Spring 2017

Direct real estate's potential to improve returns and reduce risk for target-date funds

Direct real estate's advantages over REITs

Direct real estate

- Private ownership of physical assets
- Low correlations to stocks and bonds historically
- Returns have been more stable than equities

REITs

- Own and manage commercial property
- Shares traded on public exchanges
- Returns and volatility have been similar to equities

As target-date funds have become more popular, portfolio managers have tried to improve diversification and risk management by adding asset classes. Many now hold high-yield bonds, emerging markets equity and real estate investment trusts (REITs). Until recently, however, no target-date mutual fund offered exposure to direct real estate—a separate asset class with investment characteristics distinct from equity and fixed income.

Direct real estate is defined as private investments in commercial property, including office and apartment buildings, industrial spaces and retail malls diversified by geography and market segments.

As an asset class, direct real estate's investment characteristics may offer compelling advantages

- **Potential for performance benefits and lower volatility:** As the chart below shows, direct real estate has offered returns competitive to equities and REITs, with significantly lower volatility (as measured by standard deviation) for the 20-year period, 1997–2016. Two factors contribute to direct real estate's low volatility: First, steady rental income from long-term leases tends to represent a much larger proportion of total returns, compared to equities. Second, as private investments, direct real estate is not publicly traded and less subject to news headlines and macro events.

Figure 1. Performance, volatility and risk-adjusted returns

Annualized performance for 20-year period ended December 31, 2016

	U.S. Equity	Non-U.S. Equity	U.S. Fixed Income	Direct Real Estate	REITs
Total returns	7.86%	5.05%	5.29%	**9.31%**	9.67%
Standard deviation	18.46%	21.86%	3.63%	**11.37%**	19.59%
Sharpe Ratio[1]	0.31	0.17	0.43	**0.55**	0.40

Sharpe Ratio is a measure of risk-adjusted returns. Asset classes reflect returns for the following indexes: Russell 3000 (U.S. equity); MSCI ACWI-ex USA IMI (non-U.S. equity); Bloomberg Barclays U.S. Aggregate Bond (U.S. bonds); NCREIF Property Index-Open End Funds (NPI-OE) (direct real estate); NAREIT All Equity REITs (REITs). It is not possible to invest in an index. Performance for indexes does not reflect investment fees or transaction costs. Results may be significantly different for other time periods. Source: Macrobond.

What about liquidity?

Direct real estate's less frequent transactions don't necessarily pose a challenge to maintaining target allocations.

- Net cash flows from regular plan contributions can be used for monthly rebalancing.
- Investments in high-quality "core" property markets potentially can be sold if necessary.

- **Diversification:** Low correlations historically with stocks, bonds and REITs are a key argument for including direct real estate in multi-asset portfolios.[2] Returns have tended not to fluctuate in tandem with public markets because they derive mostly from multi-year leases.
- **Inflation hedging:** Direct real estate historically has been a natural inflation hedge, with commercial rents and property values highly correlated to rising prices.

Research shows potential benefits of including direct real estate in target-date funds

Historical performance shows direct real estate improved risk-adjusted returns and reduced volatility at different stages before and after retirement. TIAA measured the impact of a 5% direct real estate allocation in the TIAA-CREF Lifecycle Funds glidepath,[3] using returns for 1978 through 2016. Figure 2 shows the return differences at four points along the glidepath: 45 years and 25 years before retirement, at retirement, and 10 years after retirement. Although absolute returns fluctuated, the data demonstrate direct real estate's historical diversification benefits—a record of improving risk-adjusted returns and reducing volatility over time.

Figure 2. Direct real estate improved risk-adjusted returns at four glidepath stages

	45 years to retirement			25 years to retirement			At retirement			10 years after retirement		
	With Real Estate	Without Real Estate	Difference	With Real Estate	Without Real Estate	Difference	With Real Estate	Without Real Estate	Difference	With Real Estate	Without Real Estate	Difference
Average annual return	11.69%	11.65%	0.04%	11.47%	11.43%	0.04%	9.49%	9.67%	-0.18%	9.05%	9.23%	-0.18%
Standard deviation	15.37%	15.40%	**-0.03%**	14.61%	14.64%	**-0.03%**	8.36%	9.11%	**-0.74%**	7.29%	7.98%	**-0.69%**
Sharpe Ratio*	0.728	0.724	**0.004**	0.751	0.746	**0.005**	1.075	1.006	**0.068**	1.173	1.093	**0.080**

* Sharpe Ratio is a measure of risk-adjusted returns.

