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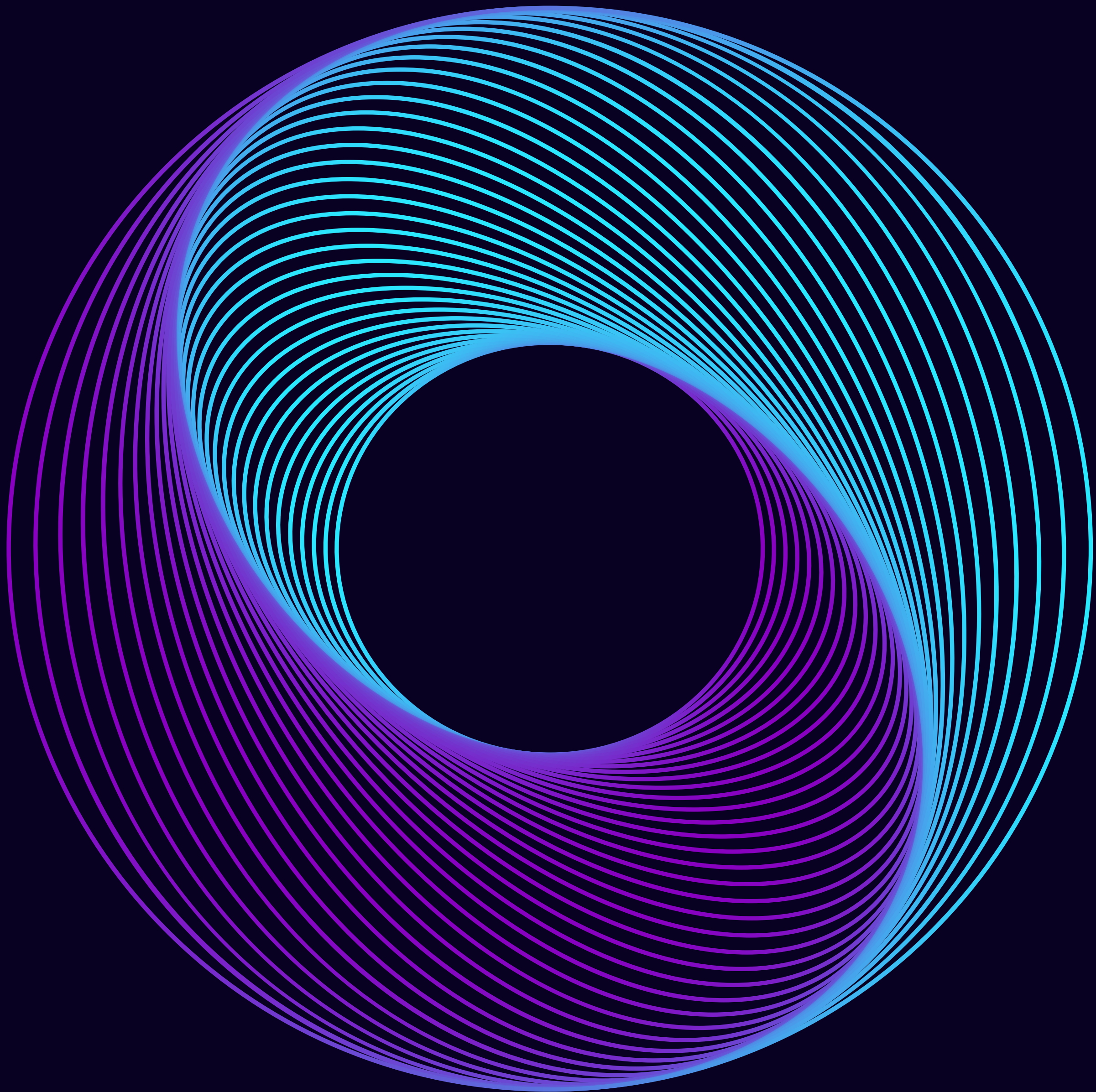
Regime Change:
The Role of Private Equity in the 'Traditional' Portfolio



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Contents

Introduction 4

Section I: Understanding the Value of Private Equity Relative to Public Equities 8

Drivers of the Private Equity Excess Returns 9

Sector Allocation: Private Equity Has Different Sector Tilts Than Public Equities 10

The Timing Effect of Deployment and Exits Can Also Bolster Performance 13

Company Selection and Value-Creation 13

Section II: How Should One Allocate to Private Equity in a Diversified Portfolio 15

Historic Return vs. Risk Highlights the Benefits of Private Equity 15

Performance of Private Equity in Different Inflationary Periods 16

Portfolio Implications of Including Private Equity 16

How Should One Think About Implementation? 18

Section III: Conclusion 19

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Regime Change: The Role of Private Equity in the ‘Traditional’ Portfolio

At KKR we still firmly believe that we have entered a different macroeconomic regime for investing, where the traditional relationship between stocks and bonds has changed. Against this backdrop, we think that new approaches to asset allocation should be considered. So, in our newest piece on portfolio construction, we focus on the role Private Equity can play in a diversified portfolio, and as part of this exercise, we look at the potential trade-offs different investors may want to consider as they think about optimizing returns across a variety of economic environments. Our punch line is that Private Equity, similar to Private Credit and Real Assets, can be quite additive to traditional investment portfolios, especially for investors who are concerned about inflation and/or do not face meaningful near-term liquidity constraints.

Habit is a great deadener.

—**Samuel Beckett,** Irish novelist, dramatist, short story writer, theatre director, poet, and literary translator

For quite some time we have been arguing that we were entering a new macroeconomic regime, driven largely by non-traditional supply shocks, including a labor shortage, rising geopolitical tensions and realignments, and the global energy transition.

Building on this viewpoint, we began publishing a series of notes on portfolio construction (see our *Regime Change* series focusing on *Alternatives* and a deep dive into *Private Credit*) using the 60/40 stock-bond portfolio as the point of reference, and we have proposed – given this new environment – that investors consider pursuing two main objectives aimed at improving their asset allocation. They are, in order of importance:

1. **Increasing inflation protection by adding more Real Assets**, given our house view that there will be a higher resting rate for inflation this cycle; and

2. **Improving the robustness of a diversified portfolio by adding private Alternatives, including more floating rate private debt (e.g., Private Credit) and Real Assets**, based on our belief that the established relationship between stocks and bonds that exists in a traditional 60/40 portfolio has now changed *(Exhibit 1)*.

To achieve these objectives, we proposed investors consider modifying their traditional 60/40 allocation into a stylized 40/30/30 portfolio where the 30% allocation in Alternatives would be distributed equally between Private Credit, Real Estate and Infrastructure *(Exhibit 3)*. Our research shows that unless one believes that we are returning to a low growth, low inflation environment (i.e., the bottom left quadrant of *Exhibit 2*), our 40/30/30 portfolio has the potential to not only deliver better returns but also reduce risk across most macroeconomic environments (see *Exhibit 4*).

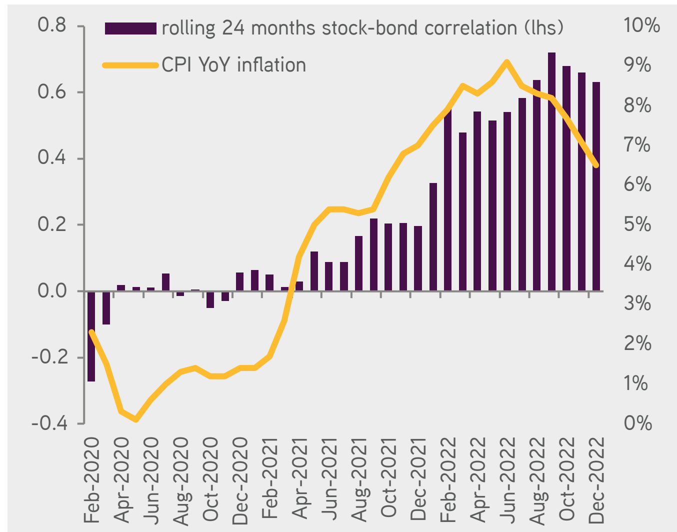
Importantly though, one asset class that we have not discussed thus far is Private Equity. We have been asked the question many times now by our clients "Where is Private Equity in the 40/30/30 portfolio?" To date, given our intense focus on the implications of higher inflation on bond prices, we have generally answered by pointing to our call for investors to first address the two priorities listed prior, before entering the Equity (public or private) discussion. That said, with our previous publications on the 40/30/30 allocation focusing on Real Assets and Private Credit now done, we are using this note to discuss how one might consider allocating to Private Equity within a diversified portfolio.

So, what is our punchline on Private Equity allocations? As we detail below, we remain quite bullish on the asset class. As one might guess, however, any discussion on the addition of Private Equity to one's portfolio does include some trade-offs. Within the traditional institutional segment of our client business (where there is often less emphasis on near-term liquidity), for example, CIOs have increasingly replaced a significant portion of their Public Equities allocation with Private Equity to take advantage of the stronger returns the 'illiquidity premium'[1] provides to Private Equity. One can see an example of our suggested *Institutional style* target portfolio in *Exhibit 3*, where Private Equity represents one third of the overall Equity sleeve. Consistent with this approach,

1 We use the term 'illiquidity premium' broadly, with no suggestion that it is simply a passive risk premium or beta factor. Indeed, based on our broad definition, 'Company Value Creation' through operational improvements, which is clearly idiosyncratic alpha, also qualifies as a component of the 'illiquidity premium', as well as leverage, deployment pacing, monetization timing, and sector allocation.

