programme, or even a co-investment programme, requires the right resources and governance, and it is far from trivial. Although the practices around direct investments and co-investments have improved, there is clearly overallocation in this space, and because the information is slow to reveal itself in private equity, it takes time to learn a lesson. This is another reason why fund allocation might shift over time.

16 An example of a careful approach to these issues can be found in Stafford (2021).

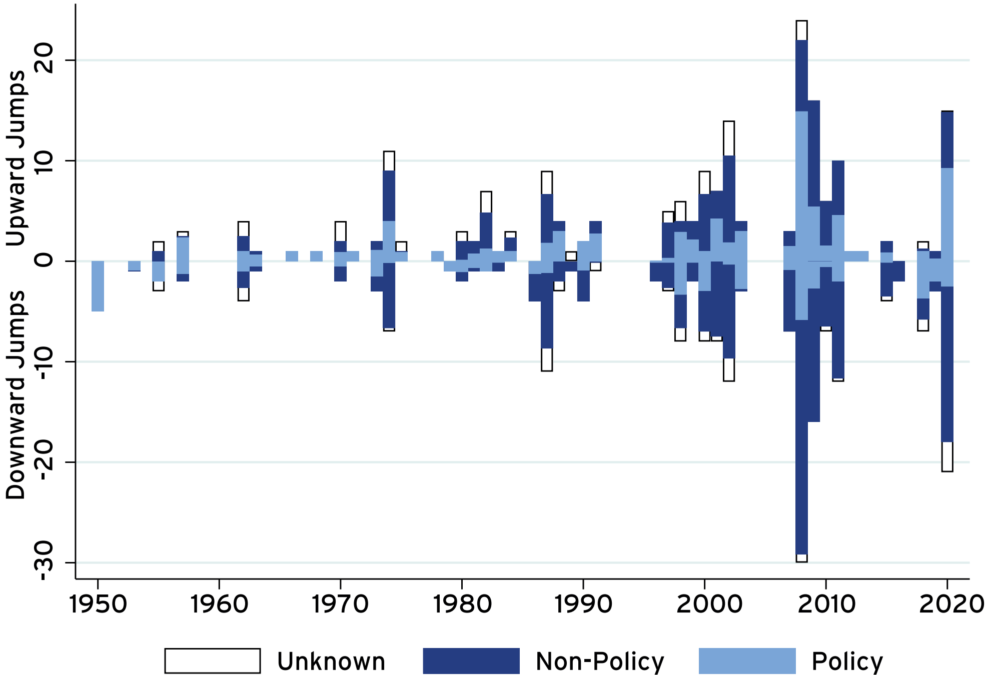
B. On access

- Another important factor unique to the private equity industry is access. When an investor decides to increase its allocation to stocks or even corporate bonds, how and when it will be achieved is not much of a discussion. This is not the case for private equity. Funds are not raised continuously. For a given private equity firm, the next fund is typically raised before the existing fund runs out of capital. A few other factors, including the economic cycle, might influence the exact timing of the next fund, but there are roughly five years in between the funds. All these elements contribute to the fact that when a pension fund is expanding its investments to private equity, it takes a decade or longer before it has converged to a steady state.
- Perhaps more crucially, average performance in private equity is not a very meaningful number because nobody has access to the average. On the one hand, access to individual private equity firms has been a relationship matter. On the other hand, funds require minimum commitments that are quite sizable and incentivise large investors by providing them with better terms (e.g., Begenau and Siriwardane, 2020). Once again in the longer run, as access continues to change, so will the flow of capital to private equity.

C. On volatility and correlations

- What stands out in Figure 3 and Table 1 is the remarkably low volatility of the different private equity strategies. Private equity marketing materials often double up on this point by stressing that extreme jumps in the public stock market have become more frequent and more pronounced over time. This point can be seen in Figure 4. But the relatively low volatility of private equity is almost definitional: illiquidity is intrinsic to private equity given its current scale, and computing the volatility of an illiquid asset class is largely a hypothetical exercise.
- There is also a benign interpretation of low volatility. While it is a mechanical artifact of data availability, this might be the relevant frequency for a long-term oriented investor. Sceptics would say that one can always just buy and hold something, but this is where institutional constraints might stand in the way. In the same way that some institutional investors are constrained from taking leveraged positions (a broadly accepted fact), holding a public asset through a turbulent time is not something that many institutional investors, and pension funds in particular, can pull off. The current governance structure cannot shield such investment choices from internal and external pressures that pension fund management can face if its position declines in value in a measurable way. And so the illiquidity of private equity, in a way, might be a service to these long-term institutions. Although the illiquidity is a by-product of the private equity investment value creation approach and not a goal in itself.

FIGURE 4 **PUBLIC MARKET JUMPS, 1950-2020**



Note: Each bar is the number of positive and negative stock market jumps in the year. Policy-related jumps (e.g., the Covid-19 response) are separated from non-policy-related jumps (e.g., the Covid-19 outbreak).

Source: Adapted from Baker et al. (2021).

As with the measurement of performance and volatility, as access continues to improve, so will the flow of money into private equity. This does not necessarily mean that there will be more capital available, but it will be more stable. But in the next decade, as we think about the flow of capital into the private equity industry, and in particular as we think about trends tied to the low interest rate environment, we should recognise that the allocations are far from stabilised and will continue to move in the background.

1.2 REGULATORY CHANGES AND DISCLOSURES

Given the expansion of the private equity class in the past decades, it is not surprising that the industry has been under increasing scrutiny. While criticism of the excess in the industry was already on display in the 1980s, private equity has avoided much regulatory pressure to date. This is likely to change soon, with both ends of the political spectrum in most countries taking on a more populist stance due to significant expansion of pension fund investments in private equity and – on the taxes front – to fiscal pressures following the pandemic.

The US private equity market has been leading industry growth, and it is likely to lead on the regulatory front as well. Recently, there have been multiple legislative attempts at regulating the industry. In 2019, US Massachusetts Senator Elizabeth Warren introduced the 'Stop Wall Street Looting Act', perhaps the most aggressive regulatory effort to date. But the bill did not leave the Senate Committee and was not put to a vote (Lewis, 2021). Two years later, in August 2021, US Senators Ron Wyden of Oregon and Sheldon Whitehouse of Rhode Island proposed the 'Ending the Carried Interest Loophole Act'. The bill would tax carried interest at typical income rates and end the ability to defer tax payments (United States Senate Committee on Finance, 2021). As of October 2021, this proposed legislation had yet to come to a vote.

There has also been significant interest from regulators in improving the transparency of the industry. Andrew J. Bowden, the Director of the Office of Compliance Inspections and Examinations at the US Securities and Exchange Commission (SEC), gave a speech in 2014 detailing the risks of the private equity model. He noted that "[l]ack of transparency and limited investor rights have been the norm in private equity for a very long time. While investors typically conduct substantial due diligence before investing in a fund, we have seen that investor oversight is generally much laxer after closing" (Bowden, 2014). The current Chair of the SEC, Gary Gensler, has also spoken about the importance of transparency. In May 2021, he testified to Congress that he asked his staff for recommendations on expanding reporting requirements on Form ADV and Form PF, both used by private funds to disclose information to the SEC (Gensler, 2021). Specifically, Gensler wanted to explore reforms on conflict-of-interest reporting and fee disclosures. Beyond this initiative, Gensler has also prioritised examining whether funds give preferential treatment to certain investors; portfolio valuation and the impact of management fees; reporting requirements around cross trades, principal investments, and distressed sales; and conflicts around GP-led fund restructuring and GP-led stapled secondary transactions (SEC, 2021).

It would be surprising if private equity were to emerge from this cross-fire untouched. In sum, there are two main dimensions on which policy actions might impact the industry. The first is a set of requirements that concerns the industry's transparency. Transparency is a broad term, and the examination initiated by the SEC in October 2012 has identified several potential avenues for action (Bowden, 2014). Lack of transparency surrounding allocation of expenses and fees has certainly been at the forefront of this agenda. The primary beneficiary of the lack of consistent and clear reporting has been the private equity industry itself. If significant progress is achieved on the disclosure of fees and expenses, it will likely accentuate negative pressures that are emanating from a zero or recovering interest rate environment.

On the one hand, all limited partners observe their capital calls and net cash flows and should be perfectly capable of understanding the totality of fees that they face. However, the problem is really whether they understand the magnitude of those costs in an unconditional sense. The returns are not guaranteed, and the high embedded fee

structure might make it less attractive to pursue an expensive asset class. It might also trigger opposition in the broader investment board once the cost structure is in plain sight, whether such opposition is justified or not. In other words, it is sufficient to ask why the fee structure is not transparent to start with, and who it benefits, to understand how things might appear and play out once it is.

The second likely point of action is the tax treatment of carried interest, or 'carry' (performance-based fees that are normally set at 20%). Currently, carried interest is taxed as capital gains, which tends to be substantially lower than the taxation of ordinary income. Note that it is important for the regulators to move in parallel on the cost transparency and taxation front, or additional taxation might find its way into the costs charged to the LPs. Evidently, if the taxes were to be raised, it would have an impact on the incentives of the investment professionals, which is not to say that it should not be done. But, first, there are several reasons to believe that such impact would be minimised through structures that allow for tax deferrals by rolling carried interest into other investments. Higher taxation of carried interest is even likely to contribute to the lengthening of the investment horizon of funds. What is more relevant for this report is that this regulation (at least the way the public conversation has been leaning), in isolation, is unlikely to shift the state of the fee structure for the large funds. The current fee structure is the crux of the economic misalignment between limited partners and general partners in the private equity industry. These are the rents that will become a source of discord as pressures build up. Carry taxation, while an important matter, is unlikely to have a direct impact on it.

CHAPTER 2

The interest rate environment and the private equity industry: The mechanisms at play

There are two primary channels through which the interest rate environment and alternative investments interact with the private equity industry: (i) capital flow due to institutional investors' reach for yield, and (ii) indirect impact on private equity through the impact on prices and credit growth. As mentioned earlier, the first is a structural shift of direct importance to private equity and will shape the industry dynamic going forward. The second ties to the cyclical nature of the private equity industry. Here, the past can teach us a lot about the future evolution of the industry through the economic channel. Put differently, we would not be updating the course of private equity in the next decade if the only mechanism at play were the potential interaction between monetary policy and the private equity market, which would work through their connection to the credit market. That said, the objective of this chapter is to discuss these mechanisms in detail.

2.1 CAPITAL FLOW: INTENDED CONSEQUENCES OF MONETARY POLICY AND BEYOND

As private equity grew, better and more consistent coverage of its performance, greater competition as well as a better understanding of the industry value-add have led to a wider range of limited partners investing in the industry. Notably, this was happening in the context of fixed income gradually losing its appeal. The Global Financial Crisis substantially accelerated this trend, as central banks around the world brought interest rates to zero and pension funds and other large institutional investors around the world responded by increasing their allocation to private equity. And this is perhaps the strongest piece of evidence that ties pension funds' capital flow into private equity to the interest rate environment.

