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Global real estate: Opportunity for income and diversification

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EXECUTIVE SUMMARY

- Real estate is an essential component of diversified portfolios, providing potentially high and stable income, capital appreciation, inflation protection and diversification. Two categories — private real estate and listed real estate investment trusts (REITs) — have differing characteristics and roles in asset allocation.
- U.S. private real estate and listed REITs improved the performance and diversification of traditional stock-bond portfolios over a 21-year time period, 1997–2017. U.S. private real estate produced better risk-adjusted returns than listed REITs, reflecting its lower volatility.
- Combining private real estate and listed REITs improved risk-adjusted returns, reflecting their low correlations. Listed REITs play a key role in providing liquidity for portfolio rebalancing to compensate for private real estate's illiquidity.
- A global approach can improve the diversification of U.S. real estate portfolios through exposure to divergent and faster growing regions, particularly Asia-Pacific. Global private real estate's large and stable yield premium over stocks and bonds contributed to its attractive returns and low volatility for the 11-year period 2007-2017.

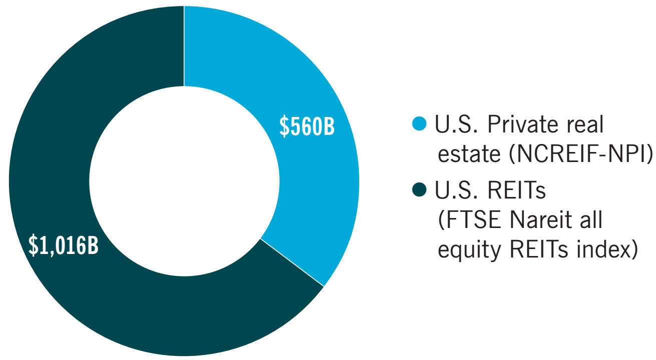
WHY INVEST IN REAL ESTATE?

Real estate is a fundamental building block of investment portfolios, providing ballast against the uncertainty of stock market returns, rising interest rates and inflation. At a time when investors are starved for yield, real estate's dominant characteristic is high income with stability borne of long-term lease contracts. Moreover, real estate's long-term growth potential benefits from megatrends — aging populations, urbanization and rapid development in Asia. Still, real estate investments are often misunderstood. For example, many investors confuse private real estate and listed REITs — two approaches to real estate exposure with different risk-return characteristics. Moreover, many invest only in the U.S., missing more attractive growth opportunities in a global market. This paper demonstrates the benefits of a diversified real estate portfolio that includes multiple categories of private real estate, listed REITs and global market exposure.

DIFFERENCES BETWEEN PRIVATE REAL ESTATE AND LISTED REITS

Private real estate — a distinct asset class separate from stocks and bonds — represents direct ownership of high-quality commercial property in four primary categories: offices, apartments, retail and industrial.[1] Listed REITs, a category of equity securities, are issued by companies that own and manage pools of commercial property. Both represent large markets rich in opportunity, with listed REITs valued at more than $1 trillion and private real estate at more than $500 billion in two leading U.S. indexes (Exhibit 1).

Exhibit 1: Private real estate and listed REITs represent large markets



Data as of 29 Dec 2017. The following indexes are represented: U.S. private real estate (NCREIF Property Index, or NPI), U.S. equity listed REITs (FTSE NAREIT U.S. Real Estate Index). It is not possible to invest in an index. Performance for indices does not reflect investment fees or transaction costs.

Sources: NCREIF, FTSE Russell.

Key differences between private real estate and listed REITs

- **Returns:** Private real estate returns historically have been competitive with listed REITs, bolstered by a premium compensating investors for illiquidity. Returns for both categories tend to be more stable over market cycles because income from long-term leases represents a larger proportion of total returns, compared to other asset classes.
- **Volatility:** Private real estate volatility has been lower, partly due to infrequent trading with prices determined by periodic appraisals. Listed REITs' higher volatility largely reflects broad stock market sentiment and investment flows, although higher leverage is also a factor. As a result, listed REITs can trade at substantial premiums or discounts to underlying real estate values, while private real estate returns tend to more closely reflect property market fundamentals.
- **Liquidity**: Listed REITs can play an essential role in providing liquidity to support portfolio rebalancing, compensating for private real estate's illiquidity.

