Investment Stewardship Guidance

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Investing in Public vs. Private Real Estate: Are REITs the Right Investment for You?

JEREMY ZIRIN, CAIA, SENIOR RESEARCH ANALYST - REAL ASSETS

Real estate investments are a core part of institutional portfolios and provide returns through a combination of income and appreciation. Different vehicle structures offer options in regards to access, liquidity, and sector exposure. Ownership can be direct through individual properties and separately managed accounts, or indirect through publicly traded real estate investment trusts (REITs), private real estate commingled vehicles, and private REITs. Due to the recent creation of a new real estate sector within the Global Industry Classification system ("GICS") as well as the current market environment, we feel it is an appropriate time to re-visit the available options for institutional investors to access real estate, specifically as it relates to public REITs. This newsletter examines some of the unique characteristics of public REITs compared to private real estate investments and compares the benefits of private real estate versus public REITs.

Recent News:

The S&P Dow Jones Indices and MSCI Inc. announced the creation of a new real estate sector, formerly included in the financial sector, within the GICS system[1] which became effective August 31, 2016. The new real estate sector marks the 11th GICS sector and the first time a new sector has been added to the GICS classification since its inception in 1999. The creation of a separate real estate sector recognizes the growth in both size and complexity of the asset class. Real estate, which began as two sub-industries, has grown in complexity over time to now contain a total of 13 sub-industries. In addition, REITs have their own unique valuation metrics, correlation profiles, and business drivers compared to other financial companies.

Exhibit 1: Private & Public Real Estate Characteristics

12/31/2016	NPI	NCREIF-ODCE	FTSE NAREIT All Equity
Inception	4Q77	1Q78	1Q72
# of Properties	7,364	2,510	170
Value ($M)	$525,273	$174,269	$920,609
Leverage	0%	22%	32%
Yield	4.8%	4.5%	4.0%
Public/Private	Private	Private	Public

Notes: Value represents net real estate assets for NPI and NCREIF-ODCE and market capitalization for NAREIT. The NPI is an unlevered index; however, half of the properties in the NPI utilize leverage. The number of properties (170) represents number of constituents. The formation of the FTSE NAREIT All Equity Index dates back to March 2006, however, NAREIT launched the Index in 1972.

Source: NCREIF, www.reit.com, FTSE

[1] See "New GICS Real Estate Sector" newsletter for more information

Performance:

Public REITs trade on a listed stock exchange, which has both advantages and disadvantages. Naturally, REITs are affected by the systematic risk associated with the broader equity market, ultimately reducing their diversification benefits. Additionally, public REITs incorporate the use of leverage, typically 30%, compared to the NCREIF Property Index ("NPI")[2] which is unlevered. Accordingly, REITs are an imperfect substitute for direct real estate, and performance data reflects these differences.

Exhibit 2 shows the annualized and calendar year returns for both the FTSE NAREIT All Equity Index and the NCREIF Property Index. Notice that the NPI showed positive returns in 2007 whereas the FTSE NAREIT showed negative returns; the difference in returns illustrates how private real estate tends to lag the market. Conversely, because REITs are publicly traded, they tend to react significantly more quickly to market events than those of direct real estate, particularly the NPI. The same phenomenon was true during the recovery from the global financial crisis as seen from the returns in 2009 when REITs recovered much more quickly than private real estate.

Exhibit 2: Annualized and Calendar Year Performance

12/31/2016	Qtr	1Yr	3Yr	5Yr	10Yr
NPI	1.7%	8.0%	11.0%	10.9%	6.9%
NAREIT	-3.3%	8.6%	12.7%	12.0%	5.1%

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
NPI	8.0%	13.3%	11.8%	11.0%	10.5%	14.3%	13.1%	-16.9%	-6.5%	15.8%
NAREIT	8.6%	2.8%	28.0%	2.9%	19.7%	8.3%	27.9%	28.0%	-37.7%	-15.7%

Source: Bloomberg, NCREIF

The inherent market exposure of public REITs makes their performance much more volatile than private real estate, especially during years of severe market events such as the global financial crisis. Exhibit 3 illustrates the long-term risk-adjusted returns of the NPI and NAREIT benchmarks versus other asset classes.

Exhibit 3: Risk and Return Matrix (1979-2016)

Source: Bloomberg, NCREIF

[2] The NCREIF Property Index ("NPI") is a composite of real estate investment performance from a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only.