For example, the low-yield environment puts key adverse pressure on pension funds and life insurers, and this has been a repeated theme in the European Insurance and Occupational Pension Authority (EIOPA) Financial Stability Reports, dating back to the Global Financial Crisis and its aftermath in Europe. For the first half-year of 2012,[17]

17 Mario Draghi's momentous "whatever it takes" speech, which sets the recovery phase for the euro area, dates back to 26 July 2012.

the report reads: "[R]ecent months have again seen the 10Y [Euro] benchmark rate decline to levels well below 2%. Clearly, long-term rates are of critical importance to life insurers and pension funds, as these institutions typically have long-run obligations to policyholders and pensioners that become more expensive in today's terms when rates are low." EIOPA's Financial Stability Report for the first half-year of 2016 similarly states: "The ongoing low interest rate environment continues to generate challenges to the European occupational pension fund sector. [...] In the course of 2015, lower interest rates had a further negative effect on cover ratios for most of the countries of the sample." More recently, EIOPA's July 2021 Financial Stability Report points out that: "Amid strengthening in the equity market, yields increased whereas credit spreads decreased from the highs of last year, both in sovereigns and in corporate bonds. Nevertheless, the low interest rate environment was and remains the main economic narrative."

Defined benefit (DB) pension plans have fixed promises to their retirees. Often, these funds are partly financed through contributions of new affiliates. Yet, with adverse demographic trends in many developed countries, this is not a sufficient income stream, which puts pressure on the investment income to finance the obligations. For example, in the United States, the return on the investment portfolio of DB plans has to be about 8% to meet the obligations.[18] Naturally, when fixed income returns become minimal, this forces DB pensions to look for returns elsewhere. This pressure has been accentuated by the underfunding of several state pension systems. This has been an unfortunate by-product of falling nominal interest rates, since liabilities are fixed and their present value becomes larger when interest rates are low (and they are discounted at a lower rate). Given the long-term structure of pensions' liabilities, it is not surprising that a significant fraction of this capital, in search of higher returns, finds its way into the alternative investment space.

One might think that defined contribution (DC) pension plans are insulated from these pressures since they do not have a guaranteed level of income. However, DC plans are sensitive to retirees' switching behaviour; put differently, these are runnable structures. Typically, there is some freedom for a retiree to switch their provider if, for example, they are not satisfied with the return profile. As you can imagine, such considerations become more acute when bank saving accounts are paying zero. This fund flow pressure leads DC plans to search for yield, or alpha, pushing the capital into alternative space.

What we saw in 2021 in terms of pensions' allocations to private equity was a result of the drop in interest rates that took place over a decade ago. As mentioned in the introduction, studies of the impact of monetary policy on the bank credit supply look for immediate changes in the allocation of bank credit following a monetary policy interest rate shock, as banks are expected to adjust new loan issuance. This is not the relevant frequency when connecting monetary policy to the patterns in the private equity space.

18 For more recent numbers, see Pew Charitable Trusts (2019); for a review of academic literature, see Novy-Marx and Rauh (2009).

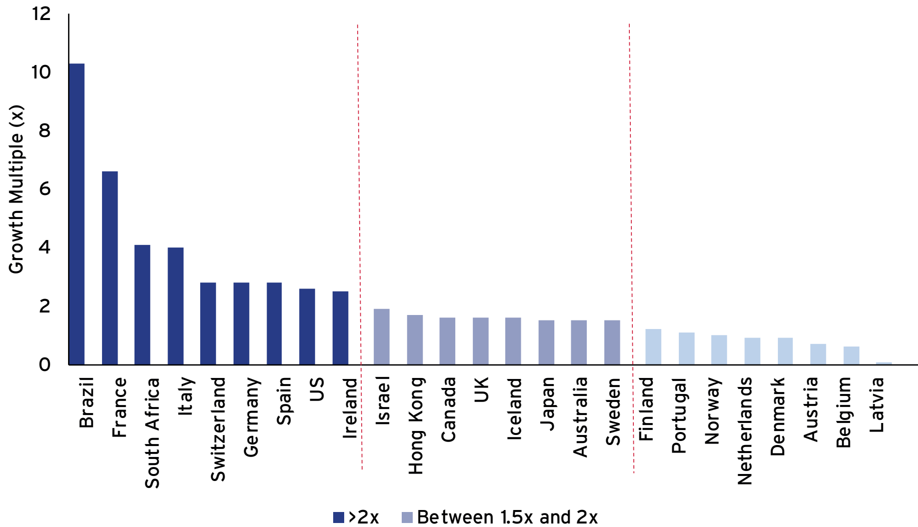
It is an asset class that, in aggregate, moves at a slow pace. Relatedly, outside of a fund of funds structure, capital allocation in private equity is a step function. There is a sizable minimum commitment to any given fund, with larger commitments receiving special rights such as co-investment rights, which allow the investor to reduce the overall costs associated with fund investing. Between the length and size of the commitment, the decision to enter the alternative space is a bit like helicopter skiing: it requires some preparation. What this means is that the limited partners' decision to enter or increase allocations (the demand for private equity as an asset class) is also something that does not move at a high frequency. In sum, between the fact that it takes time for a limited partner to design and commit to alternatives, which cannot be done gradually, and the fact that it takes a while to ramp up the portfolio of private equity investments, we end up being years removed from the original trigger.

To document this structural shift and tie fund flow into private equity, in Ivashina and Lerner (2019) we looked at the shift of pension funds toward private equity investments around the world. We do a few things in this study, but the central piece of evidence is cross-country consistency in increases in allocations to private equity from 2008 to 2017. This is illustrated in Figure 5. The basic intuition is that if the phenomenon is global, the underlying factor driving it also has to be global. It is important to distinguish the interest rate environment from other factors that might be operating at a global scale, including familiarity with the asset class. However, we are able to show that Global Financial Crisis marks a remarkable acceleration across the spectrum size that is hard to explain exclusively with education about the asset class.

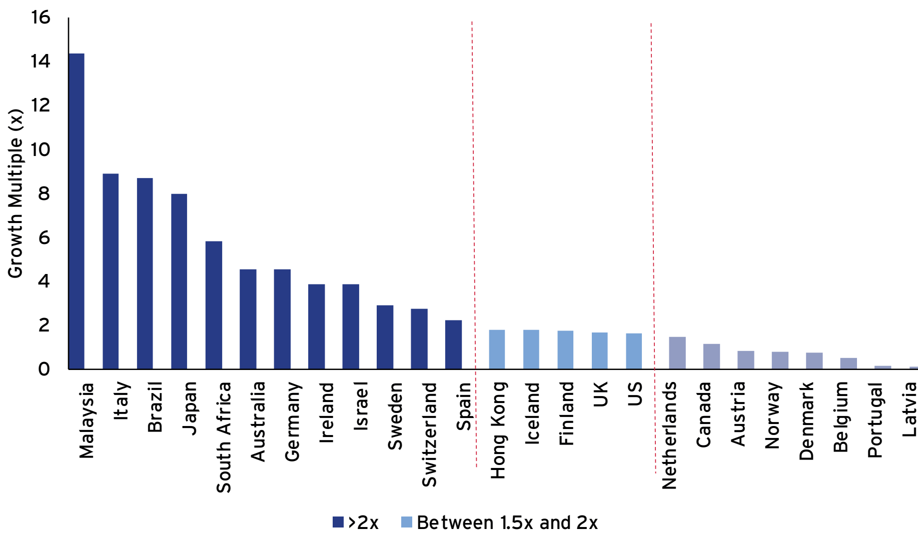
Figure 5 shows that between 2008 and 2017, in about a third of the countries covered in our sample, pensions more than doubled their allocations to private equity as a fraction of their total portfolio. Roughly two-thirds of the countries in the sample saw pensions increase their target allocations to Alts by over 50%. In most of the countries with smaller changes in target allocations, pensions already had close to 10% of their portfolios in private asset classes in 2008. On average, pension funds in developed markets increased their allocations to Alts from 7.22% of assets under management (AUM) in 2008 to 11.76% in 2017, a 63% increase. The top ten countries with the largest allocations to Alts as of 2017 were Italy (21.4%), the United States (19.6% of AUM), Canada (17.4%), South Korea (15.9%), Switzerland (14.4%), Brazil (13.8%), Germany (9.1%), Sweden (6.9%), the United Kingdom (4.9%) and Finland (3.5%). All of these countries had experienced a sizable increase in allocations to Alts over the sample period. What is also relevant to highlight is that we can see the same result whether we look at a simple average across pension funds within a given country or an average weighted by assets under management. This points to the fact that the shift is happening across the spectrum of fund sizes for many countries in our sample.

FIGURE 5 **ALLOCATION TO PRIVATE EQUITY IN 2017 AS A MULTIPLE OF 2008 LEVEL**

Equally weighted across pensions funds



AUM-weighted across pensions funds



Note: AUM is assets under management.
Data source: Compiled using Preqin data.

Overall, interest rates are an important driver of the allocation of pension funds to alternative investments. Falling rates put pressure on defined benefit pension plans to raise their investment income as their funding gap escalates, and several decades of falling rates (as well as adverse demographic trends) have already left them in a precarious funding position. Private equity offers pension funds a valuable alternative, as long-term holding horizons are in line with their long-term liabilities. However, due

to the private equity industry structure, the flow of capital into the alternatives industry is lumpy and is driven by significant shifts in investment strategy decisions. In response to the near-zero rate environment, the period following the Global Financial Crisis represents a significant structural revision in the allocation to alternatives. Defined contribution plans face a different set of pressures, but they are vulnerable to the retail investment behaviour that is triggered in the low interest rate environment.

2.2 CREDIT AVAILABILITY AND CREDIT TERMS EASING

The second central effect through which monetary policy is relevant for private equity operates via the credit cycle formation and moderation. Leverage is important for the private equity industry. According to S&P Market Intelligence, between 2014 and 2020, the total leverage on new large buyout transactions in the United States and Europe was 5.8 x EBITDA.[19] For middle market transactions (EBITDA less than $50 million) this number was 5.4 x EBITDA . For comparison, the average leverage for a non-sponsored company is about half that; hence, the conclusion that the buyout industry is reliant on debt.

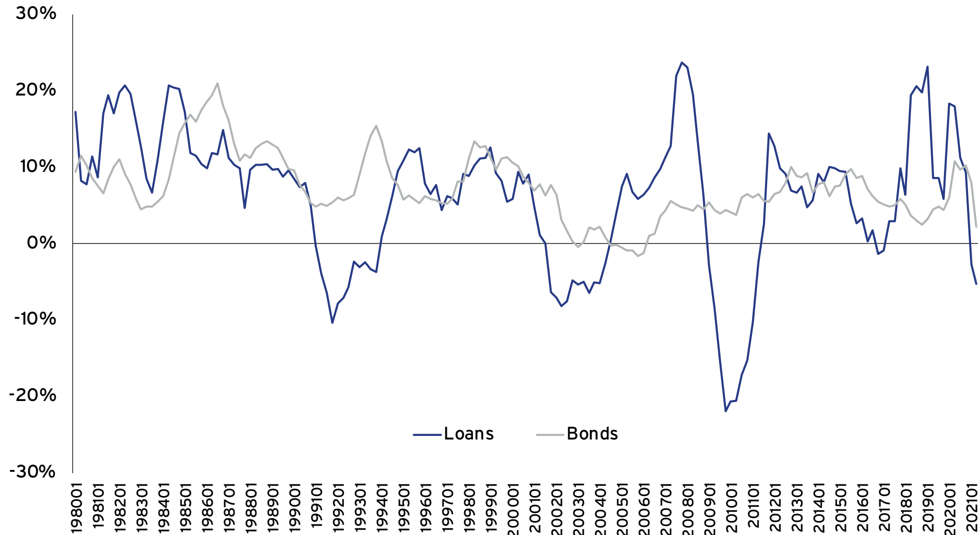
The availability and the use of credit is, at its core, pro-cyclical. This can be easily seen for the United States in Figure 6. So, adding the two things together, it should not be too surprising that buyout activity is also highly cyclical.[20] This point is illustrated in Figure 7. The correlation between a non-sponsored spread (which is a better indicator of broader credit conditions) and LBO volume in these annual data is -0.16, and the correlation with the S&P/LSTA leveraged loan index in 0.32. This is also in line with work by Axelson et al. (2013) that finds that variation in economy-wide credit conditions is the primary determinant of leverage in buyouts.

