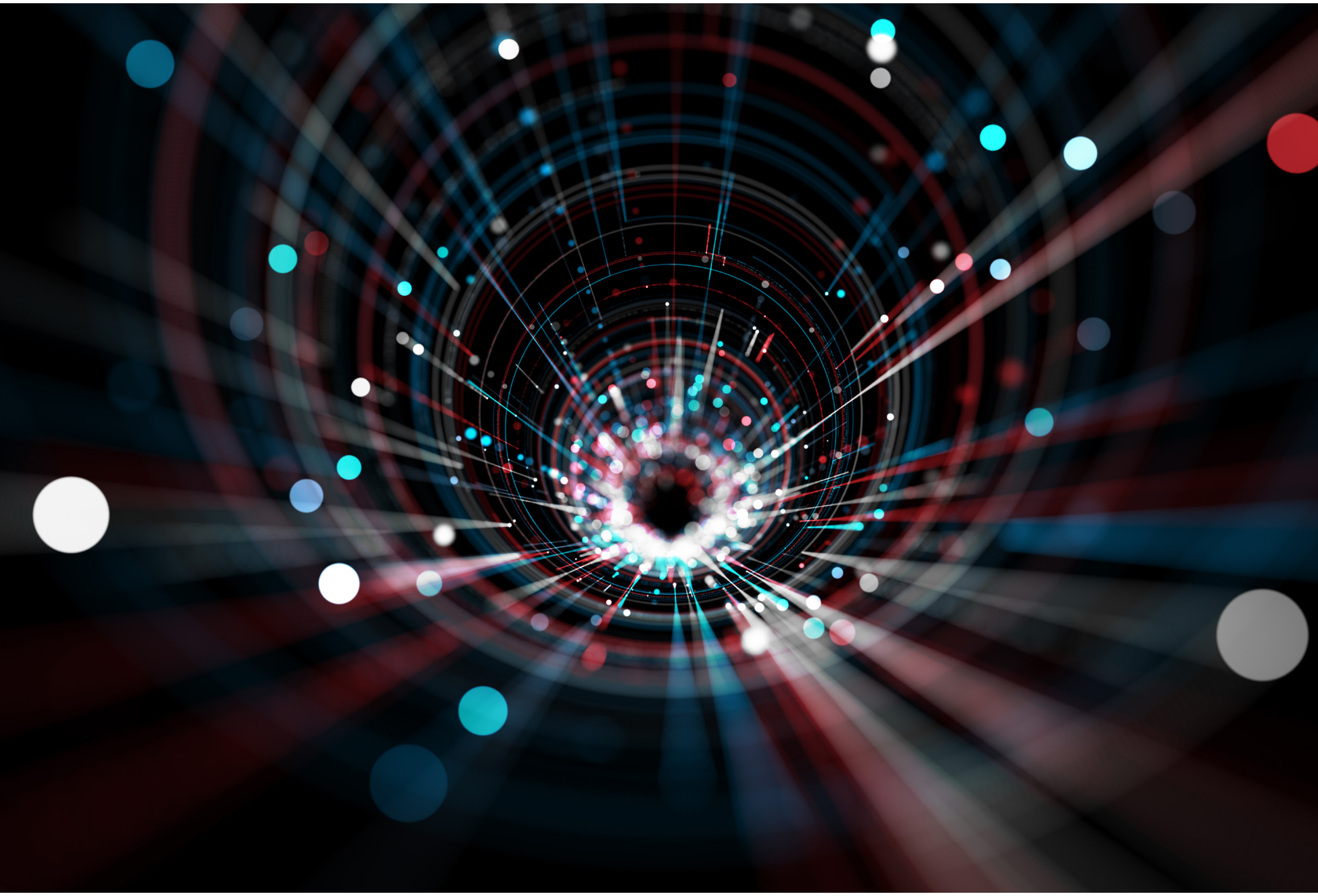

NEUBERGER BERMAN

Private Equity's Role in Defined Contribution Plans

A Guide for Plan Fiduciaries

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Private equity (PE) has been a mainstay of institutional portfolios for decades thanks to its attractive long-term performance, welcome diversification and lower volatility relative to public markets. Today it is not unusual to see defined benefit plans with PE allocations between 5% and 10%.[1]

