KKR

Insights

14.4

Global
Macro Trends
September 2024

An Alternative Perspective

Past, Present, and Future

Contents

3 Introduction

- 4 Analyzing the industry's rapid growth
- 8 Our goal in writing this paper

12 Section I: The Growth of Private Alternatives

- 15 Sovereign Wealth Funds
- 16 Individual investors
- 16 Insurance balance sheets
- 17 The rise of market demand in Asia
- 18 Targeted offerings: Segmentation and innovation

22 Section II: Why Are Specific Private Asset Classes Expanding?

- 22 Private Equity: A state of perpetual reinvention
- 30 Private Real Estate Equity: A new cycle emerges
- 37 Real Estate Debt: Navigating challenges and opportunities
- 40 Private Credit: Bank retrenchment and deleveraging helped to create opportunity
- 45 Private Infrastructure: A sizeable gap to fill

51 Section III: Understanding the Role of Private Alts in Diversified Portfolios

- 51 Private Alternatives risk/return profiles
- 53 The benefits of factor exposures in portfolio construction
- 55 A regime change calls for a different approach to asset allocation
- 56 Harvesting the illiquidity premium for various investment horizons

59 Section IV: Challenges Facing Private Alternatives

- 59 Can Private Alternatives perform well with higher interest rates?
- 60 Are private markets becoming crowded?
- 62 Does allocating to Private Alternatives create too much illiquidity risk?
- 62 Underestimation of risk in private markets
- 63 The importance of disciplined portfolio construction

64 Section V: Conclusion

Henry H. McVey
Head of Global Macro
& Asset Allocation,
CIO of KKR Balance Sheet
henry.mcvey@kkr.com

Saleena Goel
Partner, Head of KKR Solutions
saleena.goel@kkr.com

Dave McNellis
david.mcnellis@kkr.com

Racim Allouani
racim.allouani@kkr.com

Paula Campbell Roberts
paula.campbellroberts@kkr.com

Rebecca Ramsey
rebecca.ramsey@kkr.com

Brian Leung
brian.leung@kkr.com

Rachel Li
rachel.li@kkr.com

Thibaud Monmirel
thibaud.monmirel@kkr.com

Yifan Zhao
yifan.zhao@kkr.com

Coco Qu
coco.qu@kkr.com

Patrycja Koszykowska
patrycja.koszykowska@kkr.com

Ezra Max
ezra.max@kkr.com

Miguel Montoya
miguel.montoya@kkr.com

Patrick Holt
patrick.holt@kkr.com

Koontze Jang
koontze.jang@kkr.com

Jackson Battey
jackson.battey@kkr.com

Alexandre Caduc
alexandre.caduc@kkr.com

An Alternative Perspective

Past, Present, and Future

From its modest beginning as an acquisition strategy largely known as 'boot strapping', the Alternatives industry is now expected to grow to more than $24 trillion in assets in 2028 from $15 trillion in 2022. While these headline numbers may sound outsized in absolute terms, the current Alternatives market is actually still less than 11% of total global GDP and only 2.4% of total global financial assets. Importantly, though, there is no one Alternatives asset class. Rather, KKR's 48 years of experience in the Alternatives arena reinforces our view that each asset class has unique characteristics in terms of expected return, risk, yield, liquidity, and capital requirements that require a closer look to better understand the different benefits that each asset class can bring to a portfolio. Some of the asset classes may serve more of a growth and capital appreciation purpose, while others may protect portfolios against inflation and/or provide stable income. Some strategies may offer a combination. Moreover, the spectrum of characteristics is wide and getting even wider, as the industry finds new ways to deliver value to its end-users, many of whom are looking for approaches to ensure a heightened sense of retirement security. Against this backdrop, we think that sharpening one's understanding of portfolio construction with and without Alternatives as well as across the different categories of such investments is increasingly essential to delivering robust performance outcomes in the years ahead. However, before looking further into the future at the role of this distinct segment of the global investment management industry, we also think understanding the past and the present is key to forming a proper 'Alternative Perspective'.

> There are far better things ahead than the ones we leave behind.
>
> — **C.S. Lewis**, British writer, literary scholar, and Anglican lay theologian

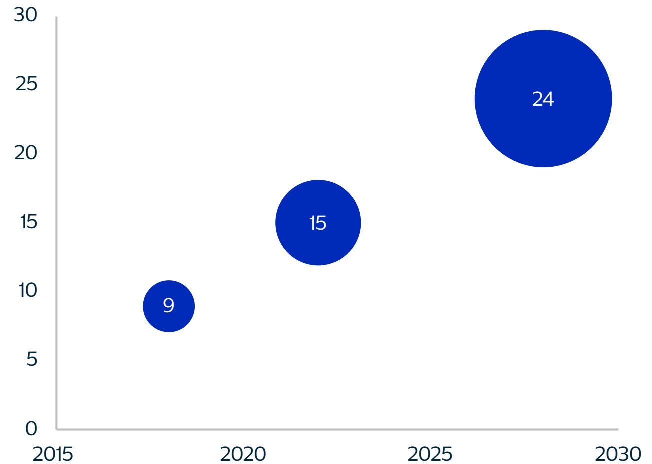
In 1976, Henry Kravis, George Roberts, and Jerome Kohlberg left Bear Stearns and hung their shingle, opening Kohlberg Kravis Roberts, or KKR. Relying on their own $120,000 seed investment and the help of outside deal supporters along the way, they initially used an approach called 'boot strapping', ultimately creating an investment management business that is now commonly referred to as Private Equity. Together, these three gentlemen not only helped to establish the Alternatives asset class but also transformed the industry from its somewhat misunderstood beginnings to one that now touches many parts of the global economy and is highly sought after by investors.

While the Private Alternatives universe is much broader than Private Equity, we are not totally surprised to hear investors and commentators use that term as a 'catch-all' phrase to describe all the various activities behind which private capital now invests. However, we view this narrower focus as a missed opportunity, given the Private Alternatives (Alts) industry now extends across not only Private Equity but also Venture Capital, Private Credit, Infrastructure, Natural Resources, and Real Estate. As we show in *Exhibit 1*, there are now more than $15 trillion of assets estimated to be under management in the space. Interestingly, though, while $15 trillion may sound large in absolute size, it is less than 11% of total global GDP and only 2.4% of total financial assets.

Why has the industry enjoyed such explosive growth, and why do we see this trend likely surpassing the current level of investment, reaching at least an estimated $24 trillion by 2028? We think there are three key reasons: a continued demand versus supply imbalance, the illiquidity premium, and diversification benefits.

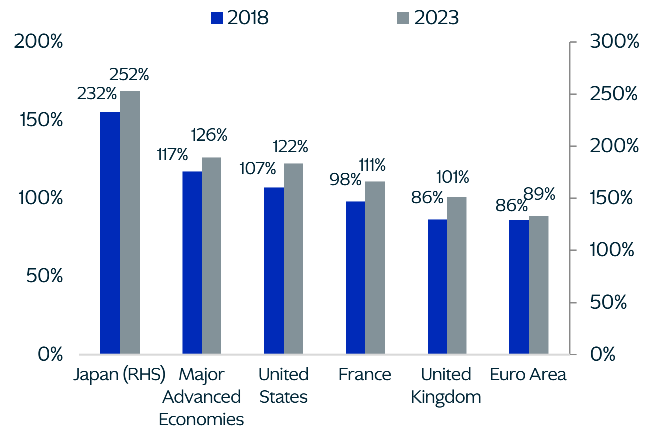
Sharpening one's understanding of portfolio construction with and without Alternatives as well as across the different categories of such investments is increasingly essential to delivering robust performance outcomes in the years ahead.

Exhibit 1: The Size of the Alternatives Industry Is Poised to Increase 2.5 Times by 2028



Alternative assets under management (AUM) is the total market value of all Alternative investments within an industry. AUM measures the size and growth of the industry by adding dry powder and unrealized value. Dry powder is the capital fund managers have available for investment but have yet to call for. Data as at June 30, 2024. Source: Preqin.

Exhibit 2: Governments in the Developed World Are Now More Levered, Which Likely Means That the Private Sector Will Need to Fund Growth in Key Asset Classes Such as Infrastructure



Data as at June 30, 2024. Source: Bloomberg.

1

The need for private capital remains outsized.

We think governments across the globe are being challenged simultaneously by historic fiscal constraints, energy transition needs, and geopolitical competition. So, as we discuss in much more detail below, private investments have emerged as a critical source of capital across a variety of industries. Just consider the post-pandemic increase in the need for infrastructure, for example, where demand for capital far exceeds what governments can provide to stand up transmission lines, connect data, build supply chain resiliency, and update existing infrastructure. One can see this in *Exhibit 4*. There is also the trend towards new products across the Alternatives universe that are not already captured in the current $15 trillion estimate, including new parts of Asset-Based Finance, Reinsurance Solutions, etc.

Exhibit 3: The U.S. Currently Invests Less in Transportation Infrastructure Than Other Developed Countries and China. We See This Changing in the Coming Years

Annual Inland Infrastructure Investment as a % of GDP, Selected Countries	
China	4.8%
Australia	1.5%
Norway	1.5%
Japan	1.1%
The U.K.	0.9%
France	0.9%
Italy	0.9%
Germany	0.8%
Canada	0.6%
United States	0.5%

Inland infrastructure includes roads, rail, waterways, maritime ports, and airports. All sources of financing are accounted for. Note: Data as at December 31, 2021 or the most recent year available. Source: Organization for Economic Cooperation and Development, Council on Foreign Relations.

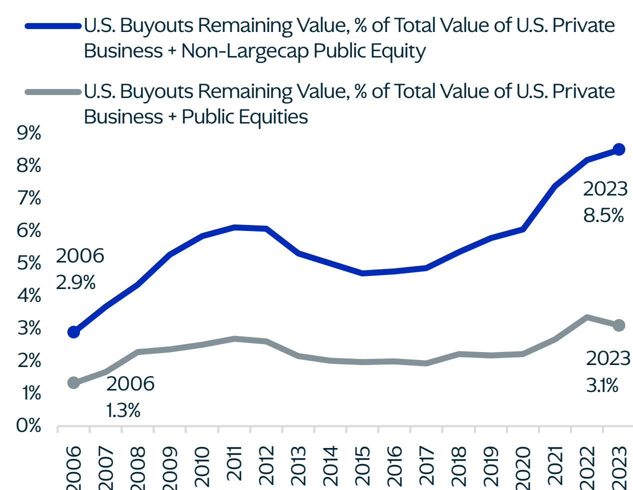
Exhibit 4: $3.7 Trillion Per Year of Investment in Economic Infrastructure Is Needed Through 2035 to Keep Pace With Expected GDP Growth

Global Average Infrastructure Need, % of GDP and US$ Trillions		
	% of Global GDP per Annum	US$ Trillions Spend in Aggregate, 2017-2035
Roads	1.0%	18.0
Rail	0.4%	7.9
Ports	0.1%	1.6
Airports	0.1%	2.1
Power	1.3%	20.2
Water	0.5%	9.1
Telecom	0.6%	10.4
Total	4.1%	69.4

Data as at December 31, 2017. Source: IHS Global Insight, ITF, GWI, National Statistics, McKinsey Global Institute analysis.

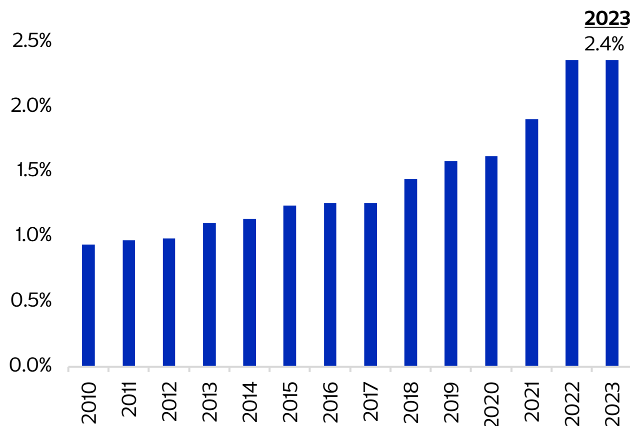
Importantly, despite all the growth in demand for private capital, the industry's size has not kept up with growth in other asset classes. Said differently, if current trends continue, then demand for private assets should actually increase relative to trend. One can see this in *Exhibits 5* and *6*, which show that private capital as a collective 'asset class' is dwarfed by the size of both global financial assets and global equity markets, especially since 2020.

Exhibit 5: Invested Private Equity Capital Still Looks Modest Relative to Its Total Addressable Market



Data as at December 31, 2023. Source: Bloomberg, Federal Reserve, Pitchbook, KKR GBR analysis.

Exhibit 6: Private Assets Under Management Represent Only About Two Percent of Global Financial Assets



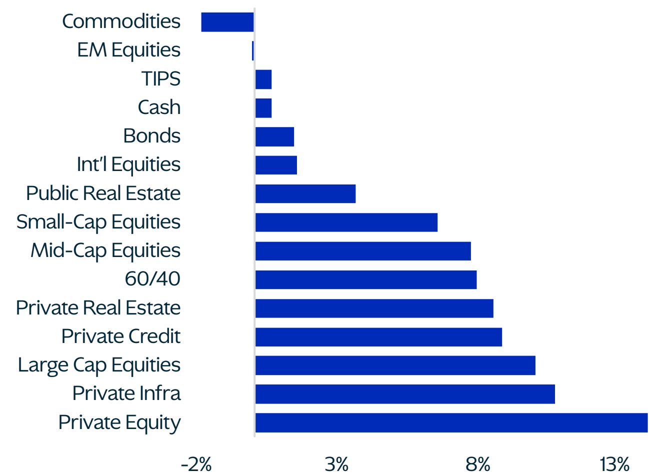
Preqin defines private capital as a broad term that refers to investments in assets not available in public markets. These investments include Private Equity, Venture Capital, Private Debt, Real Estate, Infrastructure, and Natural Resources. Data consists of the 21+EA-group: Argentina, Australia, Brazil, Canada, Cayman Islands, Chile, China, Euro Area, Hong Kong, India, Indonesia, Japan, Korea, Mexico, Russia, Saudi Arabia, Singapore, South Africa, Switzerland, Turkey, the United Kingdom, and the United States. Global financial assets include stocks, government debt, corporate credit, and bank credit. 2023 value for Global Financial Assets is an estimate. Data as at December 31, 2023 or latest available. Source: Financial Stability Board, Preqin Future of Alternatives 2028, Bloomberg.

2

The performance benefit of the private markets' illiquidity premium helps long-term savers save.

While the Private Alternatives industry requires patient capital, it generally has been rewarded by some form of 'illiquidity premium,' or excess return relative to corresponding public benchmarks. One can see this in *Exhibit 7*. This premium or value has traditionally been created by thoughtful asset selection, operational improvement, and timing of entry and exit when compared to public markets. Given that many countries around the world are reporting a savings shortage for their retirees, we believe the need for excess returns created by private capital from the illiquidity premium will likely go up, not down. Indeed, low birth rates, stagnant working-age populations, and increasing life expectancies have put pressure on global pensions and personal savings and created retirement insecurity for many. Consistent with this view, a recent World Economic Forum analysis suggests that the current global retirement savings gap is US$70 trillion; more importantly, it is expected to increase to US$400 trillion by 2050. The U.S. represents fully 40% of the total current gap, implying a $28 trillion[1] savings shortfall.

Exhibit 7: Strong Performance From Both Public and Especially Private Asset Classes Will Be Needed to Narrow the Growing Savings Gap

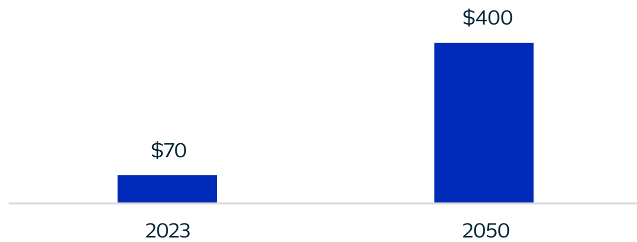


Note: Analysis using EEM, VNQ, MDY, SPSM, SPY, EFA, TIP, AGG, DJP, BIL, CDLI, SPW, Cambridge Associates Private Equity, Real Estate, and Infrastructure. Private Equity, Private Real Estate, and Private Infrastructure are Net Returns to LPs. Private Credit is a gross unlevered return. 60 /40 represented by 60% SPY and 40% AGG. Data as at 3Q23. Source: Cambridge Associates, Bloomberg.

We think governments across the globe are being challenged simultaneously by historic fiscal constraints.

1 https://cri.georgetown.edu/closing-the-global-retirement-savings-gap-a-tale-of-two-numbers/

Exhibit 8: The Global Retirement Savings Gap Is Expected to Reach $400 Trillion by 2050



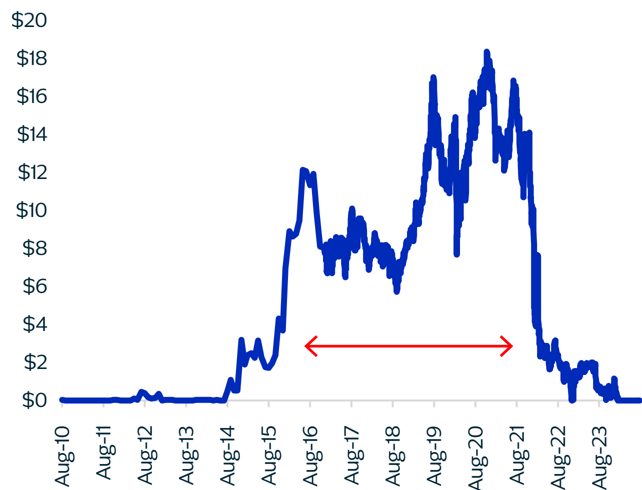
Data as at December 31, 2023. Source: The World Economic Forum.

3

Private investments provide diversification benefits, especially during what we forecast to be a rapid change in traditional asset allocation.

Beyond the strong performance, investors have also sought Private Alternatives because they often provide favorable correlations with other, more traditional asset classes. One can see this in *Exhibit 11*. This attribute has become even more critical as we have transitioned from a low-growth, low-inflation environment to one of higher GDP and inflation. As we have written extensively, we believe we have entered a *Regime Change* for asset allocation *(Exhibit 10)*. As a result, most CIOs and individual investors with whom we speak express the need for 'all-weather portfolios'. Our discussions with many CIOs, particularly in the pension, high net worth, and endowment communities, suggest that there needs to be a greater emphasis on earning alpha from asset allocation, rather than just reliance on security and manager selection alone. Indeed, given heightened geopolitical tensions and unorthodox monetary policy, these allocators are looking for portfolio resiliency and diversification rather than optimizing for the last 10 basis points on the efficient frontier curve. Importantly, our view at KKR remains that more diversification across asset classes and less dependence on global sovereign bonds is warranted, particularly as the traditional relationship between stocks and bonds could be changing from negative to neutral and/or positive. If so, this new reality has substantial implications for the typical 60/40 portfolio, we believe.

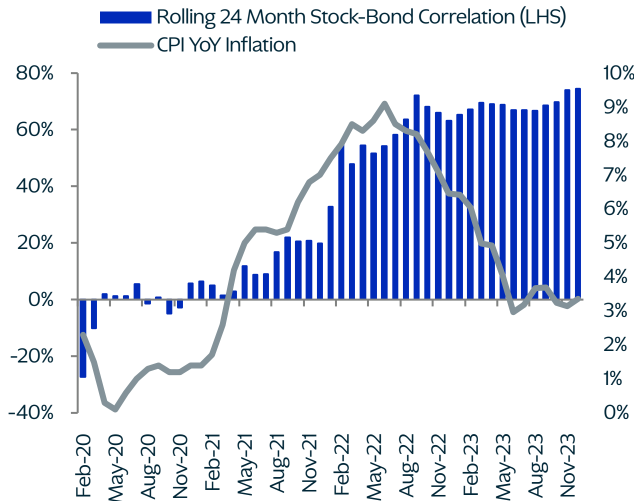
Exhibit 9: We Think the Era of Negative Rates Has Ended. This Reality Has Important Implications for Both Government Spending and Asset Allocation



Data as at July 31, 2024. Source: Bloomberg.

> Given that many countries around the world are reporting a savings shortage for their retirees, we believe the need for excess returns created by private capital from the illiquidity premium will likely go up, not down.

Exhibit 10: Despite Inflation Falling on a Cyclical Basis, We Continue to Think We Have Entered Into a Regime Change for Asset Allocation



Model retrained on a monthly basis to better reflect latest CPI inflation trends. Data as at July 31, 2024. Source: Bloomberg, KKR Global Macro & Asset Allocation analysis.

Exhibit 11: CIOs Are Increasingly Focused on the Benefits of Diversification Amidst What We Believe Is a Regime Change for Asset Allocation

	IG	RMBS	CMBS	Public Equities	Structured Credit	Private Equity	Private Credit	RE Equity	Infra
IG	100%								
RMBS	92%	100%							
CMBS	96%	91%	100%						
Public Equities	50%	28%	44%	100%					
Structured Credit	35%	6%	34%	70%	100%				
Private Equity	29%	12%	28%	84%	49%	100%			
Private Credit	7%	-17%	5%	78%	75%	76%	100%		
RE Equity	-20%	-19%	-17%	33%	12%	52%	55%	100%	
Infra	-3%	-19%	-6%	46%	21%	63%	55%	54%	100%

Correlations are computed on a quarterly basis using the last 12-month total return from 2012-2023. Data as at September 30, 2023. Source: Cambridge Associates, JP Morgan, Bloomberg, KKR Global Macro & Asset Allocation analysis.

Yet, even when we talk to investors who tend to traffic in the private side of the market, many allocators still think about Alternatives more generically, as one asset class with similar attributes. Therein lies an opportunity to learn more and go one level deeper in our view. Indeed, as we detail in this paper, our firm belief at KKR is that each asset class is a separate and distinct component of the Private Alternatives universe, providing unique performance and diversification benefits to portfolios that warrant investor attention.

What are we hoping to accomplish? Our goal in writing this paper is to achieve the following:

1. **Reflect on the latest developments and trends for Private Alternatives**. As detailed below, we still see significant opportunities across Private Equity, Infrastructure, Real Estate, and Private Credit. Importantly, there is a growing demand for private investments to solve a range of problems, including too much government debt, deconsolidation of the corporate sector, deleveraging in critical markets such as Real Estate, and increasing demand for retirement security for aging populations.

2. **Shed light on the different return, risk, and diversification characteristics of the leading Private Alternatives strategies and the role each could play in a well-balanced portfolio**. In our view, too many sweeping generalizations have become normalized across the Private Alternatives industry. For example, including Private Equity in a diversified portfolio has vastly different benefits (and return/volatility profiles) than adding Private Credit. We believe that our research in this area, especially around portfolio construction, is particularly important for some of the newer growth segments of the market, including the individual investor, sovereign wealth funds, and insurance companies.

3. **Surface potential risks that could affect the Private Alternatives asset classes, and as such, where we think investors need to pay additional attention**. Like marriage, investing in Alternatives is not something to be entered into lightly. Finding the right partner to help properly extract the entire value of the illiquidity premium is paramount, as the range of outcomes between the top and bottom quartile is great (*Exhibit*

103). Moreover, essential portfolio construction tools such as linear deployment, liquidity management, understanding concentration/exposure, and leverage are all prerequisites that an investor must consider. Simply stated, with Alternatives an investor is relinquishing some form of liquidity for a potentially higher return in the future. As a result, we think investors need to be thoughtful in determining their definitions of good value for the fees paid. Finally, regulatory risks and oversight should remain top of mind as this industry continues to grow and evolve. See Section II for details.

Looking at the big picture, we believe that we are at an inflection point in the Alternatives industry. Indeed, it reminds us of what happened when investors were clamoring for better returns in the 1990s and moved their capital out of more traditional bank trust departments towards more performance-based, independent money managers, many of whom became large mutual fund providers to the 401(k)s of today. It was – without question – a time of rapid change in the investment management industry.

In today's world, we see such an inflection point ahead for both money managers and allocators of capital, particularly regarding longer-term private investment vehicles geared to the retirement savings market. Specifically, as private investments become more transparent and accessible, we think demand will only increase, as the asset classes can be important tools to help close the gap in retirement savings shortfalls (*Exhibit 8*). Moreover, this increasing need for better returns is occurring at a time when most developed market governments are not in a position to actually pay benefits to retirees through internal free cash flow.

There are other forces at work, too, that we believe will catalyze the change we are forecasting. For example, we think that the onset and fallout from COVID, including the huge swings that we saw in central bank policy along the way, served as an important accelerant in this journey. One simply needs to look at the traditional insurance industry, which allocated more towards Alternatives when the Fed and its peers suppressed rates to stimulate growth at the expense of existing savers. Interestingly, though, despite the 21 Fed hikes that followed COVID (and the subsequent surge in interest rates), insurers did not return to their traditional, pre-pandemic asset allocation. Rather, as one can see in *Exhibit 12,* insurers' allocations to non-traditional assets have stayed elevated over the past two years (declining by only about three percent and still about double where they were in 2017). The reality is that more and more CIOs understand the longer-term benefits that private capital can provide.

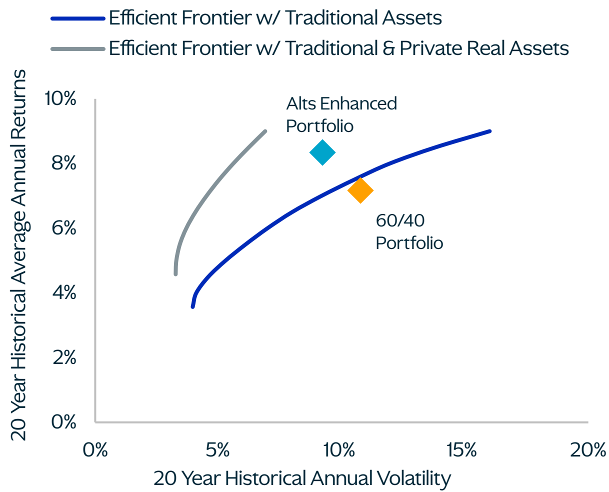
Exhibit 12: Unconventional Monetary Policy Accelerated an Existing Rotation Towards Alternatives, But That Trend Has Not Reversed as Rates Increased

KKR 2024 Insurance Survey: Alternative Allocation and Liability Spread, %

Data as at March 31, 2024. Source: Bloomberg, KKR 2024 Insurance Survey.

While the Private Alternatives industry requires patient capital, it generally has been rewarded by some form of 'illiquidity premium,' or excess return relative to corresponding public benchmarks.

Exhibit 13: With Big Deficits and More Geopolitical Shocks, We Think That There Is a Need to Reconsider Whether One Needs More Real Assets in a Portfolio

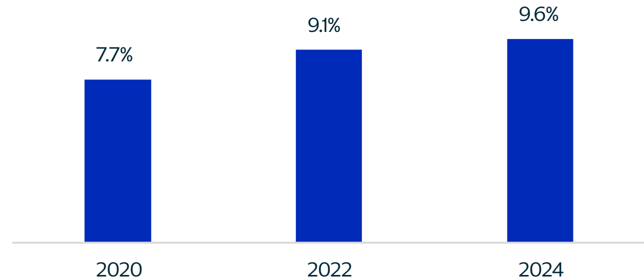


Data as at June 30, 2023. Source: KKR Global Macro, Balance Sheet & Risk analysis.

Importantly, though, it is more than just insurers. Family offices and individual investors are also now increasingly embracing the return and diversification benefits provided by many parts of the Private Alternatives industry. Strong returns, reduced volatility to better combat public market turbulence, and access to more thematic opportunities also contribute to the sector's attractiveness. For example, in many emerging markets, public indexes don't actually capture the benefits of rising GDP-per-capita. Nowhere is this more on display than in Indonesia, which – despite having almost 70 million millennials and a GDP-per-capita of nearly US$ 5000 – offers a public market index comprised of nearly 60% local banks and zero technology companies. One can see this in *Exhibit 15*.

So, our bottom line is that we are enthusiastic about what lies ahead for the Alternatives industry. However, we also fully acknowledge that this storyline will take many twists and turns, as what is needed for one segment of the market may be different for another segment of capital allocators. Moreover, as this journey unfolds, we are increasingly of the mindset that not all private investment vehicles are made equally; sourcing, operational improvement capabilities, and portfolio construction tools, especially around pacing, will increasingly make a difference, especially as more capital flows into this industry. Consistency of performance throughout cycles will matter more, too, as the illiquid nature of the investment requires a sufficient private market return premium above public markets for what is often a 5-10 year investment. This duration point is especially true for taxable investors who have to pay capital gains tax once an investment is harvested. This reality differs meaningfully from public markets investors, who can often adopt a buy-and-hold strategy to offset capital gains.

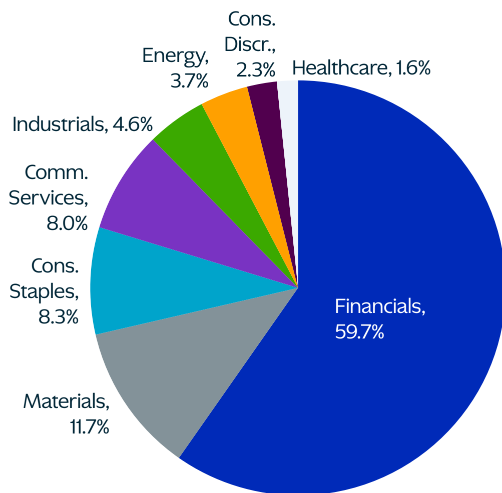
Exhibit 14: Individual Investors Increasingly See Alternatives as a Resource to Improve Long-Term Returns



2024 is an estimate. Individuals are investors with over $5 million in investable assets. Data as at December 31, 2023. Source: The Cerulli Report — U.S. High-Net-Worth and Ultra-High-Net-Worth Markets 2022: Shifts in Alternative Allocations.