There is a long academic literature that studies the economic channels that operate through bank balance sheets and the availability of bank-originated credit. An important segment of this literature, including the seminal papers by Kashyap et al. (1993), Bernanke and Gertler (1995) and Kashyap and Stein (2000), looks at how the supply of credit is influenced by monetary policy. Given the connection between the availability of credit, and buyouts and merger and acquisition (M&A) activity more broadly, we should expect private equity activity to expand and contract with easing and tightening monetary policy interventions.

19 EBITDA is earnings before interest, taxes, depreciation and amortisation.

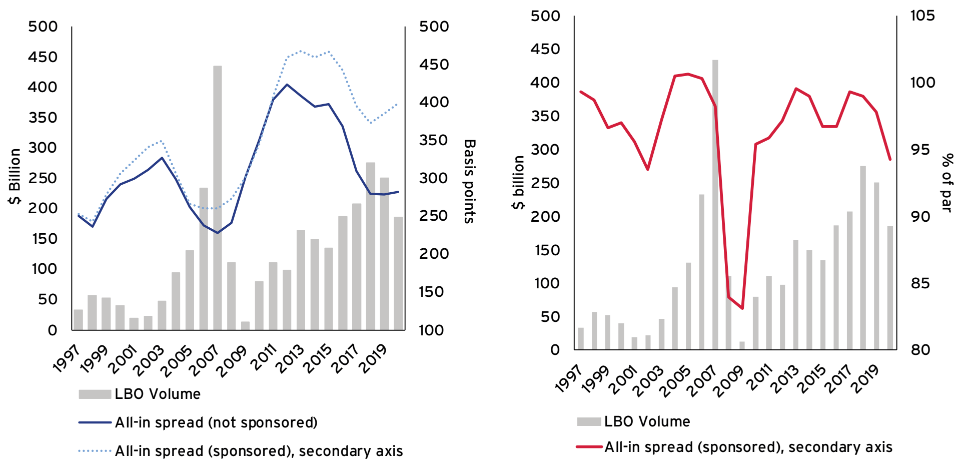
20 Note that with the growth of more traditional debt markets (such as the leveraged loan market) and the development of alternative debt markets (such as mezzanine financing and private debt funds), leverage has become common throughout the spectrum of private equity strategies, and not just characteristic of buyouts. For example, it has become common to see high levels of leverage through mid- and late-stage growth equity investments.

FIGURE 6 **CYCLICALITY OF CREDIT MARKETS: EVIDENCE FROM THE UNITED STATES**



Data source: Compiled from US flow of funds accounts.

FIGURE 7 **LBO TRANSACTION VOLUME THROUGH THE CREDIT CYCLE**



Note: All-in-spread (over LIBOR) includes all fees.
Data source: Compiled from S&P Market Intelligence.

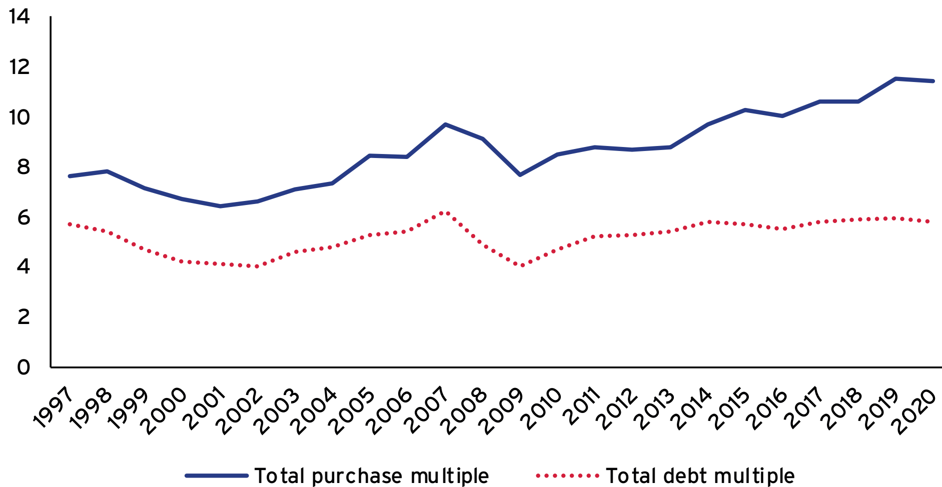
Everything is not that simple, however, and there are some implications for financial fragility that are worth reflecting upon.

There is no shortage of cynical views about the role of leverage in private equity, and in many ways those views are a reasonable representation of the early days of the industry. But in the past two decades, at least, access to credit has no longer been considered a differentiator among competitors. [21] Contrary to popular belief, easy credit is a mixed bag for the private equity industry. On the upside, equity capital can be scaled and easy credit standards can be used to moderate the risk associated with the higher leverage. On the downside, given that to a large degree leverage is a commodity through competition, credit availability feeds into high valuations, with the selling (i.e., exiting) shareholders as primary beneficiaries. Certainly, private equity exiting into high valuations markets is able to record significant gains and, as of 2021, this is in bright display. According to PitchBook, in North America, net-of-fees internal rates of return (IRRs) over the past three years for buyouts and late-stage growth equity averaged 20.4% and 26.3%, respectively. These returns were 42.7% and 53.9%, respectively, for the top quartile of funds. This is as compared to 16.8% for S&P 500 and 17.2% for the Russell 2000 index.[22] In the European market, average IRRs over the past three years for buyouts and late-stage growth equity were 18.1% and 36.1%, while the top quartile numbers were 36.7% and 82.4%, respectively.[23]

This is all well and good, but private equity is in the business of continuous investing. Effectively, every investment that is exited is replaced by a new one. In fact, more capital is deployed for every investment that is exited, since exit results and fundraising are intertwined and successful exits and abundant capital as the credit cycle expands lead to record fundraising for private equity industry.[24] As one can see, it is a bit of a vicious cycle: private equity activity puts pressure on valuations, which in turn feed into immediate returns and into ever-larger fundraising ability, which puts further pressure on valuations. The problem that arises from this dynamic is speculative pressure: there is an incentive to buy a company at an exorbitant multiple, in the hope that you get to sell it at an even higher multiple. Figure 8 illustrates the tight connection between buyout valuations and buyout leverage for the US market. The simple correlation between the two series is 0.81. The contraction dynamic during the two economic recessions is also very clear to see.

21 In a 2011 study, Anna Kovner and I emphasise the economies of scale present in the debt market specialisation (Ivashina and Kovner, 2011).
22 PitchBook Benchmarks, North America, 2021:Q1
23 PitchBook Benchmarks, Europe, 2021:Q1.
24 See, for example, "Private Equity Fundraising Reaches Record High", *Private Equity News*, 13 April 2021; "Private-Equity Fundraising Surged to $459 Billion in First Half", *Wall Street Journal*, 8 July 2021; "Buyout Deals, Fundraising on a Roll in 2021 – Bain report", *Pensions & Investments*, 6 August 2021.

FIGURE 8 **LEVERAGE AND VALUATIONS IN THE US MARKET, 1997-2020**



Data source: S&P Market Intelligence.

When the market eventually contracts, as it has done many times before, the returns inevitably suffer.[25] This is partly due to contraction in valuation and partly due to the burdens of high levels of debt. Although, the bulk of buyout debt financing is bank-originated debt, which is usually a variable rate. Variable debt is priced as a fixed spread over a benchmark rate, which until recently was LIBOR for dollar-denominated debt and Euribor for euro-denominated debt.[26] Outside of the zero lower bound, a standard monetary policy response to an economic shock is to reduce federal rates. Given the tight connection between the benchmark rates and the rates controlled by the central banks, an easing of monetary policy often comes with reduced interest expenses, which lifts any imminent debt expenses (Ozdagli et al., 2018). Following 2008, loans typically include 'floors' for the benchmarks, which fix the minimum interest expense. Perhaps a bigger challenge of managing debt through the downside are covenants constraints, which tend to bind as macroeconomic conditions deteriorate. These, however, are not a direct consequence of the monetary policy.

Private equity also has differentiated skills in managing high levels of debt through bad economic times, and multiple Harvard Business School case studies offer insight into what it takes and how it feels.[27] The lessons that emerge from these cases is that crisis management for highly leveraged firms is a tough, uncertain and in many ways damaging experience that no experienced investment professional takes lightly. In sum, the private equity relationship with debt is less cavalier than it might appear. Competitive pressures

25 Several academic studies document this relation between fund inflow and return sensitivity, including Gompers and Lerner (2000) and Kaplan and Schoar (2005).
26 These benchmarks rates are currently being moved to SOFR and ESTER, respectively.
27 Examples include Ivashina and Scharfstein (2010), Roberts and Sahlman (2011), Gompers et al. (2012) and Ivashina (2016), to name a few.

in deploying capital and competitive pressure to raise larger funds are significant factors in propelling the expansion cycle, with non-trivial downsides for the industry when the market contracts. The cyclicality of the private equity industry might therefore be in direct contention with the easing of monetary policy and its unintended consequences.

One last point to consider is another unintended consequence of credit growth unleashed by a low interest rate environment: the deterioration in credit standards. Debt management and restructuring are largely a function of debt contractual provisions. As the financial distress approaches, what can and cannot be done (is it possible to sell assets, issue additional debt or pursue acquisitions and capital expenditure?) is shaped by the existing credit agreement. Thus, the 'rules of engagement' in the case of distress are set up many years earlier when the initial agreement is signed. If cyclicality, as discussed above, is an intrinsic characteristic of buyouts and late-stage growth equity, and if debt management is something that is done on a scale, wouldn't private equity firms be very thoughtful in following debt market conditions and making sure that they receive the best possible terms as credit condition ease? They would, and they are.

In a 2020 paper, Boris Vallee and I examine the contractual terms in a large sample of high-leverage loan agreements (Ivashina and Vallee, 2020). We show that while negative covenants (financial performance triggers that shift controls to creditors, or restrictions on borrower actions) are common, clauses that weaken them are as frequent. Importantly, we see that leveraged buyouts have significantly weaker loan agreements. Both deductibles and 'carve-outs' (or exclusions in negative covenants, which are commonly used to relax the covenants) are significantly more frequent in leveraged buyouts. For example, credit agreements of leveraged buyouts include, on average, more than 30 additional carve-outs (that is, 30 exclusions added to covenants which are standard for high-leverage debt packages), including seven collateral-related carve-outs.

Private equity, therefore, is better at contracting with its creditors, which could be part of what enables financial sponsors to survive severe economic downturns without triggering bankruptcy. It is a win for the private equity industry and something that smooths the industry returns through the recession. Yet from a policy standpoint, it might be an important source of fragility as a win for equity-holders could be an unexpected loss for creditors if this complex risk is not properly priced.