However, retirement plan sponsors—even those offering PE in defined benefit plans—have largely refrained from adding PE to their defined contribution (DC) plans. This is especially the case with respect to direct investments in PE owing to PE's inherent complexities and unique attributes that pose a host of legal, operational and other challenges. The financial industry has been addressing these issues to help sponsors increase access to PE within DC plans, and the Department of Labor ("DOL"), as noted below, has provided some guidance concerning its views on the use of PE in a DC context.

In this guide, we explore:

- The potential benefits of PE for DC plan participants
- Recent DOL guidance on incorporating PE in the form of certain multi-asset investment options offered under DC plans
- Key considerations for DC plan sponsors

[1] "Has the Lack of Asset Diversification in DC Retirement Plans Been a Costly Missed Opportunity?", Georgetown University Center for Retirement Initiatives, CEM Benchmarking, June 2023.

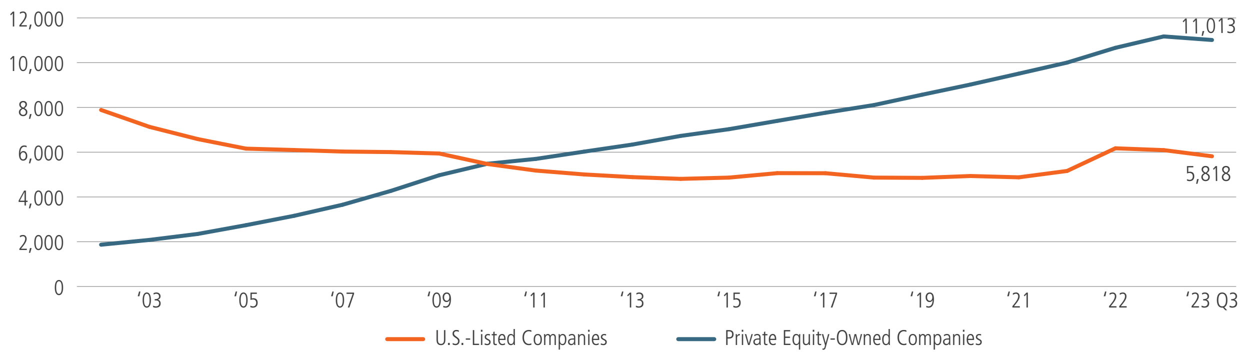
The Potential Benefits of Private Equity

We believe PE has an important role to play in potentially improving the long-term performance of traditional investment portfolios, including those held within target date funds (TDFs), along with target-risk funds and custom-built multi-asset portfolios.

Specific benefits of PE, in our view, can include:

Expanded investable universe. PE-owned companies now outnumber publicly listed companies in the U.S., and given the shifting demands of capital markets, we find that more companies are staying private longer. This allows the private equity manager to take a longer-term mindset, and by choosing to go public later in the growth cycle, much of the value creation occurs on the private side. As a result, the 6,100 publicly listed U.S. companies now represent only roughly one third of the country's total investable universe (see figure 1). By being confined to publicly held names, DC plan participants, we believe, could be missing out on a wealth of additional attractive investment opportunities.

