GEORGETOWN UNIVERSITY

McCourt School of Public Policy

CENTER FOR RETIREMENT INITIATIVES

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Has the Lack of Asset Diversification in DC Retirement Plans Been a Costly Missed Opportunity?

Panelists: (in order of presentation)

- **Chris Flynn**, Head of Product Development and Research, CEM Benchmarking
- **Mark Fawcett,** CEO, Nest Invest (UK)
- **Anne Lester**, Member, Board of Directors, Partners Group; and Member, Board of Directors, Smart USA
- **Jani Venter,** Co-President, Defined Contribution Real Estate Council (DCREC); and Head of DC Real Estate Solutions, J.P. Morgan Chase

Moderator:

- **Angela Antonelli**, Research Professor and Executive Director, Center for Retirement Initiatives

Angela Antonelli

Executive Director

Center for Retirement Initiatives

Chris Flynn

Head of Product Development and Research

CEM Benchmarking

Has the Lack of Asset Diversification in DC Retirement Plans Been a Costly Missed Opportunity?

Highlights of the report by Georgetown University Center for Retirement Initiatives in conjunction with CEM Benchmarking

Chris Flynn
Head of Product Development and Research, CEM Benchmarking

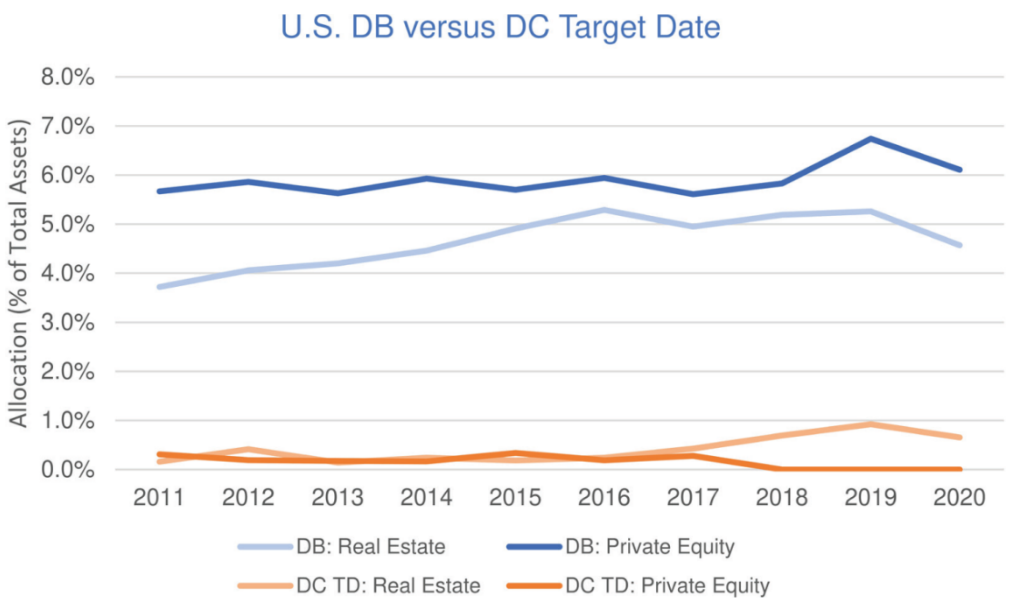
Overview

The study modelled what returns would have looked like for actual target date options in large U.S. defined contribution (DC) pension plans, had they included private equity, real assets, or both, and obtained the same range of long-term outcomes that large, U.S. defined benefit (DB) plans experienced in those asset classes.

- Allocations to private equity or real assets on their own both improved results, but the highest probability of improved results was found in adding both: 82% of modelled outcomes had higher 10-year performance.
- This scenario (up to 5% each of private equity and real assets) had a median improvement in return of 0.15% per year.

Study question and data used

- Target Date Funds have become dominant as default options in DC plans. Broadly, these funds have improved the asset allocations of DC plan members.
- Unlike DB plans, they hold very low allocations to illiquid assets.
- Would target date options have experienced better returns if they'd included private equity or real assets?



- The study uses data from CEM's $14 trillion global database. Focusing on the time period 2011-2020, it primarily uses:
  - CEM's $1.4 T U.S. Defined Contribution database as the source of actual target date option returns and allocations.
  - CEM's $4 T U.S. Defined Benefit database as the source of 10-year net returns found in private equity and real asset portfolios held by DB funds.

CEM by the numbers

- **30** Years serving institutional funds
- **20+** Countries served
- **500** Institutional funds benchmarked
- **150** Of the world's top 300 funds use CEM
- **$14T** AUM investment database
- **50M** Member data points

Scenarios

The study considers three scenarios: the addition of up to 10% private equity, the addition of up to 10% real assets (a mixture of real estate with some infrastructure) and a 50/50 mixture of the first two scenarios.