We are increasingly of the mindset that not all private investment vehicles are made equally; sourcing, operational improvement capabilities, and portfolio construction tools, especially around pacing, will increasingly make a difference.

Exhibit 15: Like Most Public Market Indices, Indonesia's Equity Market Does Not Provide Direct Ways to Play the Rising GDP-per-Capita Story



Data as at June 30, 2024. Source: MSCI.

Hence, as we peer around the corner today on what tomorrow might look like, we believe the Alternatives industry must become a learning institution both in aggregate and at the product level. Don Williams, the country singer, captured our thinking in his famous quote that "The road of life twists and turns and no two directions are ever the same. Yet our lessons come from the journey, not the destination."

As we have written extensively, we believe we have entered a *Regime Change* for asset allocation. As a result, most CIOs and individual investors with whom we speak express the need for 'all-weather portfolios'. Our visits with many CIOs, particularly in the pension, high net worth, and endowment communities, suggest that there needs to be a greater emphasis on earning alpha from asset allocation, rather than just reliance on security and manager selection alone.

SECTION I

The Growth of Private Alternatives

From almost any vantage point, the Alternatives industry has been in growth mode of late. All told, Alternatives are expected to reach $24 trillion in assets under management by 2028, compared to $15 trillion in 2022 and $9 trillion in 2018. An increase of this magnitude would represent a double-digit CAGR opportunity for the decade ending in 2028, according to Preqin *(Exhibit 16)*. However, as the data also shows, both Hedge Funds and Natural Resources, areas where we spend less time in this report, are expected to cede share and grow more slowly through 2028.

Exhibit 16: The Opportunity Set for Alternatives Could Reach More Than $24 Trillion by 2028, Up from Just $9 Trillion in 2018

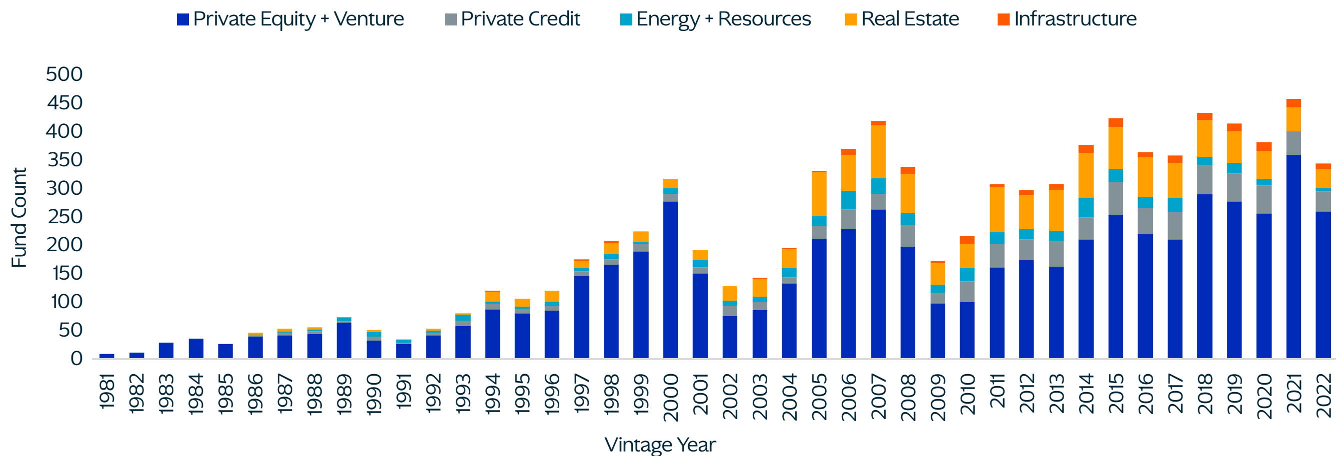
Growth of Alternatives, US$ Trillions				
	2018	2022	2028	CAGR from 2018-2028
Private Equity	$2,535.6	$4,825.9	$8,538.9	12.9%
Venture Capital	$642.5	$1,708.5	$3,796.4	19.4%
Hedge Funds	$3,450.5	$4,180.7	$5,164.0	4.1%
Private Debt	$721.3	$1,472.7	$2,774.2	14.4%
Real Estate	$911.4	$1,569.3	$2,249.6	9.5%
Infrastructure	$492.1	$1,087.6	$1,667.9	13.0%
Natural Resources	$183.3	$221.8	$261.1	3.6%
Total	**$8,936.6**	**$15,066.5**	**$24,452.2**	**10.6%**

Data as at March 31, 2024. Source: Preqin Future of Alternatives 2028.

Beyond traditional assets under management statistics, we also spent some time thinking through ways of defining how nascent or mature an asset class is within the private markets arena. This question is not an easy one to answer, so we applied a few different methods. First, we measured the maturity by private market fund count at the asset class level. We used the count of 25 funds in a given year as a proxy for 'lift off' – meaning an asset class had reached critical mass in the minds of allocators. *Exhibit 18* shows that Private Equity reached this threshold in 1983, and Real Estate followed in 2002. Meanwhile, Private Credit and Energy+Resources achieved this status in 2006, while Infrastructure has not yet attained the 25 per fund per year level. When we raise the bar to 50 funds, we find that Private Equity was the first private market asset class to attain that threshold (1989), followed by Real Estate (2005) and Private Credit (2015).

All told, Alternatives are expected to reach $24 trillion in assets under management by 2028, compared to $15 trillion in 2022 and $9 trillion in 2018. An increase of this magnitude would represent a double-digit CAGR opportunity for the decade ending in 2028.

Exhibit 17: Private Markets Have Expanded to Include Asset Classes Beyond Private Equity



Data as at March 31, 2024. Source: Cambridge Associates.

Exhibit 18: Despite More Than a Decade of Outperformance, Infra Is Still a Less Mature Asset Class Based On the Number of Offerings

Maturity Timeline of Alternatives Asset Classes					
	Private Equity + Venture Capital	Private Credit	Energy + Resources	Real Estate	Infra-structure
First Vintage Year					
>25 Funds	1983	2006	2006	2002	-
>50 Funds	1989	2015	-	2005	-
Number of Vintage Years					
>25 Funds	41	15	4	21	0
>50 Funds	32	1	0	13	0

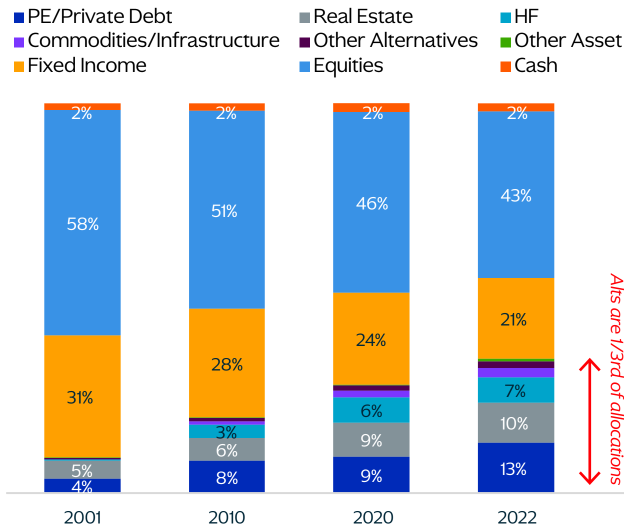
Data as at 1Q24. Source: Cambridge Associates.

Why is Infrastructure today not at the 'maturity' level when many other major private market asset classes are? We think that there are several reasons. First, Infrastructure investing requires scale, with the average deal size around $500 million and some over $10 billion. We think this reality likely contributes to fewer in number but larger in size funds, ensuring more deal flow to the top 10 funds. Second, more traditional suppliers of infrastructure funding, such as governments and corporations, have recently become hindered by their excessive debt loads (*Exhibit 2*). Third, those economic areas experiencing explosive growth of late, such as data and the energy transition, are increasingly being backed through private sources, not government entities. All told, we now forecast at least $3.7 trillion of investment will be needed each year in economic infrastructure alone through 2035 to keep pace with global GDP growth needs (*Exhibit 4*).

What else did we look at to measure the maturity of an Alts portfolio? A second way to measure an asset class's maturity is to look at its share in an allocator's portfolio. On this metric, Private Alternatives now represent, for example, between 30-50% of institutional-type client allocations such as pensions and/or family offices. So, while there is still the opportunity for certain developed pensions to increase their allocations, we think it is fair to say that these two market segments are now more mature on the Alternative allocation front.

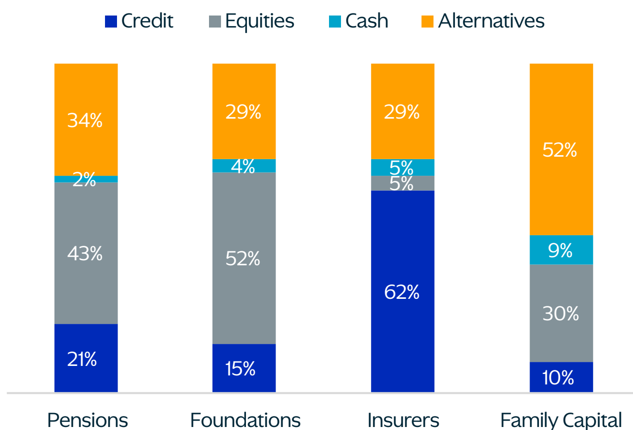
On this metric, Private Alternatives now represent, for example, between 30-50% of institutional-type client allocations such as pensions and/or family offices.

Exhibit 19: Alternatives Now Represent One-Third of Total Assets for U.S. Public Pension Plans



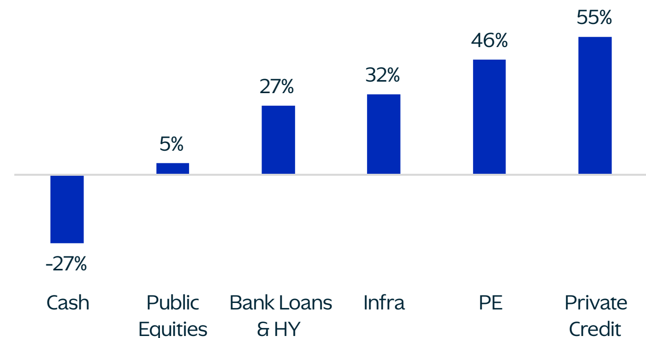
Data as at December 31, 2022. Source: Public plans data.

Exhibit 20: While Family Offices and Pensions Have Large Allocations to Alternatives, We See Significant Growth in Other Areas of the Market



Alternatives include Private Equity, Private Credit, VC/Growth, Hedge Funds, Real Estate, Infrastructure, and operating businesses for Family Offices. Insurers as at 2023. Remaining allocators as at 2022. Source: Public Plans data, CommonFund, KKR 2024 Insurance Survey, and KKR 2023 Family Capital Survey.

Exhibit 21: Investor Intentions Are Clearly Headed Towards Higher Allocations to Private Markets, Especially Regarding Infrastructure



Data as at March 31, 2024. Source: KKR 2024 Insurance Survey.

Economic areas experiencing explosive growth of late, such as data and the energy transition, are increasingly being backed through private sources, not government entities. All told, we now forecast at least $3.7 trillion of investment will be needed each year in economic infrastructure alone through 2035 to keep pace with global GDP growth needs.

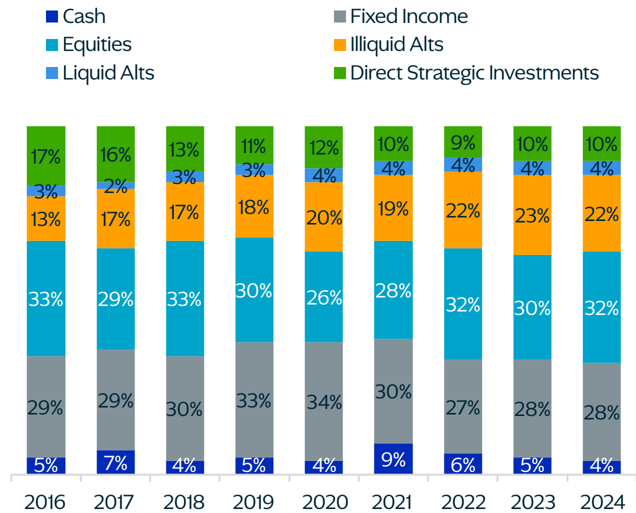
That said, our research has led us to believe that there is an opportunity for growth by product as well as by customer base and region. We note the following reasons why we think that the $24 trillion estimate for 2028 ultimately may prove to be conservative:

1. **Further growth in allocations from Sovereign Wealth Funds.** Over the last decade, the maturity of Alternatives as an asset class is apparent as Sovereign Wealth Funds (SWFs), which we think total at least $12 trillion in assets under management, have increased exposure to private markets from around 16% in 2016 to 26% in 2024. However, our conversations with SWFs in Latin America, the Middle East, and other parts of the world suggest not only a healthy desire to do more with Alternatives but also to use private markets to broaden exposure to both emerging and developed markets. In particular, the scope and scale of SWFs is expanding rapidly beyond traditional Infrastructure and Real Estate investments to include most private market asset classes across geographies. We think the reason for this shift is two-fold: in many instances private markets can help boost returns and decrease volatility, especially as the correlation between stocks and bonds has increased. For example, sovereigns can leverage private opportunities to invest excess revenues or diversify away from total dependence on natural resources or their local economies. Alternatives can also help facilitate sovereigns in acquiring strategic holdings in local companies in economically important sectors.

In particular, the scope and scale of SWFs is expanding rapidly beyond traditional Infrastructure and Real Estate investments to include most private market asset classes across geographies.

Exhibit 22: Allocations to Illiquid Alternatives in Sovereign Wealth Funds Increased Over 1.5x in the Last Decade…

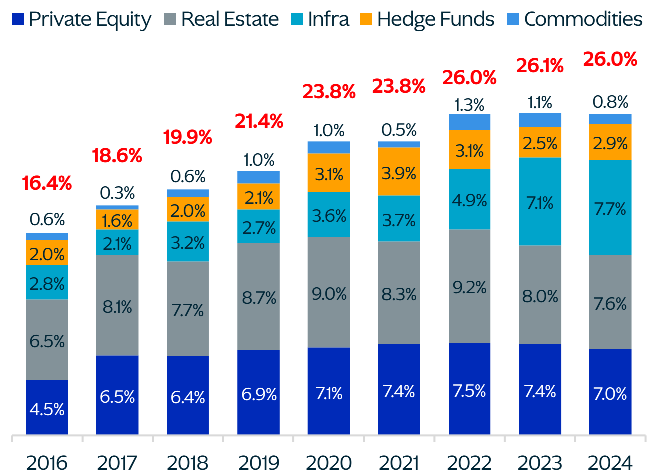
Sovereign Wealth Funds Asset Allocation, %



Data as at July 31, 2024. Source: Invesco Global Sovereign Asset Management Study.

Exhibit 23: …Fueled by Allocations to Private Equity, Infra, and Real Estate. We See Even More Growth Ahead

Sovereign Wealth Funds Allocation to Alternatives, %



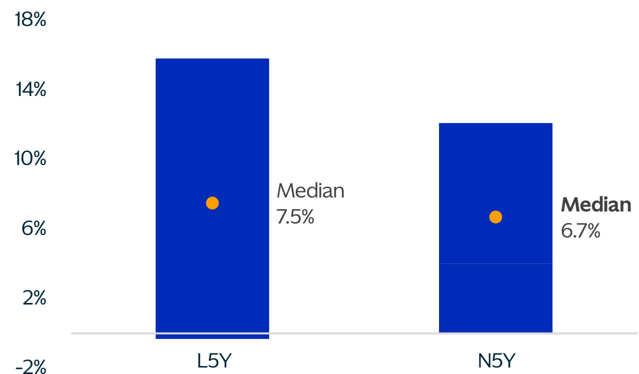
Data as at July 31, 2024. Source: Invesco Global Sovereign Asset Management Study.

2. **Individual investors are increasingly embracing the use of Alternatives.** We see the individual investor market as a significant growth opportunity. Just consider that consulting firm Cerulli reports that only 2.3% of U.S. financial advisors' client assets were invested in Alternatives in 2023. Yet, this estimate pales compared to the 60% increase since 2007 in the number of individual investors with $1-5 million in the U.S., many of whom are looking to compound their long-term returns in more efficient ways. Consistent with this view and some of the client/survey work done by our Chief Investment Strategist Paula Roberts, we expect the allocation to Alternatives to increase as private products become more accessible via lower minimums, more transparency, and increased liquidity. Indeed, as we spend more time with the wire-house and RIA channels, there is a greater acknowledgment of the benefits and importance of a longer-term focus and that leveraging the illiquidity premium can create a sustainable competitive advantage versus more traditional passive investments. Our bottom line: We think all segments, from Ultra High Net Worth to the retail investor, have meaningful growth potential, as the value of the illiquidity premium also becomes significant in a world where aggregate returns are falling. We are not alone in our thinking, as Cerulli also estimates that an additional $1 trillion in retail assets could be invested in Alternatives, thus taking the total allocation by retail investors from $1.4 trillion today to more than $2.4 trillion over the next five years.[2]

3. **Growing appetite from insurance balance sheets.** For insurers, our research suggests that non-correlated, private asset classes, especially higher-yielding ones, have gained in importance. Against a backdrop of higher interest rates, these CIOs have built pools of highly liquid assets that can deliver overall returns in support of loss reserves when they write new business (which most want to do more of). Moreover, the most recent investing environment has created a mentality shift where CIOs can now focus on leveraging both liquid and illiquid allocations to build more resilient, 'all-weather' portfolios. We think the value of a non-correlated asset in one's portfolio materially increases if we are right in our views that 1) the resting neutral rate for Fed funds is now higher; 2) traditional government bonds can't diversify as much as they did in the past; and 3) overall returns, as we show in *Exhibit 24*, have compressed now that we have exited a low rate, loose monetary, tight fiscal environment. Importantly, diversification across issuers, sectors, and asset classes all help to mitigate idiosyncratic risk, while diversification across asset classes helps mitigate systematic risk.

Exhibit 24: As We Look Ahead, We Think the Efficient Frontier Is Becoming 'Flatter'

Range of Expected Returns Across Asset Classes, Last 5-Years, Next 5-Years, %



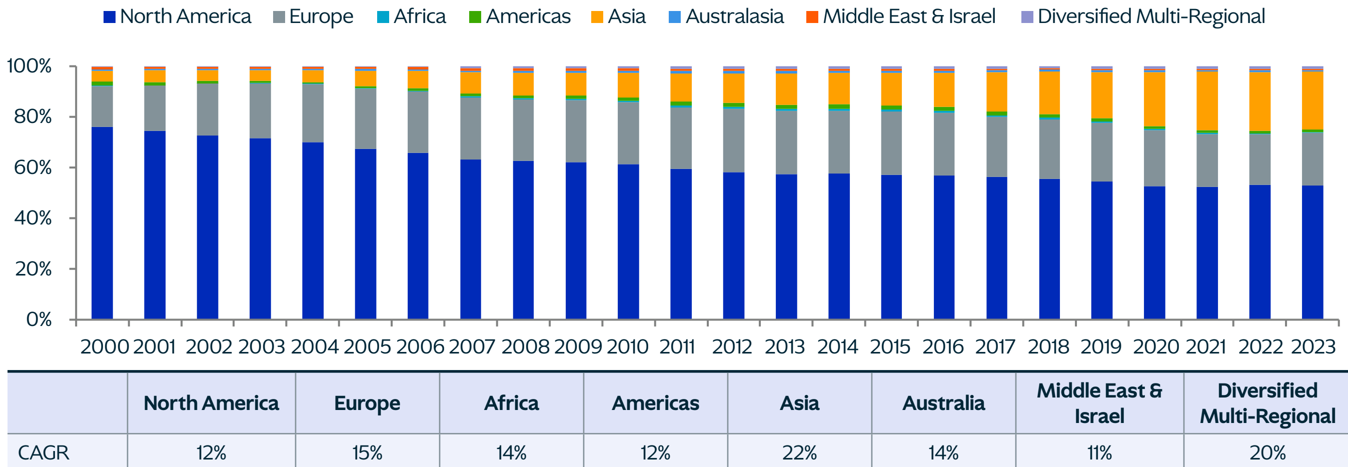
Data as at May 31, 2024. Source: KKR Global Macro & Asset Allocation analysis.

For insurers, our research suggests that non-correlated, private asset classes, especially higher-yielding ones, have gained in importance.

2 https://www.fa-mag.com/news/cerulli-gives--democratization--of-alts-investing-a-reality-check-78805.html#:~:text=Despite%20the%20hoopla%20about%20how,investors%2C%20according%20to%20Cerulli%20Associates

Exhibit 25: Asia Is the Fastest Growing Region Globally for Private Alternatives

Cumulative Private Markets AUM by Region



	North America	Europe	Africa	Americas	Asia	Australia	Middle East & Israel	Diversified Multi-Regional
CAGR	12%	15%	14%	12%	22%	14%	11%	20%

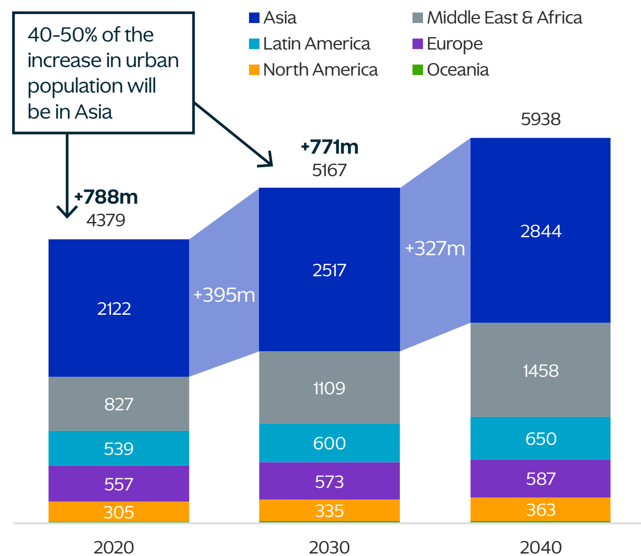
Data as at December 31, 2023. Source: Preqin.

4. The rise of private market demand in Asia. *Exhibit 25* shows the increase in assets allocated to Alternatives in Asia, growing at a 22% CAGR since 2000, almost double the rate of North American Private Alternatives and comparable in size to today's European Private Markets. We found this data particularly interesting, given that we have seen a pullback in private markets investing in China (to around five percent from 10-12%) while demand by Asia clients for Alternatives is increasing. In particular, our proprietary survey work suggests that CIOs in Asia are looking to diversify beyond Public Equities, Fixed Income, and Real Estate Equity towards more Private Equity, Infrastructure, and Private Credit.

Consistent with the growth in Asian Private Markets, KKR has been increasing its balance sheet exposure to Asia. All told, over the past five years our Asia allocation has increased to 16% from 10%, with a target allocation of 20-30%. Why are we so bullish on Asia? Of all the macro trends we are watching, the increase in urbanization in Asia is one of the most powerful tailwinds we are following. One can see this in *Exhibit 26*, which shows that between 40-50% of the urban population growth by decade in both 2030 and 2040 will come from Asia. Further, urbanization leads to demand for technology and energy efficiency. We also think key markets like China, Japan, and India will spend significantly on a wide array of retirement and healthcare offerings in the future.

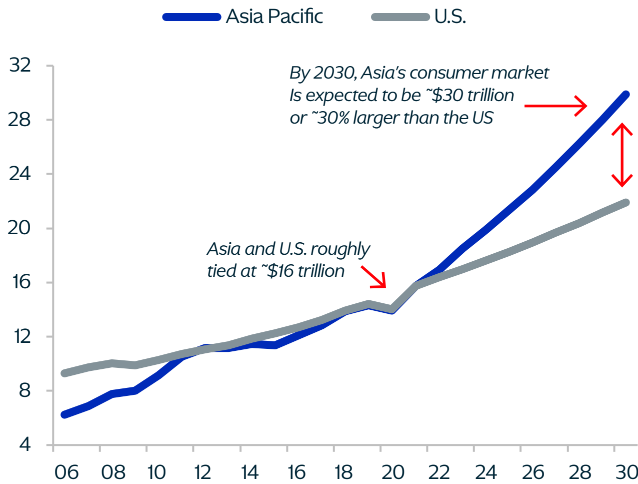
Exhibit 26: The World Is Still Urbanizing, With Asia Making Up Half of the Increase in Urban Populations

Urban Population, Millions



Data as at May 15, 2019. Source: United Nations, Department of Economic and Social Affairs, Population Division, World Urbanization Prospects, Haver Analytics.

Exhibit 27: Asia's Consumer Market Is as Large as the One in the U.S., But It Is Growing More Quickly



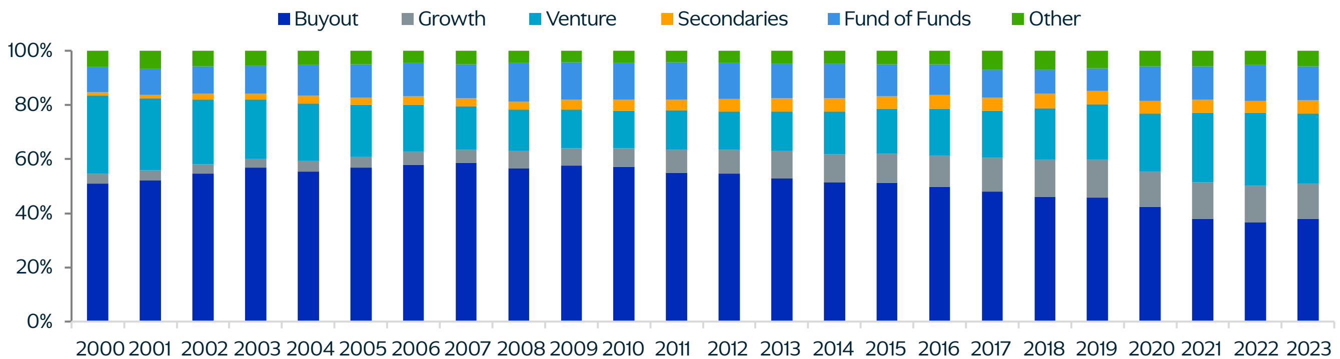
Asia Pacific includes China, India, Japan, Hong Kong, Korea, ASEAN (Indonesia, Malaysia, Philippines, Thailand, Singapore, and Vietnam), Australia, and New Zealand. Data as at May 31, 2021. Source: World Bank, IMF, OECD, Haver Analytics, KKR Global Macro & Asset Allocation analysis.

Similar to other industries that we track at KKR, we also see the Alternatives space using greater segmentation and product customization and innovation to not only meet but also stimulate demand in several instances. To this end, we note the following examples:

Segmentation of the Private Equity complex now includes more targeted offerings that appeal to a greater number of allocators. Though many investors lump Private Equity into one category, there are many different variations, including Buyout, Venture Capital, Middle Market, Secondaries, etc. As a firm, we have been focused on Growth, including Healthcare Growth and Growth Equity, as the sectors have gained importance over the past decade. In addition, we have seen a substantial increase in interest for longer-duration, compounding-focused Private Equity, an asset class that we call Core Private Equity at KKR. However, as we look across our range of clients, we see more allocations to Venture Capital from the endowment community, while traditional pensions have heavier allocations towards traditional Buyout funds.

Our bigger picture conclusion is that greater segmentation in Private Equity will likely lead to increased flows to the asset class. The ability to provide greater specification across styles and regions stimulates demand, especially among insurers, family offices, and endowments.

Exhibit 28: Private Equity Growth Has a CAGR of 18%, But It Is Increasingly Being Diversified Across Different Segments of PE



Data as at December 31, 2023. Source: Preqin.

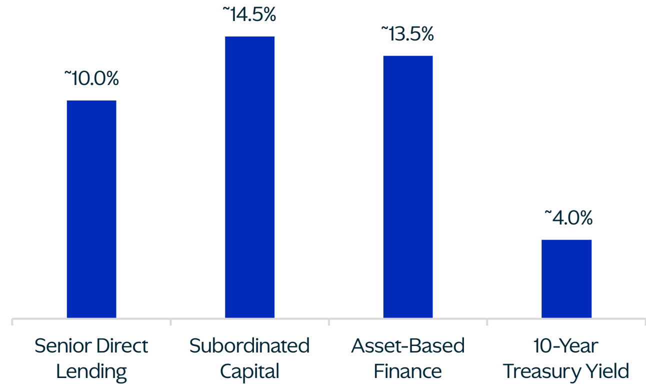
Private Credit is moving beyond Direct Lending to other forms of lending, including Asset-Based Finance. Another asset class emerging from banks' retrenchment is the Asset-Based Finance (ABF) strategy. Typically bucketed under 'Private Credit,' ABF consists of consumer and mortgage finance (mortgages, auto lending, residential bridge loans), commercial finance (development loans, equipment leases), contractual cash flows (intellectual property, royalties, insurance financing), and hard assets (aircraft leasing, railcars, and containers). The specific risk/return profile of a given deal depends on the characteristics of the pool of collateral and the position in the capital structure that the manager takes against this pool of assets.