Exhibit 1

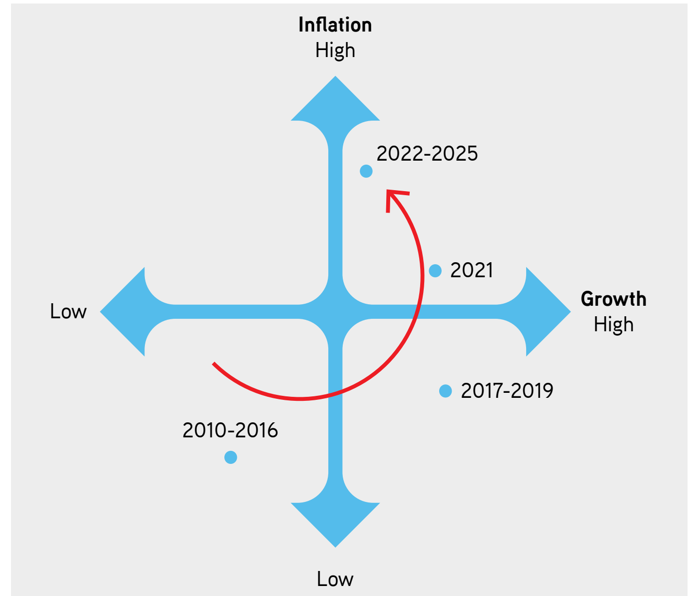
The Positive Correlation Between Stocks and Bonds Has Continued to Stay Elevated, a Key Feature of Our New Regime Thesis



60-40 Portfolio modeled using S&P 500 and Barclays U.S. Aggregate total returns, assuming weekly rebalancing. Data as at December 31, 2022. Source: Bloomberg, KKR Portfolio Construction analysis.

Exhibit 2

While 2023 Should Be a Lower Inflation Environment, We Believe a Regime Change Has Occurred



Data as at November 30, 2022. Source: KKR Global Macro & Asset Allocation analysis.

this portfolio caters to allocators who are willing to give up some liquidity for potentially higher longer-term returns[2]. Indeed, in the *Institutional style* portfolio, the Private Equity allocation is in addition to – not in lieu of – the other 30% of Alternatives, including Private Credit, Real Estate, and Infrastructure, that we have been discussing within our original 40/30/30 construct. Said differently, Private Equity replaces some of the Public Equities allocation, not other parts of the Alternatives mix.

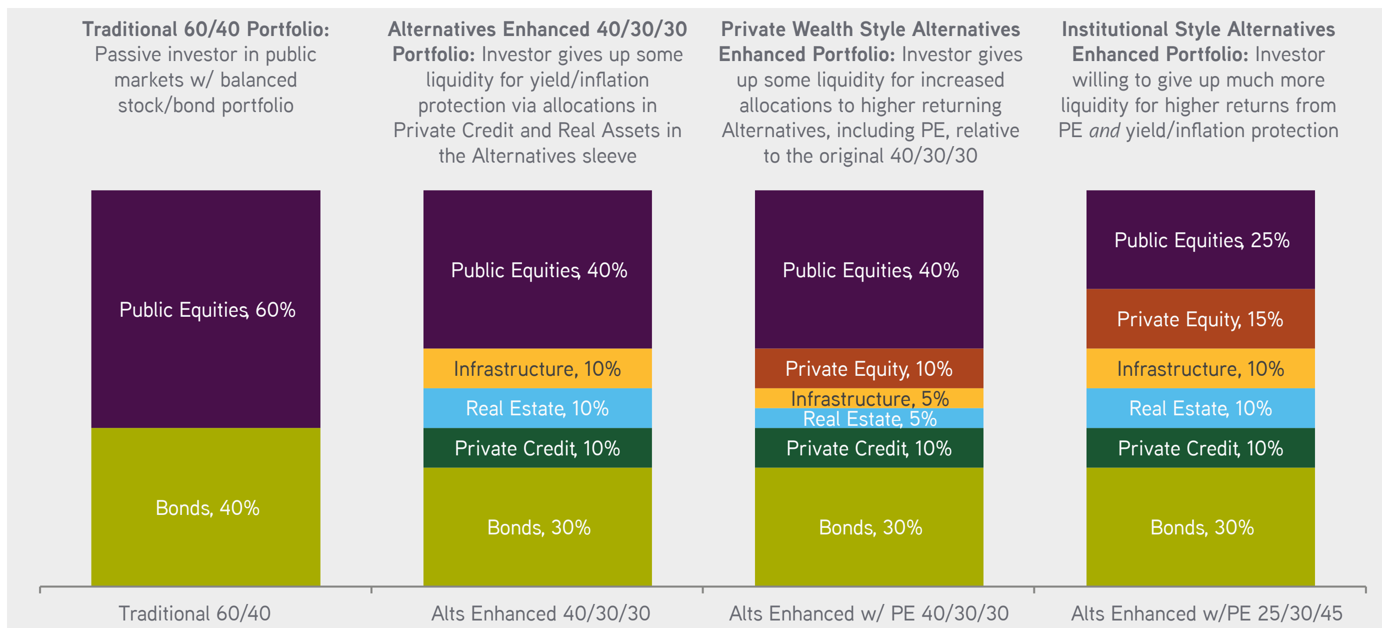
We recognize that a 45% allocation to Alternatives (i.e., the *Institutional style* portfolio), which is the level many more established endowments, family offices, and pensions are targeting in their asset allocation frameworks, might feel too lofty for those who place a higher premium on liquidity. As such, we decided to think about a total allocation towards Alternatives of 30%, including Private Credit, Real Assets, and Private Equity. One can see this more *Private Wealth style* portfolio, which includes an Alternatives bucket of 10% Private Equity, 5% Real Estate, 5% Infrastructure, and 10% Private Credit, in *Exhibit 3*. To be sure, not everyone is going to want 30% in Alternatives; but for the cohort that does, there are lots of variations that one could consider. Our goal, among others, in this note is to create a basic framework allowing all investors to begin to better appreciate some of the trade-offs between return, liquidity, risk, and inflation protection that various asset classes provide, while emphasizing Private Equity.

Over three decades, Private Equity has – on average – empirically delivered excess returns of about 4.3% on a net annualized basis. This relationship also holds true across regions and cycles over the long term.

2 Note that many ultra-high net worth investors are focused on creating intergenerational wealth and have less liquidity constraints as well. These types of investors typically adopt an institutional or endowment style model heavily weighted towards Alternatives. There are also tax benefits for longer term investing that we will discuss in a future paper.

Exhibit 3

The Addition of Private Equity Can Boost Portfolio Returns Across a Variety of Portfolios



Data as at February 17, 2023. Source: KKR Portfolio Construction analysis.

When Allocating to Alternatives, One Needs to Think Through the Benefits of What Different Strategies Can Provide

Benefits by Asset Class	Why Now?
Private Equity generally outperforms Public Equities in almost all environments except the 'low inflation/low growth' regime. In high inflation periods, for example, PE has generated returns in excess of about 6% above public stocks. Interestingly, Private Equity's excess returns are actually greatest when Public Equities deliver low returns.	**We think returns for most all asset classes will be much lower going forward, an environment that has often enabled Private Equity to outperform relative to Public Equities.** Importantly, in all the regimes we studied over several decades, PE has on average empirically delivered excess returns of about 4.3% on a net annualized basis, though as we detail below, relative performance has tended to be best in choppier markets. This relationship of outperformance also holds true across regions.
Infrastructure and Real Estate assets often have inflation indexation embedded in their cash flows; the replacement value of their assets also increases in a rising nominal GDP environment.	**Given that we see a higher resting heart rate for inflation, we believe investors should protect purchasing power by diversifying their portfolios to include more Real Assets linked to nominal GDP.** Pricing escalators embedded in contracts as well as assets linked to GDP growth tend to outperform in environments where inflation is above a central bank's target.
Private Credit can improve the return and risk profile of a traditional portfolio, as its floating rate feature helps boost the income-generating component of the fixed income allocation in a rising rate environment. It can also act as a portfolio diversifier and can shorten duration in many instances.	**With banks pulling back from lending these days, there is a significant opportunity for Private Credit to earn attractive returns, even on an unlevered basis.** Moreover, both companies and financial sponsors tend to use Private Credit solutions more in a backdrop of tightening financial conditions, which is clearly the environment we are now in.