Each scenario includes a glide path for the assets added, and a replacement rule for what assets to replace.

	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	Combines half of Scenario 1 with half of Scenario 2
Replacement rule:	Pro-rata	Equal portfolio risk	
Glide Path of added assets:	Highest far from retirement	Highest before retirement	

Analysis 2011-2020

- For each scenario, for each TD Option with uninterrupted data
  - Adjust asset allocation on a year-by-year basis. To determine the assets to substitute:
    - The amount of illiquid assets to be added is based on the location on glide path
    - Add private equity by replacing a pro-rata mix of existing equity categories in the option
    - Add real assets by replacing a large cap – core bond mixture such that projected volatility is unchanged on a covariance-based risk model
  - Back out the performance on the removed assets
    - Most of the return of each TD option is explained by its asset mix: remove attributed return of assets replaced, remove pro-rata portion of unexplained return.
  - Test adding every actual net 10-year return for the asset class experienced by U.S. DB funds to produce a range of outcomes
  - Repeat for every option

- From range of outcomes, calculate distributions of change in return, focusing on
  - Median change in compound return by scenario – the most 'typical' outcome.
  - The percentage of outcomes that were superior to the original TD return, which gives us a measure of the likelihood of success.
- The net portfolio returns for private equity and real assets sourced from CEM's Defined Benefit database are net of not only manager fees, carried interest and transaction costs, but also the pension fund's own incremental staff, consulting and other costs to oversee the asset class. They also include a mixture of funds, funds of funds, co-investments and direct investments.

All three scenarios showed improved 10-year returns. Scenario 3 had the highest proportion of improved outcomes, with 82% outperforming the original option.

	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	Combines half of Scenario 1 with half of Scenario 2
Replacement rule:	Pro-rata	Equal portfolio risk	
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%**

- A 0.15% per year improvement in net return would be worth $5 billion per year if applied to the entire U.S. Target date market.

Mark Fawcett

CEO

Nest Invest (UK)

Has The Lack of Asset Diversification in DC Retirement Plans Been a Costly Missed Opportunity?

Mark Fawcett
CEO of Nest Invest

Tuesday, August 22, 2023

Mansion House Compact

"British pensioners should benefit from British business success. By unlocking investment, we will boost retirement income by over £1,000 a year for typical earner over the course of their career. This also means more investment in our most promising companies, driving growth in the UK."

- Jeremy Hunt, Chancellor

The Mansion House Compact members are: Aviva, Scottish Widows, L&G, Aegon, Phoenix, Nest, Smart Pension, M&G and Mercer.