CHAPTER 3

An industry under stress

Many of the industry giants, including CVC Capital, Bain Capital, Blackstone and Carlyle, were founded back in the 1980s (in 1981, 1984, 1985 and 1987, respectively). Thus, the private equity industry has developed and expanded over four decades of a roughly continuous drop in interest rates. While the decline in interest rates has not been smooth, given the frequency at which the industry moves, one should be thinking about a significant rolling window as the right metric that drives a decision. Declining interest rates, on the one hand, facilitated high-yield credit market growth and are an important ingredient for buyout transactions; on the other hand, they pushed the limited partners into alternatives in an effort to bust their returns.

During the Global Financial Crisis and its aftermath, interest rates around the world were brought down to unprecedented low levels and had to be complemented with unconventional or quantitative easing (QE) tools.[28] From the historical perspective of the private equity industry, over the next decades, the macroeconomic context, and specifically the interest rate environment, will be dramatically different. While the timing of the rise in interest rates is uncertain, it is abundantly clear that the nominal rate either will continue lingering close to its zero lower bound or will begin to rise. After nearly a decade of experience and given the policy response to the 2020 Covid-19 economic shock, there is an indication that interest rates are very unlikely to continue to decline.

In the context of the Global Financial Crisis, several central banks around the world have experimented with lowering their policy rates below zero in an attempt to stimulate their economies in a low-growth and low-inflation environment, including the European Central Bank (ECB) and the central banks of Denmark, Switzerland, Sweden and Japan. However, research shows that negative policy rates do not have the same pass-through effects as policy rate changes that occur above zero (e.g., Heider et al. 2019; 2021). Specifically, Heider et al. (2021) tracked the ECB's policy rate, the three-month Euribor and the overnight deposit rate between 2003 and 2020. They found that when the ECB policy rate was positive between 2003 and 2013, the three rates all moved in synchrony. Once the policy rate dropped below zero in 2014, the Euribor followed but the deposit rate remained steadily above zero, demonstrating the difficulty of passing the negative interest rates to the depositors. This zero lower bound is particularly strong for household depositors. After the ECB dropped its policy rate below zero, none of the banks in the

28 For a summary of unconventional monetary policy and its effects, see Kuttner (2018).

euro area charged negative rates to its household depositors. A common explanation is that holding physical cash, which carries a zero interest rate, is a liquid alternative to holding deposits. If we have to pay to keep money in the bank, most of us will withdraw the money. In addition, researchers have proposed that negative interest rates may be more salient than positive rate cuts, which would cause depositors to withdraw and attempt to switch banks, especially if some banks keep interest rates positive.

This brings us to two potential scenarios in terms of the evolution of interest rates: (i) a 'hockey stick', with rates continuing to linger around zero for several years; (ii) a rising rate environment. There are very few economists who would be brave enough to claim that they can foresee the long-term evolution of interest rates beyond what is already reflected in the market indicators, and I am not one of them. In what follows, I will consider how things are likely to play out in these two scenarios based on the economic forecasts that we have to date. The structure of the industry itself, however, is very particular, so it is worth starting with a reference point: the crisis of the private equity fund of funds industry. The examination of pressures, the turning point and its consequences for fund of funds industry will help us ground the thoughts about what to expect.

3.1 A CAUTIONARY TALE: THE DISRUPTIVE CORRECTION OF THE FUND OF FUNDS INDUSTRY

Throughout this report, I have reiterated that the dynamic of private equity is deceptively slow, which – in addition to 40 years of macroeconomic tailwinds – might dilute the sense of changing times. The evolution of the fund of funds segment offers a relevant window into and supporting evidence for the adjustments that are likely to play out in the broader private equity industry in years to come.

Funds of funds are large limited partners, that is, they invest in private equity funds (hence the name). The initial value proposition for funds of funds was fourfold: fund due diligence, fund access, liquidity and diversification. Back in the early 2000s, a small pension fund interested in private equity might not have been able or willing to underwrite a significant commitment, which is what is often required to gain access to any given fund. Moreover, even if it could, its private equity position would be very concentrated, as it might not have enough capital to invest with more than a couple of funds. Who to invest with and what to make of their investment performance is another non-trivial matter. Investing through a fund of funds promised to solve these problems and more.

Take a large fund of funds, like the London-based Pantheon. It invests in about 50 primary funds each year and is often among the largest limited partners. As of 2019, it had invested in over 700 primary funds, had over 30 investment professionals in its primaries team alone and held an advisory board seat on approximately 360 funds globally (Ivashina and Labruyere, 2019). This might make it easy to see how a fund

investor like Pantheon, with a $24 billion commitment to primary private equity funds (2019 figure), might have much greater expertise and access to funds than a pension fund of any representative size.[29] Yet, the industry broadly speaking came under severe stress following the 2008 Global Financial Crisis. Between 2008 and 2012, the AUM for Pantheon and its larger peers was essentially flat. In the case of Pantheon, this led to a leadership change in 2012 and a strategy and structure overhaul. Overall, in the decade that followed, fundraising has never recovered since its peak in 2007.

Naturally, there are some important differences between primary funds and funds of funds, which are ultimately what made funds of funds the first shoe to drop. Nevertheless, there are also many similarities. First, funds of funds are also a slow-moving asset class. The shift away from funds of funds was not a direct consequence of the financial crisis, it was just a catalyst that accelerated the trends. Several things moved radically in 2008. The interest rates controlled by monetary authorities, and with them all the safe rates, fell to essentially zero. In addition, a significant drop in the value of publicly traded securities, which is present almost by definition in every economic crisis, led to what is known as a 'denominator effect'. Not having a sharply defined market value might be a blessing in periods of economic instability but, on the downside, a limited partner might seem overexposed to a private asset class as a result.[30] To the degree that these fluctuations are dramatic, as they were in the context of 2008, it leads to a pause and a re-evaluation of broader investment strategies for most institutional investors. The post-2008 investment strategy reset worked in favour of the primary private equity industry, but against funds of funds. This was an important trigger, but the issue in the re-evaluation of the role of funds of funds was their perceived cost as compared to their value proposition. Funds of funds carry their own set of costs in addition to the fees and carry charges of the funds in which they invest, and back then there was also a non-trivial fixed fee and carry. In an industry that was already scrambling to justify high upfront fees, this double-layered structure of fees fell under particular scrutiny.

To reiterate, leading to 2008, the central tension for the private equity fund of funds industry was whether the fee structure justified the performance. As with the broader private equity industry, this was not a clear-cut point, with strong views on both sides of the argument. This background is very similar to what characterises private equity today. With this in mind, let us take stock of the consequences from the correction in the fund of funds industry that was precipitated by the financial crisis:

29 Ang et al. (2008) offer a detailed dive into how to think about the fee structure of funds of funds in the hedge fund industry.

30 As an example, take a portfolio with 10% allocation to private equity and 90% in public assets. Imagine that public assets value falls by 30% (S&P 500 contraction for 2008 was close to 40%), and private equity value is assumed to stay flat. In this case, the allocation to private equity mechanically shoots up to 13.7% (= 10/(10 + 90 * 0.7)).

- The overall industry growth has deaccelerated dramatically. According to Preqin (2017), in the decade that followed the financial crisis, the total AUM of private equity funds of funds grew at an annual rate of 4.7%, whereas the rest of the private equity market grew at an 8.0% annual rate over the same period.

- The same report indicates that – in view of this pressure – the fee structure has contracted, with the average management fee dropping by about a third of its 2007 level. Instead, a larger component of compensation has been shifted to a performance-based fee structure and away from a fixed-fee structure.
- Funds of funds had to re-evaluate their business model on many dimensions.
- Larger funds of funds were more successful in adjusting to the new landscape, and the industry has undergone further consolidation.
- Consistent with the slow-moving nature of the asset class, despite dramatic adjustments in the cost structure and product offerings for the funds of funds, the flow of capital was very slow to return to the industry. Most of the growth in the recent years was due to the ability of funds of funds to reach new investor accounts.

To recap: (i) slower growth in fundraising; (ii) smaller fixed fees and increases in performance-based compensation; (iii) significant proactive effort by the private equity industry to change the value proposition; (iv) further industry consolidation; and (v) a slow return to a more moderate growth trajectory. This is likely to be the playbook for what to expect as the tension surrounding the cost structure and private equity value-add builds in a zero or rising interest rate environment.

A sceptic might try to dismiss this prediction by pointing to the different value propositions at the fund level as compared to funds of funds. Although both carry some 'active' component (due diligence in the case of funds of funds), and it is only in recent history that buyouts have become so operationally intense, it is certainly the case that a value-add is different. However, the expense structure of funds of funds was lower than that of the private equity funds even before 2008. So, it is hard to jump from different value-add to whether a 2% fee on committed capital for private equity funds is universally justifiable, especially since it is incredibly unlikely that the bulk of limited partners would be able to dive into the subtleties of the investment strategies and the nature of their 'active' component. At the end of the day, it is all about fixed costs and expected returns. 'Fees on fees in funds of funds' certainly added a non-trivial cost, so they were the first ones to fall under stress, but their value proposition was not so easy to dismiss. The same fundamental tension, which haunts private equity funds today, eventually led to the fund of funds industry disruptive correction, which put the industry under severe stress for several years.

3.2 THE TWO MACRO SCENARIOS

As of the fourth quarter of 2021, a quick and persistent rise in nominal interest rates is very unlikely. Overall future expectations of interest rates are very moderate for the United States and Europe, as can be easily seen in Figure 9. According to the most recent Federal Reserve forecast, monetary policy rates are not projected to rise until 2022. The longer-run rate levels are expected to be around 2.5%. However, post-pandemic inflationary pressures have been building up. The question is whether they are transitory.[31] According to Goldman Sachs, as a consequence of supply-side constraints, inflation will continue to rise in the United States through the end of 2021 and is projected to reach 4.25%.[32] Yet, according to the same report, a reversal in the shortages and a slowing of the wage growth could spell lower inflation over the course of 2022. The Fed and other central banks around the world share the same expectations with inflation bowing down towards 2022. Nevertheless, the IMF has warned that there is a high degree of uncertainty even with the predictions. If inflation continues to be high, central banks would feel pressure to raise interest rates. Indeed, the recent change in the Fed's timing of projected interest hikes and the tapering of asset purchases programmes are tied to higher than anticipated inflation rates. In sum, while significant increases in rate levels are unlikely in the foreseeable future, the post-pandemic inflation dynamic still carries significant uncertainty.

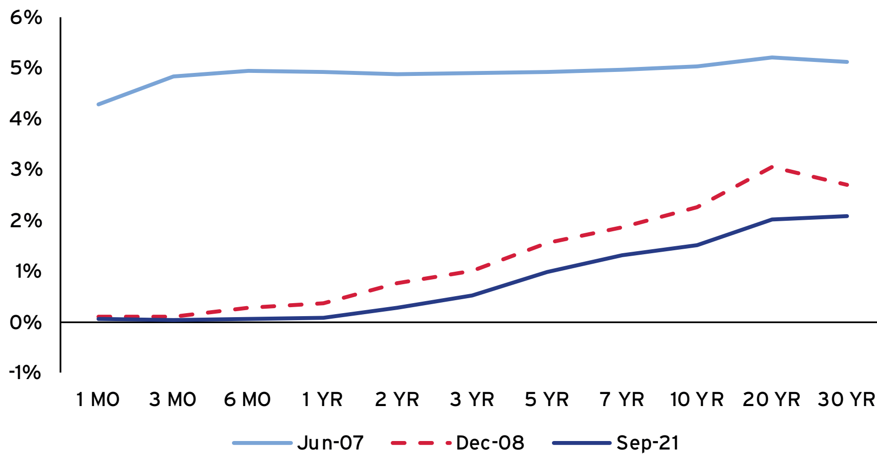
This report is focused on the interaction between monetary policy and the private equity industry, which is why the primary focus is on inflation as a driver of nominal interest rates. But the 'elephant in the room' is that inflation has a direct impact on firms' profitability. If firms cannot pass through rising costs to their customers, their margins get squeezed. Importantly, would that have a differential impact on private equity returns? It is hard to say; buyout and later-stage growth equity are heavily leveraged, and, as such, they are particularly vulnerable to drops in their performance. They are more likely to trigger financial distress or become largely paralysed by restricted actions, which are a common part of even the lightest covenant structures in credit agreements. On the other hand, private equity is smart. Among other things, a proactive approach to deal selection to combat potential inflation pressures has been something that has been on investors' minds for a while now.