Pre-GFC, Private Credit was comprised of mostly equity-like strategies such as Distressed and Mezzanine debt. Following the GFC and the rise in Business Development Companies, Direct (Senior) Lending became the most significant strategy associated with Private Credit. Today, we see Asset-Backed Finance as a natural continuation of the bank retrenchment trend. The 2023 regional banking crisis further accelerated this phenomenon, as more non-corporate bank lending activities shifted to Private Credit managers. Inherently diversified across types of collateral (homes, cars, intellectual property, planes), the ABF strategy generally provides good diversification against both private and public asset classes and is value-added in portfolio optimization. Finally, the strategy also provides a highly desirable degree of inflation protection as it is secured by hard collateral, a benefit we find much needed in today's portfolios.

The 2023 regional banking crisis further accelerated this phenomenon, as more non-corporate bank lending activities shifted to Private Credit managers.

Exhibit 29: Today, Many Parts of Private Credit Offer a Compelling Yield and Diversification Proposition That Traditional Fixed Income Often Can't Match, We Believe

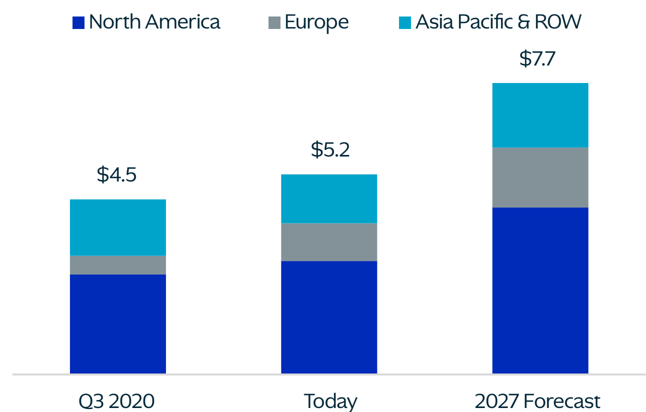
KKR Private Credit Expected Annualized Returns Over the Next 3 Years for Newly Originated Investments, %



Gross, unlevered estimates. Data as at August 31, 2024. Source: KKR Global Macro & Asset Allocation analysis.

Exhibit 30: Disintermediation of Traditional Financial Channels Has Been Critical to the Growth of Asset-Based Finance Over the Last 15 Years

Growth in the Global ABF, US$



Represents the private financial assets originated and held by non-banks based globally, related to household (including mortgages) and business credit. Excludes loans securitized or sold to government agencies and assets acquired in the capital markets or through other secondary/syndicated channels. Data as at October 31, 2022. Source: Country-specific official/trade bodies as well as company reports. Integer Advisors and KKR Credit research estimates.

Another new area of potential opportunity closely associated with ABF is the Significant Risk Transfer (SRT) market. Already a well-established market in Europe, SRTs are now growing in the U.S. as new bank capital regulations take effect, spurring banks to find ways to reduce Risk-Weighted Assets. Under the SRT construct, a bank earmarks pools of assets and buys credit default protection on the first 5% to 15% of the losses of that pool.

Traditional business loans are the most frequent collateral for these vehicles, but examples cover all types of asset classes from Leveraged Loans, SMEs, Autos, Credit Cards, Subscription Lines, and Aviation Lending. Real Estate loans are also often eligible. Given higher capital requirements, we suspect banks will have an increasing interest in managing these types of risk via SRTs.

Though not without risk, we view these transactions as opportunities where a motivated seller (a bank facing regulatory constraints), for example, will pay investors ample compensation in what is ultimately in many instances a deleveraging transaction. That said, as in any new asset class, we would caution investors that we expect more dispersion in outcomes as the cycle continues and the asset class matures (meaning this is one area where it is especially important to partner with experienced managers who have a solid track record of underwriting and managing ABF risk in their own right).

The global energy transition is a large and growing opportunity. One of the fastest-growing areas within Alternatives is linked to the societal push to create more environmentally friendly ways to produce power. Importantly, we are talking about more than just renewables, as there is an even greater opportunity in the brown-to-green segment of this market, we believe. We view this opportunity, similar to what we have long said about corporate carve-outs, as a way to buy complexity and then sell simplicity or a cleaner, more understandable story, at a premium valuation to the market once the transition has been completed. All told, we think there could be an 800-1,000 basis point difference in the cost of capital between the two types of investments, a substantial gap for Alternative managers with strong operational capabilities. Finally, there is also an increasing focus on energy security, especially as executives' demand for resiliency for all aspects of their supply chain grows.

New product innovation is expanding the definition of the Alternatives market. In recent years, we have seen key markets such as Infrastructure capitalize on innovation by expanding to digital infrastructure and contracts linked to healthcare infrastructure. More importantly, though, we have seen these new products come to market in response to investor needs. This phenomonon is one of the reasons that the $24 trillion industry estimate for 2028 feels conservative to us.

Looking ahead, we think the rise of insurance/reinsurance solutions, especially what we call 'insurance as an asset class' in the Alternatives space, is worthy of investor attention. We note the following:

- *What is it?* Reinsurance investments entail buying blocks of assets and annuities from existing insurers and 'rotating' the assets into asset classes where they have an advantage in sourcing and/or credit selection to deliver yield in excess of their liabilities. Although the spread generated on these investments is relatively small, the higher credit quality of the underlying investments often allows the equity contribution by investors to be 20% or less of the gross assets in the pool, implying a levered total return similar to Private Credit (low to mid-teens) and with comparable volatility.
- *Why is this happening?* There are a growing number of insurers looking to sell 'blocks' of existing annuities and associated assets, to exit lines of business, or to free up capital and redeploy more strategically, especially in cases where there are limited options to reduce regulatory capital and/or deliver sufficient yield against existing liabilities. Release of regulatory capital can also enhance the profitability of these investment vehicles by the return of capital or reinvestment.
- *Why do investors like the reinsurance product?* As shown in *Exhibit 31*, the return and volatility characteristics of the product are compelling. The illiquid nature of the product also would suggest that the asset class is less affected by movements in the broader equity markets, is less susceptible to movements in interest rates, and has less reinvestment risk because the assets are generally held to maturity. Finally, concentration risk is muted due to the diversity of the assets and liabilities, so investors are not overly exposed to one type of insurance or credit risk and are

protected against rate movements in any one part of the curve.

- *How does it fit into an overall portfolio?* The asset class's low correlation to other more traditional fixed income products effectively complements other yield-oriented asset classes such as Private Credit and/or Asset-Based Finance. The reinsurance strategy also supports allocators who desire to play 'offense' with their portfolios. One can see this in *Exhibits 31* and *32*, respectively. The asset class also aligns with the growing desire by family offices, ultra-high-net-worth investors, and others to own longer-duration, compounding-oriented assets with tax-efficient attributes.

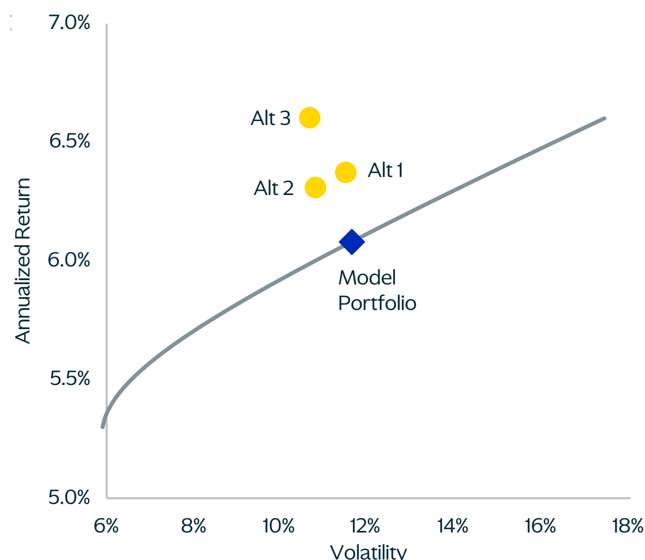
Exhibit 31: We Believe Reinsurance Transactions Can Provide Meaningful Diversification, Reduced Volatility, and Enhanced Performance

Asset	Model Portfolio (Weighting or Ratio)	Alter-native 1	Alter-native 2	Alter-native 3
Equities	60%	60%	55%	55%
Bonds	40%	35%	40%	35%
Insurance Assets	0%	5%	5%	10%
Annualized Return	6.1%	6.4%	6.3%	6.6%
Volatility	11.6%	11.5%	10.8%	10.6%
Return Risk Ratio	0.52x	0.56x	0.59x	0.62x
Difference in Basis Points				
Annualized Return	6.1%	+29	+23	+52
Volatility	11.6%	-15	-83	-97
Return Risk Ratio	0.52x	+0.03x	+0.06x	+0.1x

Equities: MSCI ACWI Gross Total Return USD Index; Bonds: Bloomberg Global-Aggregate Total Return Index. Alternative Portfolio: Reinsurance transactions. Data from 1Q03 to 1Q24. Source: KKR GBR analysis.

Exhibit 32: Reinsurance Transactions Are In Line With Our Diversification Thesis for Portfolio Construction

Various Reinsurance Transaction Portfolios Volatility and Annualized Return vs. a Traditional 60/40



Equities: MSCI ACWI Gross Total Return USD Index; Bonds: Bloomberg Global-Aggregate Total Return Index. Alternative Portfolio: Reinsurance transactions. Data from 1Q03 to 1Q24. Source: KKR GBR analysis.

The asset class's low correlation to other more traditional fixed income products effectively complements other yield-oriented asset classes such as Private Credit and/or Asset-Based Finance. This reinsurance strategy also supports allocators who desire to play 'offense' with their portfolios.

SECTION II

Why Are Specific Private Asset Classes Expanding?

In the following section, we examine the most important sub-components of the private market asset classes through a historical lens, paying particular attention to the post-GFC era and where we see growth in the future.

Private Equity: A State of Perpetual Reinvention

Investing in private companies has a long history. Since the Industrial Revolution, merchant bankers (today's investment banks) and wealthy individuals have provided financing or development capital for important 'growth' projects such as railroads and telegraph companies. However, the seeds of the modern Private Equity industry may truly be said to have been planted following World War II, when the Servicemen's Readjustment Act of 1944 or the GI Bill, was enacted. In addition to educational benefits, the GI Bill provided capital that could be invested in new (or established) businesses run by returning soldiers – and, in doing so, created a generation of business leaders.

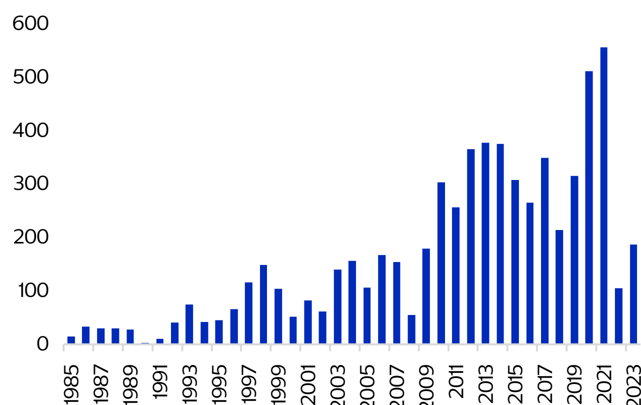
In the 1970s, when KKR was formed, the Private Equity industry was still in its infancy. At the time, much of Wall Street and/or Corporate America did not understand the approach of long-term value creation for existing companies. Meanwhile, debt providers – needed to support Buyouts – were uncertain of the business model. In general, there was very limited debt capability and certainly no High Yield markets, or private investment funds willing to participate in these types of transactions. So, financing transactions was consistently a complex challenge for general partners.

However, the passage of essential reforms in the laws regulating U.S. pension funds in the late 1970s allowed investment in Private Equity transactions, paving the way for the industry to become genuinely viable. Private Equity met a real need by providing state pension funds with an opportunity to diversify their portfolios and generate better long-term returns with manageable risk profiles that outperformed public benchmarks. These changes in the laws that governed pension fund investing resulted in KKR's establishing one of the very first Private Equity funds, launched in 1978 with just $35 million in capital. This fund pioneered the 2/20 management/carry fee structure that the industry later adopted.

In the 1970s, much of Wall Street and/or Corporate America did not understand the approach of long-term value creation for existing companies.

Exhibit 33: HY Debt Issuance Grew From Less Than $20 Billion per Year in the mid-1980s to Over $300 Billion per Year in the 2010s

HY Debt Issuance, US$ Billions



Data as at July 31, 2024. Source: Bank of America.

In the 1980s, most companies had limited access to capital, with only about 1,700 having Investment Grade ratings. The rest, considered non-Investment Grade companies, had no choice but to borrow from banks and insurance companies. The innovation of the High Yield bond market was a simple but revolutionary concept that created a market where non-Investment Grade companies could raise capital by issuing High Yield corporate bonds. These bonds offered higher returns to investors, while giving companies greater flexibility in financing as well as providing more opportunity for growth and expansion.

Prior to the creation of the HY markets, securing funds for acquisitions involved extensive wooing of institutional investors, including insurance companies, and it took a substantial amount of time and effort. However, the introduction of the High Yield bond market simplified this process dramatically, showcasing the efficiency and power of this new financial tool. The mechanisms that were developed for High Yield bonds are now integral to the broader credit markets, including Leveraged Loans. This important fundraising channel not only provided capital at critical points for many companies but also provided another path for those seeking yield beyond traditional government fixed income securities.

The 1990s brought considerable changes to the Private Equity industry. Many new players entered the business, and the Leveraged Buyout model became widely imitated, and providing companies with capital became something of a commodity. During this period the alignment of shareholder and management interests – a hallmark of Private Equity – became well accepted in corporate America. Markets, too, became more global, presenting an entirely new set of challenges and opportunities for Private Equity.

This change in competitive dynamics inspired an industry-wide pivot to not simply focus on financial engineering and providing capital but also developing comprehensive plans to improve the performance of the underlying companies. This focus on operational performance required deep industry expertise and necessitated partnerships with individuals with high degrees of specialization. It also reinforced the importance of having global capabilities with a local footprint, especially as more companies expanded into Europe, Asia, and Latin America. To this end, as the industry scaled, having a direct network of international professional relationships that could provide access to proprietary investment opportunities, valuable knowledge during due diligence, and significant operational resources to help portfolio companies all became differentiating factors.

As the Private Equity industry emerged from the GFC, it became clear that firms needed to equip themselves better to protect their portfolio companies and take advantage of evolving financing landscapes. Many firms established in-house capital markets efforts for these reasons, including KKR. Today, the capital structures for Buyout investments are much more conservative than pre-GFC, with equity contributions reaching 50% or more, for example. Managers also invested in bolstering human capital resources at the firm level and with their portfolio companies as the ability to attract and retain talent was becoming increasingly competitive; this was especially important as the original PE firms were increasingly facing succession planning needs themselves as the industry matured.

Maximizing performance and achieving operational excellence also involve navigating the comprehensive challenges and complexities businesses face in today's world. Companies and their management teams must navigate geopolitics, policy disruption, and increased demands by stakeholders around corporate governance and operations. These are areas where patient capital

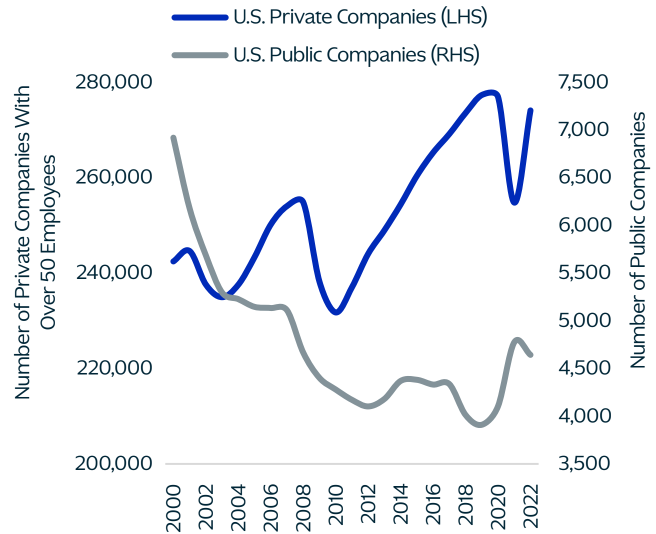
combined with expertise can add and protect value in companies and 'buy complexity and sell simplicity.'

In recent years, one of the most significant changes in the Private Equity industry has been the adoption of broad-based employee ownership programs. Shared ownership facilitates an 'acting like an owner approach' that rewards the entire workforce, not just management, for operational improvements and value creation. We also think it is a powerful tool to address inequality, deepen employee engagement, and help boost retention, all important considerations in an increasingly tight labor market. Since 2011, KKR has supported companies in implementing broad-based employee ownership programs throughout our portfolio. In 2022, we committed to deploy these programs in all control investments in our global Private Equity platform.

Another major industry trend of late has been towards companies staying private for longer. What happened and why? From our perspective, when the dot.com bubble burst in 2000, it coincided with the peak in companies wanting to go public. One can see this in *Exhibit 34*, which also shows that the number of private companies dwarfs the number of public companies. All told, we estimate that over 95% of the companies in the U.S. are held privately but still face similar capital needs as their public counterparts.

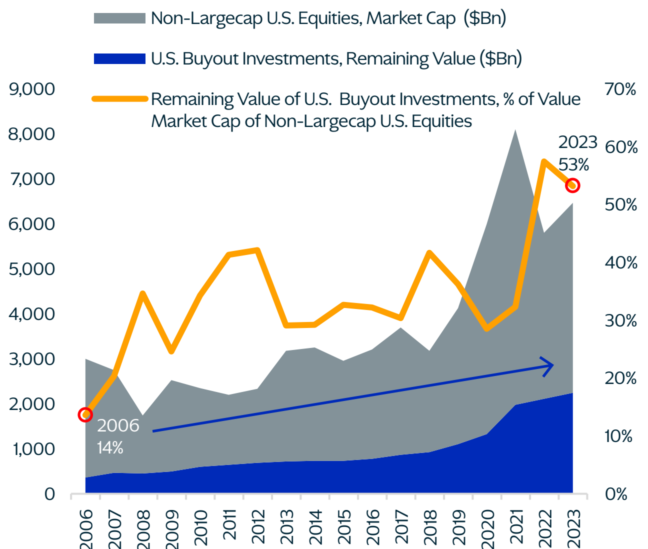
Companies and their management teams must navigate geopolitics, policy disruption, and increased demands by stakeholders around corporate governance and operations. These are areas where patient capital combined with expertise can add and protect value in companies and 'buy complexity and sell simplicity.'

Exhibit 34: Market Share of Small Companies Has Increasingly Migrated Out of Public Markets



Data as at December 31, 2022. Source: U.S Bureau of Labor Statistics, World Bank, Haver Analytics.

Exhibit 35: Private Equity Share of the Total Addressable Universe (PE + Liquid Market Small Companies) Has Steadily Increased Over the Last 15-20 Years

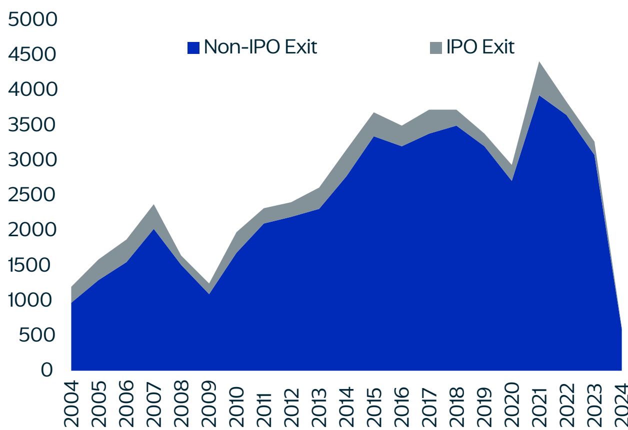


Non-Largecap = Total U.S. market cap ex Russell 1000. Data as at December 31, 2023. Source: Bloomberg, Federal Reserve, Pitchbook.

In addition, as private companies have stayed private longer, they have contributed to the increase in the total stock of private companies *(Exhibit 37)*. A large part of this shift centers on the fact that fewer companies, as referenced earlier are seeking to exit via an initial public offering, as shown in *Exhibit 36*.

Exhibit 36: The Number of IPO Exits Is Decreasing as Companies Are Staying Private for Longer

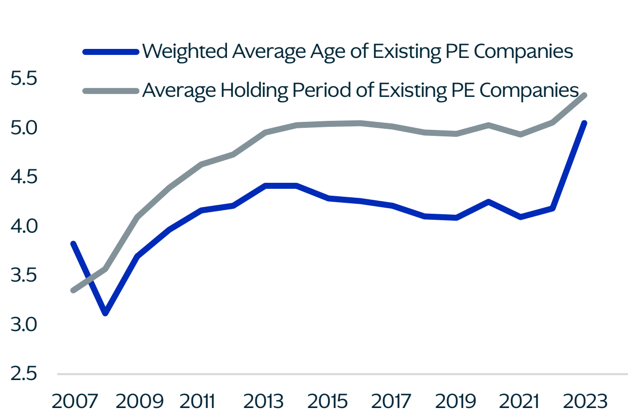
Private Equity % Deal Exit by IPO / Total Deal Count



Data as at 1Q24. Source: Pitchbook.

Exhibit 37: The Portion of PE Portfolio Holdings That Are Seasoned and Looking for Exits Looks Quite Significant

U.S. Private Equity Average Age and Hold Times, Years

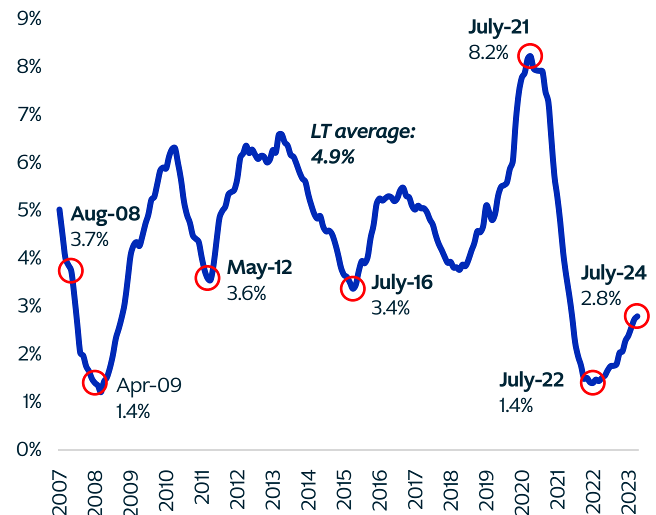


Data as June 30, 2023. Source: Pitchbook.

On a cyclical basis, it is not just IPOs that are lagging. Indeed, when you look at total net issuance (IPOs, Leveraged Loans, and High Yield) activity is still incredibly soft (*Exhibit 38*). Interestingly, our data shows that some of the best vintages for Private Equity are actually when overall issuance is at its lowest level. One can see this in *Exhibit 39*.

Exhibit 38: Our Liquidity Indicator Is Still Recovering From Near-Trough Levels. We View This Bullishly as...

Capital Markets Liquidity (TTM) as a % of GDP (IPO, HY Bond, leveraged Loan Issuance)

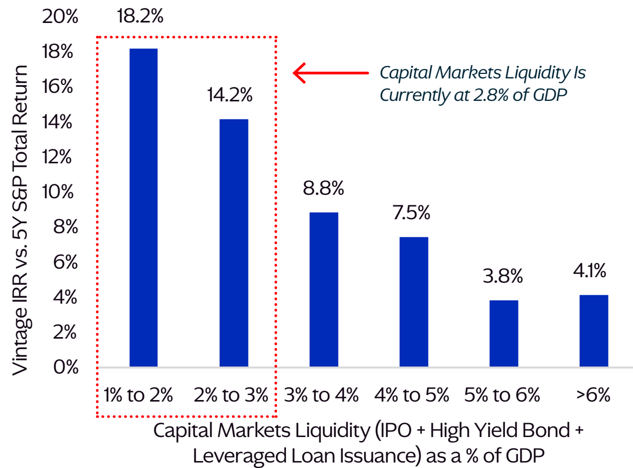


Data as at July 31, 2024. Source: Preqin, Bank of America, Bloomberg, KKR Global Macro & Asset Allocation analysis.

All told, we estimate that over 95% of the companies in the U.S. are held privately but still face similar capital needs as their public counterparts.

Exhibit 39: ...Private Equity Tends to Outperform Public Markets in Low But Improving Liquidity Environments

Private Equity Outperformance Across Liquidity Regimes, 1997-2023



PE returns from Preqin on a 5-year forward returns from 1997 - 2019 basis. Data as at December 31, 2023. Source: Preqin, Bank of America, Bloomberg, KKR Global Macro & Asset Allocation analysis.

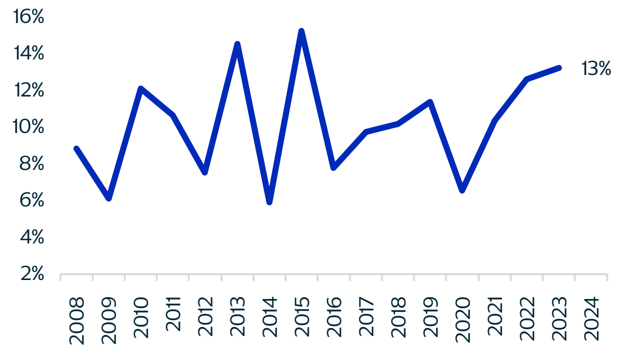
Another way to cut data is to look at the value of private market holdings relative to public market ones. Private Equity total valuation has been increasing as a share of Public Equities free-floating market capitalization. Significantly, this ratio has tilted even further towards the stock of private market valuations despite the significant increase in the market cap of the largest Tech public companies.

This context around the expansion of the opportunity set for Private Equity in terms of the number, size, and duration of Private Equity investments should also provide investors some level of comfort in the ability of the asset class to maintain healthy returns and avoid becoming 'crowded,' which we at KKR believe we are quite far away from. Dave McNellis, who has spent years analyzing key trends in Private Equity, weighed in on the subject. He notes the following:

1. **Despite much conjecture that the industry is mature, PE invested capital is actually still modest relative to the size of the relevant total addressable market (TAM).** Relative to the value of all public and private companies, Buyout invested capital stands at just 3.1% of the overall equity value. Even if one excludes S&P 500 companies, most of which are too big to be workable as traditional Buyouts, PE still controls just 8.5% of addressable U.S. equity value. We think private and non-large cap public businesses are a good approximation of the addressable market for Private Equity. Importantly, the 8.5% approximation is up from only five percent 10 years ago. Our take: Though market share has grown, there is still plenty of room for future growth.
2. **It's probably also worth noting that PE's potential market opportunity is much bigger than just the public markets.** In fact, only a few PE investments are actually sourced on a public-to-private basis each year. All told we calculate that just 13% of Buyout dollars invested in 2023 were take-privates. Most investments are sourced from private ownership, not smaller-cap public equities. As described above, privately controlled entities are a deep market in which PE buyers remain just one participant among many.

Exhibit 40: Only a Modest Proportion of PE Investments Are Sourced From Public Markets

Take-Private as % of Total Deal Value, North America and Europe



Data as at December 31, 2023. Source: Pitchbook.

Relative to the value of all public and private companies, Buyout invested capital stands at just 3.1% of the overall equity value.

3. **There are also strategic corporate initiatives that are best and sometimes only achievable under private ownership**. Probably the *purest form of PE alpha* is company value creation. It represents the ability of the PE manager to effect changes to the underlying company operations and functioning to generate higher growth or command higher multiples than would a set of 'equivalent public stocks.' Clear and effective value creation playbooks include repositioning companies, optimizing operations, expanding into new markets, corporate carve-out or roll-up strategies, improving working capital, fostering employee engagement, and aligning incentives (which may include broadening equity ownership to a portfolio company's workers, not solely to senior managers). Considerations such as environmental efficiency, supply chain resiliency, corporate governance best practices, and navigating policy and geopolitical volatility are also major undertakings critical to maximizing operational efficiency. In our experience, this value creation toolkit creates an uplift for the operating performance of companies under Private Equity ownership relative to those in the public markets.

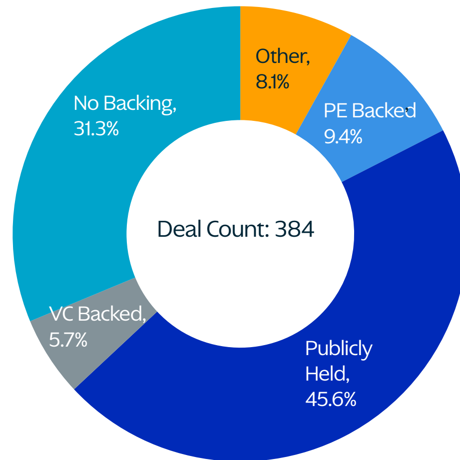
Exhibit 41: Carveouts as a Share of Private Equity Have Been Increasing Over the Last Two Years...