Our private market investments – targeting 30%

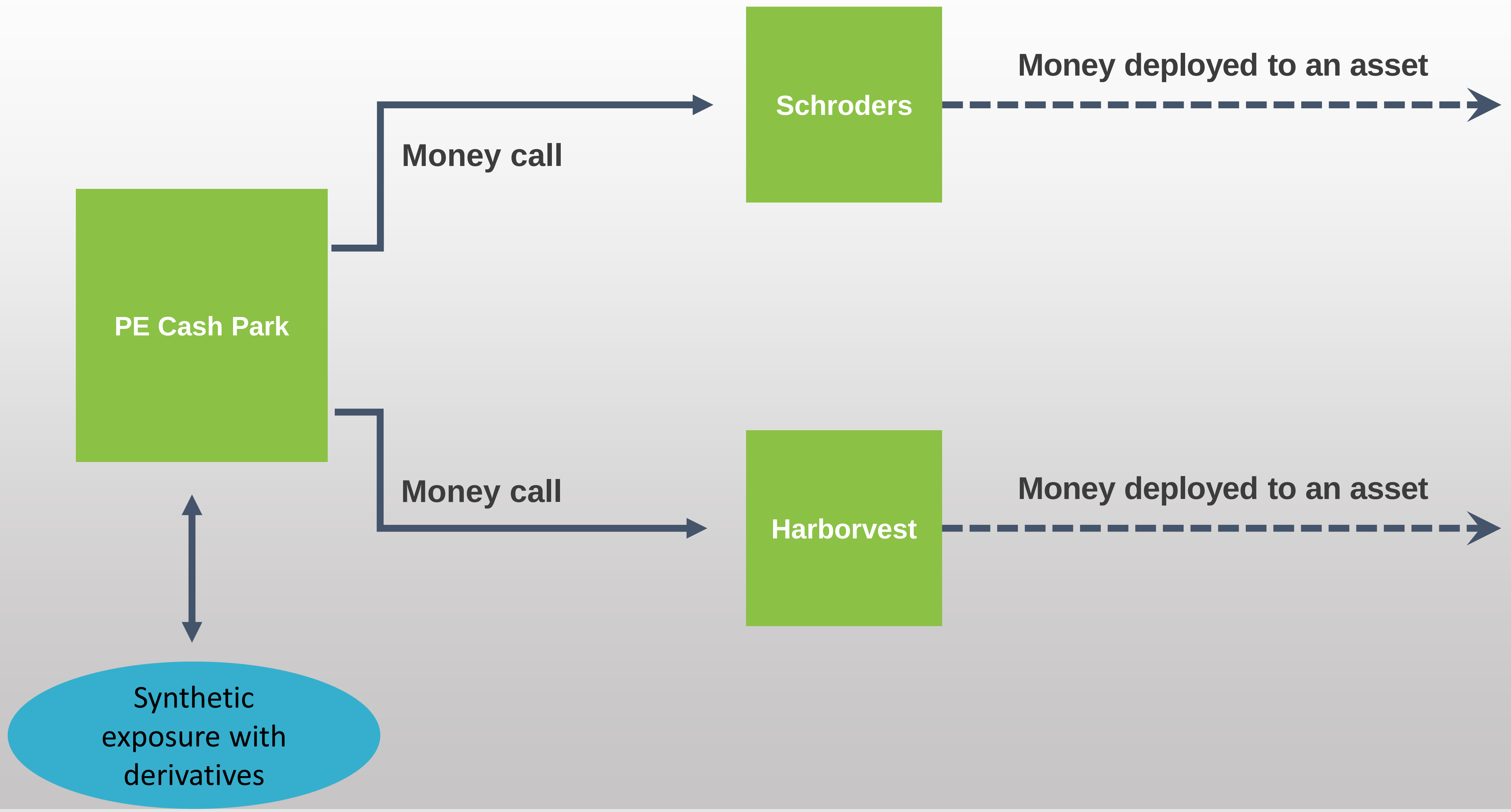
Private equity

Private credit

Infrastructure equity

Commerical Property

Private equity bucket



Managing liquidity risk & lowering transaction costs with an internal market

Anne Lester

Member

Board of Directors, Partners Group; Board of Directors, Smart USA

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Private markets in US DC plans

Risk factors & suitability considerations

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REALIZING POTENTIAL IN PRIVATE MARKETS

Public markets provide less exposure to real economy

The Link Between the Stock Market and the Economy Is Weakening

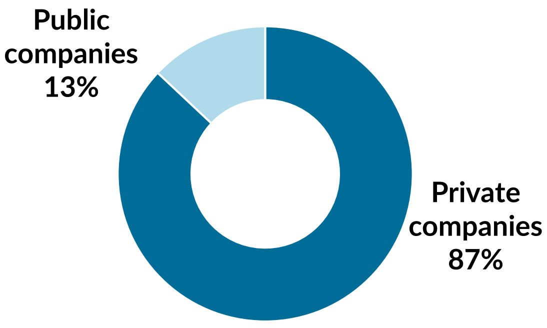
"As the economy has evolved… and as private equity funds have grown to become a larger force, **the stock market has become even less representative of current economic activity.**"

Nov. 2020 **Bloomberg**

Concentrated public markets exposure in a few stocks[1]

Top 3 stocks in S&P 500 make up 15%	Apple, Amazon, Microsoft
Top 10 stocks in S&P 500 make up 23%[2]	Tesla, Berkshire Hathaway, Exxon, Alphabet, UnitedHealth Group, Nvidia

Public equities a small segment of investible universe



87% of companies in the US with annual revenues over $100m are private, with only 13% being public[3]

Top S&P 500 companies by market capitalization [4]

1980	AT&T	Exxon	IBM	Standard Oil Company (Indiana)	Schlumberger
2000	GE	Microsoft	Exxon	citigroup	Pfizer
Today[4]	Apple	Microsoft	Google	amazon	Meta

Public markets increasingly dominated by tech

For illustrative purposes only. **1** Includes Amazon, Apple, Meta, Microsoft. **2** The fifth largest market cap company is in flux. In February 2022, Meta lost >30% market capitalization and has been replaced by Tesla which is closely followed by Berkshire Hathaway and Nvidia. **3** Sources: S&P Capital IQ, press search. **4** Bloomberg, Chicago Board Options Exchange. Source Capital IQ, as of December 2022. Source: Partners Group (2023). Diversification does not ensure a profit or protect against loss. There is no assurance that similar investments will be made