31 At the time when this report has been written, evolution of the near-term inflation has been a moving a target. The report was finalised in the last quarter of 2021. Some of the numbers mentioned here have moved since then but – at least as of the beginning of 2022 – the bigger picture on the evolution of inflation through 2022 and beyond continues to be the same.

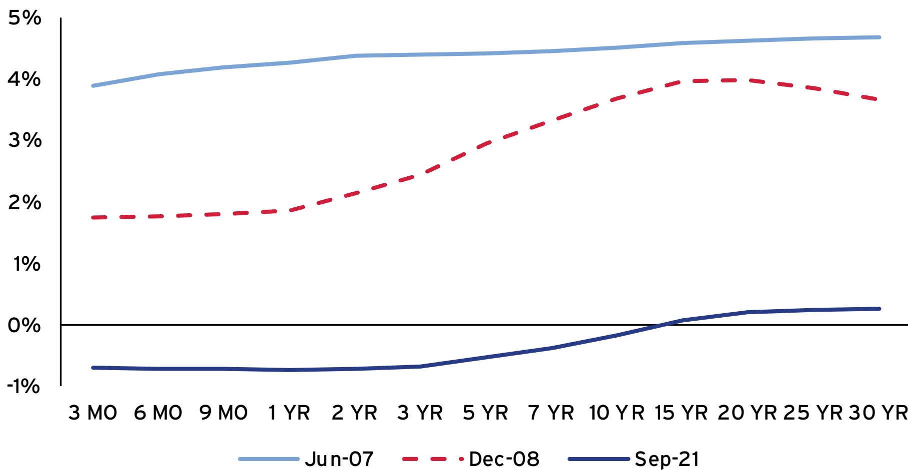
32 "US Daily: Supply Chain Disruptions, Wage Growth, and Inflation in 2022: A Scenario Analysis," Goldman Sachs Economic Research, 2 October 2021.

FIGURE 9 **YIELD CURVE**

US Treasury yield curve



Euro area yield curve



Data source: US data are from: https://data.nasdaq.com/data/USTREASURY/YIELD-treasury-yield-curve-rates; European data are from: https://sdw.ecb.europa.eu/.

Scenario 1: Rising interest rates

The Global Financial Crisis and the 'death of fixed income' have accelerated the allocations of pension funds and other institutional investors into private equity. Many large pension funds have dialled their target allocations to private equity to 15% or even 20% of their portfolio, in some cases up from 2% or 5%. Getting to these levels has not been a fast journey. For many institutional investors, this arrangement comes with co-investments and even some fraction of direct investments. This in turn comes with an internal infrastructure and a specialised investment team. In other words, there is a significant set-up cost. If private equity investments are scaled down, it is very hard to

dial them up. A hike in interest rates would be the most damning scenario for private equity. But interest rates would need to rise substantially before pressure to generate the 7–8% required return on pension liabilities could be continuously addressed by investing in the fixed-income space, thus resulting in significant fund outflows from private equity. A more likely scenario is scaling down by freezing or deaccelerating allocations to private equity and becoming more selective, which in turn would trigger the negative pressures putting the weight on transparency and fee structure.

Thinking about the composition of the private equity industry, such pressures would make new and smaller funds particularly vulnerable. The proliferation of new funds, and especially generalists' funds, in the past decade was partly explained by the abundance of capital and the desire to capture a more significant share of fund economics. These funds have a higher embedded cost structure. The amount of deals, investment professionals (the units of cost) and deal-making expenses do not scale up nearly as quickly as the management fees. This means that larger funds have more room to compress the costs, and they also have a greater ability to experiment in the investment space. Of course, these funds are also large for a reason, and that relates to their track record and relationships with a wide base of limited partners. All of this gives larger-scale firms a better chance to withstand adverse pressures.

Scenario 2: Interest rates stay close to the zero lower bound

As stated earlier, the arrival at the zero lower bound and the depth of economic distress that accompanied it drastically accelerated the broader entry of institutional investors into private equity. What we see today in fundraising is the tail of pensions around the world deciding to double or triple their allocation to private equity; it just takes a while to get there. The big push into private equity came from three main ingredients: (i) enduring contraction in expected returns on fixed-income positions, (ii) the scale necessary and desirable to invest in private equity, and (iii) either the guaranteed structure of liabilities and/or industry-level competitive pressures for limited partners. With rates being stuck near zero, private equity growth is deemed stable. Returns on fixed income cannot contract further, and the scale for limited partners' investing in private equity has already been reached. As a result, the allocation to private equity should stabilise and so too the growth of the industry.

Once again, such deceleration in capital looking to enter the 'alternative' space would likely bring the industry and its cost structure into the spotlight. Naturally, the attractiveness of running a smaller and younger firm without capacity to ramp up fundraising in any significant way will likely lead to exit and consolidation. In other words, whether rates rise or stay consistently low, the consequences are very similar. What is different is the horizon over which these pressures will materialise. Earlier, I emphasised that – due to the industry structure – to have a significant investment in private equity, limited partners need time, relationships, specialised knowledge, liquidity management that adjusts to capital calls distribution, and (hopefully) the right

investment governance structure to handle long-term assets. So, entering and exiting the alternative space is not exactly a spontaneous or isolated decision. Let us separate the timing of correction from contributing forces. As the industry's growth deaccelerates, we will see more scrutiny of the cost structure and the industry's value-add. After all, concerns about the double-layer of fees for funds of funds had been building up long before this industry came under stress. The corrosive forces for the private equity industry's 'bargaining power' vis-à-vis its limited partners are already in place and will continue solidifying in this adverse macroeconomic setting. The tipping point for the 'tanker' to start turning is, however, different in the two scenarios.

A sharp and sustainable rise in policy rates would constitute a significant shock in itself. Recall that since monetary policy is a tool, such a move is likely to be in response to a prolonged and unanticipated rise in inflation. Such a setting would be a moment of reckoning for many segments of the private equity industry, and limited partners would make significant adjustments to their portfolio strategy. If the interest rate environment stays low, a prolonged economic shock is likely to be the force that pushes the industry to adjust.

In 2020, governments around the world staged aggressive interventions in financial markets that were surprisingly effective. As a result, the financial stress in the market was very short-lived and did not lead to a significant re-evaluation by limited partners of allocations across asset classes. Yet, according to Private Equity International, fundraising was put on significant pause. The economy was not doing well, and that might explain why growth funds fundraising contracted by 44% in 2020.[33] However, not investing is not an option for the bulk of limited partners, which points to the fact that money went elsewhere. Once again, in the low interest rate environment, it would take a longer period of financial market havoc to lead to an investment strategy turnaround for the limited partners. But 2020 offers a window into vulnerability.

In the second, depressed but stable interest rate scenario, the post-2008 push will start slowly wearing down. But the shift of bargaining power to limited partners (a must for adjustment in the cost structure) is unlikely to play out in the absence of a catalyst. The speculative 'game of hot potato' that has been pushing valuations to unprecedented levels will have to go through a significant correction, which will be reflected in returns. When this happens, it is likely that some significant adjustment will follow. Meanwhile, we should expect industry growth to stabilise around the limited partner asset growth. For comparison, according to the OECD,[34] between 2009 and 2019, the US pension fund industry grew at an average annual rate of 6.2%. The same number for Germany was

33 More broadly, according to Private Equity International, as compared to 2019, in 2020 total fundraising contracted by 20% across all alternative strategies and by 30% for private equity.

34 https://stats.oecd.org/.

4.5% and 6.5% for Italy. Based on Preqin data, over roughly the same period, pension allocations to 'alternatives' for these countries grew at annual rates of 11.4%, 12.5%, and 16.8%, respectively. This reallocation of assets is no longer sustainable given the absence of interest rate tailwinds.

CHAPTER 4

Major trends in the alternative industry: Can industry preserve the momentum in the new interest rate regime?

One of the primary challenges for private equity remains the consistency of performance patterns (against the background of large and certain costs). The growth of the industry to date has been driven not so much by its remarkable performance but by the growth of long-term pools of capital, the maturity of the asset class, and importantly the declining interest rate environment that has continuously pushed capital into the industry. The initial push of capital into the alternative space initiated by the depressed interest environment has been working its way through the system in the past decade. Best-case scenario, in the years that follow, this momentum will start wearing down. Further pressure on returns due to competition and a regulatory push for higher performance and cost transparency will only add to that. To clarify, the private equity industry is not going anywhere. What is in question is the industry's continuous growth and the sustainability of rents that it has been commanding so far. But not all is grim for private equity growth prospects. The industry is notorious for being smart, agile and proactive. There are a few things that are being set in motion that might at least partially offset the negative macro pressures. (Table 2 summarises the trends shaping the private equity industry.)

That said, we should also understand that not every industry effort might end up being a significant win. A trend that has characterised past years, and is likely to continue forward, is the rise in 'non-flagship' funds, or funds in adjoined strategies such as private credit, opportunity funds and secondaries, among others. The expansion is particularly pronounced for larger GPs, with the average number of 'fund families' (or simply put, products) now reaching seven, from just a single offering in 2000. These additional products provide further avenues to capture higher capital allocations from the existing LPs. This has been a substantial success and a driver of growth for the alternatives industry. But another seemingly obvious avenue for growth – expansion into emerging markets – has been a very inconsistent and difficult journey for most large funds (and, consequently, for large limited partners).

TABLE 2 **CENTRAL TRENDS SHAPING THE PRIVATE EQUITY INDUSTRY**

'Negative' trends	'Positive' trends
• Depressed or rising interest rate environment • Competition • Regulation: Push for transparency in costs	• Growth in the investor base: Democratisation of access to private equity • Expansion in the holding horizon

4.1 EXTENSION OF THE INVESTMENT HORIZON

I will start with the most exciting trend: a lengthening of the investment horizon.[35] In the extreme, we are talking about a perpetual or evergreen structure, but in reality, movement towards up to a seven- or ten-year holding period for individual deals would represent a significant transformation for the industry. While we tend to associate private equity with patient, long-term capital, the reality is that the industry is almost entirely focused on the five-year holding horizon. Most of the funds that are being raised have a life of ten years, with the capital deployed through the first half of the life and exits being almost a requirement for raising the next fund. As a result, the average holding period (and every financial model backing the initial investment thesis) tends to be five years. That is five years to exit, which means that the growth and/or turnaround results need to clearly show in about four years. It is easy to see that the needs and opportunities for sophisticated active management far surpass those initiatives that can show results in four years. Put in academic terms, this is local optimisation: all the talent and resources being thrown after a set of deals and initiatives that fit a rather restrictive mould.