Carveouts as a % of All U.S. PE Deal Count

Data as at 1Q24. Source: Pitchbook.

Exhibit 42: ...With More Than 31% Having No Backing

Share of Carveout/Divestiture Deal Count by Backing Status In 2023, %

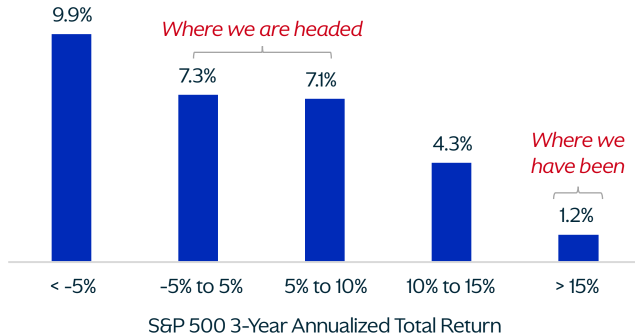


Data as at December 31, 2023. Source: Pitchbook.

We believe the demand side's appetite for the asset class is still clear. The excess return of Private Equity over time and across regions has been well documented. Perhaps what is not so well known is that a lower return equity environment, which is what our expected returns forecast is now suggesting, is better for the magnitude of the illiquidity premium. One can see this in *Exhibit 43*.

A second point on the demand side is that Private Equity companies are generally of higher quality relative to public markets in terms of growth, margins, and thematic exposures. This reality is particularly true at the smaller end of the spectrum, which is most comparable to the typical PE portfolio company.

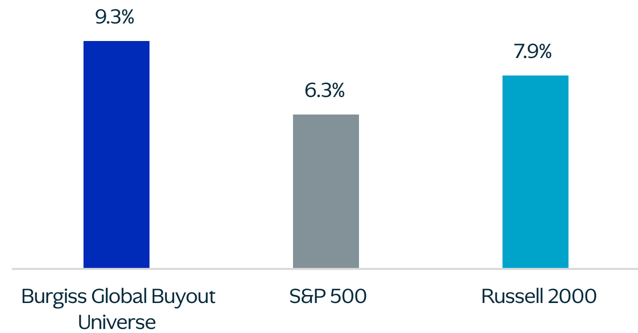
Exhibit 43: Private Equity Tends to Deliver a Higher Illiquidity Premium When Public Equities Do Not Perform as Well



Observation Period = 1Q86-1Q24. The Cambridge Associates LLC U.S. Private Equity Index® is an end-to-end calculation based on data compiled from 1,538 U.S. private equity funds (Buyout, Growth Equity, Private Equity Energy, and Mezzanine Funds), including fully liquidated partnerships formed between 1986 and 2023. Pooled end-to-end return, net of fees, expenses, and carried interest. Historic quarterly returns are updated in each year-end report to adjust for changes in the index sample. Data as at March 31, 2024. Source: Cambridge Associates, S&P, KKR GBR analysis.

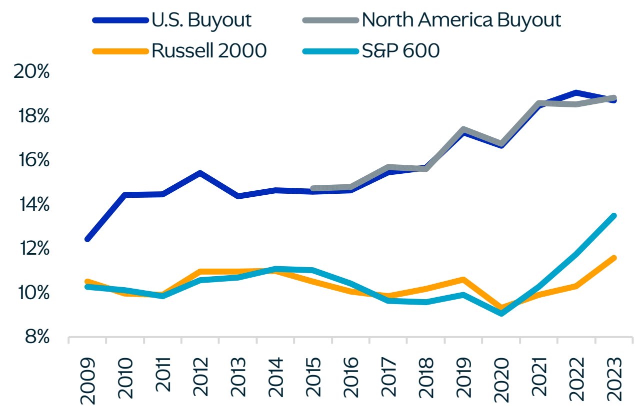
A second point on the demand side is that Private Equity companies are generally of higher quality relative to public markets in terms of growth, margins, and thematic exposures. This reality is particularly true at the smaller end of the spectrum, which is most comparable to the typical PE portfolio company. As context, the average Buyout investment has an enterprise value of roughly $500 million to $2.5 billion, which is essentially in line with the small-cap public universe (average EV = $1.5 billion) and considerably smaller than the mid-cap public universe (average EV = $7.4 billion). Compared to that smaller cap public universe, PE-held companies have generated more robust revenue growth *(Exhibit 44)* and considerably higher EBITDA margins *(Exhibit 45)*. We often speak with investors who want to drill down on leverage or financial engineering as sources of returns in private markets while missing the fundamental uplift that usually comes from owning higher-quality portfolios of companies over longer periods of time.

Exhibit 44: Compared to Public Indexes, the Median PE Company Has Stronger Top-Line Growth…



Note: Buyout-held companies based on over 3,000 funds with a capitalization of >$4.2 trillion. Data as at September 30, 2023. Source: Burgiss, MSCI, KKR GBR analysis, Bloomberg.

Exhibit 45: …And More Attractive Margins



Data as at April 30, 2024. U.S. and NAM Buyout EBITDA margin based on median data from Pitchbook. Russell 2000 and S&P 600 EBITDA margins are as per Bloomberg.

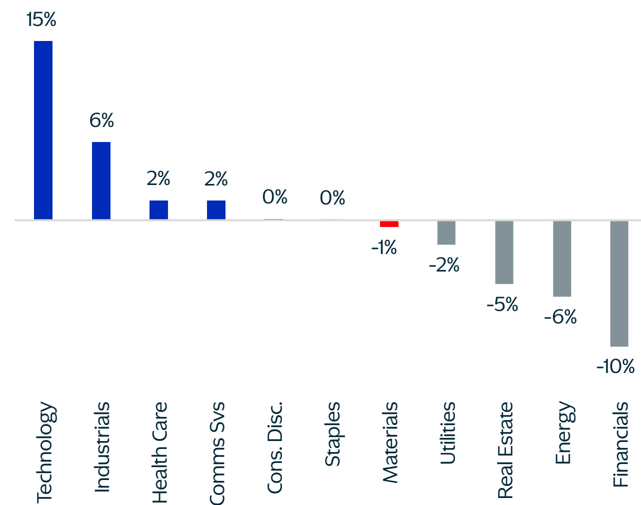
So, our bottom line is that, as we look ahead, the supply vs. demand backdrop for private capital still looks quite attractive.

Why does the Buyout universe demonstrate this quality uplift relative to public equivalents? We see multiple factors at work. First would be the longer-term, thematic growth orientation many private investors take *(Exhibit 46)*. One can see that PE portfolios tend to tilt more towards sectors including Technology, Industrials, Healthcare, and Communications Services, that benefit from tailwinds around digitalization, automation, life sciences, professional services, and experiential spending. Meanwhile, Buyout portfolios are significantly underweight Financials (largely because PE generally does not invest in traditional commercial banks) and broadly underweight more volatile, commodity-driven sectors such as Energy.

We believe an additional consideration is the nature of companies that wish to operate in a private context. While harder to quantify with data, our experience is that many management teams excited about their longer-term prospects are energized to operate in a context where they benefit from the professional networks, growth capital resources, operational improvement playbooks, and broad employee ownership that increasingly accompanies PE investment.

Exhibit 46: Private Equity Sector Tilts Are Often Dramatically Different Than Public Equities

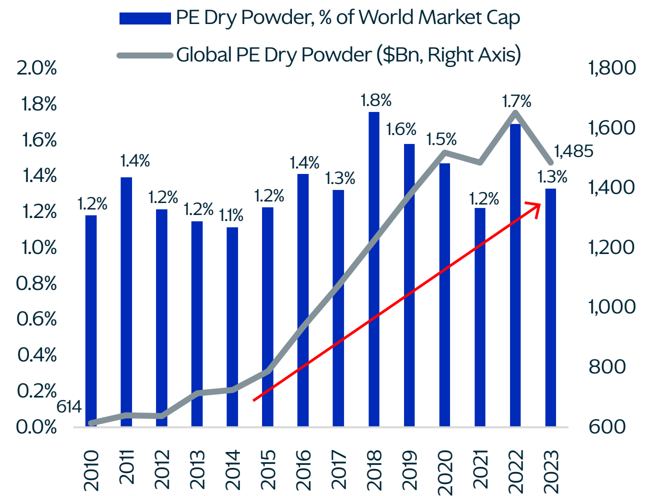
Burgiss North American Buyout vs. Russell 2000, Sector Composition



Sector weights are calculated using a remaining value for investments made in the last 5 years (vintage 2019-2023). Data as at December 31, 2023 or latest available. Source: Burgiss, Bloomberg.

Exhibit 47: While the Absolute Amount of Dry Powder Has Increased, the Quantum of Dry Powder Relative to the Public Market Cap Has Remained Roughly Constant

Private Equity Dry Powder Compared to World Market Cap, %



Data as at 2Q24. Source: Pitchbook, Bloomberg..

So, our bottom line is that, as we look ahead, the supply vs. demand backdrop for private capital still looks quite attractive. Industry skeptics often focus on the dollar amount of uninvested 'dry powder,' which is near a historic high of almost $1 trillion. What they are missing, we think, is that the addressable universe of PE 'dollars in the ground' is near an even bigger historic high of over $2 trillion. Said differently, following a surge in industry deployment in 2021-1H22 and the subsequent drought of PE exits more recently amid elevated interest rates, the stock of existing portfolio investments has surged to a historic high, which means that the ratio of dry powder to dollars in the ground sits at a historic low *(Exhibit 47)*. This reality will challenge sponsors of existing investments who over-deployed near the highs, under-hedged, and find themselves as forced sellers. For holders of fresh capital, however, we think this backdrop creates a more fertile opportunity set. As one metric of the more attractive supply/demand equation, consider that Buyout investments are still taking place near the 60-70th percentile of this historical valuation range, which is well below what we see for Large Cap (93rd percentile) and even Mid Cap (78th percentile) public valuations, albeit still above small cap valuations in the 37th percentile –

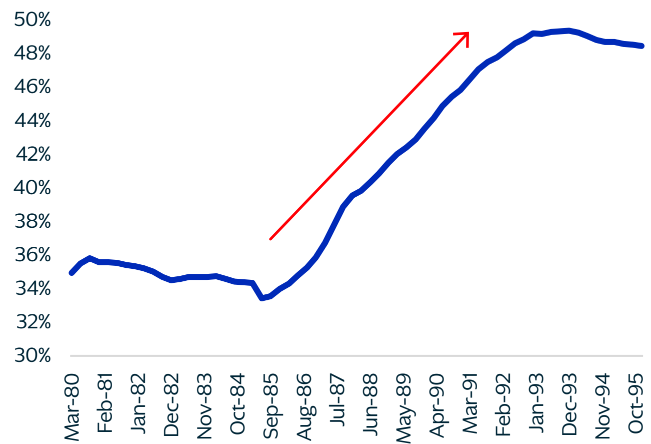
which, as discussed above, we think look cheaper due to a diminution in quality.

Private Real Estate Equity: A New Cycle Emerges

In the sections that follow, we evaluate the history and evolution of the Real Estate Private Equity market across three eras: First, the early history of the asset class, as it emerged from a deleveraging trade amid the commercial real estate crisis of the late-80s and early-90s and began maturing as an industry over the subsequent approximate 15 years. Second, the events and aftermath of the GFC marked the start of multiple structural shifts in the RE Private Equity market that continue to resonate today. Finally, an evaluation of the path forward, particularly how it echoes the deleveraging opportunities of Private RE's early history, as well as marking a continuation and, in some cases, acceleration of the structural shifts that emerged in the post-GFC era.

How Did Real Estate Private Equity get started as an asset class? Before the late 1980s, most investors did not perceive a role for opportunistic private capital in the Commercial Real Estate (CRE) market, as it was effectively 'crowded out' by lower-cost debt and equity solutions. On the debt side, U.S. commercial banks aggressively began growing their CRE loan books in the early to mid-1980s (*Exhibit 48*). Amid a heightened competitive environment in that era[3], banks prized the substantial TAM, and especially the high upfront origination fees associated with CRE lending. As a result, the banks competed to lend at increasingly high loan-to-values (LTVs) and compressed spreads. Meanwhile, on the equity side, the Economic Recovery Tax Act of 1981 created attractive depreciation incentives around CRE ownership, which fostered a burgeoning class of real estate limited partnerships geared more to individual investors seeking tax shelters than to institutional capital seeking opportunistic returns. Also, as suggested above, comparatively little of this equity capital was required, as banks were lending at elevated LTVs.

Exhibit 48: Extension of Bank Credit to the U.S. RE Sector Surged Starting in the Early-to-Mid 1980s

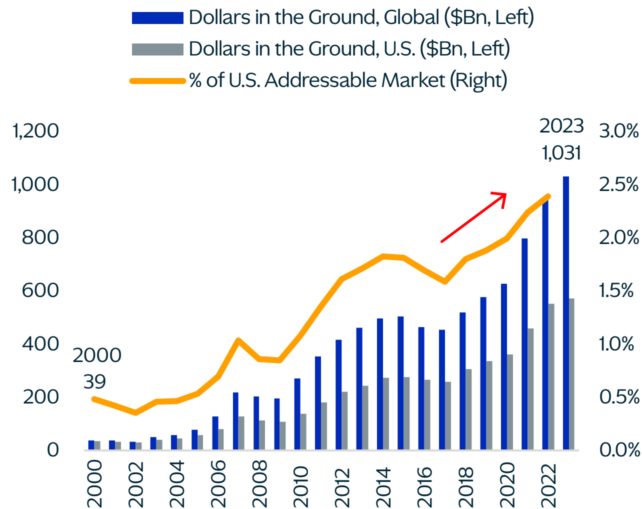


Data as at August 31, 2024. Source: Federal Reserve H.8 reporting, Haver Analytics, KKR Global Macro & Asset Allocation analysis.

> Unlike the traditional PE Buyout market, which emerged from innovations around the thoughtful use of corporate leverage, Real Estate Private Equity (REPE) as an asset class first blossomed around a deleveraging cycle related to the commercial real estate crisis of the late 1980s and early 1990s.

3 Contributing competitive pressures on banks in this era included a) the removal of regulated rate caps on deposits, b) the granting of expanded lending powers to Savings & Loan institutions, c) the share shift of C&I lending out of the banking system and into the commercial paper market, and d) the conversion of banks from mutual to stock ownership structures. Source: "Commercial Real Estate and the Banking Crises of the 1980s and Early 1990s." James Freund, Timothy Curry, Peter Hirsch, and Theodore Kelley. FDIC, 1997.

Exhibit 49: PE Real Estate AUM Has Grown > 25x Since 2000 But Still Represents Less Than Three Percent of U.S. CRE Market



'Dollars in the Ground' = unrealized value of invested capital globally. 'Addressable Market' = U.S. invested capital as a % of the stock of U.S. private real estate structures, ex-owner-occupied housing. Data as at July 31, 2024. Source: Preqin, U.S. Bureau of Economic Affairs, KKR GBR analysis.

Unlike the traditional PE Buyout market, which emerged from innovations around the thoughtful use of corporate of leverage, Real Estate Private Equity (REPE) as an asset class first blossomed around a *deleveraging* cycle related to the commercial real estate crisis of the late 1980s and early 1990s. Perhaps not surprisingly, the backdrop of low-cost, highly levered RE capital outlined above generated a glut of new RE supply that ultimately unbalanced the market. The situation became particularly unsustainable following the introduction of the Tax Reform Act of 1986, which revoked accelerated depreciation. It also lowered ordinary tax rates, thereby reducing the value of CRE's tax shield. As distress began to emerge, innovative investors perceived the need for new sources of equity capital to deleverage the sector. Early players included the Zell-Merrill I and AEW Partners Fund I, both raised in 1988[4]. Distress continued to mount, however, and by 1989 the surge of failing institutions was so large that the U.S. government established the Resolution Trust Corporation (RTC) to oversee the massive liquidation of RE assets held by insolvent thrifts. This, in turn, spurred a new generation of opportunistic RE funds first established specifically to invest behind RTC disposals, including franchises such as Starwood Capital (Feb'91), Goldman Sach's Whitehall Funds (Dec'91), and Morgan Stanley's MSREF Funds (Jun'92)[5]. Over its six-year life, the RTC resolved $394 billion of assets from 747 insolvent institutions. Maybe even more importantly, many early funds that purchased assets out of the RTC performed exceedingly well, with some achieving even triple-digit IRRs. Overall, what began as an opportunistic 'trade' around the RTC would flourish into an established asset class as investors came to appreciate the potential gains available from repositioning poor capital structures and undermanaged assets in the RE space.

As the RTC wound down in late 1995, RE Private Equity managers needed to turn to new strategies for generating opportunistic returns. Importantly, several structural tailwinds remained in place for the industry, including 1) the steady drift lower in interest rates over the late 90s and early 2000s; 2) a drumbeat of portfolio sales by institutional investors such as insurance companies that were exiting RE in light of poor backward-looking performance; 3) a steady improvement in vacancy rates and rental growth as industry fundamentals healed; and 4) an expanding opportunity set on the global stage, as the industry germinated across Europe, Japan, and Emerging Markets. What didn't change during this era was that the 'Big Five' traditional asset classes within CRE of Office, Multi-Family, Retail, Industrial, and Hospitality continued to dominate the marketplace for private CRE investment. As discussed later, sector dynamics started shifting only in the post-GFC era, a trend that has accelerated in recent years.

As the RTC wound down in late 1995, RE Private Equity managers needed to turn to new strategies for generating opportunistic returns.

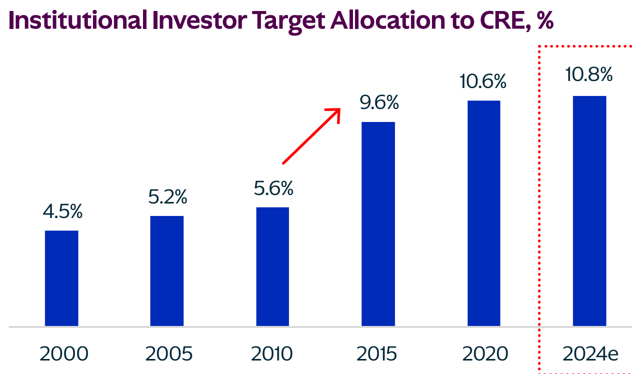
4 Source: "Twenty Years of Opportunistic Real Estate Investing." Joanne Douvas. Wharton Real Estate Review, Spring 2012.

5 *Ibid*.4.

One crucial feature of the post-RTC/pre-GFC era was that investment banks dominated the investment landscape, while wealthy individuals were the primary source of funds. As shown in *Exhibit 53*, Morgan Stanley, Goldman Sachs, Lehman Brothers, Citi, and Deutsche Bank collectively gathered fully 26% of RE Private Equity capital raised in the five years leading up to 2008. The banks significantly benefitted from their direct access to pipelines of challenged RE assets. Another important advantage for the banks was their private wealth franchises, which gave them access to pools of high-net-worth investors when institutions still had not entered the real estate market in size. *Exhibit 50* shows that as recently as 2000, the median institutional allocation to real estate was just 4.5%, less than half of what it is today. Importantly, the overall REPE industry was just 1/25th of its current size in 2000 (*Exhibit 49*), which helps explain why it was not perceived as a 'must own' allocation by the CIOs of that time.

Exhibit 50: Institutional Investors Increasingly Perceived RE Private Equity as a 'Must Own' Asset Class in the Wake of the GFC, a Trend Which Persists Today

Institutional Investor Target Allocation to CRE, %



Data as at December 31, 2023. Source: JLL Research, 2023 Institutional Real Estate Allocations Monitor, Cornell University.

Exhibit 51: REIT Performance Proved Highly Volatile Relative to Underlying Asset Values During the GFC

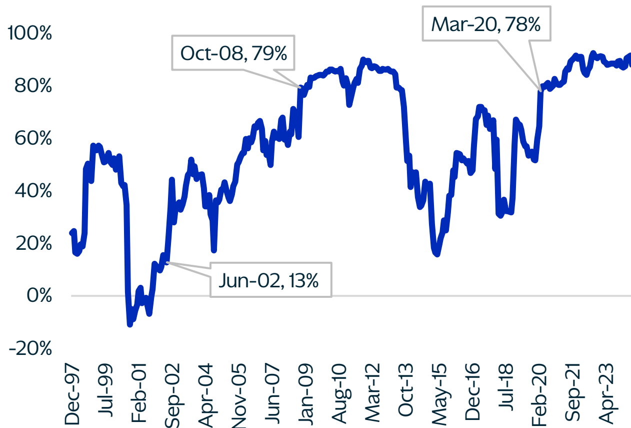
Cumulative Total Return: 1Q07-1Q09

REIT performance as per Dow Jones Equity REIT Index. Data as at August 19, 2024. Source: Dow Jones, Bloomberg, KKR Global Macro & Asset Allocation analysis.

The GFC marked a major inflection point for RE Private Equity, kicking off what we view as the current era of dominance by multi-strategy private markets investors. In many ways, we view the GFC as the starting point of the 'modern' era for RE Private Equity, as it marked important shifts across multiple dimensions, including 1) a surge in interest in the asset class from institutional investors, 2) an upswell of activity in the Multi-family and Industrial sectors, as well a flourishing of traditionally 'Alternative' sectors including single family rental, datacenters, senior housing, and life sciences, and 3) a pivot from investment banks to multi-strategy private markets firms as the dominant managers in the space. We address each of these developments in the following section.

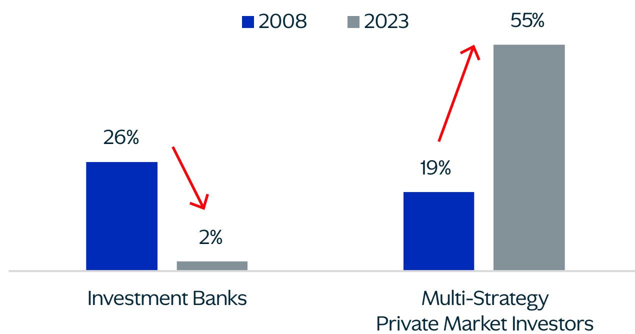
The GFC marked a major inflection point for RE Private Equity, kicking off what we view as the current era of dominance by multi-strategy private markets investors.

Exhibit 52: Maybe Even More Importantly, REITs Failed to Act as a Diversifier During the GFC Era



REIT performance as per Dow Jones Equity REIT Index. Correlation as per rolling 24-month correlation of monthly returns. Data as at August 19, 2024. Source: Dow Jones, Bloomberg, KKR Global Macro & Asset Allocation analysis.

Exhibit 53: Investment Banks Dominated Private RE Prior to the GFC, While Multi-Strategy Private Markets Firms Have Dominated in the Post-GFC Era



Investment Banks: Morgan Stanley, Goldman Sachs, Lehman, Citi, Deutsche Bank. Multi-Strategy Private Markets: KKR, Blackstone, Brookfield, TPG, Carlyle, EQT, Ares, Blue Owl, Cerberus, PAG. Source: PERE five-year fundraising rankings published in 2009 and 2024, KKR GBR analysis.

Surging Interest from Institutional Investors: As shown in *Exhibit 50*, institutional target allocations to commercial real estate surged by more than 70% between 2010 and 2015 to 9.6% from 5.6%. As such, much like similar shifts that played out across other alternative asset classes around this era, the investor base for RE Private Equity slowly shifted from a private wealth audience focused on outsized 'off market' returns and tax efficiency to an institutional base focused on diversification, inflation protection, and healthy absolute returns that capitalize on a persistent illiquidity premium. Looking at the details, we attribute the flourishing of institutional interest in Real Estate to a few factors:

- **Inflation uncertainty:** While inflation was generally low across most global regions in the post-GFC/pre-pandemic era, it was also volatile, particularly during the initial recovery years when Chinese growth remained outsized and commodity prices remained elevated. Perhaps more importantly, sovereign debt loads surged, and monetary and fiscal policy became more overtly activist amid the secular stagnation narrative that prevailed in this era, sparking interest in longer-term inflation hedges, even as reported inflation remained low.
- **'Lower for longer' rates:** Somewhat perversely, while inflation fears percolated in this era, long-term rate expectations remained on a persistently downward path. Some of this was tied to the secular stagnation trends mentioned above, and some was attributable to the growing interest in Risk Parity strategies during this era. These forces combined to put consistent downward pressures on real estate cap rates, promoting higher, steadier returns in the asset class.
- **Growing appreciation for the diversification and risk premium associated with private markets:** *Exhibit 51* shows the marked divergence between publicly traded REITs (-65%) and privately held real estate (-3%, as proxied by the NCREIF property index) that played out during the height of the GFC from March 2007 to March 2009. Some of this performance divergence ultimately converged, as the NCREIF index drifted lower over the later part of 2009 (ultimately falling 24% peak-to-trough) while REITs recovered. All told, however, the decline in private real estate marks was much milder than the drop in publicly traded REITs. Furthermore, the

REIT market in this era failed to deliver on Real Estate's promise as a diversifying asset, as correlation with the S&P 500 surged towards 80-90%, up from near zero percent around the turn of the Millennium (*Exhibit 52*). Finally, in an era where forward-looking expected returns were compressing amid the persistent downward pull of lower interest rates, the long-term illiquidity premium delivered by private markets, including their potential for excess returns derived from operational improvements, became even more attractive.

Exhibit 54: Post-GFC, RE Transaction Activity Has Surged in the Multi-Family and Industrial Sectors While Lagging in Office, Retail, and Hospitality. The Pandemic Only Accelerated These Trends…

Share of Overall Transaction Volume Across Major RE Sectors

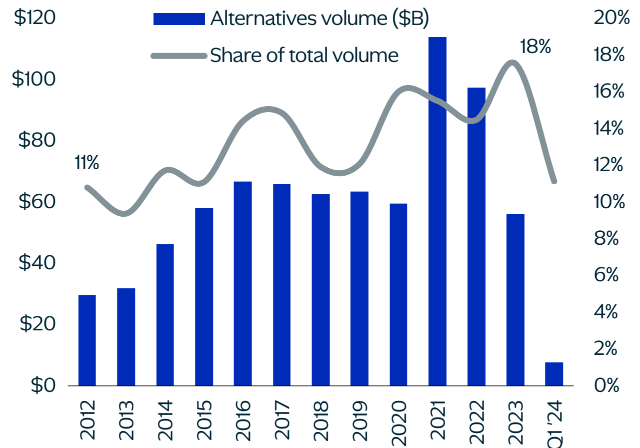
	Pre-GFC	Pre-Covid	Post-Covid	*Pre-Pandemic*	*Post-Pandemic*
	2007	2017-19	2021-23	*%pt Chg. vs. '07*	*%pt Chg. vs. '07*
Multi-Fam	21%	35%	43%	*13%*	*22%*
Industrial	12%	18%	21%	*7%*	*10%*
Seniors	2%	3%	2%	*1%*	*0%*
Hotels	8%	6%	6%	*-2%*	*-2%*
Retail	15%	13%	12%	*-2%*	*-3%*
Office	41%	25%	15%	*-17%*	*-27%*

Source: JLL Research (transactions over $5.0 million), Real Capital Analytics. Includes recaps, excludes refinances. Data as at May 31, 2024.

The REIT market in this era failed to deliver on Real Estate's promise as a diversifying asset, as correlation with the S&P 500 surged towards 80-90%, up from near zero percent around the turn of the Millennium.

Exhibit 55: …At the Same Time, Alternative RE Sectors Such as Data Centers, SFR, Student Housing, Self-Storage, and Life Sciences Have Been Gaining Increasingly Large Shares of Transaction Volumes

Real Estate Alternatives Transaction Volume, US$B and Alternatives Share, %



Alternative sectors include data centers, single-family rental, senior housing, student housing, medical office, life science, self-storage, and manufactured housing. Data as at December 31, 2023. Source: JLL Research (transactions over $5 million), Real Capital Analytics.

An upswell in activity across multi-family, logistics, and other Alternative RE sectors: A few dominant secular macro trends emerged in the post-GFC era, which remain highly relevant today. Namely, housing shortages, digitalization, and aging demographics. Each of these trends has exerted tectonic forces on the Real Estate market and reshaped activity in the sector:

- **Housing shortages:** New housing starts stagnated over multiple years in the post-GFC era, introducing renewed interest—and, more importantly, need—for rental housing solutions. *Exhibit 54* shows that between 2007 and 2017-19, the share of CRE transactions associated with multi-family housing surged by fully 13 percentage points to 35% from 21%. The trend has accelerated even further to 43% in recent years. Housing shortages also spurred the flourishing of newer Alternative Real Estate asset classes, including single family rental, manufactured housing, and student housing.
- **Digitalization:** Digitalization has reshaped most aspects of the global economy in the post-GFC era, including Real Estate. Warehouse real estate has benefitted

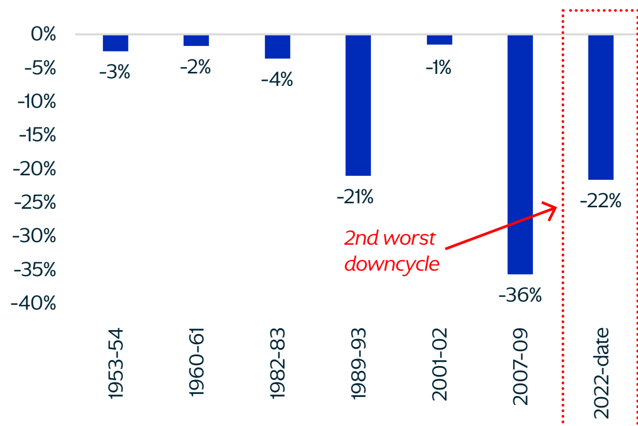
perhaps most directly, as the e-commerce share of retail sales has grown from four percent in 2009 to 11% in 2019 and fully 16% today. Meanwhile, the growth of e-commerce exerted countervailing pressure on retail, which one sees in the two to three-percentage point drop in the retail share of RE transactions relative to pre-GFC norms (*Exhibit 54*). The digitalization surge has also flowed through to the office sector, which suffered in some cases even in the pre-pandemic era from obsolescence to the current needs around digital infrastructure and modern working configurations. These trends have only accelerated, given the post-pandemic emphasis on remote work. Finally, digitalization has also fostered a step-change higher in demand for alternative RE sectors including data centers and life sciences.