Exhibit 4

Based on Historic Returns, the Addition of Private Equity to Portfolios Can Often Help Achieve Better Risk-Adjusted Performance

	Return	Volatility	Sharpe Ratio	Δ vs. 60/40	% Liquid Asset	Cash Yield
All Periods by Portfolio						
60/40	9.3%	12.7%	0.73	-	100%	2.6%
40/30/30	9.6%	9.6%	1.00	+0.26	70%	3.6%
Private Wealth	10.6%	10.6%	1.00	+0.27	70%	3.2%
Institutional	10.9%	9.2%	1.18	+0.45	55%	3.5%
High Inflation by Portfolio						
60/40	1.5%	12.5%	0.12	-	100%	2.6%
40/30/30	4.3%	8.8%	0.49	+0.36	70%	3.7%
Private Wealth	5.3%	9.1%	0.57	+0.45	70%	3.2%
Institutional	6.9%	8.6%	0.80	+0.68	55%	3.5%
Low Inflation by Portfolio						
60/40	11.0%	11.5%	0.96	-	100%	2.6%
40/30/30	10.5%	9.1%	1.16	+0.21	70%	3.6%
Private Wealth	11.5%	10.2%	1.13	+0.18	70%	3.1%
Institutional	11.4%	9.3%	1.23	+0.27	55%	3.5%

Portfolio returns and volatility modeled using annual total returns from 1928 to 2021 for the S&P 500, from 1978 to 2021 for Real Estate, from 2004 to 2021 for Infrastructure, from 1928 to 2021 for Bonds, from 1981 to 2021 for Private Equity, and from 1987 to 2021 for Private Credit. Assumes continuous rebalancing of the portfolios. U.S. equities modeled using the S&P 500 Index. Bonds modeled using a mix of 50% U.S. T-Bonds and 50% Baa Corp. Bond annual returns, computed historically by Aswath Damodaran (NYU Stern). Real Estate modeled using the NCREIF Property Levered Index. Private Infrastructure modeled using the Burgiss Infrastructure Index. Private Equity modeled using Burgiss North America Buyout Index. Private Credit modeled using the Burgiss Private Credit All Index. Cash yields modeled using annual data from 2000-2021 for all asset class with exception of private real estate (2005-2021), Public Equity using S&P 500 12M gross dividend yield, Private Equity proxied using S&P Small Cap 12M gross dividend yield, Private Infra proxied using S&P Infrastructure 12M gross dividend yield from 2006 onwards and 2000-2006 back filled using S&P Utilities, Public Credit based on Bloomberg Aggregated Credit yield to worst, Private Credit using Cliffwater Direct Lending Index Income Return, Private Real Estate based on NCREIF NPI cap rate, Source: Burgiss, Aswath Damodaran, Bloomberg, NCREIF, KKR Portfolio Construction analysis.

So, what is the punch line for an allocator who adds Private Equity to the mix of Alternatives and how might this compare to the traditional 60/40? See *Exhibit 4* for more details/analytics, but our bottom line is that, while the *Private Wealth style* portfolio is not as high returning as the more Alternatives focused *Institutional style* portfolio, it is higher returning – and often with less risk – than the traditional 60/40 portfolio and even our original proposed 40/30/30 portfolio in many instances. Moreover, it has traditionally performed well in a higher inflation environment and is usually more tax efficient. At the same time, the *Private Wealth* style portfolio only gives up a small yield and inflation fighting component to achieve these returns relative to our original, Alternatives enhanced, 40/30/30 portfolio.

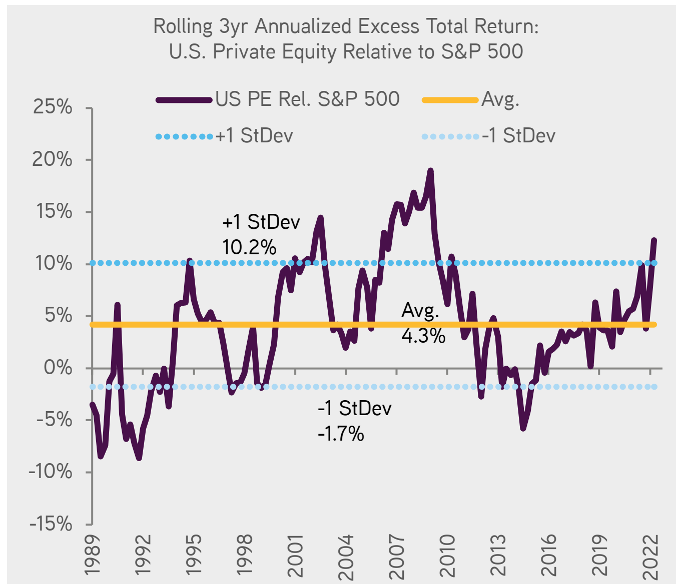
Looking at the big picture, we remain firmly in the camp that we are in a new macroeconomic regime, including a higher resting heart rate for inflation. If we are right, then lower expected returns seem likely on a go-forward basis. As such, we all should think differently about how we allocate capital. To be sure, there is no silver bullet that delivers higher returns, lowers risk, and increases liquidity, but we do feel strongly that innovative portfolio construction strategies, including considering some of our new asset allocation frameworks that challenge the traditional 60/40, makes a lot of sense at this point in the cycle. *In fact, if we are right about our regime change thesis, then the real question for investors, we believe, is whether they have done enough to harness the 'illiquidity premium' and diversify their asset base beyond just stocks and bonds for the new world order that we envision.*

Looking at the big picture, we remain firmly in the camp that we are in a new macroeconomic regime, including a higher resting heart rate for inflation. If we are right, then lower expected returns seem likely on a go-forward basis.

Section I: Understanding the Value of Private Equity Relative to Public Equities

Exhibit 5

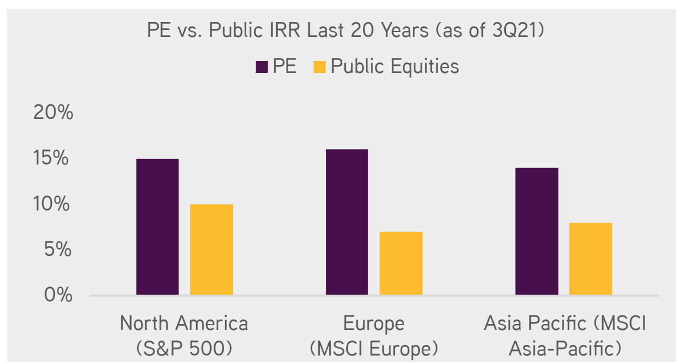
The Excess Return of Private Equity Over Public Equities Has Been Persistent Through Time…



The rolling 3-year annualized excess return is calculated as Cambridge Associates U.S. PE index net returns less the total returns of the S&P 500. Data as at November 30, 2022. Source: Cambridge Associates, Bloomberg, KKR Portfolio Construction analysis.

Exhibit 6

…and Across Regions



Public Equities IRR is calculated as a modified public market equivalent (mPME), which is defined as the returns that an investor would achieve by deploying the PE cash flows into public equity markets. Data as at September 30, 2022. Source: Cambridge Associates, Bain, Bloomberg, KKR Portfolio Construction analysis.

In deciding whether to allocate to Private Equity relative to Public Equities, any discussion should begin with the excess returns, or the 'illiquidity premium'[3], that investors demand in exchange for less liquidity. Over three decades, Private Equity has – on average – empirically delivered excess returns of about 4.3% on a net annualized basis (*Exhibit 5*). This relationship also holds true across regions and cycles over the long term (*Exhibit 6*). Interestingly, Private Equity's excess returns are actually greatest when Public Equities deliver low returns (*Exhibit 9*). As we suggested in our initial *Regime Change* note in May of 2022, all our macro and portfolio construction work at KKR suggests that we are entering a new environment for investing. Specifically, we are now seeing rising interest rates, higher levels of inflation, and heightened geopolitical risks against a backdrop of slower real economic growth *(Exhibit 2)*.

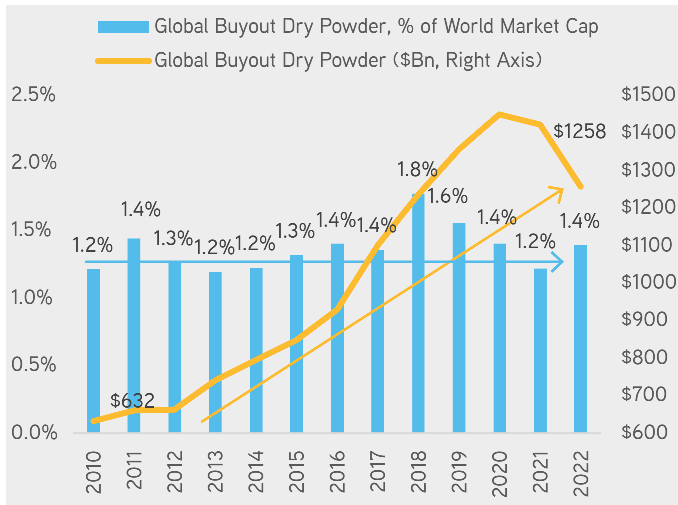
Looking ahead, the question for investors, we believe, is "Can such outperformance persist?," especially given (1) the significant amount of capital that has poured into the asset class and (2) the underlying sources of this outperformance being potentially challenged. We address the first concern by observing that while the asset class has grown and matured, the amount of Private Equity dry powder relative to total Public Equities capitalization has actually remained roughly constant over time. One can see this in *Exhibit 7*, which shows this percentage has been fairly consistent at around 1.4%. Moreover, the number of private companies (*Exhibit 8*) has dramatically increased, while the number of listed companies has dwindled by 45% over the last two decades. We think this could actually help enlarge the opportunity set for private managers to potentially generate superior returns.