Can this trend take off at a significant scale? Not so fast. The problem is information and governance. Mandatory exits provide a clear window into the performance of a fund. If the holding horizon becomes longer, the misalignment of incentives between limited and general partners can be amplified. Differed compensation for investment professionals helps. However, first, it also creates a problem as carry, which is already removed far into the future, is being pushed even farther; and second, it does not resolve the problem of gambling for resurrection or just shirking (while charging a fee.) Perhaps the answer is experience and trust. But if this building of reputation is the only way forward with long-dated funds, we are many years removed from any significant development on this front. It is also the case that the fee structure is not sustainable with a long-dated fund, because it accentuates the conflict even further.

Meanwhile, the industry has also been creative in finding ways to selectively extend the holding horizon for funds through 'GP-led' secondary transactions, that is, secondary sales of fund stakes among different limited partners accompanied by a supplemental fundraising and extension of fund maturity. 'Continuation funds' are other structures

35 For example, see "Private-Equity Firms Create Funds That Are Built to Last", *The Wall Street Journal*, 1 January 2019.

that facilitate long-term holding for a selected set of deals. According to Collar Capital, activity in the GP-led secondaries market was only about $30 billion in 2020, at its highest point (Woodman, 2021). This gives an opportunity for a private equity fund to capitalise on the operational initiatives set in motion in the initial/active stage of the investment. Of course, optionality is good, and these efforts enable private equity firms to improve their risk–return profile in a highly competitive environment. But these particular trends are not really a significant transformation of the fundamentals of the industry. Both fund-level secondary transactions and continuation funds still start with the basic ten-year fund/five-year holding period structure, and as such are not significantly widening the growth opportunities for the private equity industry. In sum, the extension of the investment horizon is the trend with the largest growth potential, but it is unlikely to become the new normal in the near future.

4.2 GROWTH OF THE INVESTOR VASE

The idea is simple: if the capital flow from one client is slowing down, complement it with a new one. The problem is that the untapped territory is retail, and historically fundraising has been very costly and time consuming, even for big cheques. It is not yet clear how the industry could fully democratise fundraising. A significant step in that direction is the entry of US defined contribution pension plans to the private asset class. Although defined contribution pension participation in Europe has been the norm for many years now, it will take time to take form, and it represents some challenges.[36]

Similarly, growth in the secondary space is about broadening the demand for the asset class. Secondaries are conducted by specialised funds and funds of funds. Whereas traditionally limited partners were expected to hold their fund stake through the entire holding period, currently, there is a reasonably active secondary market for these holdings. Secondary deals grew globally from $2 billion in 2001 to $88 billion in 2019 (Greenhill, 2021). Overall, it is not clear whether secondaries could help to substantially expand capital fundraising to those investors who would not have participated otherwise. While growing very fast, its scale is relatively modest.

36 For more details, see Brown et al. (2020).

CHAPTER 5

Concluding remarks

Much of this report has been focused on the growth of the private equity industry. The interest rates controlled by monetary policy are central to understanding the inflow of capital into the industry over its history. This study lays out the mechanisms at play, as well as parallel developments in the broader private equity industry. The conclusion is that the adverse macroeconomic pressures are evident and likely to be persistent. Although some interesting experimentation is taking place in the industry, as of this moment, none of the benign trends appears to have sufficient capacity to offset the tampering of the capital push into alternatives. To reiterate, private equity is largely a mature industry that has a firm place in the portfolios of many institutional investors. What is in question is not the industry's existence but its growth, and with it, the sustainability of the current cost structure.

For limited partners, this represents the opportunity to seize bargaining power in how the rents are split between private equity firms and their investors. But this should not be taken for granted. As discussed in the report, the impact of the slow capital inflow is likely to disproportionately affect smaller and younger funds. Larger funds will likely continue receiving substantial fund inflow, especially as the industry consolidates. Without an informed approach, and coordination among limited partners, we might see the exit of smaller private equity firms but the cost structure for large firms stay the same. Proactive coordination efforts among limited partners will be necessary to converge to a new cost structure with a better alignment of private equity incentives.

Discussions

Tito Cordella, *World Bank*

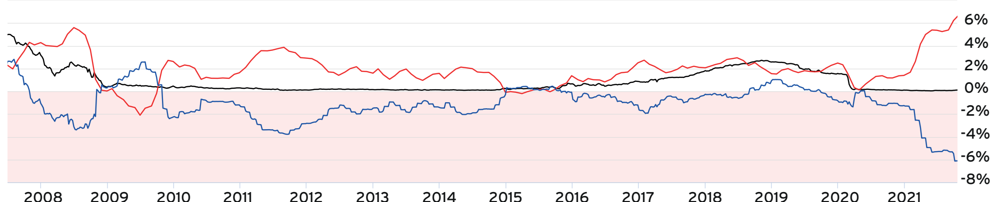
I very much enjoyed reading this sharp and insightful report, which not only provides a clear introduction to the private equity industry, but also a thorough analysis of the challenges the industry may face in the years to come. My main suggestion – and as a discussant, I do have to come out with suggestions – would be to sharpen the discussion on how interest rates affect private equity, distinguishing between nominal and real rates. The report could also pay more attention to the natural rate of interest, rather than just focusing on the policy rate. But, before getting there and throwing in, en passant, a few additional comments, let me summarise in one brief paragraph Victoria's endeavour.

The report offers a retrospective of the private equity industry in the post-global financial crisis period – a period characterised by declining interest rates, easy credit and a large pool of capital searching for yields and long-term investment opportunities. Though these trends have been particularly helpful for private equity, we may now be at a turning point: policy rates can either continue lingering around the zero lower bound (ZLB) or they may start to increase. While both scenarios imply a less favourable environment for the private equity industry, the industry is clearly going to suffer the most in the second one, especially if macroeconomic headwinds are accompanied by a stricter regulatory framework. This, however, does not mean that private equity will disappear. What is at stake is its continuous growth, the sustainability of its rents and, perhaps, the balance of bargaining power between general and limited partners.

My first question is why the report focuses on nominal and not on real interest rates. Which rate is the one that matters the most for capital flows into private equity – the real or the nominal one? Isn't it the case that institutional investors, such as defined benefit pensions, have real, rather than nominal, commitments, and thus they look for real returns? In addition, the fact that nominal interest rates will probably increase in the future does not mean that real rates, or their volatility, will increase too. Indeed, as is clear from a simple inspection of Figure 1, in the United States the real interest rate[37] decreased substantially since early 2020, even though the policy rate was stuck at the ZLB. What I am trying to say is that real rates have moved quite a lot since the global financial crisis – much more than the nominal ones – and it would be interesting to see how such movements affected (and are likely to affect) the private equity industry.

37 On one-year T-Bills. The results are similar for ten-year T-Bills.

FIGURE 1 **US POLICY RATE (BLACK), INFLATION RATE (RED), REAL INTEREST RATE (BLUE)**



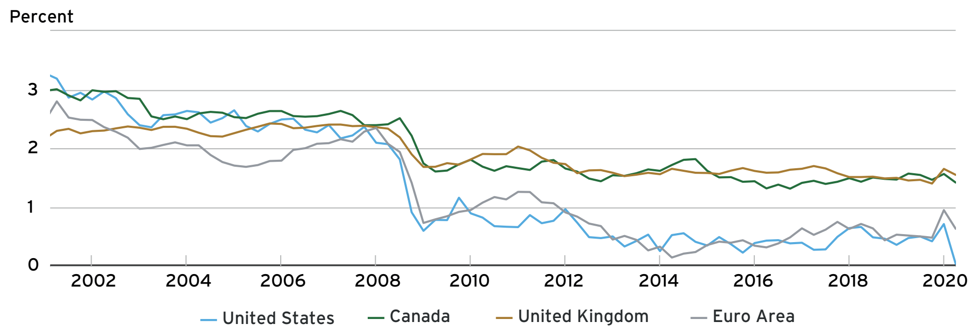
Source: Longtermtrends

My second observation on interest rates and the ZLB is that, although the report seems to suggest that moving away from the ZLB would imply higher rates, I tend to consider the ZLB more like a constraint on how negative real interest rates can be. Therefore, leaving the ZLB does not necessarily imply higher real rates, but rather the opposite. Blanchard et al. (2010) made this point very clearly when they suggested that central banks should raise the inflation target to 4%, and this to have more space to lower real interest rates when the economy is hit by a negative shock.

Then, I would also like to point out that if private equity took advantage of macroeconomic tailwinds, so did public equities. Hence, the report could have tried harder to disentangle differences between the way private equity and other asset classes react to changes in fundamentals. This is something that can be done, as we know from Victoria's previous work looking at the determinants of portfolio allocation across asset classes (Ivashina and Lerner, 2019b).

I also wonder why the report focuses so much on the policy rate instead of looking at the natural rate of interest, r*. Victoria explains that the reason why private equity moves slowly, like an oil tanker, is because the funds are closed funds, and scaling them up or down requires significant time. Now, following the analogy, when does an oil tanker change route? When it encounters choppy waves, or when there is a change in the ocean currents. And do changes in the nominal policy rate not look more like choppy waves, or changes in the natural interest rate like changes in the ocean currents? Indeed, if we look at the behaviour of r* over the last 20 years (Figure 2), what we see is a sort of a step function: quite flat until the global financial crisis, which causes a drop of around 150 basis points and after that quite flat again, at between 0 and 100 basis points in the euro area and the United States and between 100 and 200 basis points in the United Kingdom and Canada.

FIGURE 2 **NATURAL RATE OF INTEREST (R*), 2001-2020**



Source: Federal Reserve Bank of New York.

Hence, while I do not disagree that changes in the interest rate environment may pose a challenge to the private equity industry, the greater risk, in my view, is not a change in the policy rate but a change in r*, which, in a more inflationary environment, could revert back to pre-global financial crisis levels. To be fair to Victoria, the report clearly recognises that the interest rate interacts with private equity through two channels: a structural one, which affects the industry by fostering investors' search for yields; and a cyclical one, which affects private equity through its impact on prices, credit and growth. The report may thus consider addressing the structural channel as an r* channel and the cyclical one as a policy rate channel. In such a framework, it would be easier to answer two important but distinct and questions: How does monetary policy affect the cost of leverage and the funding behaviour over the business cycle? And what would, instead, be the implications of a change in r*?

Finally, the report discusses whether there are partially unexplored venues that may help private equity to continue growing in a less favourable macroeconomic environment. Among these, expansion towards emerging markets, extension in the investment horizons and growth in the investor base look quite promising. Victoria is nonetheless quite sceptical about these because of the structure of incentives in the industry, such as the principal–agent problem that could arise in case of extension of the investment horizon. My question is whether there is anything regulators can do to align incentives and somehow push the industry towards these worthy opportunities.

To conclude, I would like to thank the organisers for giving me the opportunity to read and discuss this very interesting report and commend Victoria for such a clear introduction to the private equity industry and the role it can play in the future and, even more importantly, for setting the standard for future LTI reports.

Francesca Cornelli, *Kellogg School of Management*

As the macroeconomic scenario is changing, everybody is talking about a tough outlook for private equity. Victoria's insights on competition, returns, maturity, access and how the scenario will change more slowly than everybody expects are very interesting. I agree with everything she says, but I just want to add some nuances and a few more thoughts on certain topics.