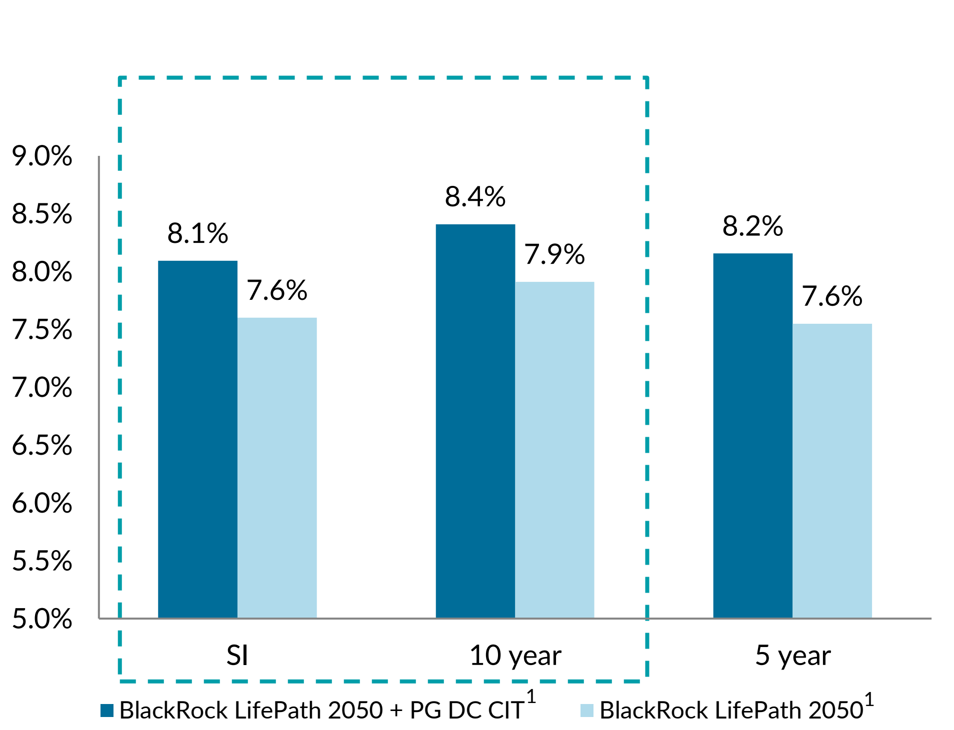
Enhanced risk/return profile through Private Equity markets

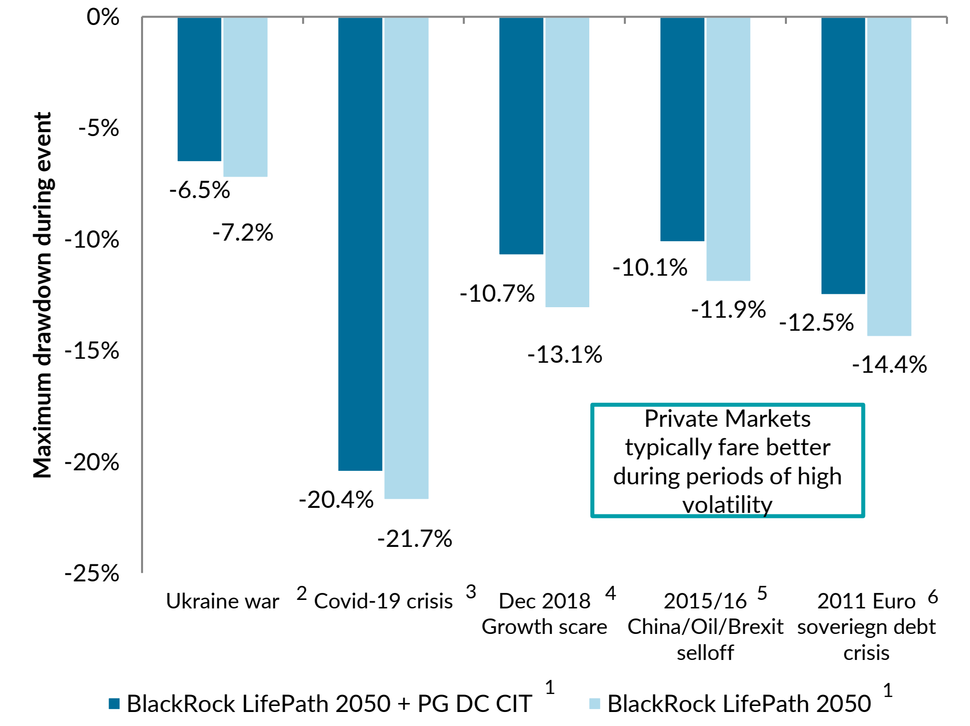
ENHANCES RISK ADJUSTED RETURNS

US PE funds have outperformed the S&P 500 index by 3.5% over the last 30 years[7]