In deciding whether to allocate to PE relative to Public Equities, any discussion should begin with the excess returns, or the 'illiquidity premium', that investors demand in exchange for less liquidity.

3 *Ibid. 1.*

Exhibit 7

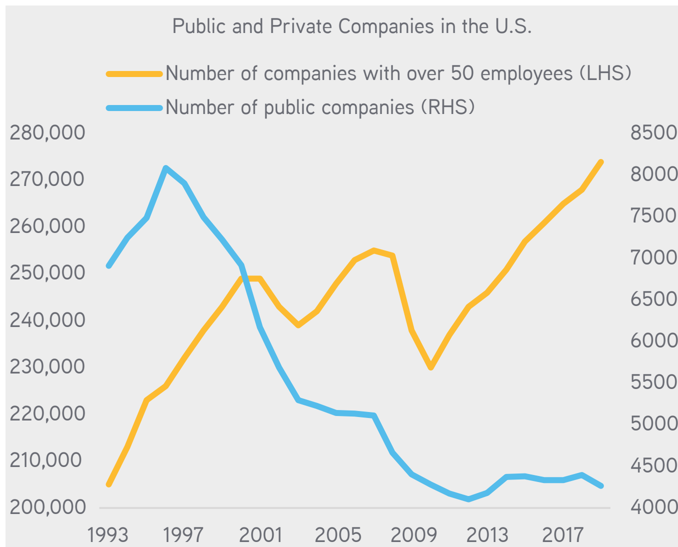
While the Absolute Amount of Dry Powder Has Increased, the Quantum of Dry Powder Relative to the Public Market Cap Has Actually Remained Roughly Constant



Data as at September 30, 2022. Source: Cambridge Associates, Bain, Bloomberg, KKR Portfolio Construction analysis.

Exhibit 8

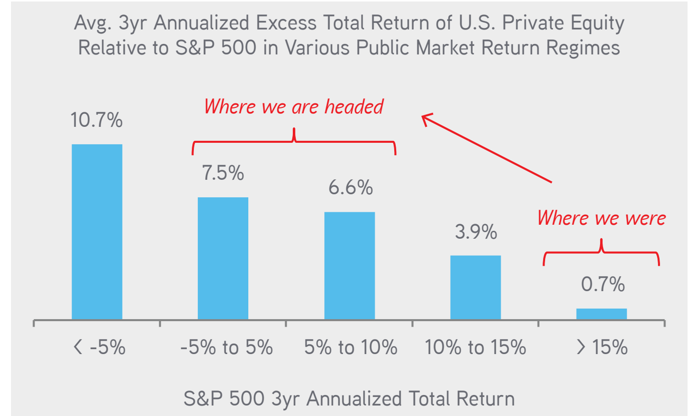
The Number of Public Companies Has Dwindled by 45% Over the Last Two Decades



Data as at October 28, 2022. Source: U.S. Bureau of Labor Statistics, World Bank, KKR Portfolio Construction analysis.

Exhibit 9

PE Typically Has the Strongest Relative Performance When Public Equities Falter



Data chart as at November 30, 2022. Source: Cambridge Associates, Pitchbook, KKR Portfolio Construction analysis.

Drivers of the Private Equity Excess Returns

As one might guess, after being in the Private Equity business for more than 46 years, we at KKR have spent a lot of time with our portfolio managers and clients digging into the question “What are the drivers of Private Equity’s excess return and are they sustainable over time?” To understand the drivers of PE excess returns over Public Equities, we break it down into basic building blocks or risk premia. See below for more details, but we believe that the main components of Private Equity returns can be viewed as:

1. Real public equity returns as the foundational building block
2. Inflation premium
3. Leverage effect
4. Sector allocation effect
5. Timing effect (deployment pacing and monetization timing)
6. Company value creation above all previous effects (‘the purest form of PE alpha’)

While digging deeper into each segment will be the focus of an upcoming paper, we wanted to briefly address here a few of the more critical components for allocators of capital. Specifically, we look at 1) the sector compositions of Private and Public Equities; 2) deployment pacing/monetization timing; and 3) company value creation. As part of this exercise, we have shared both our thoughts on these drivers from an industry level analysis as well as our Firm's own experience as one of the original pioneers of the Private Equity industry.

Sector Allocation: Private Equity Has Different Sector Tilts Than Public Equities That Can Often Lead to Outperformance

Private Equity sector exposures often look meaningfully different than those of Public Equities indices. We view this allocation effect as a significant source of alpha. Importantly, though, while there are common Private Equity sector overweights globally, such as Industrials, each region typically has its own particularities. For example, as *Exhibit 10* shows, U.S. Private Equity allocations skew more heavily towards the Industrials, Technology, Healthcare and Consumer Discretionary sectors while being underweight Financials, Energy, and Consumer Staples. Within U.S. sectors, certain developments are worth highlighting. For example, the weight of Technology in U.S. Private Equity portfolios has increased from a low of 12% in 2017 to 45% of deal volume for 2022 (see *Exhibit 11*), but the business models of these private tech companies – many younger than public tech comparisons and part of the software subsector – have also evolved to one of slower but steadier growth, recurring revenues, and higher free cash flow generation.

In Europe, Financials represent 17% of the public markets capitalization but only 7% of the EU Private Equity deal flow over the last three years. The opposite is true for Technology, which represents only 8% of public European market cap vs. 23% of EU private equity deal flow (*Exhibit 10*), driven by the large proportion of European tech companies that are privately held.

Exhibit 10

Sector Allocation Effect: Private Equity Sector Tilts Are Often Dramatically Different Than Public Equities

	U.S.			Europe			Asia		
	PE	Public Equities	Diff +/-	PE	Public Equities	Diff +/-	PE	Public Equities	Diff +/-
Financials	5%	12%	-7%	7%	17%	-10%	6%	21%	-14%
Energy	0%	5%	-5%	0%	6%	-6%	0%	4%	-4%
IT	30%	26%	4%	23%	8%	16%	12%	14%	-2%
Cons Disc	13%	10%	3%	16%	11%	6%	18%	13%	6%
Health Care	19%	16%	3%	15%	15%	0%	17%	7%	10%
Utilities	0%	3%	-3%	0%	4%	-4%	1%	3%	-2%
Cons Staples	4%	8%	-4%	8%	12%	-4%	8%	9%	-1%
Industrials	20%	9%	11%	19%	15%	4%	13%	13%	0%
Comm Services	5%	8%	-3%	5%	3%	2%	12%	7%	4%
Materials	4%	3%	1%	6%	9%	-3%	12%	8%	4%

Private sector weights based on NAV as of 2022Q3 of all Burgiss cumulative deals from 2020-2022. All public sector weights are re-calculated to exclude Real Estate for comparison purposes. Only deals valued at over $100 million were included. Public equity sector weights based on S&P 500 for the U.S., STOXX Europe 600 for Europe and MSCI Asia for Asia. Data as at December 31, 2022. Source: Burgiss, MSCI, Eurostoxx, S&P, Bloomberg, KKR Portfolio Construction analysis.

In Asia, we think that there are more opportunities in Healthcare in private markets than in public markets, a sector that we favor for its ability to reduce portfolio risk due to lower correlations of healthcare companies across countries. Maybe more importantly, Asian Public Equities are often not levered to rising GDP-per-capita. For example, Indonesia's public market cap consists of a large weighting in Financials encompassing state-owned banks but no Technology. Consequently, passive Public Equities investors cannot gain full exposure to the demographic dividend that Asian millennials offer.