I would like to start by mentioning a piece of news published in November in the *Wall Street Journal*. CalPERS, one of the largest pension funds in the United States, has just announced that it is going to borrow more money and increase its investments in alternative assets. It is going to expand its allocation to private equity from 8% to 13% and add an additional 5% allocation to private debt. The main reason for this decision is that, despite having already lowered its long-run target of 7% return to 6.8%, it recognised that even this lower target is not likely to be met. Victoria discussed how it will be difficult to adjust the size of the private equity industry because of the ten-year investment horizon. This announcement highlights that it is not only the ability to change, but even the willingness to change. Even now, when people are expecting an increase in interest rates, some funds are willing to double down on their investments in private equity. Thus, we need to look at the private incentives of investors to chase high expected returns versus actual returns and the impact of such a trade-off on the allocation to private equity.

First of all, the report focuses on the buyout fund world, which is really where large pension funds have been investing most and where the increase in private equity allocation has been concentrated. Adding to what Victoria pointed out, I want to highlight that most large pension funds have no liquidity needs. Indeed, they are cashflow positive: they have more inflows from contributions than actual outflows. I think they are expected to become cashflow negative in the near future, but at the moment they are still cashflow positive. This means, concretely, that they have zero liquidity needs and, thus, that they are not pricing the liquidity premium when investing in private equity. This leads to a very high allocation to illiquid instruments. On top of that, investors that want to evaluate illiquidity encounter non-trivial difficulties, as mentioned by Victoria.

The report also mentions the necessity to write very large tickets when investing in buyout funds. For instance, think about a large pension fund that has a large amount of money to deploy. It is basically impossible for that pension fund to conduct proper due diligence of, monitor and control many funds at the same time. This is indeed a lesson from the Great Recession: big pension funds realised that they were investing in too many funds, so they started reducing the number of funds in which they invested. This led to very large tickets, which means the limited partners (LPs) need to find funds large enough to absorb these large tickets. Therefore, we need to ask ourselves whether the objective is still to invest in funds in the top quartile. Although I think the answer is positive for some LPs, my impression is that for large pension funds, low volatility of

returns is the most important objective, given their concentration in fewer large private equity funds. Moreover, if, as mentioned before, these pension funds don't need liquidity and the returns offered by the buyout funds include a liquidity premium, then average returns are high enough for pension funds.

Regarding the increasing length of the investment horizon, Victoria sees it as a good strategy for private equity firms moving forward. I have a slightly different view about this, especially in the buyout world. Indeed, funds like KKR and Blackstone are now issuing 20-year funds. I don't think they are lengthening the horizon because they expect higher returns if they exit their investments later. I think they are simply aligning the investment horizon to the current needs of pension funds. When large pension funds get their money back too quickly from an investment, they have this money to reinvest plus the new inflows to allocate. Historically, the GPs thought that returning the money early was seen favourably by the investors. However, this is no longer the case: pension funds currently have so much money to invest that they prefer to obtain average returns for a longer time from their private equity investments, rather than above-average returns for a shorter time. It is important to note that this effect is at least partly independent of the interest rate environment.

Another aspect that I would like to touch upon is the dynamic in middle and lower-middle markets. It is true that the buyout world is dominating the industry and that it is where most of the increase in investments is taking place. However, the middle and lower-middle funds are also attracting investments and are likely to increase in size. I think we need to focus more on those, even though they will never be as big as the large buyout funds.

I would also like to mention some of the opportunities the private equity industry faces. First of all, the infrastructure bill in the United States and the move towards environmental, social and corporate governance (ESG), in my opinion, are going to help private equity. These are investment sectors in which one has to combine expertise with the ability to manage large amounts of money, and I think that one of the strengths of private equity is exactly the ability to handle many investments in specific sectors, such as infrastructure and renewable energy. I believe that there are very few companies able to do this outside of the private equity industry. Let me mention an example. Recently, some private equity funds started investing in the insurance industry, either buying closed books or restructuring insurance companies. They very soon developed great expertise, up to the point that a lot of the financial services investments of private equity are now in the insurance industry. They were quickly able to replicate this strategy globally. Thus, I think that an advantage of private equity, relative to a company that takes one or two investments, is the ability to develop expertise that can be replicated over and over again. I don't know whether this will lead to better investments or if it will enhance the bad incentives mentioned by Victoria, but I feel it is one important aspect for the future of the industry.

One remarkable trend in the industry is the growth in the number of family offices entering the private equity market. This growth could counteract, in part, the bounds imposed by pension funds. Family offices often struggle to become pure financial investors because of their industrial origin. In particular, they tend to deliver more attention to specific investments to the middle market. Therefore, as family offices enter more and more in the private equity market, I expect they will contribute to a change in its future dynamic.

I want to highlight the fact that, in the end, the global financial crisis did not reduce fees. One of the reasons is what I mentioned before: a lot of LPs reduced the number of funds they invested in. As investors tried to concentrate more their allocations, there were some GPs that could not raise funds, while others saw an increase in the demand for allocations. This gave some GPs more bargaining power, and this dynamic did not lead to a reduction in fees.

Regarding the fees, an increasing portion of GPs have gone public, and all the evidence shows that the share price of a GP only takes into account discounted future fees, while the forecasted carry is so uncertain that it doesn't affect the share price at all. This evidence enhances even more the incentive to chase fees when a GP goes public. Clearly, I am not referring to hidden fees, which are part of the criticism explained in the report; I completely agree with Victoria when she says that those fees are too high.

I want to stress that high fees are also due to an agency problem from the investors' side. I would argue that people making investments on behalf of institutional investors have an incentive to invest highly visible funds, regardless of returns. Note that, even if the actual return of an investment is ten years down the road (and thus not known), the lack of access is immediately evident. When hiring a new chief investment officer (CIO), very often the discussion is about which investors the candidates have access to. It is valued if the new CIO brings new relationships; therefore, even if the returns may not be as high as they could have been, there is an incentive for the single person to be in an investment, since the relationship is immediately evident and, if someone wants to move, it is a huge advantage for him/her to have developed such a relationship. Therefore, the question is: are there incentives to drive down the fees when, at the individual level, there is no incentive to think long-term?

Additionally, even if the LPs are sophisticated investors, it is difficult to benchmark returns and to correct for leverage and liquidity. Transparency is low, and this is reflected mainly in the difficulty of evaluating the performance of GPs. Let me come back to the case of a pension fund that does not care about liquidity. How does it evaluate the performance of an individual? I agree with Tito that the lack of transparency is not helping the industry, and some GPs are frustrated with this situation because they feel that they could show better returns than others. But the discussion about the lack of transparency is mostly about the fees and not about how to measure returns, which is in my opinion more important.

I want to conclude by discussing whether private equity will reinvent itself once again. Victoria brought up the example of the fund of funds industry. It is true that funds of funds have never completely recovered, but I would say that they actually survived pretty well. They have been able to reinvent themselves and to remain profitable by creating segregated accounts for large investors where fees are lower or zero. The underlying idea is that by using segregated accounts, the fund of fund 'teaches' how to invest to the new investors. However, investors are usually overoptimistic about their ability to learn and to be able then to implement the strategies. They lack the appropriate data to do that, so they tend to remain invested in the fund of funds much longer than they initially anticipated. These investors also have access to co-investment and secondary funds, on which high fees are charged. So, by reimagining their offering, funds of funds managed to survive. Analogously, I have no doubt that private equity will reinvent itself, but it is worth asking what a regulator can do to push them in a good direction and to avoid the perpetuation of high fees.

The very final point I want to highlight is value creation. Sometimes, all the focus in private equity is on the returns: if returns are low, private equity is considered bad. However, one should analyse whether there is value creation in private equity investing. If the investment creates value but that value is paid up front (and it is appropriated by the sellers), then the returns may be low but private equity should be seen in a positive light because of the value creation.

PANEL DISCUSSION

Chaired by Giorgio Barba Navaretti, Collegio Carlo Alberto

Giorgio Barba Navaretti, *Collegio Carlo Alberto*
The report raises many issues and having both academics and practitioners participate in the debate allows us to explore the challenges raised from different points of view. In this sense, we are fortunate to have two key market participants joining the discussion: Stefano Del Punta, Chief Financial Officer of Banca Intesa Sanpaolo; and Domenico Siniscalco, Vice-President and Head of Italian Operations at Morgan Stanley. They will offer additional insights on the topic from two slightly different perspectives – one from a commercial bank, and the other from an investment bank. Finally, Francesca Cornelli will also participate in the discussion.

Stefano Del Punta, *Intesa Sanpaolo*
First of all, I would like to thank Victoria for her report; I read it with a lot of attention and I found it very interesting. I agree with many of her findings, starting from the fact that the trend in interest rates that we have witnessed in the last decades has created a very strong tailwind for the private equity industry. I also agree on the need for more transparency in the industry. I expect regulatory pushes in this sense, at least in terms of the quality of reporting.

Before moving to my discussion, let me stress that I am not a private equity practitioner; I am the CFO of the largest Italian bank. Banca Intesa Sanpaolo is also the largest wealth manager and life insurance company in Italy, and it covers a broad spectrum of activities. We actually decided in the last few years to sell most private equity because of the unease of being on both the equity side and the debt side of the same company. Nevertheless, we can still address our clients' needs. In addition, as we manage $1.5 trillion of clients' assets, we constantly monitor investment trends in the industry and the interactions between supply and demand.

The first point that I would like to make as a discussant concerns interest rate expectations. In my opinion, interest rates will remain low; we will not see them going up significantly under any circumstances. Moreover, I think that real rates count more than nominal ones for long-term investors. Take the case of pension funds. Their mandate is to obtain positive long-term real returns. This is a difficult task in an interest rate environment in which, also on a forward basis, ten-year risk-free real rates are -2%. However, as already pointed out by the discussants, I agree with the fact that the trend in interest rates has been favourable for private equity but, as long as interest rates will remain low, this tailwind will continue to blow. Moreover, I would like to add that this dynamic is more true for Europe than for the United States. Indeed, the ECB has much bigger problems in increasing real interest rates due to the large indebtedness of all the countries in the euro area and because of the fact that there are 19 different fiscal policies that could react asymmetrically. For instance, due to differences in the level of debt and the reactiveness of the price that the government would have to pay, the impact of an interest rate rise would certainly be different in Italy compared to Germany. I thus think that central banks will be very careful in increasing interest rates, especially in Europe, and private equity will continue to benefit from this environment in the coming years.

The second point I would like to make concerns the size of the demand for private equity, and long-term investments more generally. In Europe, and in Italy in particular, we are witnessing a secular transition from a state pension system to a private pension system, and this shift is driving up the size of long-term investments significantly. This is something that we observe on a daily basis at Banca Intesa Sanpaolo, and we are trying to respond to demands from our clients. Before the 1996 pension reform, the typical Italian worker did not need to save anything because the state pension system guaranteed a constant replacement rate upon retirement. Today, people who started to work after 1996 must rely mainly on a private pension, even though pension contributions are still very generous compared to the United States or the United Kingdom. Nevertheless, this potentially huge shift from short-term to long-term investments is not actually driven by pension funds, especially in Italy where the tax legislation for pension funds does not help this process. We thus observe a lot of resources going into long-term investments and private equity funds not driven by pension funds. As a result, the key comment I would like to make on the report is that it focuses mainly on the demand side while, in my opinion, the strong push will be on the supply side. In particular, I think that the

need for infrastructure, the green transition and innovation will require a great response from the private equity supply. Within this perspective, it is important to mention the problem of Italian small and medium-sized enterprises (SMEs); they need to find ways to exit the trap of being financed only by banks and enter the equity capital market.