PROVIDES ACCESS & DIVERSIFICATION

Access exposure similar to DB portfolios; maintain diversified array of investments





Source: Partners Group 2023, Bloomberg. For illustrative purposes only. Time period used: since common inception 31 May 2011 to 31 December 2022. Returns shown net of all fees. **1** BlackRock LifePath 2050 + PG DC CIT has an allocation of 85% BlackRock Lifepath 2050 TDF and 15% PG Private Equity CIT. Indices used for BlackRock LifePath TDF: iShares Russell 1000 Large-Cap Idx K, iShares Russell 1000 Large-Cap Idx Inv A, iShares Core MSCI Total Intl Stk ETF, iShares Developed Real Estate Idx K, iShares Russell 2000 Small-Cap Index Fund (BlackRock Small Cap Index Fund), iShares US Aggregate Bond Index Instl, iShares US Aggregate Bond Index K, iShares US Aggregate Bond Index Inv A, iShares TIPS Bond ETF, and BlackRock Cash Funds Treasury SL Agency. Risk free rate used for Sharpe ratio is 2% . PG Private Equity CIT historical performance since 8/31/2015, backtested prior using PGPE LLC fund, listed securities, and cash which are the holdings of the PG Private Equity CIT. Volatility is measured by the standard deviation of returns and is shown on a per annum basis. 2 Corresponds to the maximum drawdown between 31 December 2021 and 31 March 2022, using end of day valuations. 3 Corresponds to the maximum drawdown between 31 December 2019 and 30 June 2020, using end of day valuations. 4 Corresponds to the performance of private and public markets (as defined above) between 1 December 2018 and 31 December 2018, using end of day valuations. 5 Corresponds to the performance of private and public markets (as defined above) between 1 August 2015 and 29 February 2016, using end of month valuations. 6 Corresponds to the performance of private and public markets (as defined above) between 1 April 2011 and 31 December 2011, using end of month valuations. Diversification does not ensure a profit or protect against loss. Risk-adjusted returns refer to returns taking into account potential drags to performance.' or "Risk-adjusted return refers to an investment's return by measuring how much risk is taken in producing that return. 7 Willis Towers Watson, Executive summary: 2017 Defined Contribution Plan Sponsor Survey (2017), Center for Retirement Research at Boston College, Investment Returns: Defined Benefit vs. Defined Contribution Plans (2015), Financial Times, Ordinary savers should be allowed to invest in Private Equity (2019),

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Participants globally can benefit from exposure to Private Markets in DC

Lower cost ≠ better VFM	• Lower cost funds **do not necessarily produce greater value for money for DC members**. High-quality private market managers can charge higher fees due to their **improved ability to generate more attractive returns** resulting in a **net better outcome for members** • 9 of the largest DC schemes signing the **Mansion House Compact** to **increase minimum allocation to 5% in unlisted equities** highlighting the push toward more **illiquid asset classes such as private markets**[1]
Improved portfolio diversification	• Private markets can help **diversify a DC plan's portfolio**, reducing exposure to more volatile public markets and potentially enhancing overall portfolio performance • Offers access to a **broader range of assets** that are **less correlated with the traditional stock and bond markets**[2]
Benefit of performance fees for investors	• Performance fees help **align the interests of fund managers and investors** by incentivizing managers to generate attractive returns • Provide investors with access to top tier managers who are **motivated to make decisions that are in the best interest of the investor**

Private market investments offer DC plans access to a broader range of the real economy, historically restricted to high-net-worth and institutional investors

Source: Partners Group 2023.**1** Source: Gov.uk and Professional Pensions 2023 **2** Diversification does not ensure a profit or protect against loss.

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Jani Venter

Co-President

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Head of DC Real Estate Solutions