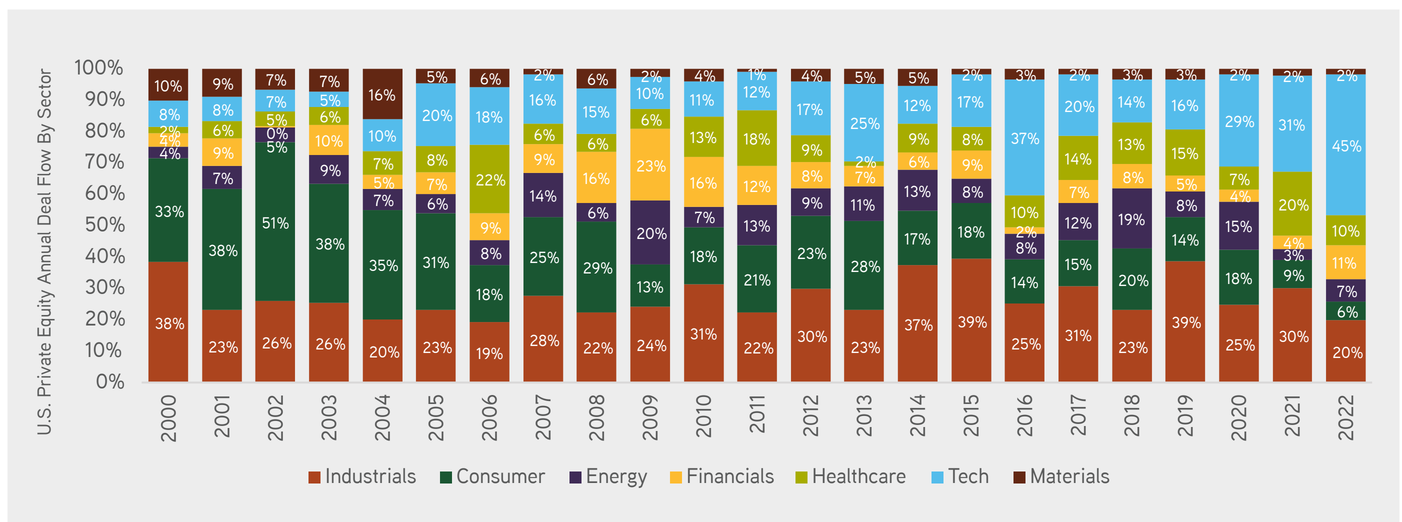
More broadly, PE deal flow tends to vary across sectors quite significantly over time. As such, broad sector compositions in different vintages of Private Equity funds are often more dynamic than those of public markets, which usually take much longer to adjust. This sector allocation effect in the overall performance of PE funds is often overlooked, but we think is critical to keep in mind, as private market investors have proven quite nimble in pursuing the most attractive value creation opportunities across sectors at the right time.

As one might expect, differences in sector compositions between Private Equity and Public Equities lead to differences in factor exposures – the underlying sources of equity returns. For example, Private Equity had a heavy value bias around the tech bubble in the early 2000s. This factor exposure led to large outperformance of Private Equity against Public Equities. Today, Private Equity is more exposed to growth-type sectors – such as Technology – than 20 years ago. That said, the industry actually retains the largest sector overweight to Industrials, a sector associated with value and solid cash flows.

Broad sector compositions in different vintages of Private Equity funds are often more dynamic than those of public markets, which usually take much longer to adjust.

Exhibit 11

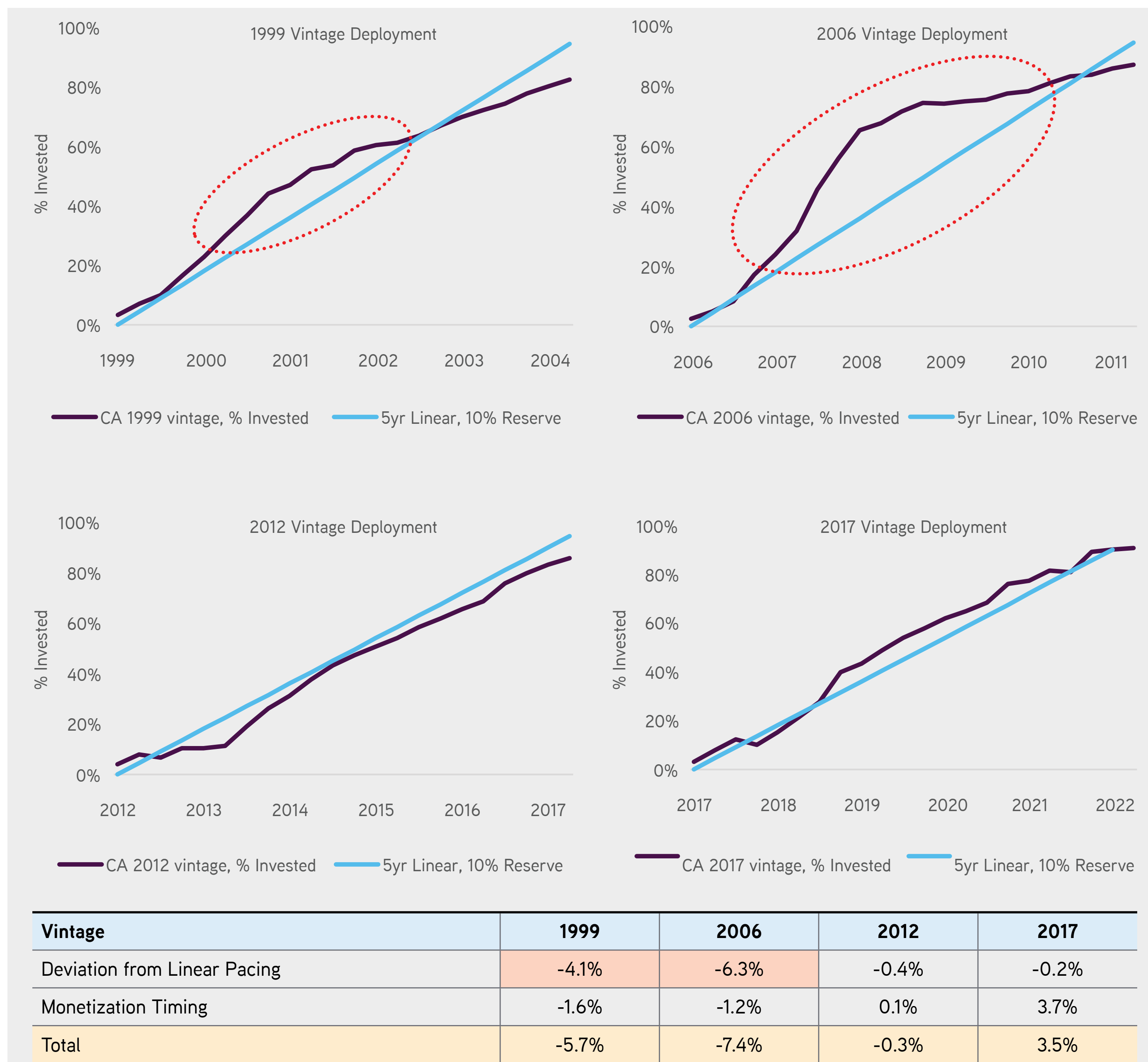
U.S. Private Equity Deal Flow Has Been Dynamic Across Sectors



Private sector weights based on deals with value above $100 million. Source: Pitchbook, KKR Portfolio Construction analysis.

Exhibit 12

Linear Pacing Is Critical in Stretched Equity Markets



Vintage	1999	2006	2012	2017
Deviation from Linear Pacing	-4.1%	-6.3%	-0.4%	-0.2%
Monetization Timing	-1.6%	-1.2%	0.1%	3.7%
Total	-5.7%	-7.4%	-0.3%	3.5%

The blue line represents deploying capital linearly over a 5-year period. The purple line denotes the actual deployment of U.S. PE Large Cap fund deployments. When the purple line is above the blue line, PE managers are deploying capital faster than a 5-year linear pace; conversely, when the purple line is below the blue line, PE managers are deploying more slowly than a 5-year linear pace. U.S. PE Large Cap universe defined as funds with size above $1 billion with a geographic focus on U.S. and Canada. Numbers in the table are relative IRR effects of deviating from a linear pace based on our proprietary P/L attribution model. Source: Cambridge Associates, KKR Portfolio Construction analysis.

The Timing Effect of Deployment and Exits Can Also Bolster Performance When Done Systematically

Without question, the data over 46 years shows that a key contributor to Private Equity's absolute and relative performance revolves around the timing of investments. The entry and exit points of investments are an important and often underestimated lever that Private Equity has over active Public Equities managers that, for the most part, tend to remain fully invested. That said, we do acknowledge that certain Private Equity investors have over-deployed at times, including in 1999 and 2006 vintages (*Exhibit 12*). As such, we believe it is critical to maintain disciplined linear deployment, especially in the later stages of an economic cycle. Not surprisingly, we tend to favor linear deployment over a 4-5 year period on average. Key to our thinking is that this disciplined pace will help create more balanced portfolios, and as such, hopefully mitigate vintage risk.

Meanwhile, at the other end of the deal lifecycle, we believe that Private Equity managers can be even more proactive in exiting portfolio investments in fully priced markets. While market timing is notoriously difficult, we believe value-added can be more easily created at exit than at entry of deals. PE managers have superior information on the trajectory of their portfolio companies and can possibly identify better market windows for monetizing investments. Said differently, it is not just deployment pacing that matters to returns. There are important rules of the road surrounding monetizations that we believe can drive significant value relative to a portfolio that is simply fully invested all the time, including being over-extended during certain periods of investor euphoria.