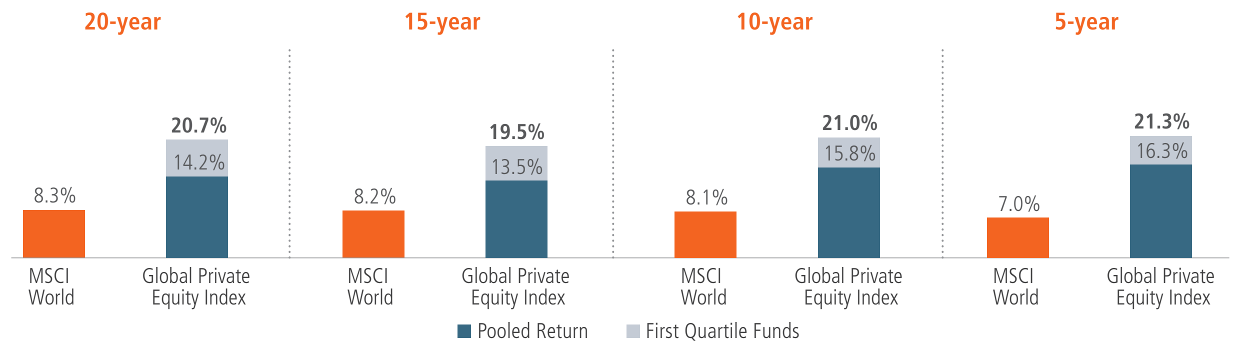
Figure 1: PE Broadens the Playing Field for DC Plan Participants



Source: PitchBook and World Federation of Exchanges. Data as of September 2023, the most current available data from the World Federation of Exchanges.

Performance potential. We find that PE has generated attractive returns relative to the broader equity market, measured by the MSCI World Index (see figure 2). Moreover, the data show that top-quartile PE funds have tended to outpace the broader PE universe by a wide margin over recent five-, 10-, 15- and 20-year time frames.

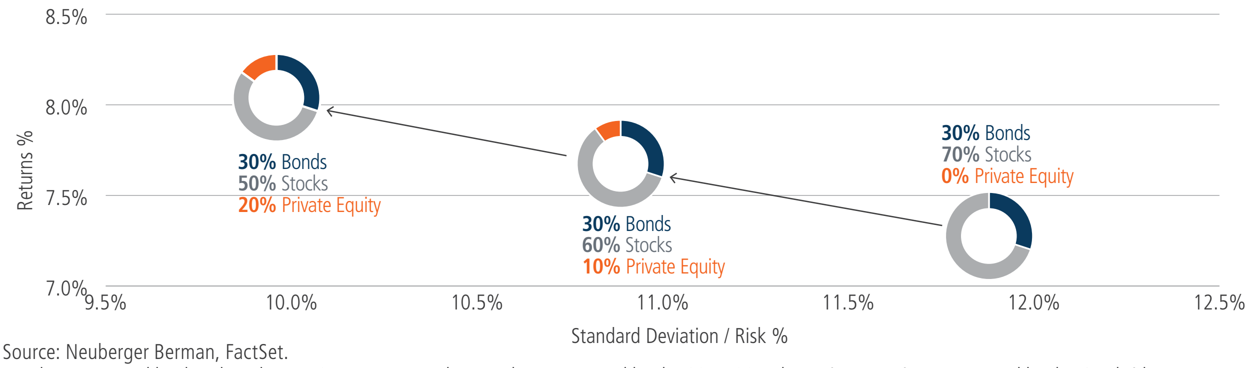
Figure 2: PE Has Offered Attractive Returns Versus Public Equities



Source: Private equity data from Burgiss. Represents pooled horizon IRR and first quartile return for Global Private Equity as of 2023 Q3, which is the latest data available. Public market data sourced from Neuberger Berman as of 2023 Q3.
The benchmark performance is presented for illustrative purposes only to show general trends in the market for the relevant periods shown. The investment objectives and strategies of the benchmarks may be different than the investment objectives and strategies of a particular private fund, and may have different risk and reward profiles. A variety of factors may cause this comparison to be an inaccurate benchmark for any particular type of fund and the benchmarks do not necessarily represent the actual investment strategy of a fund. It should not be assumed that any correlations to the benchmark based on historical returns would persist in the future. **Past performance is no guarantee of future results.** Indexes are unmanaged and are not available for direct investment. See disclosures at the end of this paper for definitions of indexes.

Risk/return benefits. An allocation to private equity can complement traditional portfolios and may improve the risk/return profile.

