Nareit Research
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2020 CEM Benchmarking Study Highlights REIT Performance

21-year study reveals allocations, returns, volatility and risk-adjusted performance of 12 asset classes

Highlights

- **REITs had the second highest average annual return of the 12 asset classes covered**
- **REITs had relatively low correlation with equities.**
- **REITs had the highest non-fixed income risk-adjusted returns.**
- **REITs outperformed all styles of unlisted real estate.**

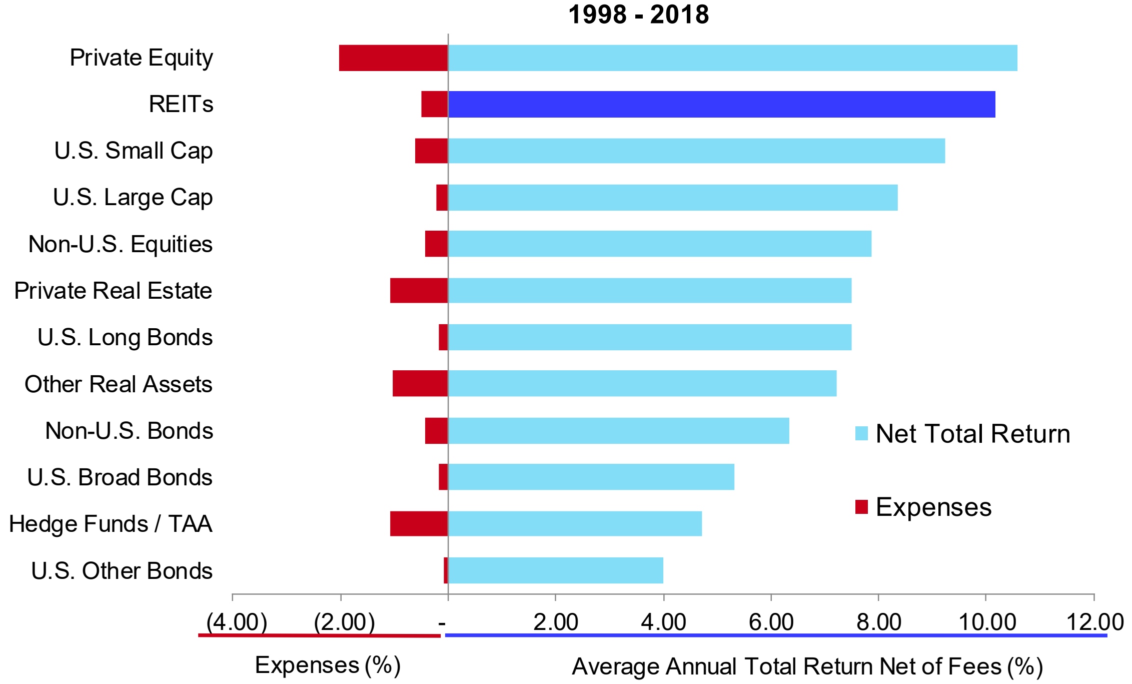
Introduction

CEM Benchmarking's 2020 study, sponsored by Nareit, provides a comprehensive look at realized investment performance across asset classes over a 21-year period (1998-2018) using a unique dataset covering over 200 public and private sector pensions with nearly $3.9 trillion in combined assets under management. One of the unique benefits of the CEM dataset is that it provides the actual realized performance of the assets chosen by plan managers and trustees.

The study compares gross and net average annual total returns as well as correlations and volatilities for 12 asset classes with appropriate adjustments for reporting lags associated with illiquid asset classes (unlisted real estate and private equity).

The 2020 study also compares the performance of different styles of unlisted real estate including internally managed, core, value added/opportunistic and fund of funds.

Figure 1
Annual Net Total Return and Expense by Asset Class for U.S. Defined Benefit Pension Funds 1998 - 2018



Source: CEM Benchmarking, 2020.

Returns

Over the 21-year period covered by the study there are striking differences in performance across asset classes. Figure 1 summarizes average annual net returns and expenses for the 12 asset classes.

- Listed equity REITs had the second highest average annual net return over the period, 10.2%.
- Unlisted real estate produced average net returns of 7.5% over the period, about 270 basis points less than REITs.
- The two worst performing asset classes were hedge funds/tactical asset allocation (TAA) strategies and U.S. other fixed income. U.S. other fixed income however includes cash. If cash is excluded from U.S. other fixed income as an aggregate asset class, then hedge funds/TAA would have been the worst performing asset class with a 21-year arithmetic average annual net return of 4.7%.