To sum up, I strongly believe that the supply will be a strong driving force in the sales of private equity in the next decades. Let me conclude with an observation. In Italy, we saw a huge supply of private assets in the aftermath of the global financial crisis of 2008. This was associated with the need for banks to deleverage a huge amount of non-performing loans generated during the crisis. Resources eventually arrived, even if interest rates in Italy were higher than in most advanced markets. The point is that the driving force of this surge of private assets towards Italy was banks' need to deleverage. This was actually driven by supply dynamics and not by the low interest rate environment.

Giorgio Barba Navaretti
The issue of concentration of investments in large private equity funds was raised in the report and also in the discussions. In addition, the need for diversification not only in terms of asset classes but also in term of types of companies has been advocated. I would like to ask Francesca Cornelli how it is possible to reconcile these two dimensions, and how she sees these trends evolving in the future.

Francesca Cornelli, *Kellogg School of Management*
First of all, let me say that the more concentrated the pool, the more it is up to the fund to diversify. In fact, what I see in the industry right now is that there is a lot of diversification, especially in the big general partners like Blackstone or KKR. In particular, they are in all the asset classes, they have developed a lot of expertise and they are investing in new technologies, such as AI for identifying and finding new investments. All these facts clearly give the big funds a huge advantage. Yet, it is up to them to diversify.

Moreover, as already mentioned, these big funds are not necessarily required to be in the top quartile, but they need to consistently deliver above the average return of the market, and this is an incentive to diversify. In other words, they can use diversification to avoid being in the bottom quartile.

Finally, I would like to argue that today there are more specialised funds than in the past. When I started doing research on private equity, the general partners were more generalist, but now they are more specialised and this would make it more difficult to differentiate.

Giorgio Barba Navaretti
I think that in the post-pandemic period we are currently living, private equity investments are very important for the restructuring of the economic system. As a matter of fact, many companies are restructuring and need equity. I would like to ask Domenico Siniscalco about his views on the role that private equity plays in the real economy, on

the restructuring of companies and on the targets where they are investing. In addition, I would like to ask his view on the impact of this process of low interest rates in this environment.

Domenico Siniscalco, *Morgan Stanley*
I would like to start by suggesting that the topic of the report is very timely and associated with many elephant deals recently launched by private equities in the United States and Europe. Moving to my discussion, I think that the current and future role for private equity is huge. The dry powder in Europe and globally is remarkable; we are talking about $2.5 trillion in the United States and $560 billion in Europe. Therefore, we are in a situation where there is a lot of scope for private equity investment and a lot of supply by the financial markets. Here comes Victoria's report, which is very good and explores a specific issue: what happens to private equity in a slowly rising interest rate environment? However, in my opinion, the issue is that the markets' timing is probably more important than the direction of change itself. To be specific, if what Victoria envisages materialises over the next 20 years, with all due respect, it is not a very relevant phenomenon. Conversely, it is necessary to consider a shorter time horizon. What is even more important is that the market participants forecast very strong growth of private equity. An analysis by Morgan Stanley and Oliver Wyman based on a survey of the main potential and actual limited partners corroborates this thesis: 81% of respondents believe that the private equity pull of capital will grow over the next three to five years, 16% of the respondents believe that it will stay where it is and only 3% of respondents believe it will decrease. Therefore, what I feel is that this industry will continue to thrive and grow in the future, but I also think that it will increasingly consolidate and specialise. In any case, there are a lot of factors influencing the evolution of private equity, and this makes the whole picture a bit confused. For instance, among these factors is the ability of these market participants to reinvent themselves in a changing environment. The private equity industry has been attracting most of the talent in the last ten years; the talent that used to go into banking or consulting is now going to the buyside, and in particular to private equity. I don't believe that such a huge bunch of very smart people will not be able to reinvent their industry and to adapt it to the new environment. To conclude, I think that Victoria's report is a very interesting and very convincing piece of analysis, but I don't see signals in the market of the trend described in the report for the time being.

Giorgio Barba Navaretti
One issue that has emerged concerns the time horizon. For instance, Francesca Cornelli argued that pension funds do not need liquidity. In this sense, let me add that it is probably true for US pension funds, but I am not sure about European ones. However, the enlargement of pension funds certainly brings a different time horizon for investors and a lower liquidity need for the funds themselves. I would like to ask Stefano del Punta whether, in his experience, this trend will also help target companies. More specifically,

a crucial argument about private equity has been that it has an extremely short time for target companies to really develop and expand. Does Stefano think that this changing time horizon will affect the private equity industry?

Stefano Del Punta
This is a point that emerged in the discussion between Victoria and Francesca. In particular, Victoria sees the lengthening of the investment horizon as a possible element of support for the industry's growth, while Francesca sees it more as a structural need for the industry itself. In my opinion, probably the key matching point is liquidity, and secondary market transactions in particular. It is clear that there exists a need for longer horizons in many industries, especially if you go to SMEs, but this does not necessarily mean that Victoria's entry-exit cycle will enlarge. Probably the solution will be the implementation of some secondary market transactions in between. I think that this is where the industry may find an equilibrium.

In any case, I want to add that I am more focused on the European environment while Victoria is looking more to the United States, and the underlying trend of a growing share of savings going long-term has probably already stabilised on that side of the ocean.

Giorgio Barba Navaretti
I think that a crucial issue is that having savings going from deposits on the current accounts to investments in private equity is a long way away. I would like to ask Stefano del Punta how we can foster this process, including from the point of view of the investor?

Stefano Del Punta
I hope, first of all, that all the money that is present on bank accounts will go somewhere as quickly as possible. Even a short-term bill is fine for us because we redeposit all this money in the ECB at -50 basis points, which is clearly not good business for us.

Anyway, I think such a process will be a very long journey, especially in Italy where it is not obvious how this could happen since pension funds are still not very spread out due to the low tax incentives mentioned above. In fact, if you enter a pension fund rather than normal investments, you have some limitations deriving from the nature of the investment itself, such as the holding period. Therefore, without tax incentives, savers will not choose this type of investment. Imagine what the 401K plans would be if you only have a tax incentive on the first $5,000 that you allocate; of course they would not be the same.

However, there are other vehicles that can be used to allow investors to go long-term. For instance, at Intesa Sanpaolo we created a specific division of our asset management function focused on private assets and we have seen a huge amount of investments going there. In particular, we opened up to our high-net-worth individuals a fund that invests in innovation, and it has been a bit of a success. Note that this is money that is probably

intended to be there in the long term, but it is not a pension fund. So, my point is that it is more difficult to track how the dynamic is evolving when pension funds are a very small portion of the total managed money.

Giorgio Barba Navaretti

In recent years, equity has been going up substantially and, because a lot of entrepreneurs have seen the value of their companies going up, I think that they have been more keen to open up their capital. This is partly a side-effect of the low interest rate environment. I would like to ask Domenico Siniscalco whether this has been an important trigger for the growth of private equity investments, or whether he thinks that there has been a change of culture in the entrepreneurs. Maybe, after the financial crisis and the Covid pandemic, entrepreneurs are really starting to understand that it is good to open up the capital of their companies.

Domenico Siniscalco

First of all, I do not consider private equity an investment for retail but rather an investment for specialised investors. Therefore, I do not think that the money in deposits will ever go into private equity. Turning to Italian entrepreneurs, I see a need for private equity and private capital to go into big firms or big infrastructure or real estate, but I do not see it for Italian SMEs. The reason behind this is the deep-rooted Italian culture of family capitalism. In addition, as an agency problem, private equity firms have to devote a lot of energy and attention, even if the deal is small.

Giorgio Barba Navaretti

The question of fees and transparency is debated a lot in the report and has also been debated in the discussions. I would like to ask both Stefano and Domenico whether there will be an evolution in this respect and, in case they see a turnaround, what the driving force will be. I would also like to discuss whether regulation will force more transparency in the industry or whether it will it be through self-regulation. Finally, I wonder whether they see pressure from the limited partners, or whether competition will change the behaviour.

Stefano Del Punta

I think that competition in the end will drive everything. However, for competition to be fully exploited, markets need transparency. Therefore, in my opinion, the regulator should probably set the stage for competition to be fully exploited and not focus so much on regulating the industry. Let us think about the reason why so much talent is going from banking to private equity. If you are at a bank, you have a lot of constraints, including some on your remuneration. In fact, the reasonable political reaction in the aftermath of the financial crisis to compensation in banks makes it very difficult for them to attract talent. As a result, talent is going to private equity and if they regulate their industry, these people will just go somewhere else. So, if they impose more regulation, they will simply kill the industry. What the regulator can do, instead, is to push for more transparency to let competition do its job. An example of this strategy can be gathered

from the automotive market. In the past, when you bought a car using a financing scheme, everybody used a different metric for the interest rate and it was impossible to compare offers. In response to such an environment, the legislator imposed that everybody should calculate the financial costs using the same standards. So, this is what I think that the regulator can do to let competition do its work.

Domenico Siniscalco
I would also like to discuss a little the ecosystem of illiquid investments. In fact, in analysing the future of private equity, or of any other illiquid investment institution or sector, one needs to take into account how articulate the ecosystem of illiquid investments is. I think that in Europe it is not particularly developed, and this may explain the lack of alternatives for investing long-term. In my opinion, the difficulties in the shifts among institutions are caused also by the few savings-investments channels available.

Elisa Luciano, *University of Torino and Collegio Carlo Alberto*
European regulators have been quite tough on private equity and private markets. For instance, you have regulatory charges on those assets, but those haven't been so tough as to discourage institutional investors from taking those assets on their books. Nevertheless, regulators evidently now want funding channels different from banks. So, what do the panellists think about that?

Second, there exists a fixed cost for institutional investors to start investing in private markets that by now in Europe has gone. It can now be considered a sunk cost because almost every big institutional investor has private assets on its books already. The question is: since this cost is gone, why shouldn't institutional investors get the returns which, after all, are not that bad? Is that also part of the growth in private equity that we can expect in Europe?

Stefano Del Punta
I think that the reversal in fortune of funds of funds could also be due to the fact that institutional investors were doing the job themselves. In fact, they have been able to build internal capabilities up to the point that they did not need the intermediation fund anymore. However, it is not necessarily the case that what we have seen in funds of funds will also happen in the other industries. Anyway, it is true that expertise has been developed among the investors in private markets; as I said, we also now have our own private assets capability. To conclude, I also think this is something that will help supply and demand to match.

Domenico Siniscalco
The answer to the first question is very clear to me: when the market does not provide enough returns, it is somehow mandatory to go to illiquid assets because it is the only area where you can make decent returns. Note that this is exactly the argument given by Victoria in the report. In fact, in the first part of her report she shows that the growth of private equity is related to the drop in interest rates.

Coming to the fixed cost argument, I feel instead that fixed costs continue to accrue because the private equity industry and its playbook change continuously. I cannot tell you to what extent the fixed costs are somehow sunk costs or whether they are going to increase all the time but, from what I see, private equity firms are investing continuously in their own structures.

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The consistent growth of long-term alternative asset managers in the past four decades coincided with the secular decline in interest rates. This has been an important tailwind for the private equity industry's development as debt markets became increasingly cheaper, and institutional investors were searching for ways to offset the shrinking yields on their fixed income portfolios. The past decade, however, has marked a new monetary policy regime: short-term rates have been trapped at zero and it is clear that the favourable environment of declining rates will no longer be there. This development is likely to redefine the growth trajectory, composition and economics of the private equity industry in the decades to come. This report expands on the dynamics at play that shape the development of the global private equity industry and its interaction with the interest rate environment and explores the consequences of deceleration in its growth.

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