Diversification benefits

Diversification benefits, which help to manage risk, are a primary reason for including real estate in multi-asset portfolios. As a distinct asset class, private real estate has a different risk-return profile than stocks and bonds. Factors include stability of income, illiquidity and infrequent trading that reduce volatility. This is clearly reflected in Exhibit 2 showing low or negative historical correlations with stocks and bonds, 0.17 and -0.08, respectively. Although publicly traded, listed REITs' correlations also have been relatively low with stocks and bonds, 0.40 and 0.09, respectively. Combining private real estate and listed REITs may provide additional diversification benefits based on their record of low correlations to each other, 0.08, reflecting differences in pricing, trading and leverage.

Exhibit 2: Correlations between U.S. real estate, bonds and stocks

(1997-2017)

	U.S.			
	Private real estate	Listed REITs	Stocks	Bonds
Private real estate				
Listed REITs	0.08			
Stocks	0.17	0.40		
Bonds	-0.08	0.09	-0.33	

Data as of 31 December 2017. Indexes represented: Private real estate (NCREIF Fund Index–Open End Diversified Core Equity (NFI–ODCE), REITs (FTSE NAREIT U.S. Real Estate Index), U.S. stocks (S&P 500 Index), U.S. bonds (Bloomberg Barclays U.S. Aggregate Bond Index). It is not possible to invest in an index. Performance for indices does not reflect investment fees or transactions costs.

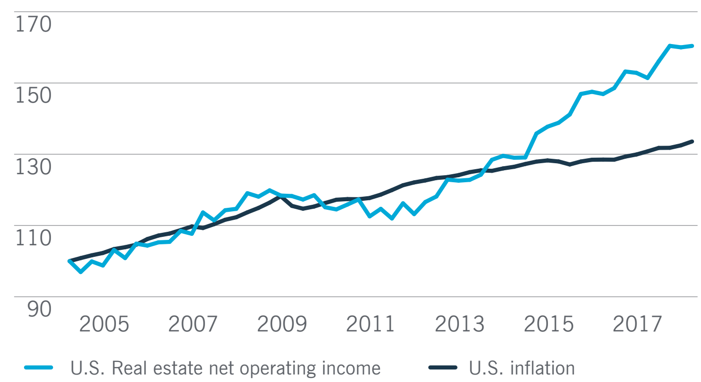
Source: MacroBond

Inflation hedging

Private real estate and REITs provide a natural hedge against inflation, with commercial rents and property values highly correlated with rising prices. Exhibit 3, for example, shows that U.S. private real estate's net operating income (NOI) has closely tracked increases in the consumer price index[2] since 2004 and exceeded it since 2013.

Exhibit 3: U.S. private real estate income versus inflation growth

Real estate net operating income (NOI) has outpaced inflation since 2013



Data as of 31 Dec 2017. U.S. private real estate net operating income (NOI) is based on the NCREIF Fund Index–Open End Diversified Core Equity (NFI–ODCE). U.S. inflation data reflect the Consumer Price Index For All Urban Consumers (CPIU). Sources: NCREIF, Moody's Analytics.

COMPARING INDEX PERFORMANCE: PRIVATE REAL ESTATE VS. LISTED REITS

This section compares the performance and diversification benefits of U.S. private real estate and listed REITs using index data for the 21-year period, 1997–2017. We show the benefits of combining the two categories using 80% private real estate and 20% listed REITs — an allocation designed to provide additional liquidity and diversification. Private real estate is represented by NCREIF Fund Index – Open End Diversified Core Equity (NFI – ODCE) representing lower-risk investments in U.S. operating properties across regions and property types. Listed REITs performance is represented by FTSE NAREIT U.S. Real Estate Index covering equity REITs across sectors.

Performance summary

21-year period 1997–2017

- U.S. private real estate exhibited slightly lower absolute returns than listed REITs, 9.2% vs. 9.6%, with lower volatility, 11.1% vs. 19.1% (Exhibit 4).

- As a result of lower volatility, private real estate's risk-adjusted returns were higher, 0.71 vs. 0.49, based on Sharpe ratio.
- Combining the two categories in an 80% / 20% split improved performance. Absolute returns increased and volatility declined, producing higher risk-adjusted returns, 0.82.
- Low correlations between the two categories, 0.08, provided diversification benefits that contributed to improved performance.