- **Aging demographics:** The leading edge of Baby Boomers turned 65 in the early post-GFC year of 2011. Today, this demographic is nearing 80, and approaching its peak demand phase for senior housing. Shifting needs of an aging population have also spurred rising activity in areas including medical office, and self-storage.

A pivot from investment banks to multi-strategy private markets firms as the dominant managers in the space: As outlined above, investment banks dominated the early history of the RE Private Equity market, given their access to pipelines of distressed assets, as well as their early ties to high-net-worth investors who accounted for an outsized share of the LP base. These trends shifted markedly around the GFC era to the advantage of diversified private markets managers, including KKR and its competitors.

- **The first and most abrupt was the forced deleveraging of investment bank balance sheets,** which suppressed their ability to warehouse assets and spurred their interest in more flow-based businesses rather than more volatile businesses associated with principal risk and carry upside.
- **Second, and more profound over the longer term, have been the secular industry shifts outlined above around institutional penetration and the flourishing of alternative RE sectors, which we believe have shifted competitive advantage in the space away from investment banks and towards diversified private market firms** (*Exhibit 55*). The private markets firms have tighter links with the institutional LP base that now dominates the asset class given the institutional heft in the LP base of other private asset classes including PE and infrastructure. Perhaps more importantly, diversified private markets players have the management acumen for more operationally intensive sectors such as data centers, SFR, student housing, medical office, and life sciences, among others. Finally, these private markets firms have increased perspective through their PE and other franchises to navigate thematic shifts and opportunities related to the big-picture macro trends including digitalization, housing shortages, and demographics.

Exhibit 56: Since 2022, U.S. CRE Has Experienced the Second-Worst Bear Market in Modern History

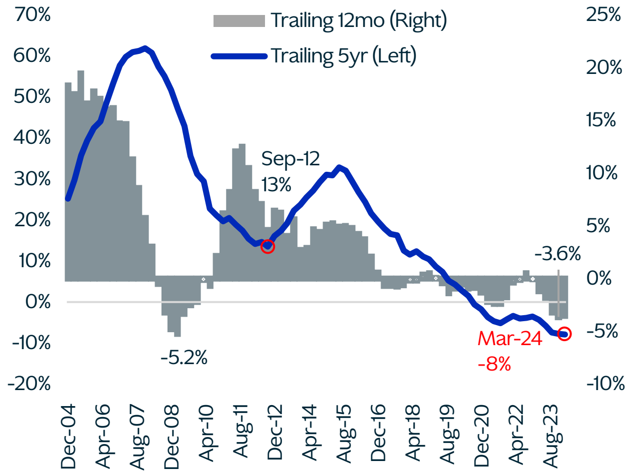


Based on quarterly data sourced from the Federal Reserve Board Commercial Property Prices Index for 1951-1997 and Green Street Advisors from 1998 onwards. '2022-date' drawdown based on 1Q22-2Q24. Source: KKR GBR analysis.

Institutional target allocations to Real Estate are approximately 10.8% as of 2024, which is actually a new historical high.

Exhibit 57: Open End Core RE Funds Have Experienced Consistent Outflows in Recent Years

Net Inflows/(Outflows) of Core RE Capital, as a % of NAV



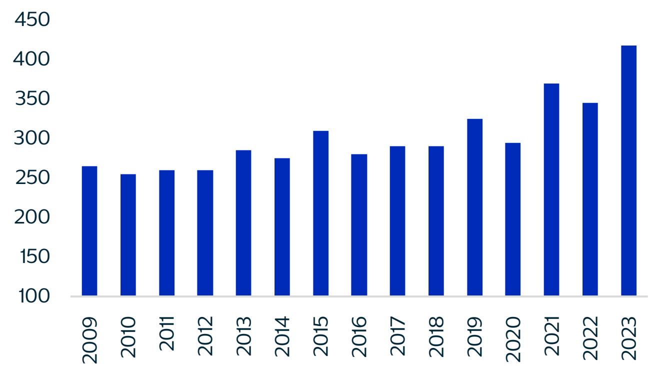
Core = NCREIF ODCE constituents. Data as at June 30, 2024. Source: NCREIF, KKR GBR analysis.

The path ahead: If we had a mantra for RE Private Equity investing going forward, it would be 'Back to the Future.' The current setup in many ways echoes the industry's early history, representing both a continuation and acceleration of the secular shifts that have dominated the space over the past 10-15 years.

The echoes of early Private RE history are that today we are once again in a time of dislocation, where new sources of opportunistic capital are needed to replace debt and core equity capital that has become scarce. The recent Fed tightening cycle and secular post-pandemic pressures on the Office sector have combined to force asset prices down by a cumulative 22% from 1Q22 through the end of 2023 (*Exhibit 56*). That is quite analogous to the 21% drawdown from 1989-93 in the early days of the industry and second only to the 36% drawdown in asset values that played out during the GFC. Also similar to the RTC era is the flight of lower-cost bank leverage and core equity capital. We discuss debt dynamics in more detail in the following section. On the equity side, cumulative five-year outflows from open end core funds are now the largest in the history of the industry (*Exhibit 57*), as a risk-adverse investor base has become more wary of poor backward-looking performance. We view this flight through a positive lens, as it creates space for Opportunistic equity capital to fill the void, particularly as cap rates have risen, creating the potential for Opportunistic returns from assets with more Core-like risk profiles.

Exhibit 58: Now More Than Ever, Commercial Real Estate Capital Formation Is Gravitating Towards Larger Managers

Average Size of North America Focused Funds to Reach Final Close, US$ Millions



Data as at December 31, 2023. Source: JLL Research, Preqin.

What continues today is that Institutional LP capital remains committed to the sector, and we believe diversified private markets managers are still best positioned to generate attractive Opportunistic returns. *Exhibit 50* shows that institutional target allocations to Real Estate are approximately 10.8% as of 2024, which is actually a new historical high. While recent performance has engendered outflows from Core RE equity, forward-looking institutional allocators, especially those focused on the opportunistic subset of the market, are heartened by the improving cyclical and structural backdrop for the industry, particularly as we approach a Fed easing cycle. Furthermore, investors are recognizing the competitive advantages of the large, diversified private markets players, which we think is best illustrated by the fact that average fund sizes in the industry have continued to grow in recent years, even amidst recent volatility (*Exhibit 58*).

All told, our bottom line is that we see the stars aligning for a promising new upcycle in RE Private Equity. Rates have plateaued, valuations have corrected, core equity and bank capital have become scarce, and large multi-strategy private managers are positioned to gain share.

Importantly, we remain in an increasingly complex and thematically driven market where financing prowess and ability to understand trends and stand-up platforms in areas including logistics, life sciences, data centers, and senior housing are crucial competitive advantages.

In summary, we see an unusual convergence today between a time of interesting valuations, supportive supply/demand technicals (both in terms of capital and terms of go-forward physical supply), and long-tailed secular themes for which Real Estate aligns well as a vehicle to express them.

Real Estate Debt: Navigating Challenges and Opportunities

While many of the challenges and opportunities in the Real Estate Credit market mirror the current backdrop outlined above for Real Estate Equity, there are a few special considerations for RE Credit that we think merit special attention. First is the unusual variable-rate sensitivity of the RE market, which may accelerate the pace of credit demand going forward. Second, regional banks are a significant channel for Real Estate financing, with knock-on implications for credit supply amidst a building demand pipeline. Finally, as mentioned in the ABF discussion above, there is also a significant role for risk transfer solutions in Real Estate Credit. However, across all aspects of Real Estate finance, we think there are notable opportunities for private market lenders. The section that follows addresses these points in turn.

The unusual variable-rate sensitivity of the Real Estate market is setting up 2024 to be a 'year of transactions.' Low interest rates spurred a surge in property transactions and a sharp increase in prices over 2020 and 2021. *Exhibit 49* shows the value of private Real Estate dollars invested globally surged to $797 billion in 2021 from $577 billion in 2019, a compound growth rate of fully 17.5%. Said differently, there was a significant wave of buyers who purchased near peak valuations and trough interest rates which, importantly, were not fully hedged on their cost of debt over the term of their mortgages. Unlike Private Equity portfolio companies, which can generally use the swaps market to hedge the full term of at least part of their debt, single Real Estate assets generally do not have the capacity to enter into swaps. As such, Real Estate buyers must instead hedge via interest rate caps, a higher-cost option for limiting the cost of debt.

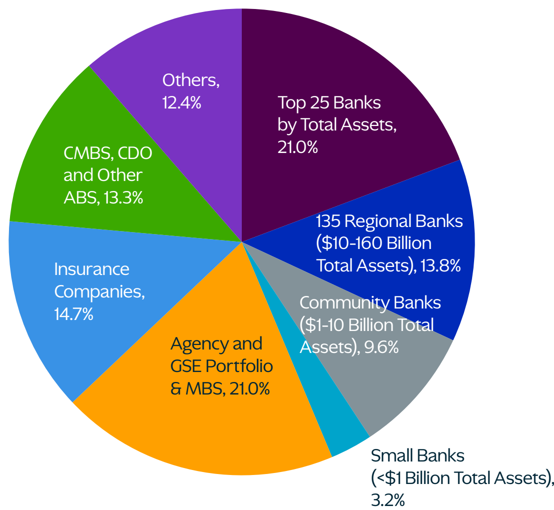
Given high hedging costs, among other structural considerations, RE owners typically purchase caps on just three-year terms. There is now a significant wave of capital structures from the peak 2021 vintage facing expiring rate caps. This is playing out amid an environment where the Fed has hiked rates fully 525 basis points over the intervening term, placing many borrowers in a state of being highly levered or over-levered. While some of these loans will be modified, we are also seeing a wave of owners forced to refinance or sell. In a recent note, Matt Salem, Head of KKR Real Estate Credit, flagged 2024 as a 'Year of Transactions,' which is creating opportunities for well-capitalized lenders to finance deals.

Flow-through implications from the regional banking crisis. Beyond the broader RE market stresses described above, the debt side of the market has experienced additional dislocation from banking sector stresses. The acute crisis of regional bank deposit flight seems to have abated, with help from measures from the Federal Reserve and FDIC. That said, the banking sector remains under fundamental pressure from elevated deposit costs, asset-liability mismatches, and elevated regulatory scrutiny. These dislocations matter for Real Estate because CRE loans are a critical component of bank balance sheets, comprising 13% of large bank holdings and fully 44% of regional bank holdings. Maybe even more importantly, banks are a crucial source of funding for the CRE market. *Exhibit 59* shows that, as of 2023, banks accounted for 48% of all CRE credit outstanding, with small, community, and regional banks representing fully 27% of that total.

The echoes of early Private RE history are that today we are once again in a time of dislocation, where new sources of opportunistic capital are needed to replace debt.

Exhibit 59: In 2023, Banks Accounted for 48% of All CRE Loans Outstanding, With Small, Community, and Regional Banks Representing Fully 27% of That Total

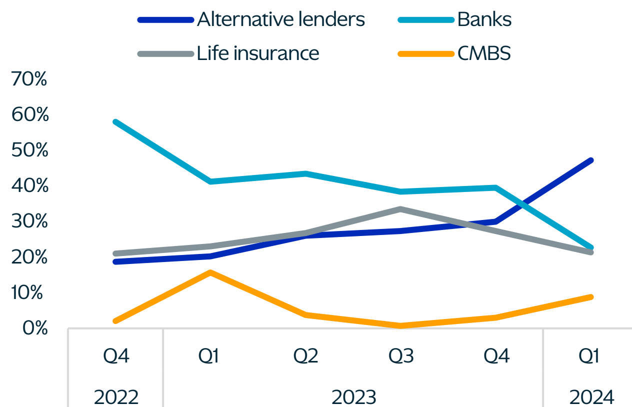
Outstanding CRE Loans, %



Source: MBA, FDIC, Moody's Analytics as of April 4, 2023.

Exhibit 60: That Said, the Share of Commercial Real Estate Loans Held by Banks Has Been Declining Meaningfully

Lender Composition for Non-agency Commercial/ Multifamily Loans, %

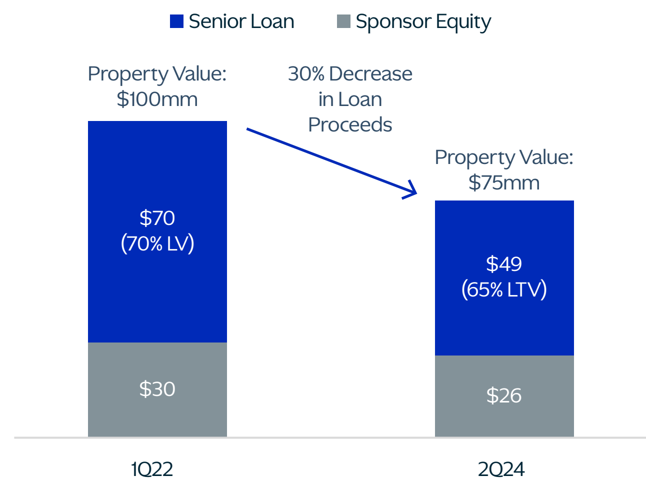


Data as of March 31, 2024. Source: CBRE.

Banks are not stepping away from CRE lending space entirely but are becoming more selective in risk taking. The latest Fed data show bank CRE loans outstanding growing by a modest two percent year-over-year in July, down substantially from a peak of +13% year-over-year in February 2023, albeit still positive. That said, banks are undoubtedly easing off the accelerator. *Exhibit 60* shows that banks have gone from making up fully 58% of the lender composition for non-agency commercial/ multifamily loans at the end of 2022 to just 21% as of the latest data in March 2024. Therein lies the opportunity for alternative lenders, we believe.

Exhibit 61: RE Credit Originations Now Feature Deeper Equity Cushions...

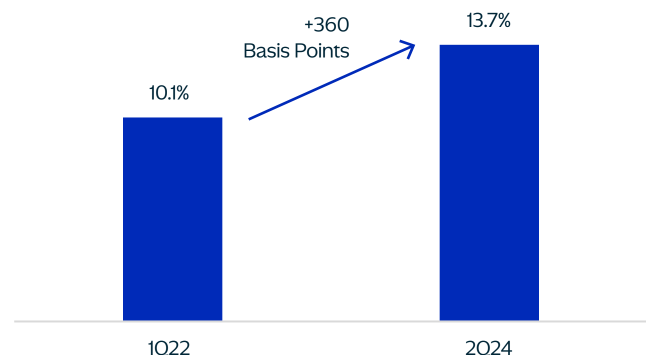
Change in Sponsor Equity and Senior Loan, 1Q22 to 2Q24



Data as at July 31, 2024. Source: KKR Real Estate Credit based on its historical experience and proprietary analysis.

Exhibit 62: ...And Higher Yields

Mezzanine Yield, %

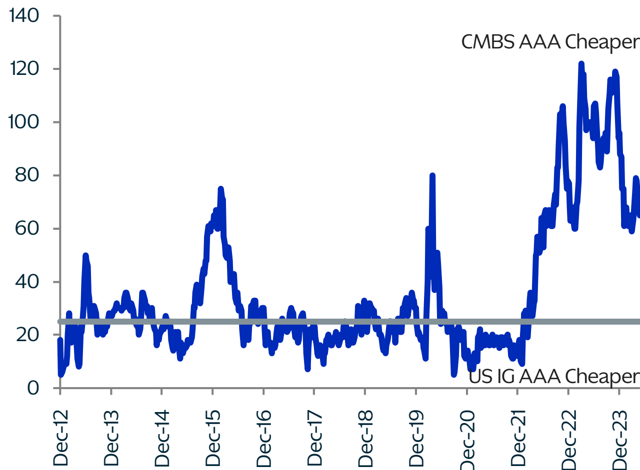


Data as at July 31, 2024. Source: KKR Real Estate Credit based on its historical experience and proprietary analysis..

With rates now higher and banks no longer shoring up the foundations of Real Estate capital structures as they once did, the terms for Real Estate Credit have become notably more lender-friendly. At the junior end of the spectrum, *Exhibits 61* and *62* show that Mezzanine yields for new originations have increased fully 360 basis points since 2022, which is particularly notable when one considers that lenders are now extending credit at lower valuations (with property values down around 25%), and also at lower LTVs (with typical senior loan attachments now around 65%, down from 70% at the peak of the market). Furthermore, the yields on offer today look attractive not just for higher-risk slices of debt, but also for the highest-quality assets. *Exhibit 63* shows that AAA CMBS spreads are trading around 65 basis points wide of AAA corporates, far above the norm of 10-25 basis points in more settled times.

Exhibit 63: Spreads Have Widened Even in the Highest Quality Segments of RE Capital Structures

Spread Differential: CMBS AAA Minus US IG AAA, Basis Points

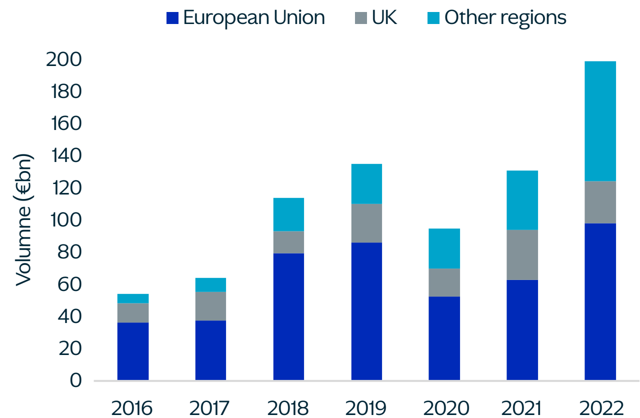


Source: KKR Real Estate Credit. As of December 2023.

Real Estate dislocations are creating attractive opportunities for traditional junior credit instruments, including Mezzanine.

Exhibit 64: Offloading Credit Risk Is a Growing Market

Volume of Synthetic Risk Transactions by Region Banks



Note: Other regions include Switzerland, U.S., Canada, and Asia. Data as of March 6, 2024. Source: International Association of Credit Portfolio Managers.

Significant role for Alternative Lenders in Real Estate finance. As mentioned above, Real Estate dislocations are creating attractive opportunities for traditional junior credit instruments, including Mezzanine. In addition, we would highlight entirely new classes of credit investments that have sprung up in the wake of the GFC, designed to address new regulatory mandates on the banking and asset-based finance industries. An early example relates to the CMBS risk-retention rules arising from the Dodd-Frank Act. The Act mandates that CMBS originators hold at least five percent of a loan on their books, or to sell the most junior portion of the capital structure (the 'B-piece') to a limited pool of qualified buyers who meet strict standards around their ability to operate real estate portfolios and manage pools of credit assets. Bottom line: We expect the CMBS market (and alternative lenders/debt funds) to benefit from banks' pullback. Our internal analysis suggests that banks will reduce their exposure by approximately $100 billion per year over the next handful of years, and that will go into CMBS and private debt funds, which presents a massive opportunity for the asset class. Already, pricing in B-piece market has widened by 400-500 basis points.

Private Credit: Bank Retrenchment and Deleveraging Helped to Create Opportunity

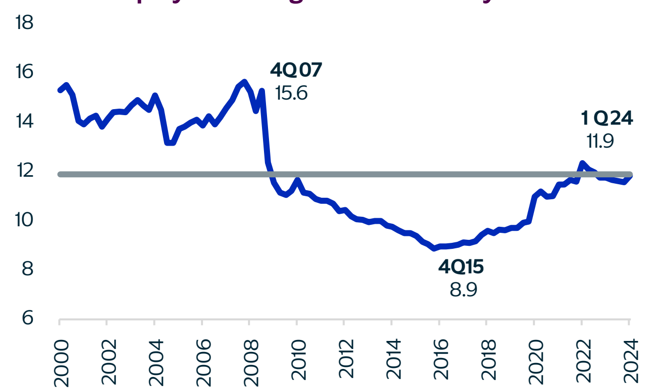
Similar to the changes in the late '70s to laws regulating U.S. pension funds that allowed investment in Private Equity transactions, the emergence of the U.S. High Yield market in the late 70s/early 80s was also an important milestone for the still young Private Equity industry. Until then, both the public corporate bond market and the U.S. private placements market were largely focused on Investment Grade rated companies only. High Yield in many ways became a 'democratizing' tool, allowing smaller, or 'mid-market' companies previously unable to secure traditional financing from banks or insurance companies' access to long-term, fixed-rate business debt financing. For Private Equity, as it sought funding for acquisitions of promising but undervalued, or more 'opaque,' hard-to-value companies, High Yield offered a more agile partner, able to act quickly and imaginatively, than traditional institutional lenders. Historically, many of the proceeds of High Yield financing supported 'High Growth' innovation, breaking new industries (think semiconductors) and supporting the restructuring/reinvention of companies to better align manager, shareholder, and employee incentives and implement operating improvements.

Throughout the 1990s/early 2000s, as the private debt market grew, new vehicles for corporate lending emerged, in particular through the growth of new forms of securitized debt such as Collateralized Loan Obligations (CLOs). CLOs were a precursor to Private Debt funds insofar as they allowed institutional investors the opportunity to de facto invest in smaller companies' loans for the first time and tailor investments to their risk appetite (previously, these loans had been the purview of commercial banks investing off their own balance sheets). These new instruments expanded the debt markets and served as a precursor to the broad adoption of Private Credit following the GFC.

At the time of the GFC, banks found themselves holding too much highly correlated, risky debt when financial conditions tightened, and the capital markets seized up. Leverage, too, was a major problem. Just consider that at the time of the crisis, Bear Stearns, Morgan Stanley, Goldman Sachs, and Lehman Brothers were sporting assets-to-equity ratios of 30:1. Responding to the crisis, policymakers enacted a variety of new regulations that impacted corporate lending, including the Dodd-Frank Act. Risk-weighting, for instance, was intended to reduce risky lending by banks to ensure that the banking system was safer and better capitalized.

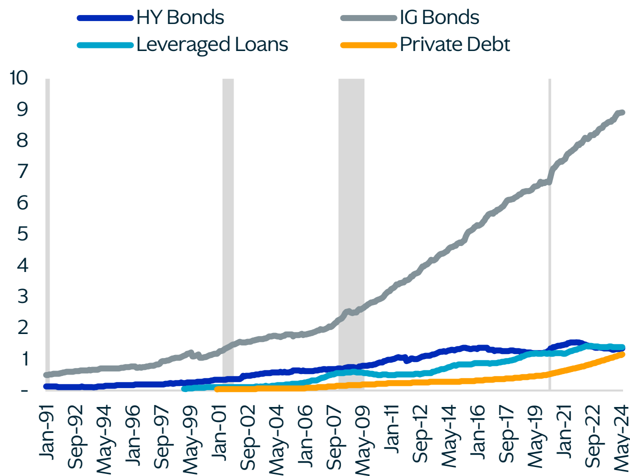
However, higher capital requirements also meant that banks were less willing to lend, in particular to smaller 'non-Investment Grade' companies, which make up the bulk of companies in the U.S. Consistent with this withdrawal by the banking sector, our research shows that traditional bank loans today comprise less than half of U.S. bank assets, compared to 65% in 2000. Moreover, because of a greater focus by policymakers on scale players with the ability through sheer size to survive financial shocks, nearly 60% of all banking assets now sit in the 15 largest banks. As banks have pulled back since the GFC, it has further opened the window for Private Credit.

Exhibit 65: Banks Have Continued to De-Lever Since the GFC



Data as at June 30, 2024. Source: Bloomberg.

Exhibit 66: The Biggest Player in the Credit Space Remains Investment Grade



HY is H0A0 Index; IG is C0A0 Index; and for loans SPBDALB Index. Data as at June 30, 2024. Source: ICE BofA, Bloomberg, PitchBook LCD. Note: Private Debt from Preqin as at 4Q23 with linear forecast up to 2Q24.

Not surprisingly, this massive contraction in credit availability from the traditional banking system gave rise to Private Credit as a substitute. Private Credit is, in the simplest terms, just the extension of credit by non-bank financial lenders, including drawn-down funds managed by Alternatives firms like KKR. Leverage on these funds typically is less than 1.0x (versus 10x or more at traditional financial intermediaries), and capital users are usually willing to pay a slightly higher price for speed/access as well as the ability to structure something more complex than what a traditional bank might be able to provide. All told, Preqin suggests that the Private Credit market has grown from $375 billion around the GFC to roughly $1.6 trillion, which is now essentially on par with the High Yield and Bank Loan markets.

There has been an important debate in recent years about whether the development of non-bank lending has created new systemic risks to financial stability in the process (even as it has helped reduce the concentrated risk that exists on bank balance sheets). We see both sides, but in the May 2023 Financial Stability Report by the Federal Reserve, financial stability risks from Private Credit funds were categorized as low because of the five to 10 year lock up period. Because the structure is so different, the risk of a destabilizing 'bank run' in periods of stress and volatility is reduced. By comparison, banks generally depend on capital markets and/or depositors to fund their lending, which can result in more of a liquidity crunch that disrupts the flow of debt to the economy (which is what happened at Silicon Valley Bank). As noted earlier, leverage at the fund level is also materially different than what traditional financial institutions employ.

That said, Private Credit is not without risk. There can be vintage deployment risk, sector concentration risk, and potential transparency risk around marks. Also, as capital has come into the sector, competition has heated up across the industry as well as relative to liquid alternatives. Finally, there are always regulatory risks to consider.

At KKR we mostly focus on the following four key areas of Private Credit. They are as follows:

1. *Direct Lending:* Companies borrow directly from a single or group of non-bank lenders. The loans are typically senior secured floating rate in nature and offer some income protection if rates rise via the linkage with short-term rates. Lenders typically hold these loans to maturity and loss rates are typically assumed to be modest.

2. *Mezzanine or Junior Debt:* Although the investments in this tranche are typically subordinated, these assets sit in larger capital structures of well-established and more resilient businesses between other loans and equity. This type of debt is accessible via fixed and floating rate products offering investors the ability to control their rates (and inflation) sensitivity. Junior debt typically offers attractive call protection and make-whole provisions.

3. *Asset-Based Finance:* Asset-Based Financing has historically been a product of bank lending, where loans are secured by collateral, such as inventory, receivables, equipment, royalties, or property. The benefits of ABF are really around its intrinsic diversification of risk and economic drivers. The ABF strategy provides access to various types of exposures such as consumer, real estate, transportation, and insurance risks in addition to the traditional corporate risk accessible via Direct Lending and Junior Debt. In our view, this market opportunity may be underappreciated by the investor community, and it is one of the reasons that we continue to see such strong growth in the asset class.

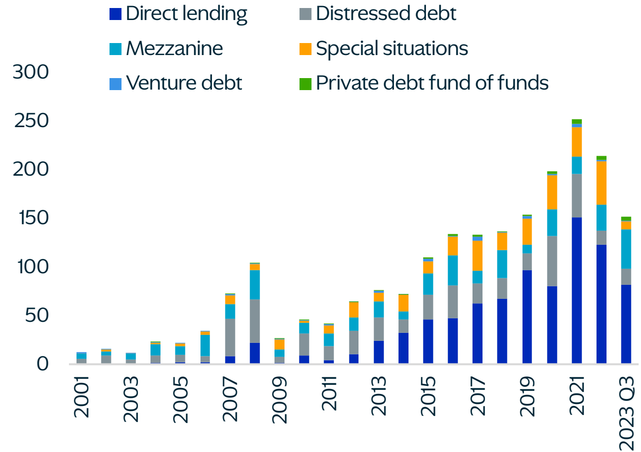
4. *Capital Solutions:* These tend to be customized loan or highly structured hybrid solutions that can flexibly support companies facing a diverse array of conditions or be in response to an event such as an acquisition, a corporate action, market dislocations, or episodic growth challenges. This trend has been fueled by several themes including, but not limited to, the ability to help bridge valuation gaps for private businesses, facilitating a return of capital, owners that are looking for a strategic partner to help accelerate growth and value creation without ceding control, and broader capital structure optimization in this higher-for-longer rate environment.

The growing variety of credit structures has accrued to the benefit of capital allocators, especially as interest rates are no longer being suppressed by global central banks. Indeed, as our colleagues Chris Sheldon and Dan Pietrzak have noted, investors now have more access than ever before to diversified pools of credit portfolios across the public markets, the private corporate space, and the Asset-Based Finance space. By comparison, a decade ago it would have been impossible, especially at scale, for most investors to craft a diversified portfolio across multiple different asset types. The ability to take advantage of the interplay between different asset classes supports, we believe, thoughtful capital allocation and portfolio management decisions to help generate optimal yield and relative value. Further, in a higher for longer environment, asset classes like Asset-Based Finance that are linked mainly to nominal GDP growth can serve as a buffer to inflation or tightening financial conditions. That's the power of what is happening in this evolution of the credit market.