Company Selection and Value-Creation

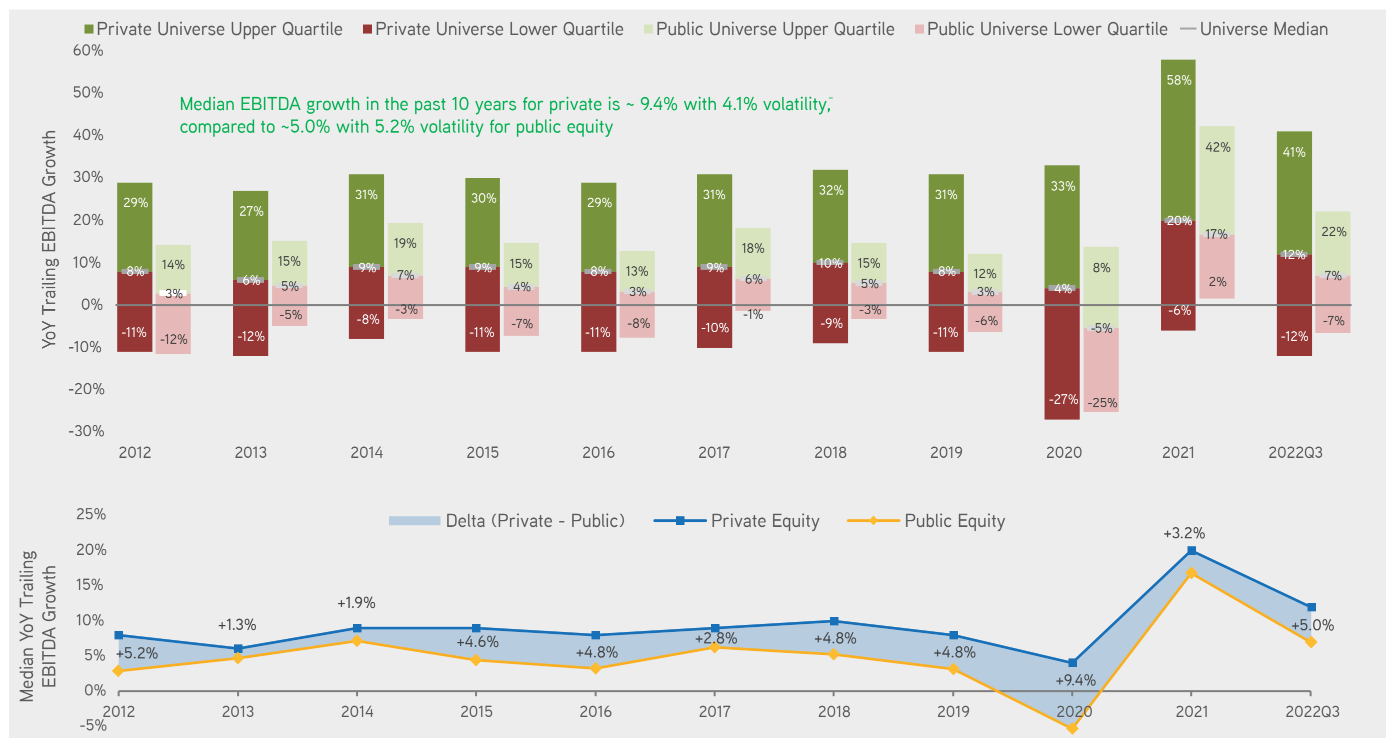
The final component of the Private Equity return build up that we cover here is the *purest form of PE alpha*: company value creation. It represents the ability of the PE manager to effect changes to the underlying company operations and functioning to generate higher growth or command higher multiples than would a set of 'equivalent public stocks'. Each Private Equity general partner will have different approaches and philosophies on value creation. 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, and fostering employee engagement and aligning incentives (which may include broadening equity ownership to a portfolio company's workers, not solely to senior managers). In our experience, this value creation toolkit leads to better improvements in the operating performance of companies under Private Equity ownership than those in the public markets (*Exhibit 13*).

The much studied great dispersion between PE managers (*Exhibit 14*) is mostly due to the component of value creation. The average difference between top and bottom quartile managers across vintages has been around 13% historically, compared to around 5% for active Public Equities managers. As such, a deep understanding of a Private Equity manager's management style and track record is even more critical in the private space today, we believe.

Meanwhile, at the other end of the deal lifecycle, we believe that Private Equity managers can be even more proactive in exiting portfolio investments in fully priced markets. While market timing is notoriously difficult, we believe value-added can be more easily created at exit than at entry of deals.

Exhibit 13

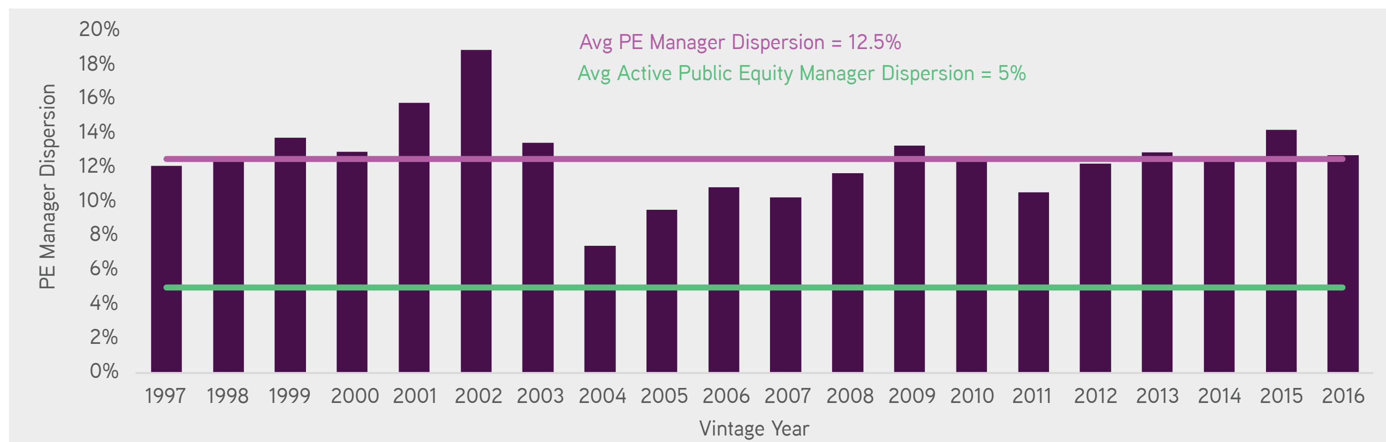
PE-Backed Companies Often Experience Faster and More Stable EBITDA Growth Compared to Public Companies



Figures represent the median, upper and lower quartile EBITDA growth rate among the universe of companies that have a 12-month EBITDA available at both the year-end date and one year prior. The mix of companies may change from year to year. The private universe is based on Burgiss buyout data, the public universe based on MSCI World index universe, resampled each period for the calculation. Source: Burgiss, Bloomberg, KKR Portfolio Construction analysis.

Exhibit 14

Private Equity Manager Dispersion Peaks When Valuations Trough. The Difference Between Top and Bottom Quartile Vintages Is Wider for PE Than for Active Public Equities Managers



The PE returns are annualized IRRs computed by vintage year of funds net of fees, expenses and carried interest as of the current date. Upper quartile less lower quartile gross pooled returns by vintage year. We exclude the most recent 5 years of data as the use of sub-lines and differences in valuation methodologies create biases in the data which wash out with time. Source: Cambridge Associates, KKR Portfolio Construction analysis.

Section II: How Should One Allocate to Private Equity in a Diversified Portfolio?

While Private Equity returns are attractive and offer excess returns over Public Equities, the question of how to incorporate Private Equity into a broader strategic allocation is not straightforward. In our previous notes, we shared our best thinking on how to integrate Private Credit, Infrastructure and Real Estate into our 40/30/30 portfolio construct. Now we do the same for Private Equity.

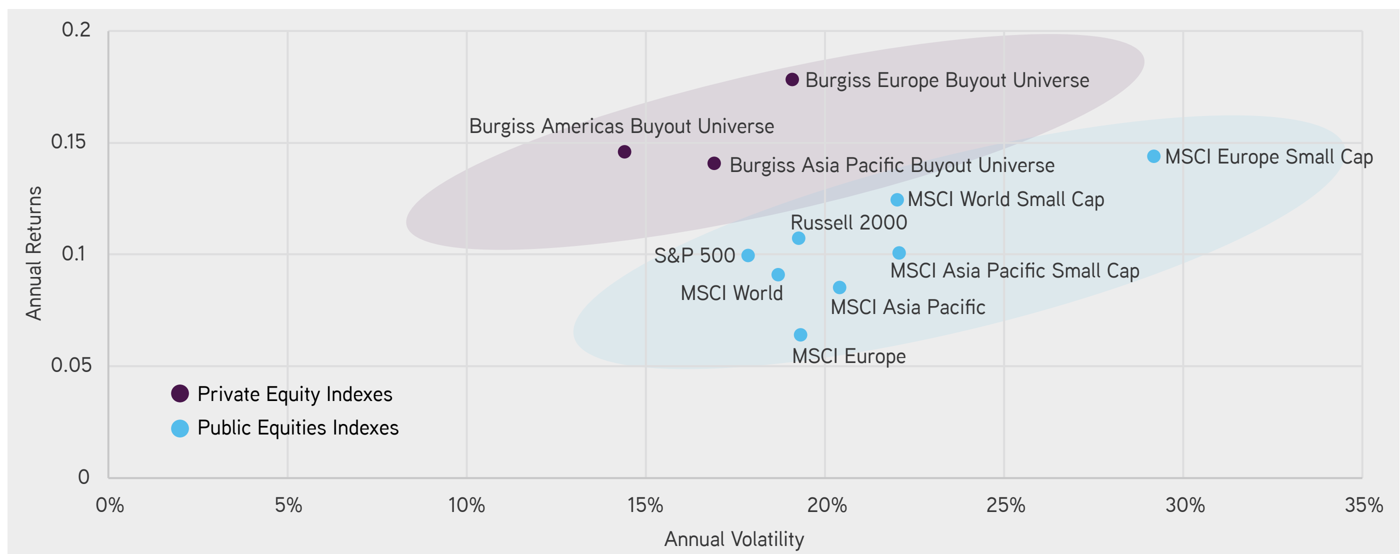
Historic Return vs. Risk Highlights the Benefits of Private Equity