J.P. Morgan Chase

Two decades of managing private real estate in DC plans

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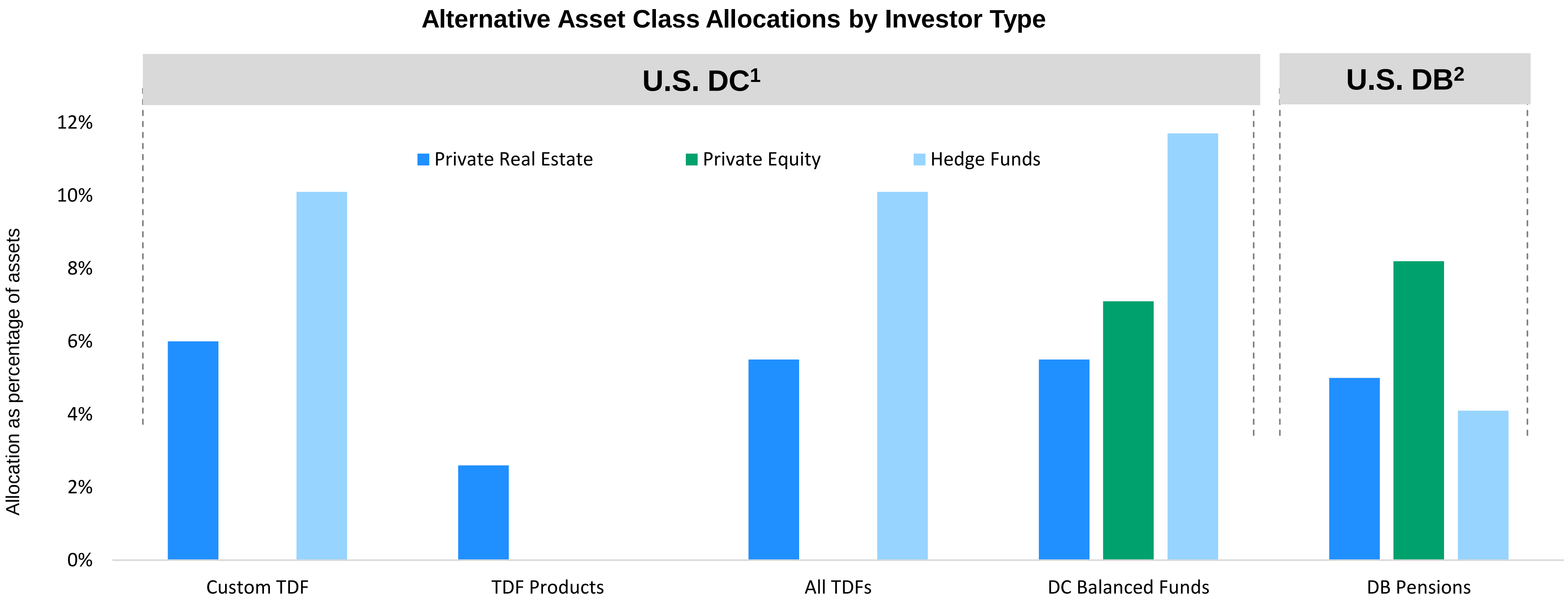
An allocation to Core private real estate can strengthen participant retirement outcomes

When DB plans expanded beyond public stocks and bonds in the early 1970s, Core private real estate was the first stop



Source: *CEM Benchmarking; DCALTA, Data as of July 13, 2022; [1]DC: Defined Contribution; [2]DB: Defined Benefit

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Real estate is the largest and most widely used alternative asset class

Core private real estate offers key diversifying and stabilizing benefits in DC plans

Diversification

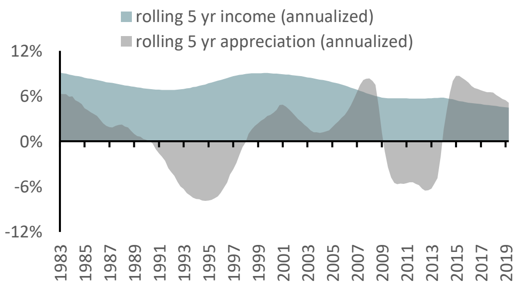
Low correlations traditional asset classes

1Q03 – 1Q23[1]