Alternative investment firms can leverage their expertise in managing complex transactions to originate and underwrite loans that traditional banks might turn down. Similar to Private Equity, this expertise can provide greater speed and flexibility in decision-making, provide the ability to structure deals creatively, foster innovation, and give access to a broad network of resources that can support portfolio companies beyond just capital provision.

Exhibit 67: Direct Lending Continues to Be a Beneficiary of Capital

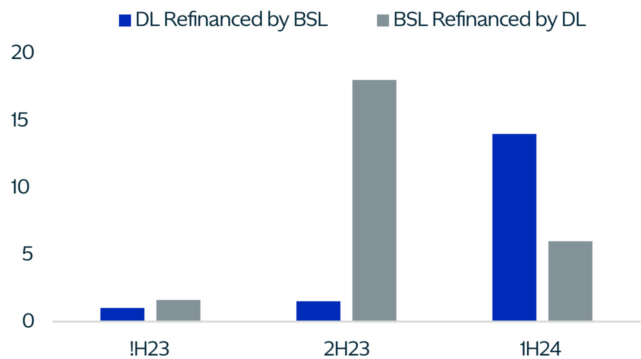
Capital Raised by Year of Final Close, US$ Billions



Data as at September 30, 2023. Source: Preqin 2024 Global Report: Private Debt.

Exhibit 68: $14 Billion of Direct Deals Have Been Refinanced by Broadly Syndicated Loans Year-to Date

Broadly Syndicated Loans and Direct Lending Refinancings, 2023-2024, US$ Billions

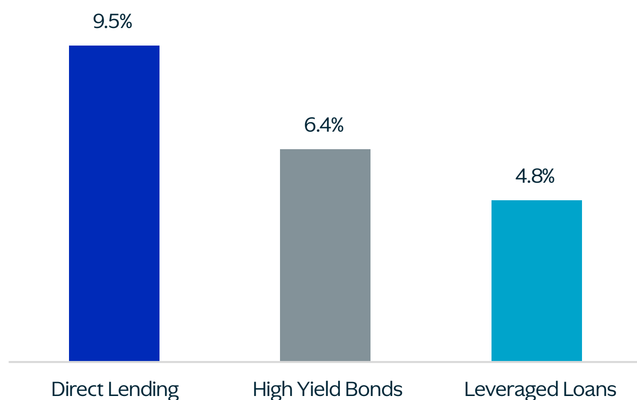


Data as at May 31, 2024. Source: JPMorgan Research, Pitchbook, LCD, and KKR Credit analysis.

Private Credit continues to deliver benefits to investors. We are often asked why Private Credit has grown so fast. Beyond the need for alternative capital to step in where the banks have pulled back, we also think it is worth noting that the money that supports the capital in Private Lending funds, which include pensions, endowments, family offices, insurers, and individual investors, has generally had a good experience. Indeed, aided by the yield premium and resilient dynamics, Private Credit has outperformed public loans since 2005, delivering returns on an annualized basis of 9.5%, compared to 4.8% for Leveraged Loans and 6.4% for High Yield Bonds. While this performance is appealing, greater speed of process, flexibility, and certainty of execution amid volatile market conditions are also part of the asset class's attractiveness. There have also been a lot of dollars raised for Middle Market Private Equity funds and they need capital to finance acquisitions. This has been an area where the private markets have again stepped in to fill investing gaps.

Exhibit 69: Direct Lending Has Outperformed Both Leveraged Loans and High Yield Since 2005...

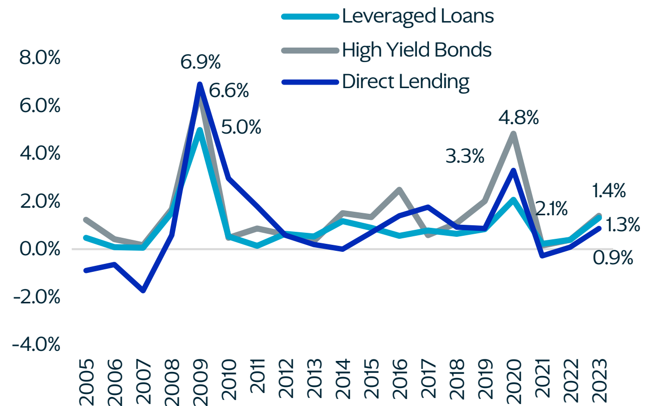
Compounded Annual Growth Return Since 2005, %



Direct Lending: Cliffwater Direct Lending Index; High Yield Bonds: ICE BofA High Yield Index; Leveraged Loans: Morningstar LSTA U.S. Leveraged Loan Index. Data as at December 31, 2023. Source: Cliffwater, Bloomberg.

Exhibit 70: ...and With Similar Loss Rates

Annual Credit Losses by Asset Class, %



Direct Lending: Cliffwater Direct Lending Index; High Yield Bonds: ICE BofA High Yield Index; Leveraged Loans: Morningstar LSTA U.S. Leveraged Loan Index. Data as at December 31, 2023. Source: Cliffwater, Bloomberg.

Beyond higher absolute returns, Private Credit can often offer better protection against losses. The asset class demonstrated strong relative resiliency during the pandemic, with loss rates of 0.9% for Direct Lending, compared to 1.3% for Leveraged Loans, and 1.4% for High Yield Bonds. The floating nature of the liabilities today will likely put more pressure on the cash flows of Private Credit loans, but we still see better loss-adjusted absolute returns across most recent vintages of Private Credit versus other liquid credit products we have been tracking.

As the role of banks continues to evolve, we think there will be a need for Private Credit to remain a complimentary force in credit creation. Specifically, we focus on four major drivers:

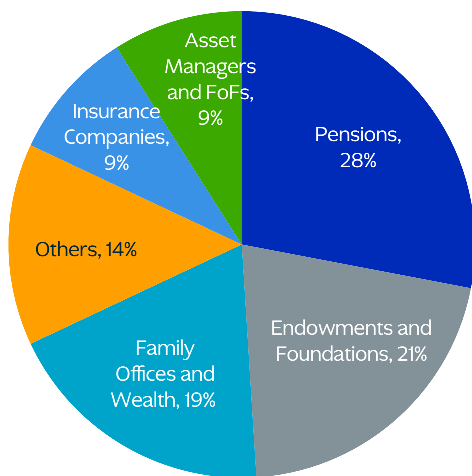
- **Structural shifts in the capital markets helped Private Credit transition from a niche asset class to a heavyweight.** Growth in this asset class has been robust across borrower types, collateral types, and seniority. In our view, many of those changes are set to accelerate in the coming years. A key benefit for borrowers is the certainty of obtaining and executing debt financing in any market condition. As we witnessed in 2022 and much of 2023, syndicated markets can become difficult to access during periods of volatility. This also impacts pricing, putting borrowers at the whim of the market. By comparison, Private

Credit often gives both borrowers and lenders more agency on timing, price, and process/documentation, with much lower reliance on broad market conditions.

- **The appeal of Private Credit for investors comes not only from its income generation but also its diversifying potential.** This combination of characteristics has contributed, in our view, to the asset class becoming more widely accepted as a meaningful part of investors' asset allocation. For example, in our 2024 Insurance Survey, investor intentions suggested Private Credit was the top choice for increasing future allocations. Many areas of private debt, particularly Asset-Based Finance, have historically shown low correlation to traditional asset classes and thus may convey diversification benefits for a portfolio. More opportunistic types of credit allow investors to take advantage of volatility and dispersion, move up and down capital structures, or invest more thematically. Further, we believe Private Credit can play a role in addressing investor goals, whether it's boosting return, reducing risk, or maximizing income generation.

Exhibit 71: Private Credit Is Now a Formal Asset Class Across Most Major Pools of Global Capital

Investors in U.S. Private Credit Funds



Data as at April 30, 2023. Source: IMF Global Financial Stability Report.

- **Borrowers in this space can ensure improved execution, a more tailored nature of the transaction, and the ability to have direct contact with one or a few lenders.** Private debt transactions usually only involve one or a handful of lenders versus the many that may partake in a public syndication. Lenders can also customize loan documentation and covenants at origination and can singularly work with the borrower should any problems or stress arise during the term. In our view, this direct level of control may result in more lender-favorable outcomes in the case of exogenous shock or default.

We believe Private Credit has emerged as an important transition vehicle for credit extension to several parts of the economy that need financing. Indeed, while large, Investment Grade-rated, publicly-traded firms continue to utilize a combination of bank financing and bond issuance, public markets can be challenging to access for the majority of borrowers that do not fall under that umbrella. Notably, the size of the major public markets has generally stagnated or declined over the past 15 years. In the corporate space, for example, the High Yield Bond market ($1.3 trillion) is the same size it was in 2015. Finally, there are also subjective issues to consider. Our experience at KKR is that lenders will have different motivations based on their position size, cost basis, relationship with the borrower, and investment strategy, creating the potential for inter-creditor conflict. Private lenders, who typically sit in the driver's seat in partnership with the borrower, can often exercise greater discretion and agility to achieve the best outcome for an investment. As mentioned above, we think this advantage is particularly notable for Private Credit lenders with management experience on the equity side.

Many areas of private debt, particularly Asset-Based Finance, have historically shown low correlation to traditional asset classes and thus may convey diversification benefits for a portfolio.

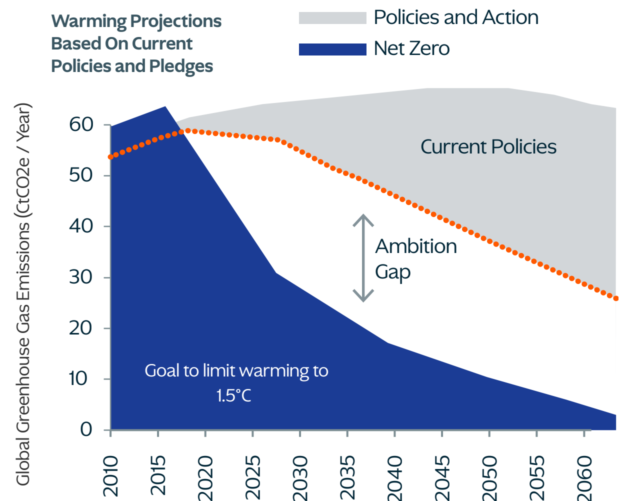
Private Infrastructure: A Sizeable Gap to Fill

Like the evolution of Private Equity, the earliest origins of infrastructure investing began with wealthy families and individuals during the Industrial Revolution. However, the asset class as we know it today actually took shape during the privatization wave of the 1990s as banks began to raise capital to deploy in core-type Infrastructure investments. In hindsight, we think that these assets were appealing to investors for a variety of reasons. First, the assets were defensive in nature, typically insulated from economic volatility, and provided inflation protection due to their stable demand and contractual inflation escalators. Second, they were collateral-backed, cash-flowing assets with steady, predictable income streams that supplied services to society. Finally, there were important portfolio diversification benefits due to the low correlation to other asset classes. Hamilton Lane has suggested that the asset class grew from about $5 billion in 1999 to $1.3 trillion in 2023.

No doubt, recent growth can be linked to private capital stepping in to fill the investing gap created by governments decreasing infrastructure spending as national debt (*Exhibit 2*) and societal obligations increased. However, at KKR we see an increased desire by investors to build 'all-weather' portfolios. Infrastructure is increasingly viewed as a core building block of portfolio construction, especially as investors worry about valuation levels, need downside protection, and do not want to miss out on potential equity market upside. Further, the inflation protection and yield characteristics are particularly attractive. As inflation cools, we think yield will become increasingly important and further heighten the attraction of the asset class.

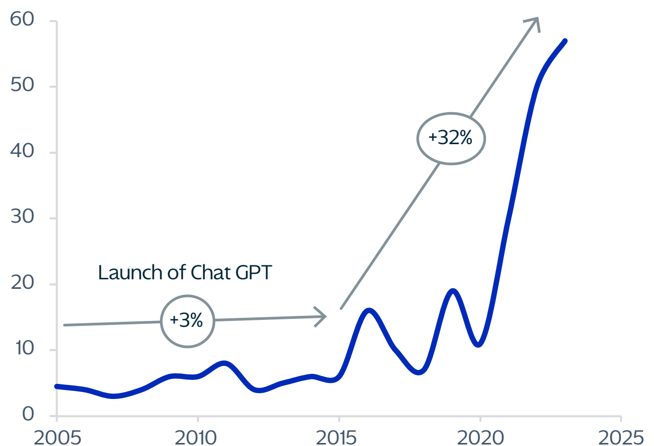
Infrastructure investments are typically framed as either economic or social. Economic infrastructure, in the most traditional sense, includes utilities, transportation, telecommunications, and natural resources. As the sector has evolved, this category now encompasses renewable energy, clean tech, logistics, and industrial operations. Social infrastructure includes defense and government (think the security of everything), healthcare, education, and judicial.

Exhibit 72: There Is a Massive and Urgent Need for Large-Scale Decarbonization Investment to Get 'Back On Track'



Data as at March 31, 2024. Source: IMF.

Exhibit 73: 'More' and 'Faster' Are the New Demand Drivers



Data as at December 31, 2023. Source: IMF.

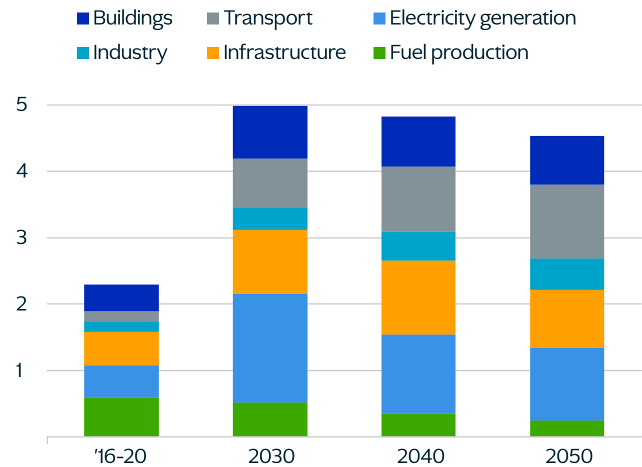
Looking ahead, our Infrastructure team, led by Raj Agrawal, believes that there are four significant catalysts for additional growth. They are as follows:

Decarbonization to reduce and offset carbon emissions, a potential $200 trillion opportunity. We think the shift from fossil fuels to renewable energy creates a host of possibilities, particularly as the brown-to-green transition will play out for decades as cost and technological advancement support adaption. Geopolitical rivalries and the regionalization of supply chains further elevate the importance of Infrastructure, with subsectors such as energy, water, communications, and data at the forefront of 'the security of everything'. The good news is that today, technology has advanced to the point where renewable power generation is now cheaper than fossil fuels in many instances, making it commercially viable and a real economic choice for companies and consumers. Electric vehicle infrastructure, investment in grid resiliency, and transmission lines are important components of the process. Battery storage infrastructure is essential to achieving net zero in the electricity sector as solar and wind are, by nature, intermittent energy sources. Battery power can help bridge the gap between production and consumption.

Within these potential growth sectors, there are private infrastructure assets that sit along the risk spectrum. Within renewable energy, for example, there is a major difference between investing in mature installations and greenfield projects. Because infrastructure assets tend to be heavily regulated and monitored, political risk is important to understand. We think the best risk-return across all opportunities comes from choosing investments that limit the potential downside by identifying those with strong market positions, difficult-to-replace assets, and predictable cash flows. We think protecting the downside in this high-growth sector could yield surprising risk-return.

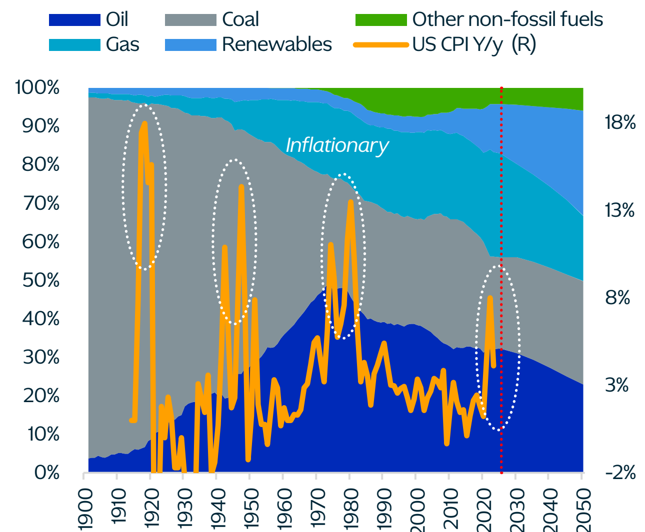
> Geopolitical rivalries and the regionalization of supply chains further elevate the importance of Infrastructure.

Exhibit 74: Private Markets Will Need to Fill the Investment Gap for Climate-Related Infrastructure Spending for Many Years to Come



Data as at December 31, 2021. Source: International Energy Agency (2021), Net Zero by 2050, IEA, Paris.

Exhibit 75: Importantly, the Energy Transition Is Inflationary



Data as at September 12, 2024. Source: BP Statistical Energy Review 2024, U.S. Bureau of Labor Statistics, World Energy Consumption database 1820-2020 (2022 revision) Paolo Malanima.

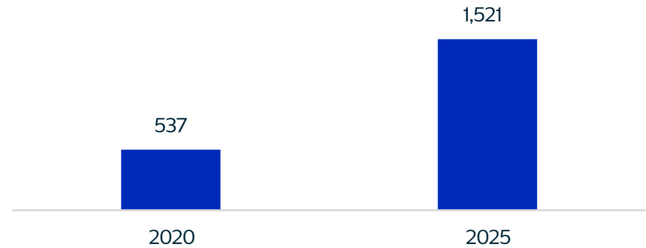
Digitalization of everything. Just as railways and pipelines supported global industrialization in the 18th century, digital assets support our reliance on data. Indeed, we think networks of data centers are like a new utility, housing the entire value chain of the digital economy and believe there are two long-term megatrends driving the demand for data center capacity: organizations continuing to migrate their data from on-site servers into the cloud and the rise of artificial intelligence. Consider that the Magnificent 7 spent $400 billion on capex and R&D in 2023 and we anticipate another $70 billion in expenditures in 2024. We liken this to a tech 'arms race' to build data center capacity that doesn't show signs of slowing down. The central challenges of this arms race are: 1) it takes several years to upgrade grid infrastructure, and 2) the data center operators are hedging their bets by building data centers close to urban centers rather than in places of cheap and abundant energy. This increases concentration risk and puts more strain on the grid.

Further, demand for data centers has grown exponentially, too, with vacancies declining all over the world and at a decade-low in North America. Today, most existing data center capacity is under lease and in high demand by cloud and AI players, with projects, campuses, and capacity sold forward further and further out, often with undertaking-or-pay terms. Unlike renewables, the challenge of these investments is not necessarily their high valuations. It's executing construction and development, managing risk including contractual safeguards in a highly competitive market, and sourcing the vast power needed to run the centers. This last concern is a critical issue in assessing any data center deal, in our view, and risk-return could be meaningful if capital is protected thoughtfully.

> As AI continues to develop, we think further opportunities in fiber optics may arise.

Exhibit 76: There Are Strong Underlying Demand Drivers From Increased Usage of Technology

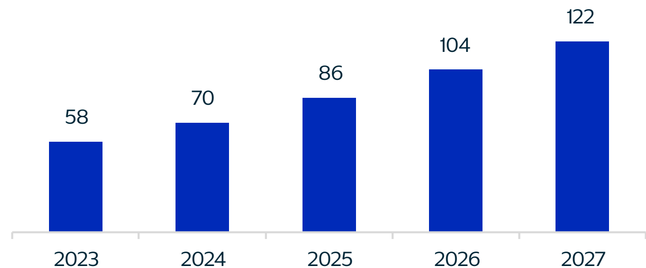
U.S. Data Usage per Household, GB/Month



Data as at December 31, 2023. Source: Frontier Communications.

Exhibit 77: Data Centers Are Needed to Fuel the Next Wave of the Computing

Actual and Expected Total Data Centers, GW



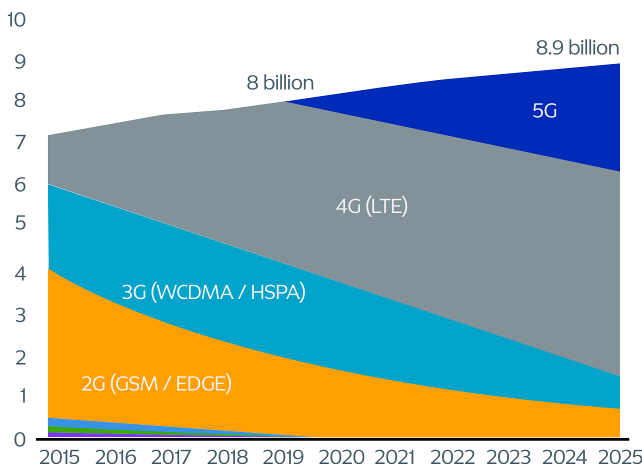
Data as at December 31, 2023. Source: Morgan Stanley, TD Cowen.

As AI continues to develop, we think further opportunities in fiber optics may arise. Importantly, not all data centers are created equal, and understanding how to properly value and future-proof investments with appropriate downside protection is key to investment success, in our view. This supply/demand for energy imbalance will require billions of dollars in investment in natural gas, renewables, grid infrastructure, and copper mining. The increased power constraints could also result in heightened near-term demand for fuel cells, natural gas-fired turbines, and siting data centers at operational nuclear power plants. We also think the pace of the retirement of coal-fired plants may slow temporarily as renewables come on stream.

So, our bottom line is that the digital tools of the modern global economy require tremendous physical

infrastructure like telecom towers to carry signals, fiber connections to enable high-speed Internet access, and data centers to store and process data. We think these types of investments are appealing for both lower risk tolerance, long-term focused Core type investors and those with higher risk tolerance, willing to lean into more opportunistically focused, complex deals.

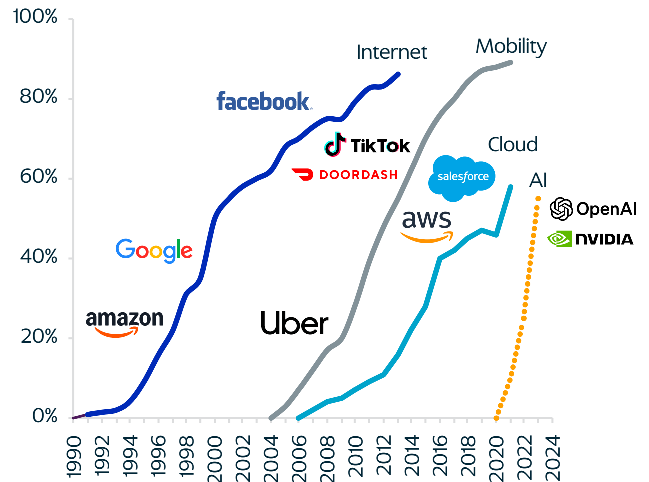
Exhibit 78: Over 95% of the World Has 3G Or Better Mobile Access. This Backdrop Likely Means Demand for Data Infrastructure Is Going Up



Data as at December 31, 2023. Source: International Telecommunication Union (ITU).

Companies with business models that result in high levels of carbon emissions or that own high-emitting assets are prime targets for brown-to-green transitions.

Exhibit 79: 'New' Technology Adoption Rates Are Accelerating, Which Means More Infrastructure Will be Required

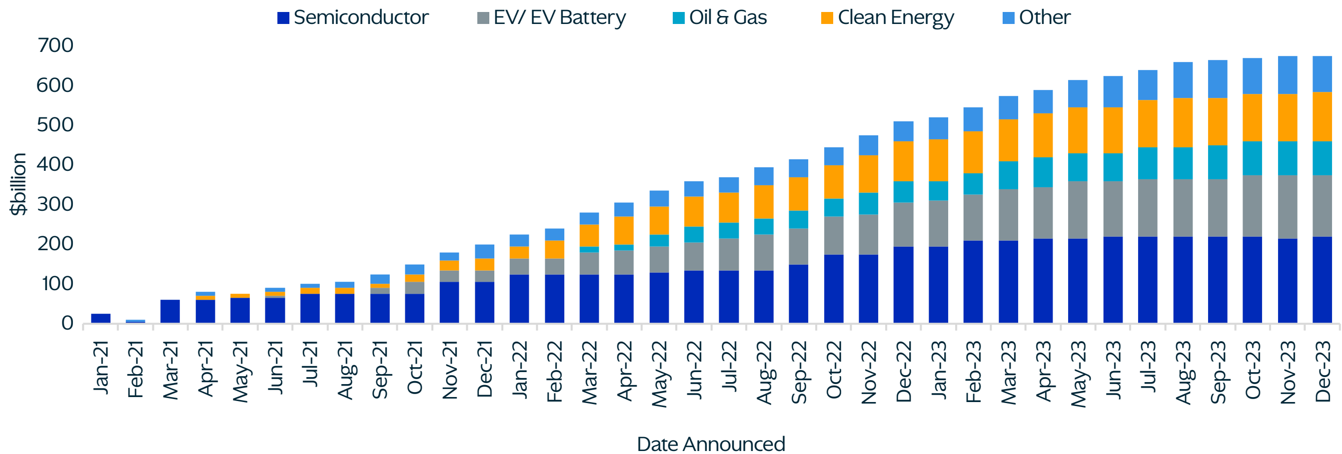


Data as at September 30, 2023. Sources: DGTL Infra, DCHawk, FTI Delta analysis.

Deconsolidation via corporate carve-outs: A public to private opportunity. A significant share of the current infrastructure investment landscape stems from large corporations and industrial companies facing pressure to divest infrastructure assets as higher for longer inflation and interest rates are applying more pressure to earnings. The catalyst is typically when the valuation of the whole company declines as the cost of capital and inputs rise, necessitating a freeing up of cash. In our experience, this can lead to integrated telecom companies selling their towers, integrated energy companies separating their long-haul pipelines, and large industrial companies divesting their industrial infrastructure and logistics assets.

One approach is by leaseback arrangement. Companies can unload assets such as a group of manufacturing facilities that may be a cost center and would not fetch a fair price if sold as a unit. A private operator can own the asset, install a team that is highly skilled in improving operations and processes, and contract with the original owner to be a customer of the facilities over the lifespan of the investment. This may be a particularly constructive solution for companies needing to decarbonize heavy-emitting assets in the face of their net-zero goals.

Exhibit 80: A Large-Scale Capital Spending Super-Cycle Is Underway in North America



Data as at December 31, 2023. Source: Company Data, Melius Research.

Transportation and supply chain opportunities to meet demand and reduce emissions. Building out charging infrastructure, upgrading the power grid to accommodate more electric vehicles, and alleviating congestion in cities will all require significant private infrastructure investment, we believe. Bloomberg estimates that nearly 1.6 million public charging units will be needed in the U.S. by 2030. To put this in perspective, the U.S. currently has only 30,000 locations. Meeting projected demand for public and private charging units globally could, at its peak, require up to $75 billion per year in grid capex, which is around 16% of total spending on the grid. Today, only around five percent of annual grid expenditure is connected to EVs.

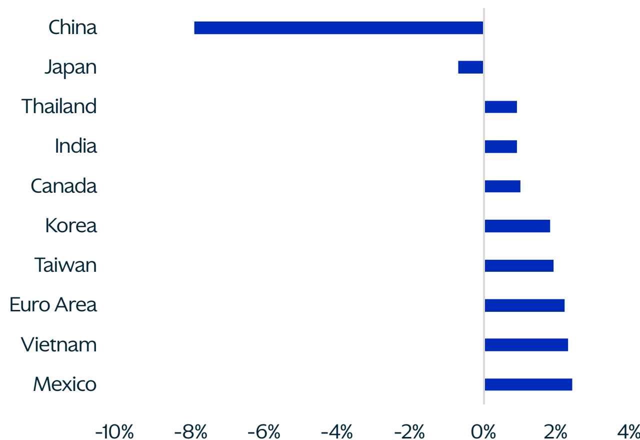
Transportation is also a key sector that needs to decarbonize across road, marine, air, and rail transport. We see opportunities to invest in road transportation fleets and their associated infrastructure, including batteries and charging stations. Most industrial companies must also find ways to decarbonize to stay ahead of future regulation and net-zero goals. Companies with business models that result in high levels of carbon emissions or that own high-emitting assets are prime targets for brown-to-green transitions. These transitions are complex and require operational expertise that is well-suited for private capital. Investing in decarbonization opportunities is achievable up and down the risk spectrum. Mature renewables and clean energy businesses might fit into a core solution. Higher up on the growth curve, experienced infrastructure operators can help younger companies with proven technologies scale their deployment.

We think ESG and reshoring are both complementary strategies that can be utilized to reduce emissions. Businesses began to reevaluate and adapt their supply chains post-pandemic. Pre-COVID, global supply chain development was based on efficiency and a 'just in time' approach more focused on the trade in goods as a driver of the global economy. Today, however, services and data are the growth engines of global commerce. Even the nature of goods is changing as more products integrate the usage of data and computing technology. The other key consideration of past supply chain development was cost. Supply chains were designed to maximize margins, often at the expense of resiliency. While cost certainly matters, consumers (and governments) increasing demand that businesses pay attention to other considerations as part of 'conscientious consumption,' including both the 'what' and the 'how' of production. The 'what' envisions a more digital economy in which every industry will increasingly rely upon emerging technologies of advanced manufacturing and automation. The 'how' embeds heightened consciousness of environmental, social, and governance considerations that value social responsibility alongside cost.