As we show in *Exhibit 15*, an incremental allocation to Private Equity can shift the efficient portfolio frontier to the benefit of the investor. To this end, we plot the returns and risk of Private Equity and Public Equities across regions. Examining returns over the past two decades, Private Equity has delivered higher returns than Public Equities. Using annual returns to measure volatility across both Private Equity and Public Equities, which mitigates the smoothing effect in private market portfolio returns[4], we find that Private Equity portfolios also often have lower volatility, notwithstanding the usual caveats around comparing private and public marks. In addition, given the differences in sector composition between Private Equity and Public Equities, including PE should also increase portfolio diversification at the sector level (and consequently at the factor level).

Examining returns over the past two decades, Private Equity has delivered higher returns than Public Equities.

Exhibit 15

Our Public and Private Equity Realized Return and Risk Analysis Underscores Many of the Benefits That Private Markets Can Provide

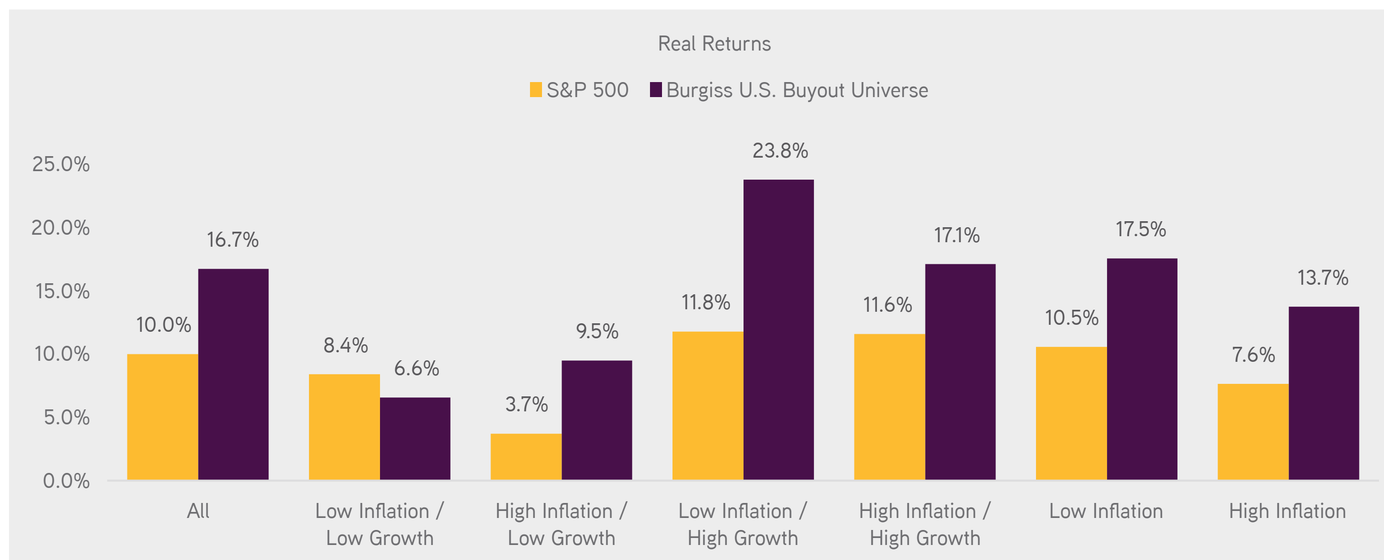


We use annual returns to partially correct for the well-known downward bias of volatility. Data as at December 31, 2022. Source: Burgiss, KKR Portfolio Construction analysis.

4 We find that *quarterly* Private Equity portfolio returns have statistically significant autocorrelations up to three lags. However, *annual* returns have no statistically significant autocorrelations and therefore should mitigate the well-known effects of returns smoothing biasing volatility and beta measures in private asset portfolios.

Exhibit 16

Public vs. Private Equity Across Different Economic Regimes



Returns modeled using annual total returns from 1981 to 2021. Real returns are calculated using nominal returns after subtracting CPI inflation rates. Source: Burgiss, KKR Portfolio Construction analysis.

Performance of Private Equity in Different Inflationary Periods

Since we began discussing our macro regime change thesis, and the implications for rethinking traditional portfolio allocation, we've been asked how adding Private Equity would affect portfolio behavior. It's important to note that Private Equity is a much younger asset class than Public Equities (starting in the late 1970s/early 1980s), and as such, it does not have the same amount of historic data available to assess its behavior. That said, with the data we do have, we find that in real terms Private Equity typically outperforms Public Equities in all environments except the 'low inflation/ low growth' environment, which is a period where significant multiple expansion in the Public Markets often can outweigh the benefits of operational improvements in Private Equity. In *Exhibit 16*, which shows performance across different economic regimes, one can see that PE generates an approximately 6% excess return above public stocks in high inflation environments. Excess returns in inflationary/rising rate environments are partially driven both by a Private Equity manager's ability to enact operational improvements – such as revenue/cost optimization to protect and grow margins – as well as sound financial management on the right side of the balance sheet. The outperformance also speaks to the sector selection benefit that we referenced earlier.

Portfolio Implications of Including Private Equity

While we are constructive on adding Private Equity to one's portfolio, there is no doubt that it does come at a 'cost.' On the liquidity front, for example, it takes time to fully allocate to the asset class as committed capital gets called gradually over a few years. As such, investors who build a Private Equity portfolio should not only be comfortable with the reduced overall liquidity level that a PE allocation implies, but they will also need to maintain enough liquidity on hand to sustain expenditures throughout the deployment stages until their PE allocation becomes self funding.

Besides managing deployment, there is also a need to manage distributions. Both can create an additional risk of a cash drag if a Private Equity program is not managed properly. Not surprisingly, our strong view is that an allocator should maintain a disciplined program until a steady state of self funding is reached.

So, given these considerations, what are some goal posts to consider when evaluating how much Private Equity one should have in a portfolio? For the average *Institutional style* investor[5], we typically suggest a 15% allocation to Private Equity (plus or minus 5%, depending on the specific investor's liquidity needs, experience with PE investing, and plan return targets). At the midpoint of a 15% allocation to PE in this adjusted *Institutional style* portfolio, liquid assets will decrease by 15% to 55% of the total portfolio. In aggregate, we believe that for most types of investors 55% in liquid wealth should cover most needs, but of course defer to the allocator and his/her specific constraints to dial up or down this allocation. In this scenario, the risk adjusted return profile improves for the full period by +0.45x to a 1.18 Sharpe ratio compared to the traditional 60/40 portfolio, and by +0.18x compared to our initial (no PE) Alternatives enhanced 40/30/30 portfolio. The *Institutional style* Alternatives enhanced portfolio performed the best during high inflation periods, improving returns by an additional approximately 5%pts compared to the traditional 60/40 portfolio and improving the Sharpe ratio from 0.12 to 0.80. (*Exhibit 17*).

While individuals will also benefit from the higher expected returns and diversification benefits of a Private Equity allocation, we recognize that for certain investors, including those in the private wealth community, allocating a total of 15% to Private Equity as well another 30% to other illiquid Alternatives (across Private Credit, Infrastructure and Real Estate) may be too fast of a ramp, or impose untenable liquidity constraints because of specific needs or financial goals of the investor. As such, an Alternatives allocation of 10% Private Equity, 10% Private Credit, 5% Infrastructure and 5% Real Estate may be more of a sensible starting point (see the *Private Wealth style* portfolio in *Exhibit 3*). As always, the unique constraints, financial goals, risk and liquidity tolerance of the investor should be taken into account.