Real Estate Returns by Ownership Style

Unlisted or private real estate can be accessed through a number of different ownership styles each with different risk profiles and costs. CEM provides comparisons of returns, correlations and volatilities for each of the four key private real estate ownership styles:

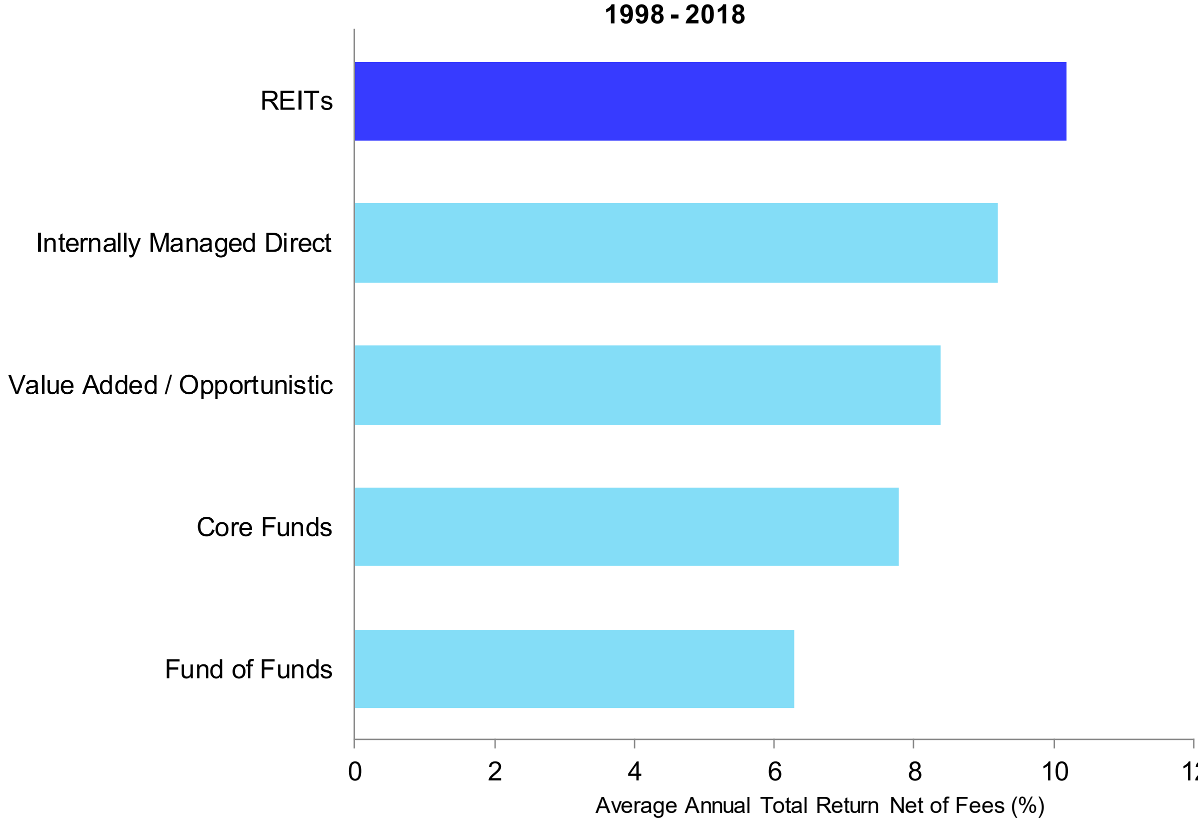
- Internally managed direct
- Core Funds
- Value Added / Opportunistic Funds
- Fund of Funds.

Figure 2 shows that irrespective of ownership style, REITs outperform private real estate.

Correlations

The study computed correlations of annual returns among the 12 asset classes. Table 1 (next page) summarizes some key correlations between broad equities, REITs and unlisted real estate.

Figure 2
Annual Net Total Return for Real Estate
1998 - 2018



Source: CEM Benchmarking, 2020.