Max Drawdown:

Because they are publically traded and thus systematically exposed to the broad equity market REITS are subject to significantly greater max drawdown[3] risk compared to private real estate. As shown in Exhibit 4, the max drawdown of the NAREIT All Equity REIT Index is much more severe relative to the NPI and even the S&P 500. Ultimately, the ability to buy and sell REITs on a daily basis makes them more volatile and susceptible to severe market events (such as the global financial crisis). On the other hand, direct investments in real estate (i.e. private investments) tend to only offer quarterly liquidity and as a result, assets are stickier. These differences explain the bifurcation of investor type: public REITs are traded on an exchange and impose minimal size[4] requirements, thus retail investors most commonly purchase REITs. Institutional investors, however, are larger in size and can easily meet the minimum investment requirements; they also tend to react more slowly to market events, so private real estate investments are typically a better fit.

Exhibit 4: Maximum Drawdown 1979-2016

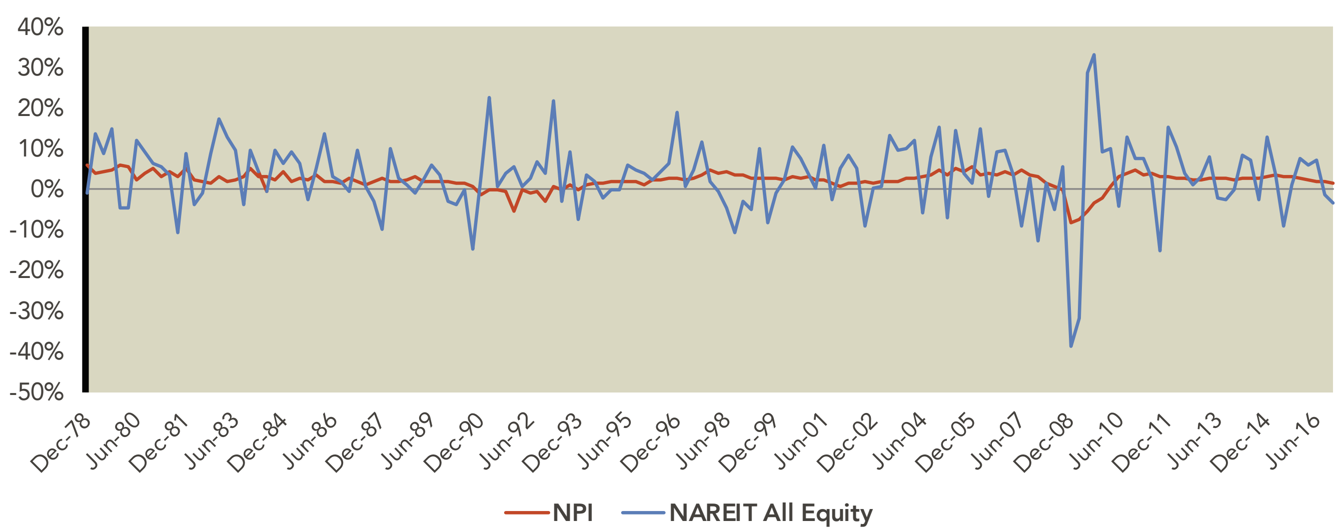
	S&P 500	NAREIT Equity Index	NCREIF Property Index
Cumulative Return	-47.7%	-65.4%	-23.9%

Source: Bloomberg, NCREIF

Smoothing:

Public REITs offer many advantages for investors including daily liquidity, transparent pricing through stock quotes, and access to diversified property portfolios. However, depending on an investor's risk tolerances, the advantages may come with a price. The performance of a public REIT is partially determined by the underlying properties, and partially by the public equity markets (the premium or discount the markets place on those assets). On the other hand, private real estate performance is based on property-specific returns, and impacted less by investor sentiment. Exhibit 5 demonstrates this phenomenon.