Figure 3: Portfolio Risk/Return Profile 25 Years Ended September 30, 2023



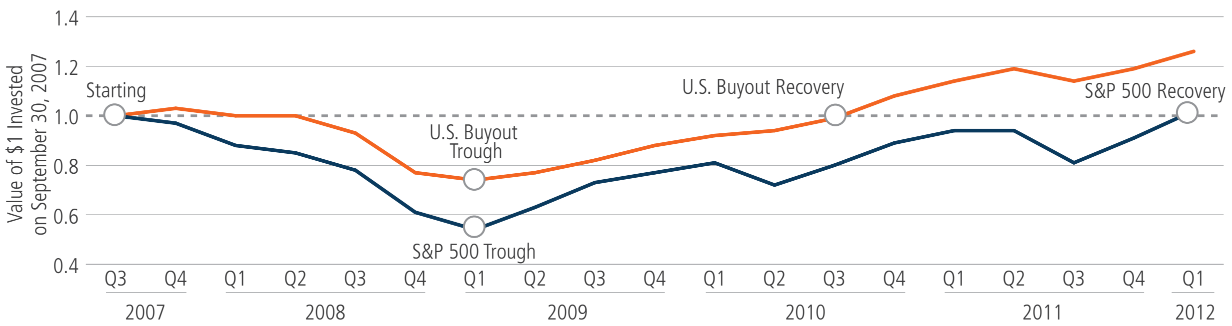
Source: Neuberger Berman, FactSet.
Bonds represented by the Bloomberg U.S. Aggregate Index, stocks represented by the S&P 500 Index, private equity represented by the Cambridge Associates Private Equity index. **Past performance does not guarantee future results.** Indices are not available for direct investment. Please refer to the endnotes for certain important information on indices and certain risks of private equity investing.

Lower volatility. Although private assets are not immune to broader economic tumult, they have tended to be less volatile than public markets. PE investors often take a longer-term view than do public shareholders; that approach can help in a downturn by postponing asset sales until the economy improves and valuations rebound.

This resilience is evident in historical performance data. The Neuberger Berman Private Equity team compared peak-to-trough valuations of public and PE markets during three significant economic downturns: the early 2000s dot-com crash, the 2008 Global Financial Crisis (GFC) and the disruption in 2020 wrought by the COVID-19 pandemic.

In all three cases, we found that PE as an asset class suffered a lower decline in valuation and posted a quicker recovery than did its public counterparts. During the GFC, for example, the U.S. buyout sector experienced a 28% peak-to-trough decline in net asset value, while the S&P 500 index suffered a 55% maximum drawdown (see figure 4).

Figure 4: PE Has Historically Helped Smooth Return Volatility in Certain Times of Economic Distress



Source: Cambridge Associates, FactSet. Nothing herein constitutes investment advice or a recommendation. It should not be assumed that any investment objectives or client needs will be achieved. Investing entails risks, including possible loss of principal. Indexes are unmanaged and are not available for direct investment. These figures are based on expectations, estimates, and projections and no party provides any guarantee or assurance that these projections are accurate. Such figures involved known and unknown risks, uncertainties and other factors, and undue reliance should not be placed thereon. Actual events or results may vary significantly from those reflected or contemplated. Assumptions are for example purposes only and alternative assumptions may result in significant or complete loss of capital. See disclosures at the end of this paper for definitions of Indexes. **Past performance is no guarantee of future results.**

Asset classes that help smooth the ride for participants may deter participants from panic selling at exactly the wrong time. Panic selling not only causes participants to lock in losses, it can also play a role in their missing out on the market recovery.

The Lack of PE Within TDFs May Have Been Disadvantageous to Participants Over Time

Research also suggests that PE allocations within multi-asset frameworks—such as TDFs—can improve long-term outcomes for plan participants.

A recent analysis by Georgetown University Center for Retirement Initiatives and CEM Benchmarking captured the potential benefit of adding PE to TDFs. Drawing on CEM's database of more than $11 trillion in managed assets over three decades, the study examined how TDF participants may have fared had they allocated a portion of their equity holdings to PE within their DC plans.