Post-pandemic, companies began to shift production with more of a focus on 'just in case.' Considerations widened

beyond just labor costs to include labor availability, tariff regimes, geopolitical considerations (like-minded blocs), and enhancing resiliency, often through digitization and reshoring to ensure the security of everything. As companies shift and build redundancies into supply chains, we think there will be opportunities to upgrade capex plans to incorporate enhanced automation and build complementary supply chain transparency and management capabilities. We also think some of the more compelling solutions-oriented opportunities in reshoring centers around creating greener, more energy- and resource-efficient manufacturing centers out of modern telecommunications infrastructure.

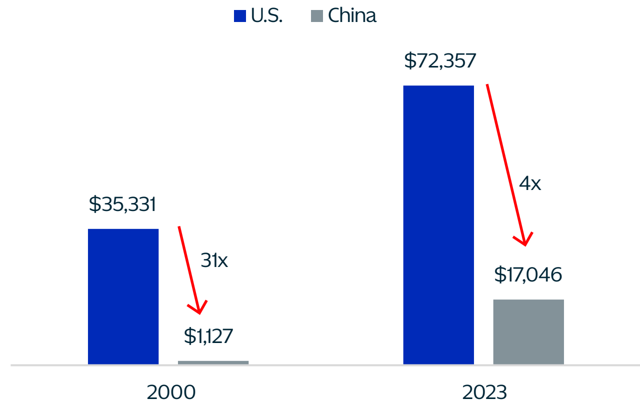
Exhibit 81: China's Share of U.S. Imports Has Dropped Eight Percentage Points Since 2018



Data as at May 31, 2024. Source: BofA U.S. Equity and Quant Strategy, Haver Analytics.

So, many factors like the proliferation of private companies, the retrenchment of banks due to regulatory pressures, or the societal needs for infrastructure exceeding governments' funding abilities, are all leading to the same consequence of growth, institutionalization, and further segmentation of private asset classes. As such, we believe investors should look to evaluate and understand the characteristics of those and the role each private asset class could play in an investment portfolio, which is where we turn to for Section III.

Exhibit 82: The Labor Cost Differential Between the U.S. and China Is Narrowing



Data as at December 31, 2023. Source: FRED, Haver Analytics.

A significant share of the current infrastructure investment landscape stems from large corporations and industrial companies facing pressure to divest infrastructure assets as higher for longer inflation and interest rates are applying more pressure to earnings.

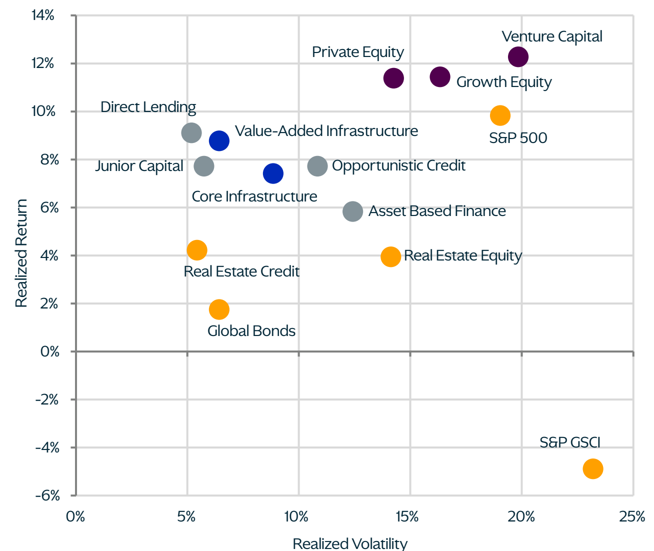
SECTION III

Understanding the Role of Private Alts in Diversified Portfolios

One of the questions we consistently get as investors dig deeper into the Alternatives bucket is, "What makes sense for me?" That question is not easy, as there is no one-size-fits-all approach to Alternatives investing for two reasons. First, most investors already have an existing portfolio of investments. So, understanding how these existing positions in stocks, bonds, and cash interact with a new non-traditional investment is essential. Second, Alts investments are often lumped together, but they behave quite distinctly in terms of what they offer from a return, risk, correlation, yield, and volatility factor. Tax implications also matter a lot too. To this end, we note the following:

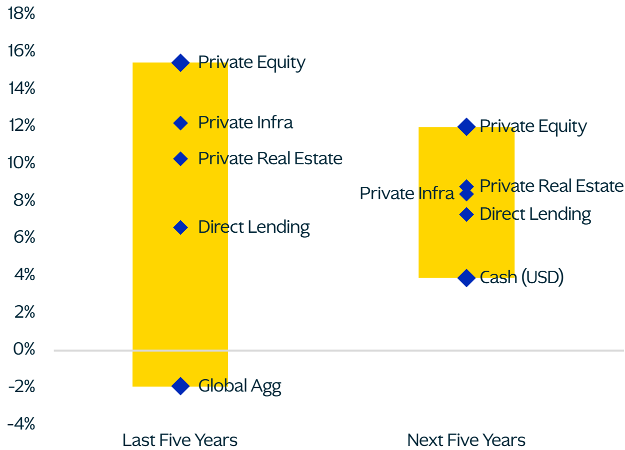
Private Alternatives Risk/Return Profiles. As discussed earlier, we think it can be misleading and detrimental to portfolios to group all Private Alternatives under the same category. *Exhibit 83* shows the historical behavior of various Private Alternatives across the two dimensions of realized return and volatility. Yet, there are more components to consider including liquidity, cash yield, factor exposures, expected drawdown/loss, inflation sensitivity, etc., when assessing the appropriateness of a Private Alternatives allocation.

Exhibit 83: Realized Returns, Volatility, and Liquidity Can Vary Meaningfully by Asset Class



Data as at December 31, 2023 using annual returns from 2008-2023.
Source: Cliffwater, Cambridge, Burgiss, Gilberto-Levy, Bloomberg, and S&P.

Exhibit 84: Forward-Looking Expected Range of Outcomes Will Be Narrower



Data as at June 30, 2024. Source: KKR Global Macro & Asset Allocation analysis.

In addition, those characteristics can vary over time and by cycle, much like traditional asset classes do. *Exhibit 84* shows KKR's expected returns for a wide range of Private Alternatives for the next five years compared to the last five years. In the past decade, there have been low rates, moderate inflation, and healthy global growth. The differential between equity-like and fixed income strategies was much more pronounced than we envision over the coming years, in a higher for longer rate and inflation backdrop and a global recovery that is asynchronous. In other words, when looking at both traditional and Private Alternatives together, we believe the expected returns dispersion over the next few years will be narrower than in the previous decade. This point alone stresses the importance of understanding the diversification benefits Private Alternatives can provide. If one believes that expected returns are *more* similar across asset classes going forward, one tangible way to improve the expected risk-adjusted return of the portfolio is to select asset classes that enhance portfolio diversification.

Further, *Exhibit 85* shows the correlation matrix of private asset classes to each other and traditional asset classes. While higher correlations are expected within a given private asset class (Private Credit, Private Equity, and Private Infra), the correlations between sub-strategies of different asset classes appear quite moderate. For example, Venture Capital and Senior Debt have historically seen a reasonable correlation of 0.49 and could work quite complementarily within an allocation scheme.

In other words, when looking at both traditional and Private Alternatives together, we believe the expected returns dispersion over the next few years will be narrower than in the previous decade. This point alone stresses the importance of understanding the diversification benefits Private Alternatives can provide.

Exhibit 85: The Correlations Between Sub-Strategies of Different Alternatives Asset Classes Appear Quite Moderate

		Private Credit				Private Equity			Infrastructure		Real Estate		Traditional Assets		
		Direct Lending	Junior Capital	Opp. Credit	ABF	PE	Growth Equity	VC	Core Infra	Val-Added Infra	RE Equity	RE Credit	Global Agg	S&P 500	S&P GSCI
Private Credit	Direct Lending	1													
	Junior Capital	0.78	1												
	Opp. Credit	0.91	0.70	1											
	ABF	0.65	0.29	0.67	1										
Private Equity	PE	0.77	0.86	0.84	0.54	1									
	Growth Equity	0.57	0.67	0.68	0.56	0.92	1								
	VC	0.30	0.60	0.41	0.25	0.75	0.89	1							
Infra-structure	Core Infra	0.60	0.83	0.54	0.17	0.75	0.56	0.39	1						
	Val-Added Infra	0.76	0.88	0.76	0.29	0.83	0.66	0.51	0.76	1					
Real Estate	RE Equity	0.56	0.89	0.46	0	0.71	0.54	0.60	0.79	0.81	1				
	RE Credit	0.57	0.29	0.58	0.97	0.54	0.61	0.36	0.14	0.26	0.03	1			
Traditional Assets	Global Agg	0.05	-0.06	0.03	0.63	0.15	0.33	0.17	-0.10	-0.19	-0.31	0.72	1		
	S&P 500	0.77	0.74	0.81	0.67	0.88	0.78	0.58	0.63	0.62	0.47	0.68	0.33	1	
	S&P GSCI	0.62	0.54	0.64	0.16	0.56	0.30	0.09	0.51	0.60	0.44	0.06	-0.26	0.46	1

Data as at December 31, 2023. Source: Preqin.

Exhibit 86: We Think Factor Analysis Will Grow in Importance as Portfolio Construction in the Alts Arena Matures

	Growth	Yield	Inflation Protect.	Diversif. Potential
Venture Capital				
Growth Equity				
Middle Market				
Large Buyout				
Direct Lending				
Junior Debt				
Asset-Based Finance				
Capital Solutions				
Distressed Credit				
Opportunistic Infra				

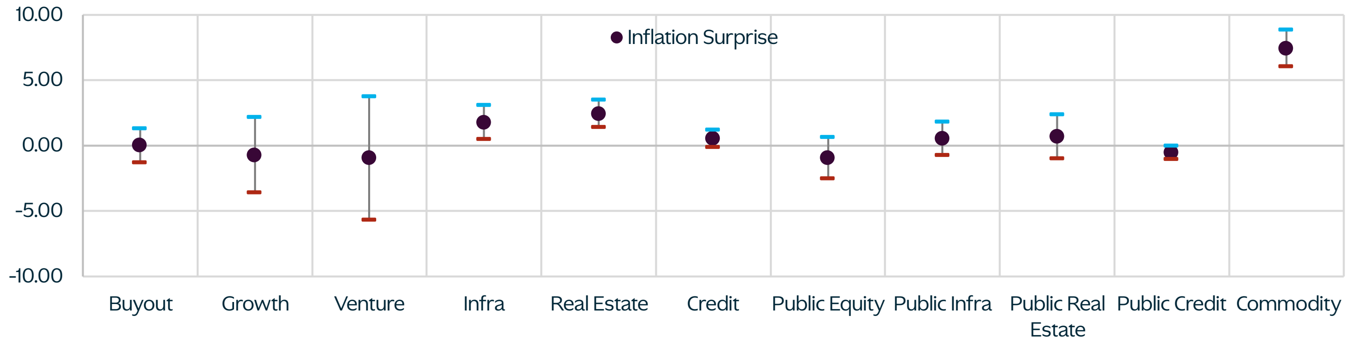
Darker green equals higher correlation to certain asset classes. Data as at December 31, 2023. Source: KKR GBR analysis.

Beyond the headline correlation numbers (which can encompass several potential biases, such as the fact that private indices time series suffer from the infrequent valuations of private assets), we look next at the factor exposures expected to come with investments in those private strategies.

The Benefits of Factor Exposures in Portfolio Construction. Earlier, we discussed that the expansion of Alternatives should be viewed positively as investors can choose from a broader menu to achieve their return and portfolio construction objectives. Whether one is looking to play offense by enhancing expected returns through more growth sensitivity or play defense by increasing diversification or inflation protection, Private Alternatives offer choices.

Exhibit 87: Inflation Surprises Can Affect Asset Classes in Very Different Ways

Public and Private Assets Beta to Inflation Surprise



Analysis based on following quarterly data after desmoothing*: Buyout: Cambridge U.S. Buyout from 2Q86 to 3Q23; Growth: Cambridge U.S. Growth from 2Q88 to 3Q23; Infra: Burgiss U.S. Infra from 3Q00 to 3Q23; Real Estate: Cambridge U.S. RE from 4Q86 to 3Q23; Venture Capital: Cambridge VC from 2Q86 to 3Q23; Credit: Cambridge U.S. Senior Debt from 1Q96 to 3Q23. Factor data from Bloomberg and Survey of Professional Forecasters. Desmoothing model based on Geltner D. (1993a) Estimating market values from appraised values without assuming an efficient market. Source: Burgiss, Cambridge Associates, Bloomberg, KKR GBR analysis.

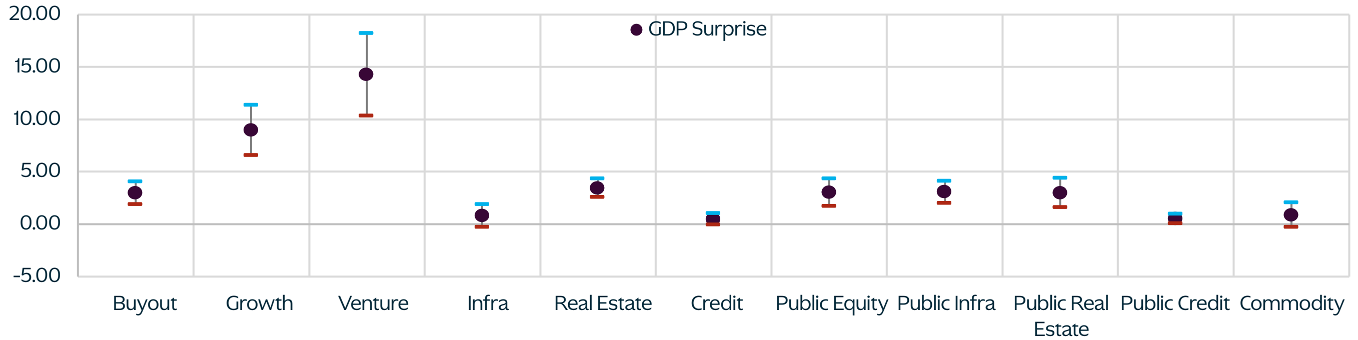
Not surprisingly, given the growing interest in Alternatives, our discussions with clients increasingly revolve around how to blend private and public strategies under the same framework. To this end, we believe the factor lens is, for now, the most conducive to effective portfolio construction, as analyzing factor returns mixes both science and art to lead to a more refined portfolio construction approach. Most strategies do have sensitivities to multiple factors. *Exhibit 86* shows a qualitative assessment informed by quantitative measurements of private sub-asset classes' sensitivities to different classic factors like growth, inflation, yield, and diversification.

Exhibits 87 and *88* show estimated sensitivities of private and public asset classes to the macro return drivers of inflation and GDP surprises. Our analysis suggests that Asset-Based Finance strategies or Reinsurance Solutions are some of the best diversifiers to traditional asset classes. In line with general intuition, strategies such as Commodities, Private Infra, and Private RE exhibit reasonably positive beta to inflation surprises. For investors who want to add more exposure to long-term growth to their portfolios, strategies with more equity beta should be prioritized (Venture Capital, Growth Equity, Middle Market, and Buyouts). Infrastructure is an example of an asset class with multiple-factor sensitivities. Based on the mandate, opportunity set, and risk/return appetite, a given Infrastructure sub-strategy can have quite different sensitivities to those factors than the next one. For example, Value-Add/Opportunistic infrastructure would have a higher beta to growth and a lower beta to inflation than Core Infrastructure. Those sensitivities should be considered, in our view, at the fund and even at the deal level (especially for those investors with large direct or co-investment programs) for sound portfolio construction.

Whether one is looking to play offense by enhancing expected returns through more growth sensitivity or play defense by increasing diversification or inflation protection, Private Alternatives offer choices.

Exhibit 88: We Believe That Factor Analysis Is Key to Having a Holistic View of a Diversified Portfolio

Public and Private Assets Beta to GDP Surprise



Analysis based on following quarterly data after desmoothing*: Buyout: Cambridge U.S. Buyout from 2Q86 to 3Q23; Growth: Cambridge U.S. Growth from 2Q88 to 3Q23; Infra: Burgiss U.S. Infra from 3Q00 to 3Q23; Real Estate: Cambridge U.S. RE from 4Q86 to 3Q23; Venture Capital: Cambridge VC from 2Q86 to 3Q23; Credit: Cambridge U.S. Senior Debt from 1Q96 to 3Q23. Factor data from Bloomberg and Survey of Professional Forecasters. Desmoothing model based on Geltner D. (1993a) Estimating market values from appraised values without assuming an efficient market. Source: Burgiss, Cambridge Associates, Bloomberg, KKR GBR analysis.

Exhibit 89: A 60/40 With Private Markets Outperforms the Traditional 60/40 On a Risk-Adjusted Nominal Return Basis in Many Environments

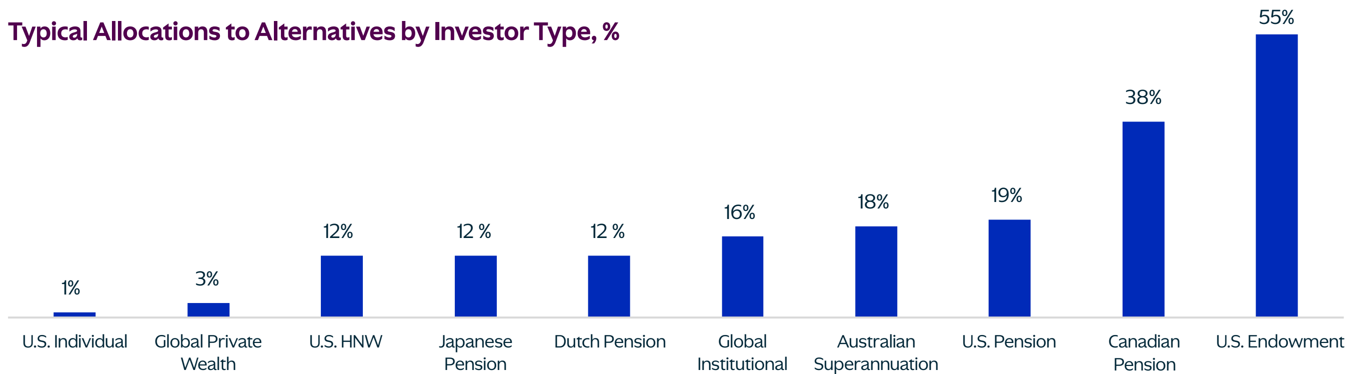
	All Periods		High Inflation High Growth		High Inflation Low Growth		Low Inflation High Growth		Low Inflation Low Growth	
	60/40	40/30/30	60/40	40/30/30	60/40	40/30/30	60/40	40/30/30	60/40	40/30/30
Return	9.3%	9.6%	2.3%	6.5%	0.1%	2.1%	10.6%	11.1%	11.6%	10.1%
Volatility	12.7%	9.6%	12.3%	8.8%	12.8%	8.7%	8.8%	6.6%	14.9%	11.7%
Sharpe Ratio	0.73	1.00	0.19	0.74	0.01	0.24	1.20	1.68	0.78	0.86

Using annual total returns from 1928 to 2023 for U.S. Bonds and from 1987 to 2023 for Private Credit. Data as at December 31, 2023.
Source: KKR GBR analysis.

Finally, It May Be Different This Time...A *Regime Change* Calls for a Different Approach to Asset Allocation. In our *Regime Change* series we discussed the increasing correlation between traditional asset classes in an inflationary environment and how Private Alternatives can play a role in improving this picture. In particular, bonds have become much more positively correlated to stocks over the past few years as inflation rose. Therefore, the historical belief that government bonds solely can act as shock absorbers when risk assets go down is being challenged. In our view, a more holistic and 'distributed' approach to diversification is warranted, especially in relation to growth shocks and the impact on investor portfolios. We think enhancing portfolio diversification via different sources of return and risk should lead to robust portfolio construction for the long run and across differing inflation and growth regimes *(Exhibit 89)*.

Therefore, the historical belief that government bonds solely can act as shock absorbers when risk assets go down is being challenged. In our view, a more holistic and 'distributed' approach to diversification is warranted, especially in relation to growth shocks and the impact on investor portfolios.

Exhibit 90: While Allocations to Alternatives Differ Meaningfully Across Investor Type, We Think All Pools of Capital Need to Think More About Portfolio Construction



Data as at December 31, 2023. Source: KKR Global Wealth Investment Solutions.

Harvesting the Illiquidity Premium for Various Investment Horizons. We also believe that investors with long investment horizons are typically well-positioned to take advantage of the illiquidity premium offered by Private Alternatives. At its core, Private Alternatives offer excess return as a compensation for being more illiquid than traditional stocks, bonds, etc. For institutional investors, such as endowments and foundations, long investment horizons and typically small short-term liquidity requirements mean they can afford to allocate more significantly to illiquid Alternatives. Pension funds, while they do have certain liabilities and yield requirements, also have a generally long-term perspective that allows them to diversify into less liquid investments, such as Private Credit and Core Real Assets, without unduly compromising their overall financial positions. By comparison, individual investors who need periodic access to their capital and insurance companies where a liability may be due sooner rather than later must be particularly sensitive to the illiquidity that Alternatives may demand.

Said differently, when building a portfolio with Private Alternatives (which are more illiquid), investors should indeed ensure the timing of cash flows from assets aligns with the timing of cash flows needed to meet liabilities and/or operating expenses. That said, as we have worked with clients across various disciplines and geographies, we think that getting the right asset-liability match (ALM) is particularly important for pension funds, insurance companies, and other institutions with limited payment flexibility linked to their maturing obligations. Doing so will, for example, help minimize the risk of having to sell assets at a loss to meet liability payments. Meanwhile, for liquid investors, we have been digging in on research around portfolio liquidity in our communication with wealth and financial advisors.

Beyond the traditional ALM matching referred to above, another potential approach to liquidity management is to consider the use of 'evergreen structure' private funds rather than drawdown funds. To review, evergreen funds tend to provide an investor with 1) accelerated access to a more mature portfolio than a drawdown fund (which helps with the multiple of money return calculation) and 2) more optionality around withdrawals. Because of the liquidity provided, the underlying assets are priced monthly, offering more frequent transparency to investors. Although it can be argued that investments in an evergreen fund can reach maturity faster, the diversification across vintage and the number of investments should be offsetting factors.

When building a portfolio with Private Alternatives (which are more illiquid), investors should indeed ensure the timing of cash flows from assets aligns with the timing of cash flows needed to meet liabilities and/or operating expenses.

However, there are some inherent risks to consider for an evergreen fund, such as lock-up periods, early redemption fees, maximum redemption levels, and suspension of redemptions. When requesting for redemption, other investors may be doing the same (especially in periods of market-wide stress), which could result in an investor receiving only a certain percentage of the requested amount. An additional factor to consider is timing risk. Due to the perpetual nature of the fund, an investor's capital may enter deals after significant value creation has already occurred and may leave deals at a discount to the optimal time to exit. To be sure, there is 'no free lunch' to gain access to these features, and as such, an investor must weigh the trade-offs, including fees, performance, vintage, and portfolio breadth.

Meanwhile, the traditional drawdown fund structure has different advantages and considerations. To review, a private markets drawdown fund is the type of fund structure where capital is committed upfront, then called gradually over several years, and distributed back to the investor when investments are exited. The pace of deployment and resulting capital calls can vary, depending on not only economic conditions but also the attractiveness of the opportunity set that the General Partner sees for the fund. The advantage of the drawdown program for pensions and endowments is that they get the full impact of the illiquidity premium (i.e., there is no ongoing cash balance in the fund). Drawdown funds are particularly appealing for patient capital, especially when the allocators build a self-sustaining program where deployment is essentially in line with monetization activity. Fees on the institutional drawdown funds also tend to be cheaper.

Our bottom line: There is no 'one size fits all' when it comes to drawdown funds versus evergreen funds. An interesting analysis prepared by our colleague Paula Roberts in *Exhibits 91 and 92* shows that some combination of the two may be a good way to ramp into private investments and still achieve compelling returns.

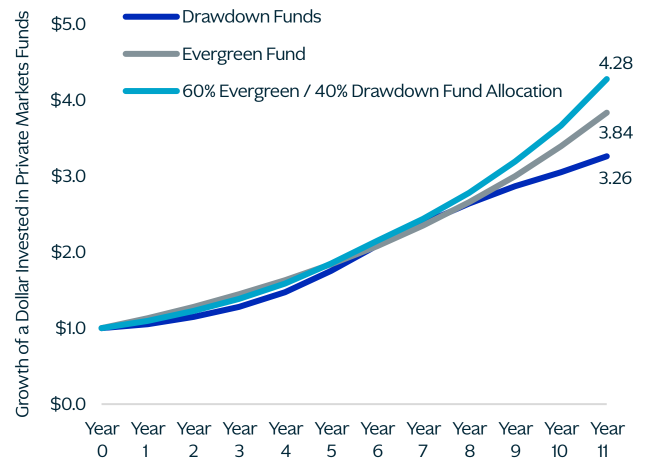
Exhibit 91: The Combination of Drawdown and Evergreen Funds Can Help With Portfolio Optimization

Long Term Investment Outcome, 11 Years			
Allocation	**Draw-down Only**	**Ever-green Only**	**Core Satellite (60% Ever-green/40% Drawdown)**
Total Multiple	3.3x	3.8x	4.3x
Volatility (Public Proxied)	34%	22%	29%
Average Private Markets Allocation	55%	90%	88%

Data as at December 31, 2023. Source: Preqin, KKR GBR analysis.

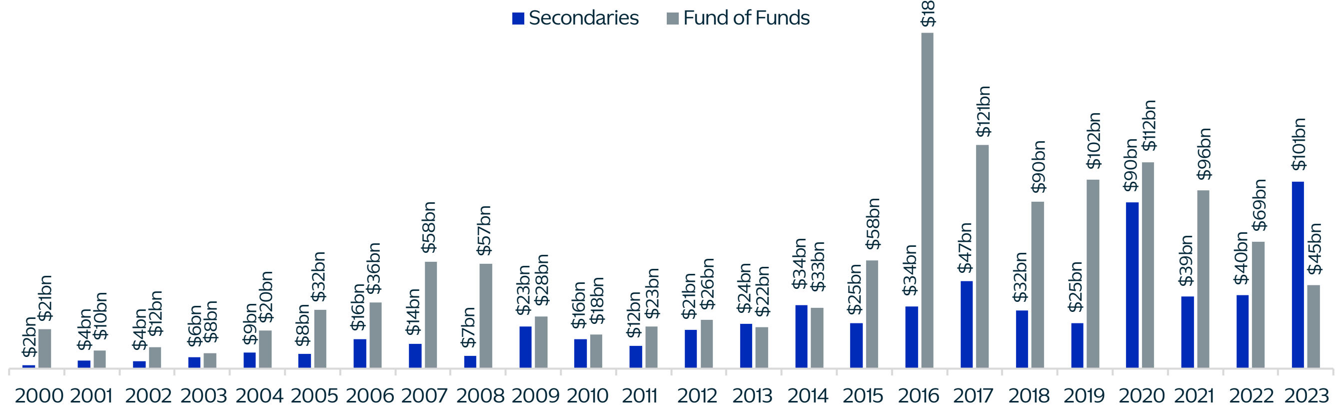
Exhibit 92: The Use of Evergreen Funds, in Combination With Drawdown Funds, Can Increase Long-Term Compounding Benefits in Certain Instances

Impact of Recyling and Distributions on Evergreen and Drawdown Funds, US$



The analysis assumes that evergreen fund exposure is achieved immediately through day-one deployment. Capital calls for drawdown funds are made from an allocation to a portfolio of 60% public stocks and 40% public bonds with an expected return of 7.0%. All yield, dividends, and cash distributions from drawdown funds are recycled either into the 60/40 portfolio allocation or the evergreen fund. Assumes a 4-year investment period and a 6-year holding period for private equity assets in drawdown funds. Data as at August 31, 2024. Source: KKR GBR analysis.

Exhibit 93: Secondaries Are an Important Part of the Fund of Fund Strategy



Data as at April 30, 2024. Source: MSCI Report for the Norwegian Ministry of Finance.

At the same time, traditional Fund of Fund (FoF) structures have been widely used by allocators of capital over the past few decades, given their ability to provide holistic and diversified access to the Private Alternatives market, which is not necessarily easy to navigate. The benefits of FoF can include a reduced need for operational, accounting, and diligence work, as well as access to funds that may be too small to be considered by an institutional investor. However, these traditional FoF structures can impose additional layers of fees that can negatively impact the value of the illiquidity premium. They also may use leverage, and sometimes the duration of the underlying investments is shorter than expected.

Overall, though, this market is growing, and more recently, secondary funds (secondaries purchase interests in existing funds vs. new primary issuances) have gained increasing prominence. This is in part to address the ability of investors to accelerate deployment and mitigate the 'j-curve' effect (the period when funds have called capital for fees but have not yet created gains in the portfolio). In fact, secondary funds raised more capital than primaries in 2023. This development only further benefits the Private Alternatives asset classes, establishing more liquidity and addressing one of an investors' potential concerns, we believe.