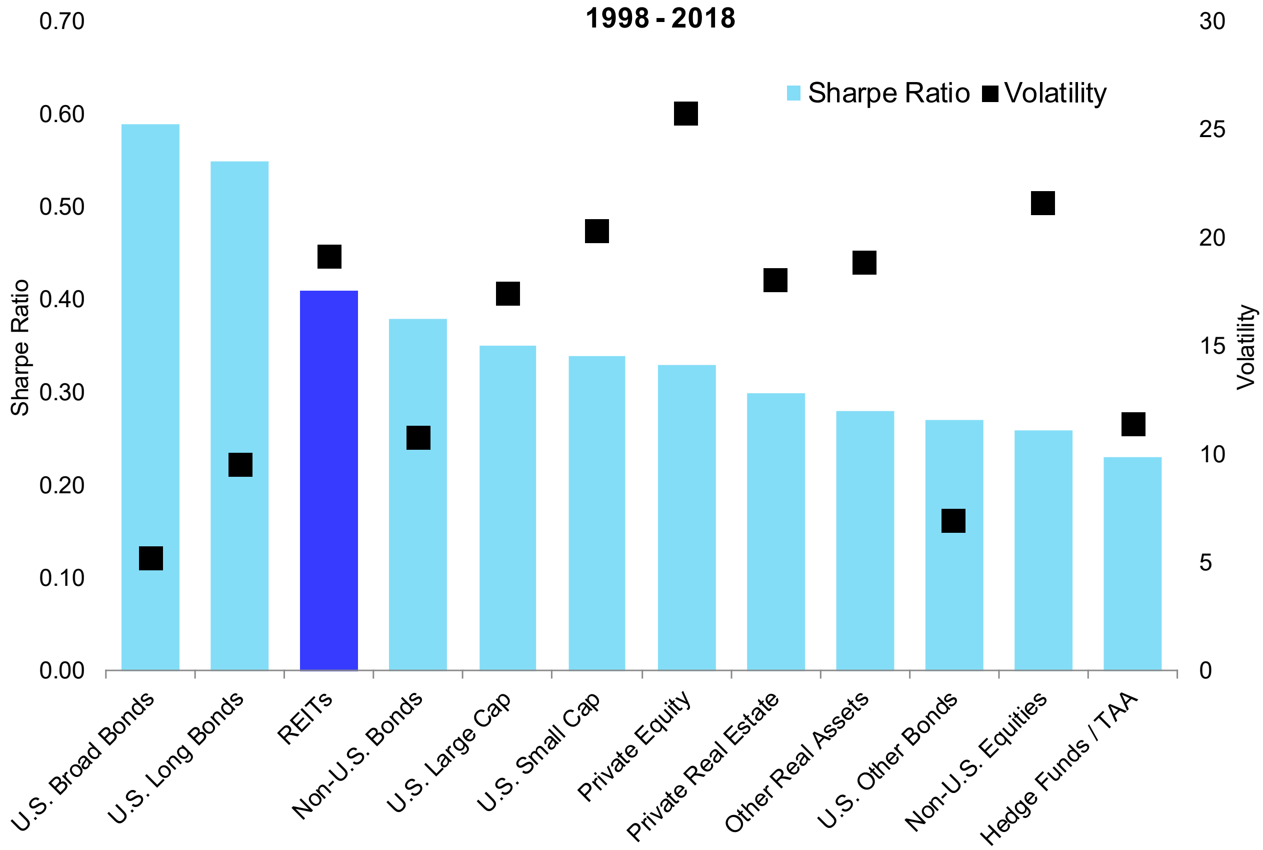
Table 1
Key Correlations
(1998 - 2018)

	REITs	Private Real Estate	U.S. Long Bonds	U.S. Large Cap	U.S. Small Cap	Non-U.S. Equities	Private Equity	Hedge Funds
REITs	1.00	**0.84**	0.04	0.54	0.64	0.57	0.51	0.52
Private Real Estate		1.00	0.02	0.45	0.54	0.49	0.51	0.41
U.S. Long Bonds			1.00	-0.31	-0.38	-0.38	-0.44	-0.21
U.S. Large Cap				1.00	0.92	0.89	0.85	0.92
U.S. Small Cap					1.00	0.88	0.89	0.79
Non-U.S. Equities						1.00	0.90	0.85
Private Equity							1.00	0.80
Hedge Funds								1.00

As highlighted in green, REIT and unlisted real estate returns were highly correlated when illiquid returns are adjusted for reporting lags. The correlation is measured as .84. The high correlation is not surprising given the similarities in underlying assets.

As highlighted in dark blue, REIT and unlisted real estate returns had relatively low correlations with bonds and listed equity returns. These relatively low correlations reflect the well known diversification benefits associated with the real estate asset class, whether REITs or unlisted real estate.

Figure 3
Volatility and Risk Adjusted Returns by Asset Class for U.S. Defined Benefit Pension Funds
1998 - 2018



Source: CEM Benchmarking, 2020.

Volatilities and Risk-Adjusted Returns

The study also compared volatilities and risk-adjusted returns using the Sharpe ratio across asset classes.

The data are summarized in Figure 3.