Specifically, the researchers found that replacing up to 10% of public equity allocations with PE boosted the median net return of TDFs by 22 bps per year from 2011 to 2020 (see figure 5). The researchers also calculated that Scenario 3 may provide that a retirement participant receiving $48,000 in annual retirement income could receive $2,400 more in income per year if illiquid assets (PE and real assets combined) were included in their TDF (based on the researchers' assumptions).[1]

Figure 5: A Lack of PE Within Target Date Funds Can Hurt Returns Over Time

The 2023 report by Georegetown University Center for Retirement Initiatives in conjunction with CEM Benchmarking tested three scenarios adding illiquid assets to target date options from 2011 – 2020. All three scenarios showed improved net compound returns.

	Scenario 1	Scenario 2	Scenario 3
Add:	Up to 10% Private Equity	Up to 10% Real Assets	Up to 10% Illiquid Assets
Replace:	Mix of all listed stock	U.S. large-cap + Core bonds	
Replacement rule:	Pro-rata	Equal portfolio risk	Combines half of Scenario 1 with half of Scenario 2
Glide Path of added assets:	Highest far from retirement	Highest before retirement	
% Better outcomes	**80%**	**72%**	**82%**
Median change in annual return	**+0.22%**	**+0.11%**	**+0.15%**

Source: "Has the Lack of Asset Diversification in DC Retirement Plans Been a Costly Missed Opportunity?", Georgetown University Center for Retirement Initiatives, CEM Benchmarking, June 2023.

Note: The theoretical PE allocation replaced each class of listed stock on a pro-rata basis. The "glide path" assumed that PE allocations are highest 30 years before retirement and gradually fall to zero 20 years after retirement.

For these reasons, the addition of private equity to a professionally managed asset allocation fund has the potential to provide access to growth companies that stay private longer, and may increase the returns of the funds while lowering volatility, resulting in an enhanced risk/return profile of the funds.

[1] Assumes base returns of 6%/year, salary growth of 3%/year for an individual DC participant who saves for 40 years and then draws down for 20.

Considerations Associated with Private Equity in DC Plans

TRADITIONAL DB PLAN APPROACH	APPROACH ADAPTED TO DC PLAN NEEDS
Standalone Allocation to Private Equity More granular allocations to individual asset classes and sub-asset classes	**Inclusion of Private Equity in Broader Equities Portfolio** Reduce the need for constant rebalancing and lessen return and fee volatility
Typical Private Equity Reporting Timeline Private equity investments are typically valued quarterly (with a 45- to 60-day lag after quarter-end)	**Daily Valuations** TDFs are typically offered on a daily valued recordkeeping platform
No Liquidity 10- to 14-year terms, with possible extensions	**More Frequent Liquidity Needs** TDFs typically have daily liquidity
Cost Traditional PE funds typically charge "2 and 20" with management fee charged on committed capital during a fund's investment period	**Fee Sensitivity** TDFs are highly fee sensitive and typically have a materially lower total expense ratio
Traditional Capital Call Structures and GP Fundraising Timelines Multiple capital calls with uncertain timing New fund subscription every 3 – 5 years	**NAV Target Approach** TDFs require a more precise capital deployment approach (with limited unfunded commitments) to effectively manage risk and volatility

For illustrative and discussion purposes only. The information supplied is intended to show investment process and not performance.

Recent DOL Guidance on Incorporating PE in DC Plans

Despite PE's potential benefits, plan sponsors face some key challenges when incorporating PE into their DC plans. Among these have been concerns by plan fiduciaries that the inclusion of PE is somehow contrary to their fiduciary duties under the Employee Retirement Income Security Act of 1974, as amended ("ERISA").

The DOL has issued two letters addressing the possible use of PE strategies in investment options offered under participant-directed DC individual-account retirement plans such as "401(k)" plans.

JUNE 2020

The first letter, issued in 2020 under the prior (Republican) administration confirmed that "a plan fiduciary would not, in the view of the [DOL], violate the fiduciary's duties under ... ERISA solely because the fiduciary offers a professionally managed asset allocation fund with a [PE] component as a designated investment alternative for [a plan]."

DECEMBER 2021

The 2021 letter, issued under the current (Democratic) administration, emphasized the importance that "the use of private equity investments [be] within professionally managed asset allocation funds designated as investment alternatives for participant-directed individual account plans." It concluded that "in no case" should PE investments be permitted for "direct investment by plan participants and beneficiaries on a standbasis."