We turn next to the risks embedded in Private Alternatives. Specifically, we look at what can 'go wrong' as private asset classes expand and seek to address many of the key concerns expressed to us by investors.

Not surprisingly, given the growing interest in Alternatives, our discussions with clients increasingly revolve around how to blend private and public strategies under the same framework. To this end, we believe the factor lens is, for now, the most conducive to effective portfolio construction, as analyzing factor returns mixes both science and art to lead to a more refined portfolio construction approach.

SECTION IV

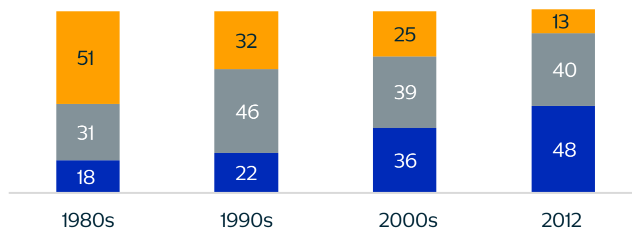
Challenges Facing Private Alternatives

Can Private Alternatives perform well with higher interest rates? With the higher cost of debt driven by higher levels of base interest rates, we are often asked if Alternatives equity strategies can continue to outperform, given (i) a lower level of available leverage and (ii) the cost of that debt weighing on equity returns. In addition to higher financing costs, given the typically inverse relationship between equity multiples and interest rates, investors also focus on the potential for multiple compression over the life of recent Private Equity deals and cash drag on their capital earmarked to fund capital calls.

Exhibit 94: Operational Improvement Is the Value Creation Strategy Most Important for Future Growth

Contribution to Value Creation in PE Deals, %

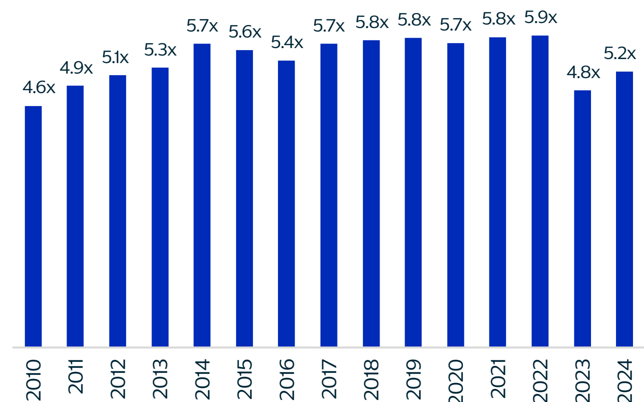
■ Operational Improvement ■ Multiple Expansion ■ Deleveraging



Operational improvement involves top-line growth and margin expansion. Deleverage involves debt repayments. Data as at December 31, 2012. Source: BCG.

Exhibit 95: Private Equity Is Relying Less on Leverage Than in the Past

Debt/EBITDA Multiples on U.S. Broadly Syndicated Loans



Data as at June 30, 2024. Source: Pitchbook, LCD.

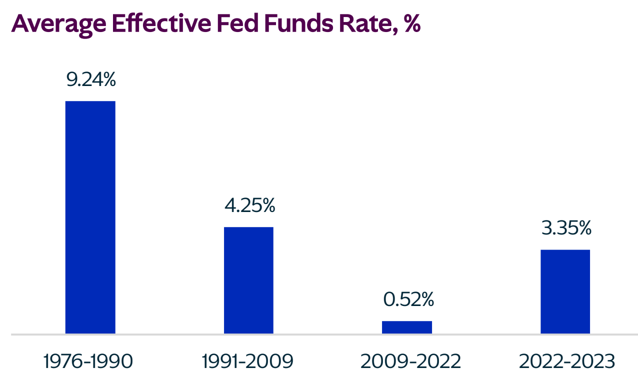
Regarding interest rates and their impact on Private Equity returns, it is important to put things in historical perspective. For starters, interest rates today are below their long-term average over the industry's existence. Historically, Private Equity exhibited strong performance when rates were higher, and reliance on debt was greater (and capital structures were riskier). See *Exhibit 101.* That said, there is no question that much of the Alternatives industry put too much money to work in 2021 across Private Equity, Real Estate, Infrastructure, and even pockets of Private Credit at a time when valuations were higher and interest rates were at historic lows. It is one of the reasons that we focus so much on portfolio construction, including linear deployment, in our modeling.

As this vintage of companies needs to refinance, their cash flows will be adversely affected by higher interest costs. Higher interest rates will also impact exit multiples for equity owners, affecting debt repayments for credit owners. If there is good news, it is that short rates did not hit six percent during the Fed's tightening campaign, which is the level that we had identified as a negative inflection point for corporate cash flows.

Moreover, the industry is not sitting idle and it remains dynamic. Indeed, as in past downturns, we have seen the Alternatives industry, especially in Private Equity, re-invent itself using different levers to generate attractive returns, and we expect no difference this time. Undoubtedly, current GPs will have to rely less on cheap financing and multiple expansion and, instead, focus on EBITDA growth via both organic and inorganic drivers.

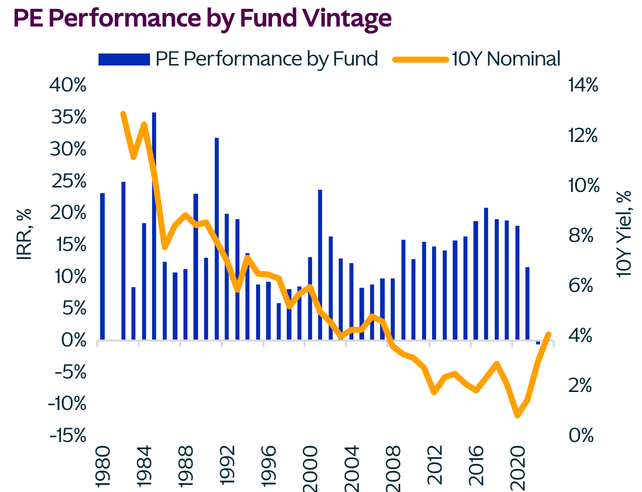
New deals can also help GPs dollar cost average their fund holdings down. For example, instead of relying on more highly priced private-to-private transactions (which we think peaked in 2021), today deal teams across Private Equity, Real Estate, and Infrastructure, can consider more public-to-private and corporate carve-out transactions. Already, Public to Private takeouts as a percentage of total deal value have significantly increased since 2020, from 6% to 13%, and we see this proportion going materially higher in the coming quarters across multiple asset classes.

Exhibit 96: Compared to History, It Could Be Argued That Rates Are Just Returning to More Normalized Levels



Data as at December 31, 2023. Source: Federal Reserve.

Exhibit 97: Private Equity Historically Exhibited Strong Performance When Rates Were Higher, and Reliance On Debt Was Greater



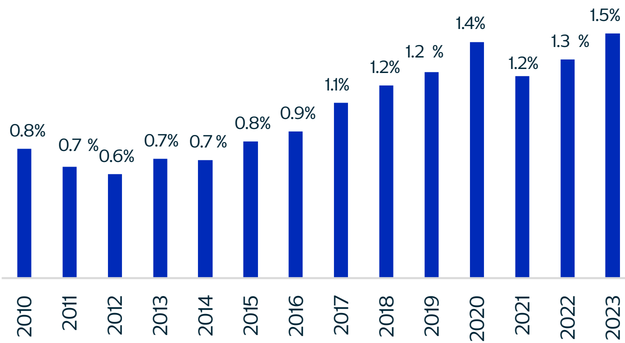
Data as at December 31, 2023. Source: Preqin, Bloomberg.

Are Private Markets becoming crowded? Private markets have become increasingly popular among institutional investors—indeed, a significant amount of capital has been raised in absolute terms in the past 5-7 years, especially by larger managers. Not surprisingly, many investors are growing concerned that excessive fundraising will lead to compression in returns by inflating entry valuations. Increased competition for the same assets could, they believe, lead to diminishing returns.

However, one does have to consider the overall size of the available market. Just consider, as we show in *Exhibit 98*, that total dry powder is only 1.5% of the total global nominal GDP. As a result, current valuations across private asset classes do not seem to reflect an excessive amount of capital chasing the same opportunities. One can see this in *Exhibit 102*.

Current valuations across private asset classes do not seem to reflect an excessive amount of capital chasing the same opportunities.

Exhibit 98: Dry Powder Is Still Only 1.5% of Global Nominal GDP



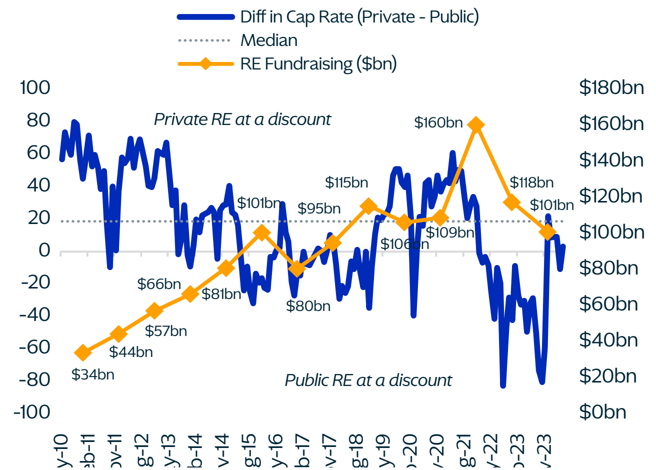
Data as at December 31, 2023. Source: Preqin, Bloomberg, KKR GBR analysis.

In general, it's important to consider that private markets are not fixed but instead reflect an evolving landscape. As discussed in Section I, the Private Alternatives industry continues to evolve towards where its capital is needed. As a result, it can expand in real time, depending on corporate, economic, financial, and regulatory inputs. For example, public-to-private Private Equity opportunities can increase the total stock of private companies, while the absolute volume of carve-outs/divestitures often increases after robust corporate M&A cycles.

We continue to see an increasing convergence between the public and private markets in the Credit space. For example, issuers continue to toggle more often between the traded Broadly Syndicated Loans and the Private Loan market. So, from our perch at KKR, we continue to see an evolution where both asset classes co-exist and function better together (see Chris Sheldon's latest Credit Market Review). Indeed, we have numerous examples of borrowers that tap into the public markets first and then refinance themselves in the private markets.

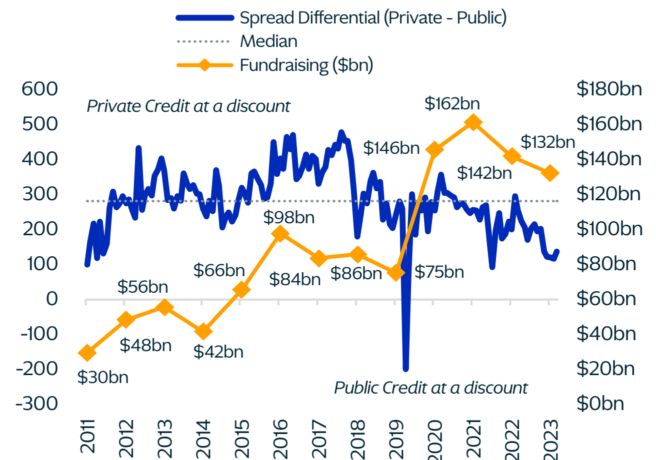
Indeed, we have numerous examples of borrowers that tap into the public markets first and then refinance themselves in the private markets.

Exhibit 99: In the Real Estate Markets, Private Real Estate Equity Is Trading at a Discount...



Private and Public Real Estate cap rates as at May 10, 2024; Fundraising data as at December 31, 2024. Source: Greenstreet, Preqin.

Exhibit 100: ...Whereas Across the Entire Credit Spectrum, the Public Markets Look Cyclically More Attractive



Data as at December 31, 2023 or latest available. Source: Private Credit spreads from KKR Portfolio Construction; Public Credit Spreads from LCD; Fundraising data for U.S. PC from Preqin.

Does allocating to Private Alternatives create too much illiquidity risk? When broadening allocations to Private Alternative investments, many investors worry they are increasing their illiquidity risk beyond safe levels. We do understand this concern, as in the current environment of low capital markets activity, fewer private companies are being IPOed, and there are fewer transactions overall, increasing the holding period of private investments and the overall illiquidity of the strategy. Further, the uncertainty of cash flows for Private funds and the time needed to deploy capital can leave LPs with uncalled capital for longer, leading to cash drag on their side.

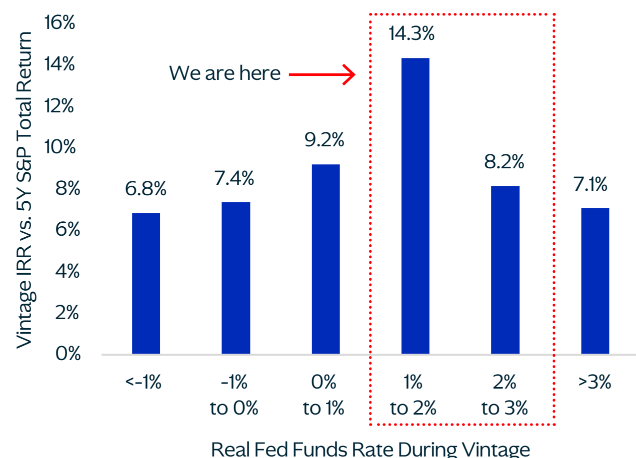
We believe in careful capital planning for any type of allocator, from pension funds to individual investors. Investors must ensure that their commitments to illiquid strategies are below their liquidity needs with some healthy margin of safety. We suggest stress-testing GPs deployment pacing, monetization speed, and dividend rates before forming a decision on an illiquidity budget. That said, the reverse is also true, as vastly over-estimating one's liquidity needs leads to under-deployment in Alternatives and missing out on harvesting the illiquidity premium. We see much more evidence of the latter than the former in our discussions with all types of clients.

There is an increasing ecosystem for *less illiquid* structures enabling access to Private Markets. The development of a secondary market in Private Equity and increasingly in Private Debt enables more frequent sales of private asset interests. In addition, Evergreen Funds, which are primarily targeted at individual investors, offer the ability to be fully invested immediately and to redeem (albeit partially) at regular intervals of time. These structures improve the overall liquidity of private markets holdings, with caveats that must be well understood. In exchange for increased flexibility, Evergreen Funds typically comprise a sleeve of lower-returning liquid assets as part of the structure. For those able, a final option is to secure a revolving line of credit (secured by the public and/or private assets in one's portfolio) to create further liquidity capacity when needed. Lastly, when liquidity in the system is low, private markets (in particular Private Equity) funds have been performing well, particularly when compared to public markets *(Exhibit 39)*.

Underestimation of risk in private markets. Similar to our aforementioned points on illiquidity, we believe the economic risk embedded in private markets must be well understood by participants before allocating. Using public market indices to estimate the risk of private asset classes is notoriously flawed. One must remember that private assets are valued infrequently (typically by quarter) and often using appraisal values (versus observable market prices in publicly traded securities). This, in and of itself, results in a downward bias of risk measures such as volatility for those indices.

However, one must also remember that, because of illiquidity, private assets are not meant to be traded on a frequent basis. The locked-up nature of most funds 'protects' investors from being exposed to the same type of daily gyrations as the public markets. The choice of risk measure for private asset classes is a hotly debated topic. The amount of bias can also be asset specific. For instance, Buyout (and to a large degree Growth) incorporates public comps as part of their valuation approach. This compares to Infra and Real Estate, which tend not to use public comps, resulting in returns that can be more 'smoothed' compared to Private Equity. What we suggest, however, is for investors to focus on the actual distribution of final returns for funds and the deals through history. This 'final outcome' view of performance for private assets represents a better view of the embedded risk than the interim risk measures such as time series volatility.

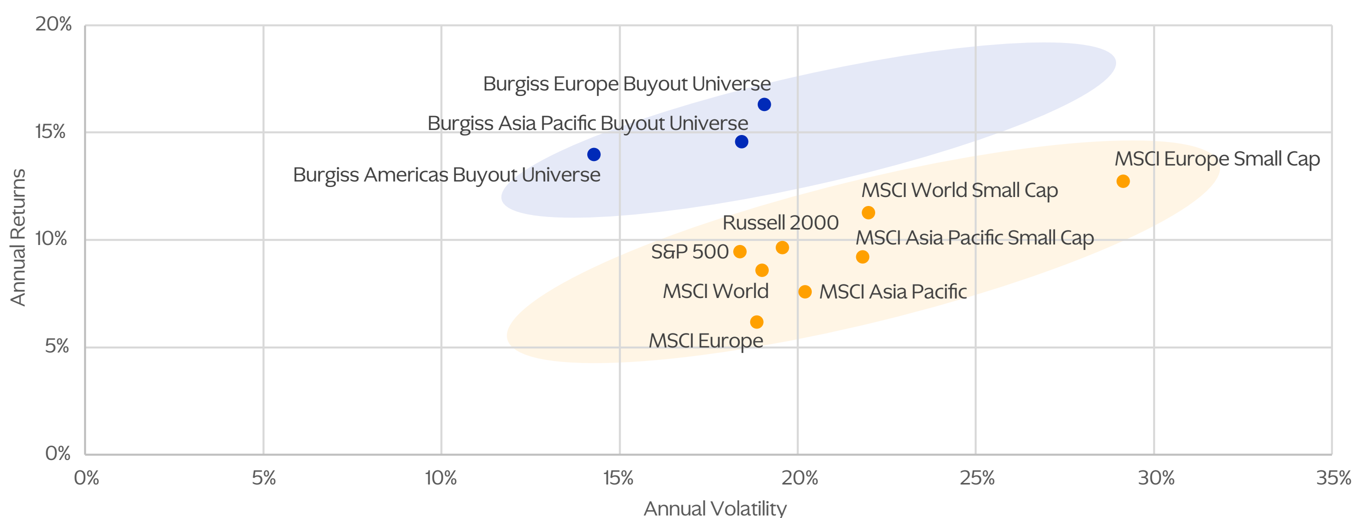
Exhibit 101: Private Equity Performance Has Been Strong Across Different Real Rate Environments



Vintage IRR analysis looks at 5-Year forward returns from 1997 - 2018. Source: Bloomberg, Preqin.

Exhibit 102: Our Public and Private Equity Realized Return and Risk Analysis Underscores Many of the Benefits That Private Markets Can Provide If Managers Perform Well

Public and Private Indices Annual Returns and Volatility, %



We use annual returns to partially correct for the well-known downward bias of volatility. Data as at December 31, 2023. Source: Burgiss, KKR GBR analysis.

The importance of disciplined portfolio construction for private markets. With over 40 years' experience investing across private markets, we at KKR have at times learned the hard way some key lessons which we think could benefit investors. While it is true that Private Assets are typically 'buy-and-hold' strategies, it shouldn't exempt investors from applying rigor in building portfolios. Some of the key lessons are as follows:

- **Deployment pacing and vintage diversification:** Contrary to public markets funds which are often fully invested, private markets funds take time to deploy capital. The timing of capital deployment is nevertheless critical as it influences entry valuations and, therefore, ongoing returns. Having the discipline of a consistent deployment strategy and avoiding the temptation to try and time the market has been one important takeaway from our real-life investment experience.
- **Managing concentration**: Whether in terms of deal concentration, sector concentration, or factor concentration, it is essential to maintain diversification in private markets portfolios as well. While a thematic approach can be highly accretive to performance, preserving the benefits of diversification is one of the keys, we believe, to robust long-term performance.
- **Avoiding excess leverage:** Similar to public markets, a strategy with excessive on or off-balance sheet leverage can be a source of trouble, and we typically err on the side of caution when it comes to adding too much leverage and illiquidity risk. It is one of the reasons we have generally not been in favor of GPs returning capital to investors via loans against a fund.
- **Knowing when to exit.** Private markets investors can suffer from the same biases as public market investors when it comes to cutting losses. Being able to exit losing positions early before they become a drag on performance and resources is an important skill for allocators.

The timing of capital deployment is nevertheless critical as it influences entry valuations and, therefore, ongoing returns.

SECTION V

Conclusion

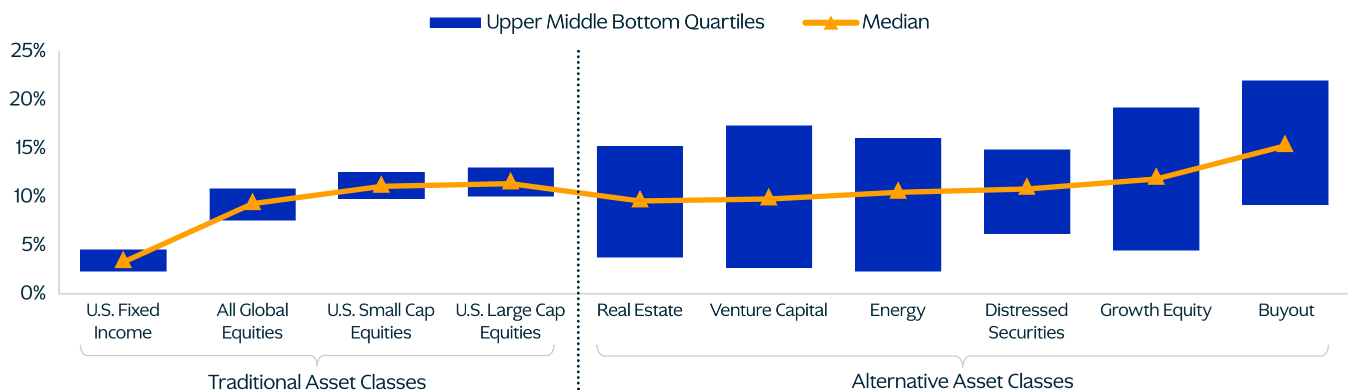
From almost any vantage point, the Private Alternatives arena has experienced substantial growth in the most recent decade, increasing from $9 trillion in assets under management in 2018 to $15 trillion by 2022. Importantly, though, this total is expected to increase to $24 trillion by 2028, and we think this forecast is conservative as it does not include several of the key growth products mentioned in this report. There are also several tailwinds to consider. More companies stay private – for longer, while governments are over-levered – and now require more private capital to fund GDP growth. At the same time, there are still massive under-savings by current and future retirees, suggesting greater demand for the illiquidity premium will be needed to sustain current living standards. There is also both product proliferation and innovation, including more non-correlated assets (e.g., Reinsurance Solutions).

Against this backdrop, Private Alternatives have – not surprisingly – found an increasing role in a growing group of clients' portfolios. A key to the industry's success has been its ability to evolve its business. Indeed, what started in the 1970s as a cottage industry is today a global industry playing an important role in the global economy, vis-à-vis operational improvements, employee-ownership programs, and new sources of capital formation.

While we see continued industry growth as highly probable, we strongly believe that the Alternatives industry likely needs to evolve in several areas. For starters, as the Alts industry scales, it needs to ensure that it fulfills its promise to deliver above-average performance. Scale begets scale, but it does not guarantee superior performance. As a result, more time and effort should be spent on portfolio construction, including pacing, vintage/concentration risk, and correlations. In addition, as the industry product suite expands, more investor education around the nuances of the various private asset classes will be needed, including expected return, risk, yield, liquidity, and capital requirements. Finally, as the industry becomes an even more significant part of the economy, it must work with regulators and others to ensure that guidelines are followed and safeguards are maintained.

Exhibit 103: Manager Selection Matters, Particularly in Alternative Asset Classes, as There Is a Wide Dispersion of Performance Between Top Quartile and Bottom Quartile Managers

Performance: Net IRR: Inception to Date, % Vintage Years 2000-2023



Data as at December 31, 2023 or latest available. Source: Cambridge Associates, eVestment.

Our bottom line: As we look ahead, we think that the future of Alternatives is a bright one. In particular, we see several areas of opportunity. For starters, Private Equity, especially with an expanded focus on employee ownership, should continue to thrive. A broader number of offerings, including more growth in Asia and by Asian investors, should help fuel demand. Further segmentation of the asset by class, style, and duration (i.e., everything from evergreen to long-term holds, or what we call Core PE at KKR) should also drive incremental demand. We see continued demand for Infrastructure, including more desire for digital Infrastructure and expansion of the asset class to include more recurring revenue models with inflation protection. Private Credit, too, should see favorable growth. Beyond Direct Lending, we are particularly excited about other yielding assets like Asset-Based Finance and Reinsurance Solutions. Finally, after what has been a tumultuous 18-24 months in the Real Estate arena, we now see good value in both Real Estate Equity and Credit, and as such, we advocate investors begin to lean in.

Importantly, though, from a big-picture perspective, we do want to remind investors that we have entered a *Regime Change*. Rates are likely not going back to zero, inflation could prove stickier this cycle, and geopolitics and the current energy transition will both be 'messy', we believe. So, while the promise of what Alternatives can deliver for investors is compelling, investors should proceed with cautious optimism, given these aforementioned crosscurrents likely mean that more of an 'all weather approach' to building portfolios is now required. Plus, who you partner with matters. That said, if the Alts industry performs and allocators are thoughtful about portfolio construction, we think the addition of Alternatives to a diversified portfolio in what is likely to be a period of below-average returns for traditional 60/40 portfolios could be quite compelling, in our view.

So, while the promise of what Alternatives can deliver for investors is compelling, investors should proceed with cautious optimism, given these aforementioned crosscurrents likely mean that more of an 'all weather approach' to building portfolios is now required. Plus, who you partner with matters.

Important Information

References to “we”, “us,” and “our” refer to Mr. McVey and/or KKR’s Global Macro and Asset Allocation team, as context requires, and not of KKR. The views expressed reflect the current views of Mr. McVey as of the date hereof and neither Mr. McVey nor KKR undertakes to advise you of any changes in the views expressed herein. Opinions or statements regarding financial market trends are based on current market conditions and are subject to change without notice. References to a target portfolio and allocations of such a portfolio refer to a hypothetical allocation of assets and not an actual portfolio. The views expressed herein and discussion of any target portfolio or allocations may not be reflected in the strategies and products that KKR offers or invests, including strategies and products to which Mr. McVey provides investment advice to or on behalf of KKR. It should not be assumed that Mr. McVey has made or will make investment recommendations
in the future that are consistent with the views expressed herein, or use any or all of the techniques or methods of analysis described herein in managing client or proprietary accounts. Further, Mr. McVey may make investment recommendations and KKR and its affiliates may have positions (long or short) or engage in securities transactions that are not consistent with the information and views expressed in this document.

The views expressed in this publication are the personal views of Henry H. McVey of Kohlberg Kravis Roberts & Co. L.P. (together with its affiliates, “KKR”) and do not necessarily reflect the views of KKR itself or any investment professional at KKR. This document is not research and should not be treated as research. This document does not represent valuation judgments with respect to any financial instrument, issuer, security or sector that may be described or referenced herein and does not represent a formal or official view of KKR. This document is not intended to, and does not, relate specifically to any investment strategy or product that KKR offers. It is being provided merely to provide a framework to assist in the implementation of an investor’s own analysis and an investor’s own views on the topic discussed herein.

This publication has been prepared solely for informational purposes. The information contained herein is only as current as of the date indicated, and may be superseded by subsequent market events or for other reasons. Charts and graphs provided herein are for illustrative purposes only. The information in this document has been developed internally and/or obtained from sources believed to be reliable; however, neither KKR nor Mr. McVey guarantees the accuracy, adequacy or completeness of such information. Nothing contained herein constitutes investment, legal, tax or other advice nor is it to be relied on in making an investment or other decision.

There can be no assurance that an investment strategy will be successful. Historic market trends are not reliable indicators of actual future market behavior or future performance of any particular investment which may differ materially, and should not be relied upon as such. Target allocations contained herein are subject to change. There is no assurance that the target allocations will be achieved, and actual allocations may be significantly different than that shown here. This publication should not be viewed as a current or past recommendation or a solicitation of an offer to buy or sell any securities or to adopt any investment strategy.

The information in this publication may contain
projections or other forward-looking statements regarding future events, targets, forecasts or expectations regarding the strategies described herein, and is only current as of the date indicated. There is no assurance that such events or targets will be achieved, and may be significantly different from that shown here. The information in this document, including statements concerning financial market trends, is based on current market conditions, which will fluctuate and may be superseded by subsequent market events or for other reasons. Performance of all cited indices is calculated on a total return basis with dividends reinvested. The indices do not include any expenses, fees or charges and are unmanaged and should not be considered investments.

The investment strategy and themes discussed herein may be unsuitable for investors depending on their specific investment objectives and financial situation. Please note that changes in the rate of exchange of a currency may affect the value, price or income of an investment adversely.

Neither KKR nor Mr. McVey assumes any duty to, nor undertakes to update forward looking statements. No representation or warranty, express or implied, is made or given by or on behalf of KKR, Mr. McVey or any other person as to the accuracy and completeness or fairness of the information contained in this publication and no responsibility or liability is accepted for any such information. By accepting this document, the recipient acknowledges its understanding and acceptance of the foregoing statement.

The MSCI sourced information in this document is the exclusive property of MSCI Inc. (MSCI). MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used as a basis for other indices or any securities or financial products. This report is not approved, reviewed or produced by MSCI..

KKR

Kohlberg Kravis Roberts & Co. L.P.
30 Hudson Yards
New York, New York 10001
+ 1 (212) 750.8300
www.kkr.com