- Outside of fixed income, REITs had the highest Sharpe ratio measuring .41, reflecting their high returns and just above average volatility. Unlisted real estate had a much lower Sharpe ratio measuring .30, reflecting lower returns and comparable volatility to REITs.
- After adjusting for valuation lags, the study found that REITs and unlisted real estate had comparable volatilities. REITs and unlisted real estate had measured volatilities of 19.2% and 18.0% respectively. As with correlations, the similarity in volatilities is not surprising given that REITs and unlisted real estate have the same underlying assets.
- After adjusting for valuation lags, private equity was by far the most volatile asset class.

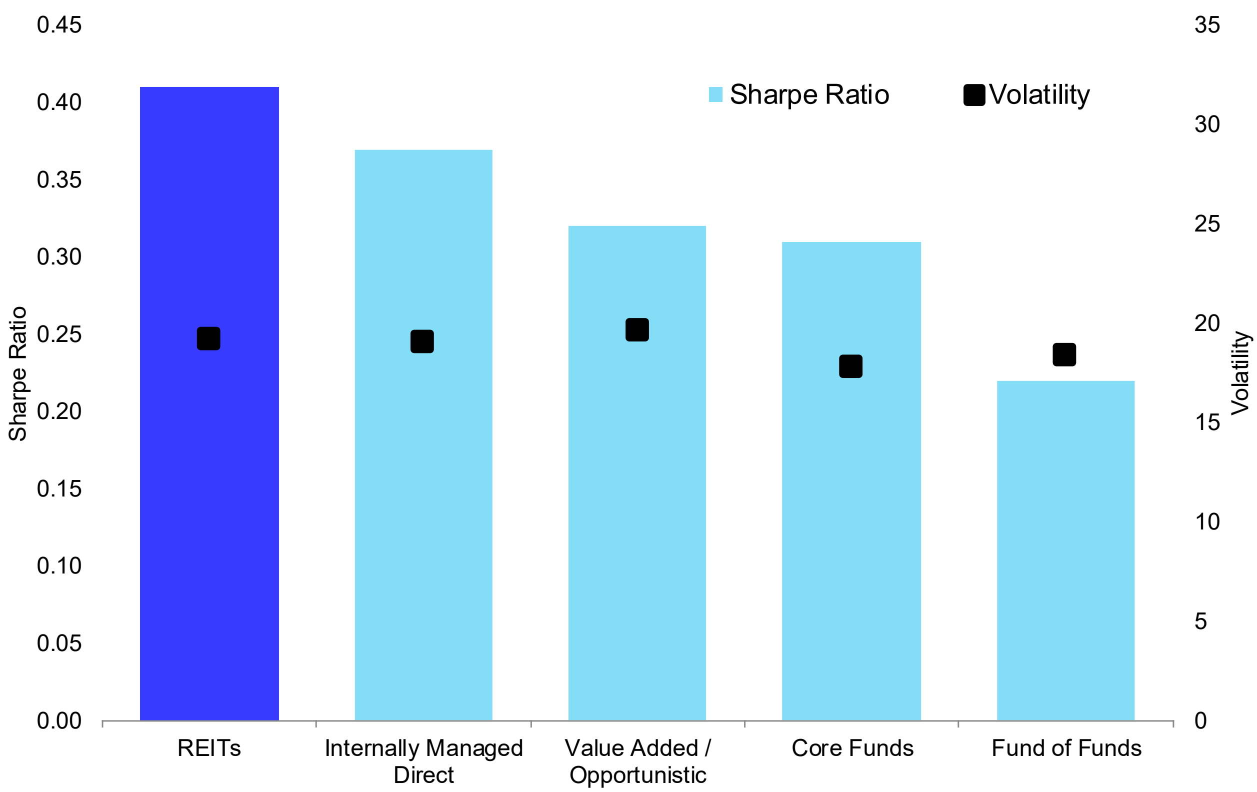
The study also compared volatilities and risk-adjusted returns using the Sharpe ratio across real estate ownership styles. The data are summarized in Figure 4.

As the figure indicates, REITs have comparable volatilities to and provide better risk adjusted returns than any style of private real estate.

Conclusion

CEM Benchmarking used its unique proprietary dataset which is comprised of asset level return data for hundreds of US pension funds with nearly $3.9 trillion in assets. The CEM analysis concluded that over the 21 year period of study covering the years 1998 through 2018, REITs had the second highest average annual net return, relatively low correlations with other asset classes, implying good diversification benefits, and strong risk adjusted returns.

Figure 4
Volatility and Risk-Adjusted Returns for Real Estate and Alternatives
1998 - 2018



Source: CEM Benchmarking, 2020.