	Equities	Fixed Income	U.S REITs
Private RE	0.41	-0.22	0.53

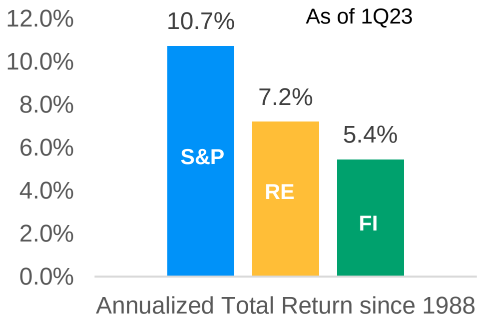
High income yield

Strong, predictable cash flow from core assets due to long term lease structures



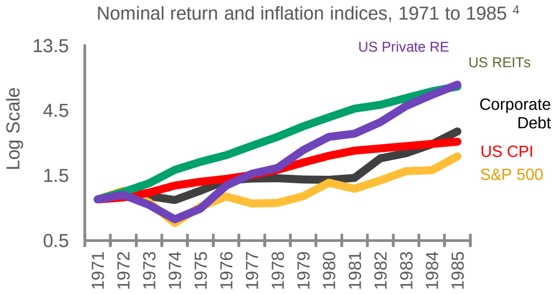
Attractive risk-adjusted returns

Low volatility return profile supports improved risk-adjusted returns



Potential for inflation protection

Without increasing portfolio volatility



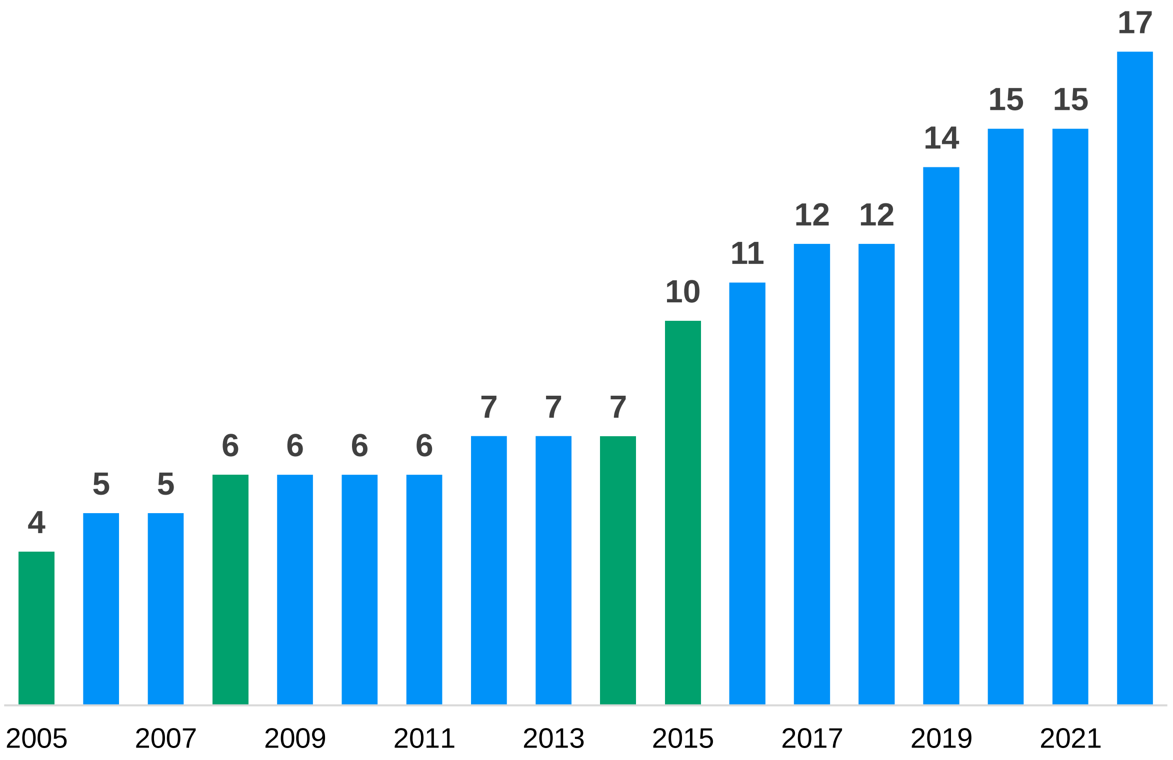
Source: JPMorgan Asset Management. For illustrative purposes only.

DC solutions were supported by a DB mindset and consideration for the end user experience

Three key areas of expertise informed our 2005 implementation of private real estate in DC plans and real estate solution design

- **Five decades managing private real estate through multiple cycles**
- **Six decades managing DC plans**
- **Two decades managing private real estate in DC plans**

Growing number of dedicated DC private real estate solutions demonstrated a strong demand for private real estate benefits in DC plans

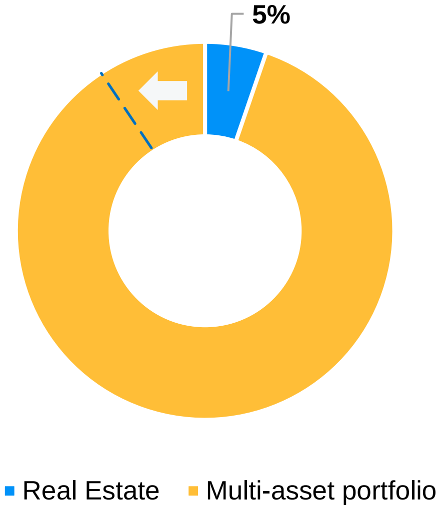


Source: J.P. Morgan Asset Management. The Defined Contribution Survey 2022 DCREC, NAREIM.