Performance data are based on quarterly total returns, 1/1/1978–12/31/2016, using allocations of the TIAA-CREF Lifecycle Funds glidepath, rebalanced monthly. Asset classes are represented by the following indexes: Russell 3000 (U.S. equity); MSCI ACWI ex-USA IMI (non-U.S. equity); Bloomberg Barclays U.S. Aggregate Bond (U.S. bonds); NCREIF Property Index-Open End Funds (NPI-OE) (direct real estate). The chart compares performance with and without a 5% allocation to direct real estate. The allocation to direct real estate is sourced from the following indexes: 45 years and 25 years to retirement, 5% from Bloomberg Barclays U.S. Aggregate Bond; at retirement and 10 years after retirement, 3.5% from Russell 3000 and 1.5% from MSCI ACWI ex-USA IMI. It is not possible to invest in an index. Performance for indexes does not reflect investment fees or transaction costs. Results may be significantly different for other time periods. Sources: Haver Analytics, TIAA Investments.

Conclusion

Direct investment in real estate offers the potential to improve risk-adjusted performance and retirement savings outcomes of target-date funds. A record of high returns, low volatility, and low correlations suggests this distinct asset class may provide superior portfolio diversification than public REITs—the dominant form of real estate exposure in target-date funds.

To learn more, read **Target-date funds: Improving diversification with direct real estate** at **TIAA.org/assetmanagement**.

TIAA

1. Sharpe Ratio, a measure of risk-adjusted returns, represents the following calculation: Annualized return minus the risk-free rate (90-day Treasury Bill), divided by average standard deviation of returns.
2. Correlation is a statistical measure indicating how closely together the returns of two asset classes move over time. An asset class is considered a good portfolio diversifier if its correlation to other asset classes in a portfolio is low or negative. Correlations range from -1.0 to 1.0. A correlation of 1.0 indicates the assets' returns move together in unison, e.g., when Asset A increases by 10%, Asset B increases by 10%. Conversely, a correlation of -1.0 indicates the assets move in opposite directions, e.g., when Asset A increases by 10%, Asset B decreases by 10%.
3. Glidepath represents TIAA-CREF Lifecycle Funds, which use a "through retirement" glidepath design based on a proprietary asset allocation model.

This material is not intended to be a recommendation or investment advice, does not constitute a solicitation to buy or sell securities, and is not provided in a fiduciary capacity. The information provided does not take into account the specific objectives or circumstances of any particular investor, or suggest any specific course of action. Financial professionals should independently evaluate the risks associated with products or services and exercise independent judgment with respect to their clients. Certain products and services may not be available to all entities or persons. Past performance is not indicative of future results.

TIAA-CREF investment products may be subject to market and other risk factors. In reference to target-date funds, the target date is the approximate date when investors plan to start withdrawing their money. The principal value of the funds is not guaranteed at any time, including at the target date. Portfolios are subject to certain risks such as market and investment style risk. Target-date funds share the risks associated with the types of securities held by each of the underlying funds in which they invest. Diversification is a technique to help reduce risk. There is no guarantee that diversification will protect against a loss of income.

You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877-518-9161 or go to TIAA.org for product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.

Nuveen, LLC, formerly known as TIAA Global Asset Management, delivers the expertise of TIAA Investments and its independent investment affiliates. Nuveen Securities, LLC, member FINRA and SIPC, is a subsidiary of Nuveen, LLC.

©2017 Teachers Insurance and Annuity Association of America, 730 Third Avenue, New York, NY 10017

For Institutional Investor Use Only.

C38616

707601_815400
(04/17)