While taken in combination, the letters arguably broke no new analytical ground, they have served to provide some comfort for DC plan fiduciaries that may have been concerned about including an asset allocation fund with a PE component as a designated investment alternative for a Plan. Indeed, assuming that all technical legal requirements are satisfied, it appears that the DOL believes that the basic principles under ERISA generally do not endorse or proscribe any particular investment strategy.

In considering a designated investment alternative with a PE component, it would therefore seem appropriate in light of this guidance for fiduciaries to:

- Seek to gauge whether an allocation to PE has the potential to generate better risk-adjusted returns, net of fees, for plan participants.
- Determine how to provide participants with adequate disclosure and information on the character and risks of the investments so they can make an informed investment decision.
- Consider capping the percentage the funds can allocate to PE, ensure the investments are independently valued according to standard accounting rules and necessary disclosures to meet the plan's ERISA obligations are being provided.
- Consider whether they have the skills, knowledge and experience to select PE components for their plans, or whether they need to seek assistance from a qualified investment professional. In this regard, the DOL did caution that fiduciaries of small, individual account plans are not likely suited to evaluate the use of PE investments.
- Confirm that they have sufficient information to be able to clearly convey a PE investment strategy (as part of a multi-asset investment option) and its potential risks so that plan participants can make truly informed assessments and investment decisions.

Multi-asset vehicles with PE components may be beneficial as they can provide access to a professionally managed portfolio overseen by investment professionals who have a fiduciary duty to manage PE allocations and ongoing investment decisions, thereby adding an extra layer of prudence and oversight.

Key Considerations for DC Plan Sponsors

In keeping with DOL guidance, we believe DC plan sponsors should address the following considerations when incorporating PE investments into their plans:

BENEFITS TO PARTICIPANTS

Fiduciaries should seek to gauge whether an allocation to PE has the potential to generate better risk-adjusted returns, net of fees, for plan participants.

PARTICIPANT DEMOGRAPHICS

As part of their due diligence, plan sponsors should consider the broader characteristics of their workforces. For example, while PE may be a suitable offering for younger workers with longer investment horizons, it may make less sense for older workers on the brink of retirement; likewise, PE may be a better fit for companies with relatively low turnover because longer-standing employees may tend to stay in plans over longer time horizons.

MANAGER SELECTION

While we believe incorporating PE into retirement portfolios can help plan participants meet their long-term investment goals, complexity and performance data for this asset class suggest that plan fiduciaries should strongly consider who will implement and oversee the allocation. In some cases, internal investment professionals may have sufficient capability; in others, they may require external third party investment experts. Either way, fiduciaries should be sure that the PE component is managed by investment professionals with the requisite skill, experience and scale to manage the unique challenges associated with PE.

LIQUIDITY MANAGEMENT

DC plan portfolios are typically allowed to trade on a daily basis. PE funds typically provide for less frequent liquidity opportunities. The challenge for TDFs, target-risk funds and custom-built multi-asset portfolio sponsors seeking to include an allocation to PE is how best to carefully integrate investment allocations in accordance with fiduciary duties while meeting expectations of DC plan fiduciaries and participants for more periodic liquidity. It is perhaps worth mentioning that few plan participants tend to reallocate their plan account balances on a daily basis (indeed, there are many that place restrictions on the amount of times a given participant may reallocate or rebalance his or her account in a given time period to avoid "day trading" and promote long-term investing principles). TDFs, target-risk funds and custom-built multi-asset portfolio investment options often contain 10-to-16 asset classes, many of which are highly liquid. The careful sponsor of TDFs, target-risk funds and custom-built multi-asset portfolios will therefore be able to take into account these factors in helping to design a multi-asset class investment product that is sensitive both to liquidity concerns and ongoing continuity of illiquid PE holdings. As such while product sponsors continue to innovate in this regard, plan fiduciaries should ensure that they are comfortable with the liquidity parameters of the product, and that provisions for participants are consistent with the plan's terms and investment policy statement (or make adjustments as they may deem prudent).