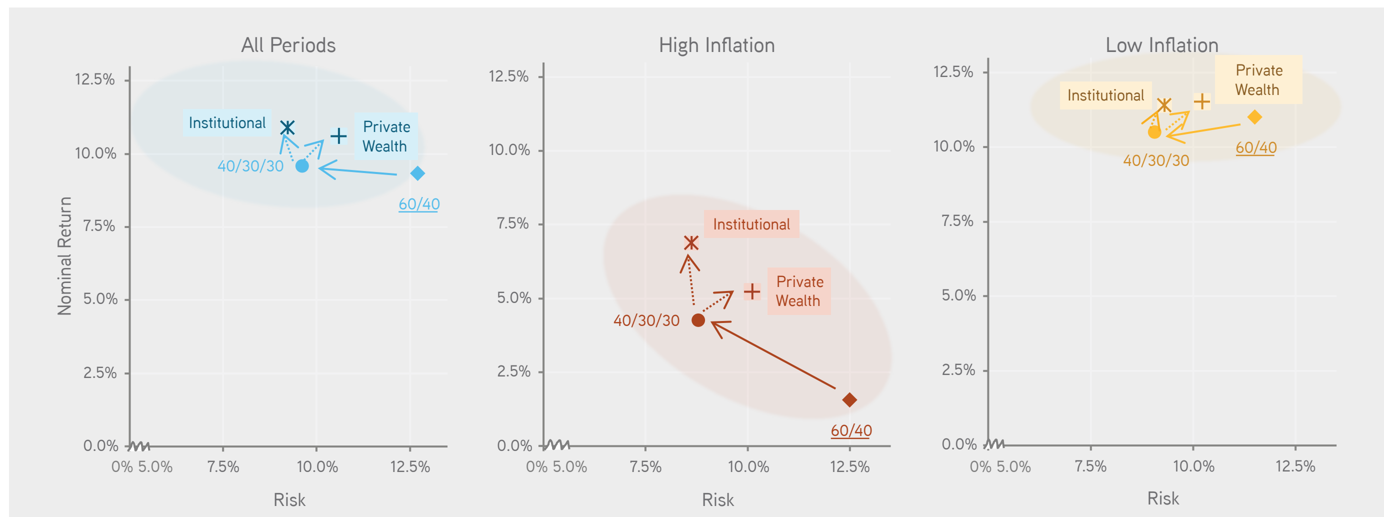
Overall, as we show in *Exhibit 17*, there are significant benefits to adding Private Equity to one's portfolio over the long-term. Just consider that, over our entire sample period, the 40/30/30 portfolio with the inclusion of PE (i.e., the *Private Wealth style* portfolio) improved the Sharpe ratio versus the 60/40 portfolio by 0.27 to 1.00 from 0.73. In addition, it achieved an incremental 1.3% per annum in returns versus the 60/40 over all periods, which is significant if we are right that we are entering a lower return period for most asset classes. Maybe more important given the current environment, our target asset allocation including PE improved the Sharpe ratio by 0.45 to 0.57 from 0.12, and it also boosted, on average, the full year annual return by 3.8% each year (to 5.3% from 1.5%) relative the 60/40 portfolio during the inflationary periods we studied.

Just consider that, over our entire sample period, the 40/30/30 portfolio with the inclusion of PE (i.e., the Private Wealth style portfolio) improved the Sharpe ratio versus the 60/40 portfolio by 0.27 to 1.00 from 0.73. In addition, it achieved an incremental 1.3% per annum in returns versus the 60/40 over all periods, which is significant if we are right that we are entering a lower return period for most asset classes.

5 *Ibid. 2.*

Exhibit 17

The PE Enhanced Private Wealth and Institutional Target Portfolios Outperformed the Traditional 60/40 Portfolio On a Risk-Adjusted Nominal Return Basis in Almost All Environments



Portfolio returns and volatility modeled using annual total returns from 1928 to 2021 for the S&P 500, from 1978 to 2021 for Real Estate, from 2004 to 2021 for Infrastructure, from 1928 to 2021 for Bonds, from 1981 to 2021 for Private Equity, and from 1987 to 2021 for Private Credit. Assumes continuous rebalancing of the portfolios. U.S. Equities modeled using the S&P 500 Index. Bonds modeled using a mix of 50% U.S. T-Bonds and 50% Baa Corp. Bond annual returns, computed historically by Aswath Damodaran (NYU Stern). Real Estate modeled using the NCREIF Property Levered Index. Private Infrastructure modeled using the Burgiss Infrastructure Index. Private Equity modeled using Burgiss North America Buyout Index. Private Credit modeled using the Burgiss Private Credit All Index. Source: Burgiss, Aswath Damodaran, Bloomberg, NCREIF, KKR Portfolio Construction analysis.

How Should One Think About Implementation?

What is the best way to put into action our suggested allocation to Private Equity? There are many implementation vehicles, and the good news is that the options are becoming more investor friendly, especially at the individual investor level. However, today the most common vehicle is still the traditional drawdown fund (with multi-year capital calls and distributions), though we are seeing a notable increase in single/multi-strategy separately managed accounts and secondary funds, a vehicle that allows investors to access more mature Private Equity investments. There are also co-investment opportunities in specific deals and even continuation funds, which allow investors to invest in seasoned Private Equity deals that still appear to have significant upside momentum.

We also want to highlight that there is no single form of Private Equity, so an allocator needs to do their homework to quantify exactly what they truly wish to achieve. Indeed, the Private Equity asset class spans a wide spectrum of strategies ranging from Core PE to Growth Equity and from small buyouts to mega buyout funds. There are also regional, country specific, and sector 'flavors' of Private Equity that may appeal to certain investors. As such, understanding the mandate, the duration of the investment, and the risks associated with each strategy is of paramount importance, we believe.

For those who are interested in gaining exposure to the asset class, Private Equity is becoming more readily available to a wider array of investors. For example, secondary markets are becoming increasingly liquid, so we are seeing increasing ability for investors to buy and sell positions. Maybe more importantly, 'democratized access vehicles' are now coming

to market. What does this mean? In the case of Private Equity, this product typically allows individuals to buy into more seasoned and diversified portfolios – and all in one place – than what one could get through a series of specific regional and/or sector funds. These products, many of which cater to individual investors, help mitigate the J-curve by allowing investors to buy into more mature portfolios in many instances. Though these products typically offer improved liquidity features relative to traditional drawdown private funds, they are more restrictive than what, for example, an open-ended mutual fund may offer.

Looking ahead, we remain excited about the innovation that is unfolding in this market. From our perch, Private Equity makes a lot of sense for buy and hold investors, especially retirement focused investors who want to compound capital at more efficient tax rates than many income-oriented products provide. We also believe that if our team is right about lower returns across many parts of our capital markets assumptions, the value of the 'illiquidity premium' will become more important.

Section III: Conclusion

Our research shows that because of timing, sector, and operational improvements among other factors, there is long-term value in Private Equity that can help drive significant outperformance relative to Public Equities in a diversified portfolio. The excess return of Private Equity over Public Equities has been pervasive across time and geographies, a trend we believe will continue.

For institutional investors, we think at least a 15% allocation to Private Equity as a part of a long-term diversified Alternatives program could make sense[6]. For both institutional and individual investors who want more exposure to Private Equity but require more liquidity and/or are in the ramp up phase of their Alternatives portfolio, we prefer our *Private Wealth style* portfolio in *Exhibit 3* which has a 30% weighting in Alternatives, including Private Equity (10%), Real Estate (5%), Infrastructure (5%), and Private Credit (10%). Importantly, as we detail in *Exhibit 4*, this target portfolio outperforms the traditional 60/40 portfolio in almost all macro environments, but especially in those with elevated inflation. It also provides an enhanced return relative to our original 40/30/30 portfolio, including in a higher interest rate environment.

To be clear, though, we also still find a lot of merit in our original 40/30/30 portfolio, especially for allocators who value more upfront yield and inflation protection. Indeed, as we discussed in our previous note, the 40/30/30 portfolio handily beats the 60/40 portfolio across the entire sample set. In fact, the only environment in which the 40/30/30 has a slightly lower return than a 60/40 portfolio (by a mere 50 basis points per year) but a higher Sharpe ratio is in a low inflation world.

Looking ahead, we remain excited about the innovation that is unfolding in this market. From our perch, Private Equity makes a lot of sense for buy and hold investors, especially retirement focused investors who want to compound capital at more efficient tax rates than many income-oriented products provide. We also believe that if our team is right about lower returns across our capital markets assumptions, the value of the illiquidity premium will become more important.

6 *Ibid.2.*

In terms of implementation, there are already a wide variety of strategies within Private Equity such as traditional buyout, growth equity, and secondaries that meet the risk/return/liquidity needs of institutional pools of capital. The good news is that there is more innovation on the way, and as such, we believe that investors who are ready to start to build out the private segment of their Equity portfolios will have more efficient opportunities on a go-forward basis than they did in the past.

So, our bottom line is that we have entered a new era for macro and asset allocation, and as such, investors should think about the benefits of replacing the traditional 60/40 benchmark with a different asset allocation mix. We believe change is required to strengthen portfolios to weather the potential higher resting heart rate of inflation we envision. We also believe that harnessing the 'illiquidity premium' should deliver better performance in the lower return environment we anticipate going forward. Finally, we think diversification in portfolios across sectors, styles and vintages is now more important than the more concentrated positioning that worked in the past. So, against this backdrop, we think that an allocation to Alternatives, including some combination of Private Equity, Real Assets, and Private Credit, can be quite additive to a variety of portfolios in this new investing regime that we are forecasting at KKR.

We believe change is required to better strengthen portfolios to weather the potential higher resting heart rate of inflation we envision. We also believe that harnessing the 'illiquidity premium' should deliver better performance in the lower return environment we anticipate going forward. Finally, we think diversification in portfolios across sectors, styles and vintages is now more important than the more concentrated positioning that worked in the past.

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