DC real estate solutions and implementation supported by a DB mindset

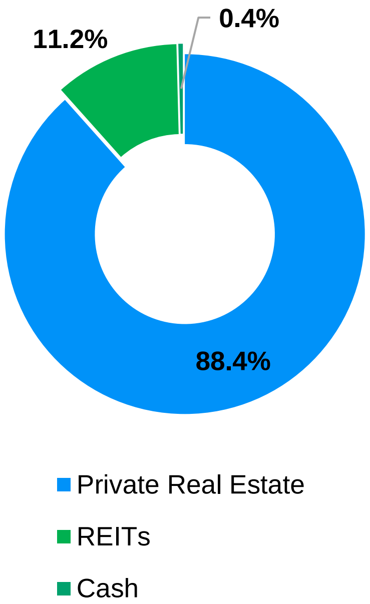
A small allocation can have a meaningful impact

Real estate allocations with multi-asset portfolios can range ~5-15%



A range of DC Real Estate Solutions with varying allocations[1]

Private real estate allocations in solutions range 75 – 100%



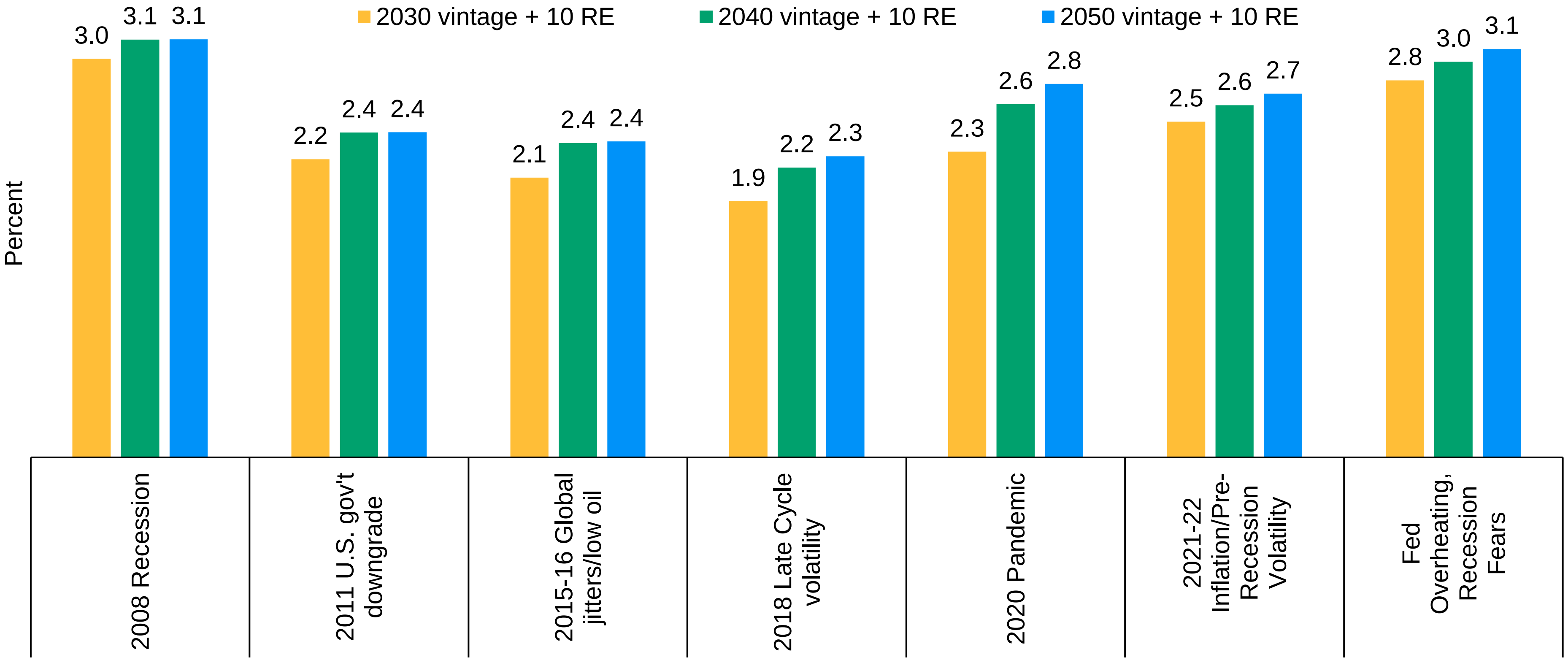
Liquidity management considerations

- Inclusion in multi-asset portfolios
- Manageable allocations
- Scale of real estate solutions and private platform
- Variety of DC real estate solutions support daily, monthly and quarterly liquidity
- Variety of DC real estate solutions addressed DC plan liquidity needs since 2008

[1]Defined Contribution Survey 2022, NAREIM/DCREC; J.P. Morgan Asset Management

Relative value preservation from 10% real estate allocation during market drawdown periods

An allocation to private real estate preserved value for participants when needed most



Source: JP Morgan Asset Management, Passive TDFs without real estate: vintages, 2030, 2040 and 2050 vs. TDFs with a 10% allocation to RE.

The End

Important risk and disclaimers

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