Exhibit 4: Private real estate offered better risk-adjusted returns than listed REITs.

Combining both categories improved performance

1997-2017	Private real estate	Listed REITs	Combined (80% private real estate / 20% listed REITs)
Total returns (average annual)	9.2%	9.6%	9.7%
Volatility (standard deviation)	11.1%	19.1%	9.9%
Risk-adjusted returns (Sharpe ratio)	0.71	0.49	0.82

Data for the period 01 Jan 1997 – 31 Dec 2017. The indexes represented are as follows: U.S. private real estate (NCREIF Fund Index – Open End Diversified Core Equity (NFI – ODCE), listed REITs (FTSE NAREIT U.S. Real Estate Index). Performance over different time periods may have been less favorable than shown above. It is not possible to invest in an index. Performance for indices does not reflect investment fees or transaction costs. Source: MacroBond.

PORTFOLIO ANALYSIS — U.S. REAL ESTATE

This section explores the impact of adding U.S. private real estate and listed REITs to standard 60% / 40% stock-bond portfolios. First, we compared the results of separately adding 10% allocations to each category, replacing 5% each of stocks and bonds. Next, we compared these results with adding a combined 10% allocation consisting of 8% private real estate and 2% listed REITs. We show results based on returns for U.S. indexes for the 21-year period, 1997– 2017 (Exhibit 5). (We chose 10% as a reasonable allocation to an illiquid alternative asset class. The 2% allocation to REITs in the combined portfolio was designed to provide additional liquidity and diversification.)

Results

- **10% allocation to private real estate:** Improved returns relative to a stock-bond portfolio, producing a larger reduction in volatility and a larger increase in risk-adjusted returns, compared to adding listed REITs.
- **10% allocation to listed REITs:** Improved returns relative to a stock-bond portfolio, but with higher volatility and lower risk-adjusted returns compared to adding private real estate.
- **Combined 10% allocation to private real estate and listed REITs:** Improved absolute returns and reduced volatility for better risk-adjusted returns, compared to a stock-bond portfolio. Results were similar to adding only private real estate, but including REITs improved liquidity.

Exhibit 5: Diversifying stock-bond portfolios with U.S. real estate

Private real estate provided the largest increase in risk-adjusted returns

1997-2017	60% stock/ 40% bond	Adding 10% private real estate	Adding 10% listed REITs	Adding 10% combined*
Total returns (average annual)	7.6%	7.8%	7.9%	7.9%
Volatility (standard deviation)	10.6%	9.9%	10.7%	10.0%
Risk-adjusted returns (Sharpe ratio)	0.58	0.64	0.61	0.63

*10% combination includes 8% private real estate and 2% listed REITs

Data for the period 01 Jan 1997 – 31 Dec 2017. Indexes represented: U.S. stocks (S&P 500), U.S. bonds (Bloomberg Barclays U.S. Aggregate Bond), private real estate (NCREIF Fund Index – Open End Diversified Core Equity (NFI – ODCE), listed REITs (FTSE NAREIT U.S. Real Estate Index). Performance over different time periods may have been less favorable than shown above. It is not possible to invest in an index. Performance for indices does not reflect investment fees or transaction costs.

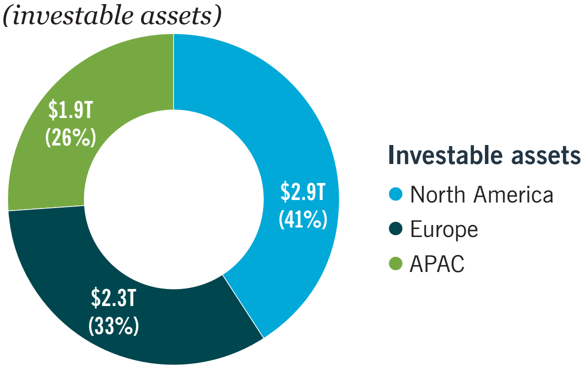
Source: MacroBond

BENEFITS OF DIVERSIFYING PORTFOLIOS WITH GLOBAL REAL ESTATE EXPOSURE

Investors exposed only to U.S. real estate are missing opportunities for diversification and faster growth in non-U.S. markets, particularly in the Asia-Pacific region. North America, for example, represents less than half the $7.1 trillion global institutional real estate market that includes the U.S., Canada, Europe and Asia-Pacific (Exhibit 6). A global approach offers diversification because real estate markets are not monolithic—they reflect different levels of maturity, growth rates and stages of the real estate cycle. Asia-Pacific, for example, is growing at more than twice the rate of the U.S. and Europe, with projected annual growth of 4.8% between 2017 and 2026, compared to 1.8% in the U.S. and 1.7% in Europe.[3] In fact, the Asia-Pacific economy is expected to grow more than 50% by 2026, compared to about 16% each in the U.S. and Europe.