PORTFOLIO REBALANCING

TDFs, target risk funds and custom-built multi-asset portfolios often have preset asset allocations and trading bands that specify when to rebalance as markets shift. Maintaining those targets could prove more challenging when illiquid assets, such as PE, are added to these plans. As a result, portfolio managers may require more time and discretion when rebalancing DC plans, perhaps by widening the trading bands or making fewer periodic adjustments. Plan fiduciaries should take these features into account when considering such products.

VALUATION NUANCES

One major difference between private and public assets is the timing of valuations. Unlike publicly traded securities, which are valued daily, PE investments are typically valued quarterly, with a 45- to 60-day lag following quarter end. Valuation procedures and methodologies can be put in place so that the PE portfolio can issue a daily NAV for use in valuing the broader asset allocation fund of which PE may be a component. When selecting TDFs, target-risk funds and custom-built multi-asset portfolios that contain PE solutions, fiduciaries should fully understand the valuation methodology to ensure that it meets accounting standards and the plan's ERISA reporting obligations.

Conclusion

We believe private equity can offer an expanded investment universe with potentially attractive long-term performance, net of fees. These characteristics, in our view, make TDFs, target-risk funds and custom-built multi-asset portfolios with PE allocations a worthwhile consideration for many retirement plan sponsors.

As DC plans grow even more popular, and access to quality PE offerings aimed at wider investment audiences continues to grow, we believe plan sponsors should consider TDFs, target-risk funds and custom-built multi-asset portfolios with PE investments for DC plans to help participants reach their retirement goals. The needs of each plan will depend on a host of factors, including the demographic and other individualized attributes of a given plan's participants and beneficiaries, as well as the plan (and its fiduciaries') philosophical approach.

INDICES DESCRIPTION

Bloomberg U.S. Aggregate Bond Index: The index measures the investment grade, U.S. dollar-denominated, fixed-rate, taxable bond market and includes Treasuries, government-related and corporate securities, mortgage-backed securities (MBS) (agency fixed-rate and hybrid adjustable rate mortgage (ARM) pass-throughs), asset-backed securities (ABS), and commercial mortgage-backed securities (CMBS) (agency and nonagency). This index is not subject to a fee.
Cambridge Associates Private Equity Index: The Cambridge Associates Private Equity Index is a pooled horizon IRR calculation, net of fees, expenses, and carried interest, based on quarterly data compiled from 1,538 private equity funds (buyout and growth equity only) from the years 1986 through 2023 as of September 30, 2023. The benchmark database utilizes the quarterly unaudited and annual audited fund financial statements produced by the fund managers (GPs) for their limited partners (LPs). These documents are provided to Cambridge Associates by the fund managers themselves as Cambridge Associates does not use Freedom of Information Act (FOIA) or similar requests, regulatory filings, manager surveys, or press "scrapings" to obtain such information. The Cambridge Associates Private Equity Index is not transparent and cannot be independently verified because, in addition to voluntary reporting by GPs (as not all GPs will report valuations timely or continuously), Cambridge Associates does not identify the funds included in the index, and because Cambridge Associates recalculates the index each time a new fund is added, the historical performance of the index is not fixed, cannot be replicated and will differ over time as funds are added or removed, and may reflect a bias toward funds with track records of success if the funds dropping out had poorer returns than those funds that remained.
MSCI World Index captures large and mid-cap representation across 23 Developed Markets (DM) countries. DM countries include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the UK and the US. With 1,479 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. This index is not subject to a fee.
Global Private Equity Index is represented by the Cambridge Associates LLC Global Private Equity Index which contains the historical performance records of 850+ private investment fund managers and 2,755 institutional quality funds raised, net of fees, expenses, and carried interest. These funds have a total capitalization of USD $3.54 trillion as of September 30, 2023.
S&P 500 Index: The index is a float-adjusted market capitalization-weighted index that focuses on the large-cap segment of the U.S. equity market, and includes a significant portion of the total value of the market. This index is not subject to a fee.

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