Exhibit 6: North America represents less than half the global real estate market

Global private institutional real estate market (investable assets)



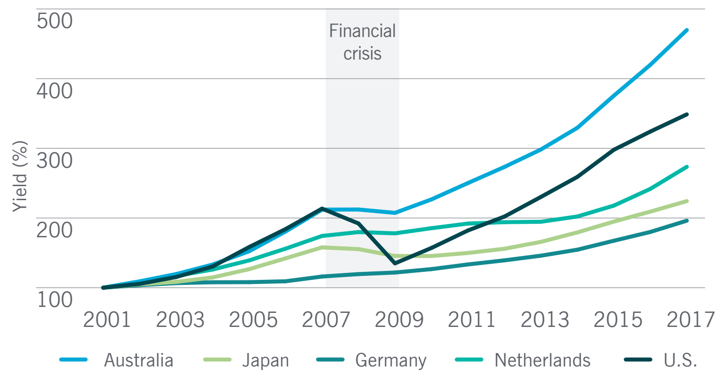
Data as of 31 Dec 2016. Estimated market size based on institutional investable assets.
Source: MSCI.

Global market divergence can provide diversification

Global exposure is important because markets respond to different economic and demographic trends affecting particular countries and regions. Exhibit 7 shows how private real estate markets have diverged between the U.S. and other developed markets over time. During the financial crisis, for example, U.S. private real estate dropped 22% in 2008-2009, compared with much smaller declines of 2% in Australia and 8% in Japan, and 5% appreciation in Germany.[4]

Exhibit 7: Real estate market divergence: global vs. U.S.

Private real estate index annual returns 2001-2017



Data as of 31 Dec 2017. Non-U.S. private real estate performance represented by MSCI indexes, U.S. private real estate represented by NCREIF Fund Index–Open End Diversified Core Equity (NFI – ODCE). It is not possible to invest in an index. Performance for indices does not reflect investment fees or transaction costs.
Sources: MSCI, NCREIF.

Limiting exposure to a single market, even the sizeable U.S., can undermine diversification and pose additional risk, particularly during periods of market stress. Moreover, investors should consider markets where faster economic growth may create better opportunities in the future, rather than relying only on developed markets based on their historical performance.

Performance differences across countries and regions contribute to global real estate's ability to diversify portfolios of global stocks and bonds. Exhibit 8 shows the low correlations between global private real estate and stocks and bonds (0.24 and -0.28, respectively).

> *"Limiting exposure to a single market, even the sizeable U.S., may undermine diversification and pose additional risk, particularly during periods of market stress.*

Exhibit 8: Correlations between global real estate, stocks and bonds

(2007-2017)

	Global			
	Private real estate	Listed REITs	Stocks	Bonds
Private real estate				
Listed REITs	0.12			
Stocks	0.24	0.88		
Bonds	-0.28	0.03	-0.07	

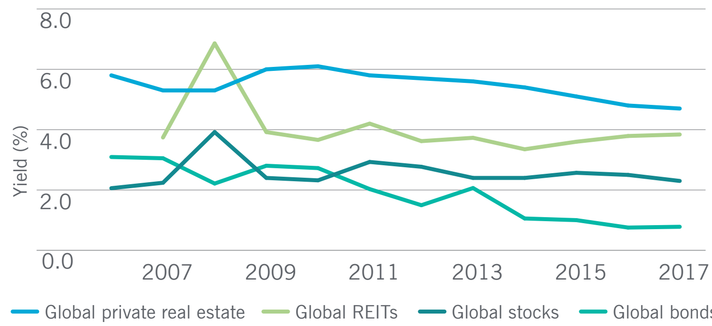
Data as of 31 December 2017. Indexes represented: Global private real estate (MSCI Global Total Return), global listed REITs (FTSE EPRA/NAREIT), global stocks (FTSE All-World Index), global bonds (Bloomberg Barclays Global Aggregate Bond Index). It is not possible to invest in an index. Performance for indices does not reflect fees or transaction costs. Source: MacroBond

Real estate's income premium drives performance

Global real estate's income premium and low volatility explain a record of attractive returns that make this asset class a complement to stocks and bonds. Private real estate's income returns have been higher and more stable than other asset classes because they depend on long-term rental contracts spanning three to 15 years, depending on market and sector. Real estate leases staggered over different time periods help to reduce the impact of economic cycles on income, which remains relatively consistent — even during periods of economic distress. Exhibit 9 shows that income returns for global private real estate and REITs have been higher and more stable over time, compared to the yield on stocks and bonds. For example, global private real estate's yield spread over global government bonds and stocks averaged 3.6 and 2.8 percentage points, respectively, for the 11-year period 2007-2017. The yield spread contributed to global private real estate's competitive returns, relative to global stocks and bonds (Exhibit 10). More recently, real estate's yield advantage has increased as global bond yields have declined more rapidly, making real estate an attractive alternative to bonds in a low-yield environment.

Exhibit 9: Global real estate's income premium over other asset classes

Comparing income yield: Global real estate, stocks and government bonds



Data for the period 1 Jan 2006 – 31 Dec 2017. Asset classes are represented by the following indexes: global private real estate (MSCI Global Total Return), global REITs (FTSE EPRA/NAREIT), global stocks (FTSE All-World Equity Index), global government bonds (FTSE Global Government Bond -7-10 year). It is not possible to invest in an index. Performance for indices does not reflect investment fees or transaction costs. Source: MacroBond, MSCI.

Exhibit 10: Global private real estate's record of attractive returns and low volatility

Comparing returns and risk for global asset classes

2007-2016	Global private real estate	Listed REITs	Global stocks	Global bonds
Total returns	5.9%	2.1%	6.3%	3.7%
Standard deviation	6.3%	22.6%	18.4%	4.1%

Data as of 31 December 2017. Indexes represented: Global private real estate (MSCI Global Total Return), global listed REITs (FTSE EPRA/NAREIT), global stocks (FTSE All-World Index), global bonds (Bloomberg Barclays Global Aggregate Bond Index). It is not possible to invest in an index. Performance for indices does not reflect fees or transaction costs. Source: MacroBond

Private real estate offers better global coverage than less-mature REITs markets

A final consideration is how to gain exposure to global market opportunities. Investors should consider market size and maturity differences between private real estate and listed REITs. The global private real estate market is four times the size of the $1.7 trillion[5] global listed REITs market, with deeper coverage across developed markets. In contrast, listed REITs are concentrated in the U.S., which represents $1.1 trillion, or nearly two-thirds of the global market. The depth and diversification of the U.S. listed REITs market would be difficult for investors to replicate outside the U.S. without accessing the deeper and more mature private real estate markets.

CONCLUSIONS

- Private real estate is a distinct asset class offering powerful diversification benefits, based on its record of attractive risk-adjusted returns, lower volatility than stocks and higher, more stable income than high-grade public bonds.
- Investors should understand the important differences between private real estate and listed REITs, which represent a subcategory of stocks. With lower volatility, private real estate historically has provided better risk-adjusted returns. Listed REITs can play an essential role in providing liquidity for portfolio rebalancing to compensate for private real estate's illiquidity.
- Combining private real estate and listed REITs can improve portfolio diversification, based on their history of low correlations.
- A global approach to real estate offers the potential to further improve long-term performance and diversification through exposure to non-U.S. markets benefiting from divergent and faster growth, particularly in the Asia-Pacific region.

About Nuveen

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Endnotes

1 Additional private real estate sub-categories include student housing, senior housing and data centers.

2 Consumer Price Index For All Urban Consumers (CPI-U) measures changes in the price of a basket of goods and services purchased by urban consumers.

3 Oxford Economics.

4 Based on changes in index levels between 31 December 2007 and 31 December 2009 for non-U.S. private real estate markets represented by MSCI indexes and U.S. private real estate represented by NCREIF Fund Index–Open End Diversified Core Equity (NFI – ODCE).

5 EY, Global Perspectives: 2016 REIT Report.

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