Exhibit 5: Quarterly Returns, NPI and NAREIT All Equity Indices (1979-2016)



Source: Bloomberg, NCREIF

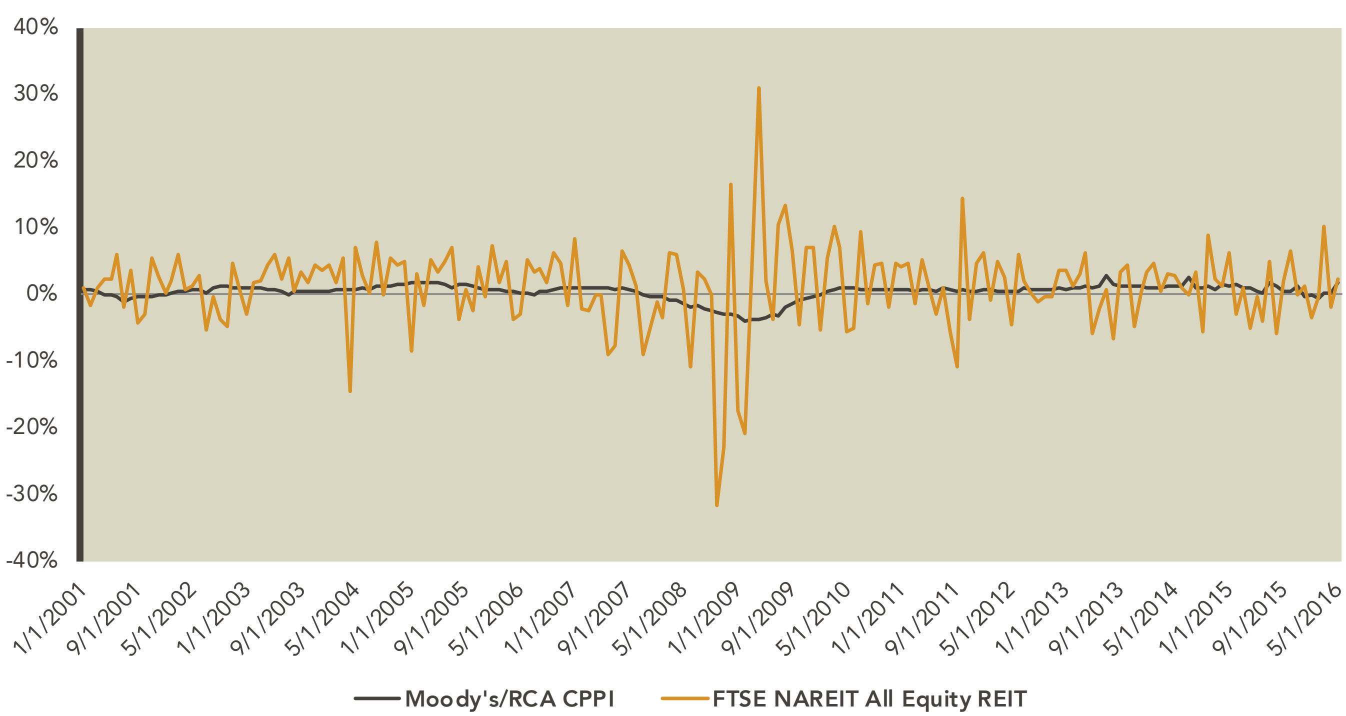
[3] Max drawdown is the maximum loss from peak to trough.

[4] Based on dollar amounts

One of the most notable differences between REITs and direct real estate is the frequency of appraisals, or better said, lack of frequency within the NPI compared to public REITs which are valued daily. The NPI reports returns on a quarterly basis, but not all properties are appraised every quarter. Within the NPI, some properties are appraised quarterly while other properties are appraised less frequently (i.e. once every year). Because direct real estate is appraised on a less frequent basis, investors are often critical of the risk and return profile of the NPI and support the notion that it reports lower volatility as a result of lagged reporting. This notion is referred to as the "smoothing effect" and is a direct result of these infrequent appraisals. It is worth noting, however, that the lack of frequent appraisals has been addressed as quarterly property appraisals among the funds within the NCREIF-ODCE[5] Index are now standard. That said, quarterly appraisals vs. daily pricing basis still leads to some form of price smoothing.

Further expanding upon the notion of smoothing and the differentiated risk characteristics, Exhibits 6 and 7 demonstrate this by comparing the FTSE NAREIT to the Moody's/RCA Commercial Property Price Index ("CPPI"). The CPPI uses a repeat-sales regression to measure commercial property price changes across various property sectors within the U.S. and is calculated on a monthly basis. Since the CPPI uses repeat sales of commercial properties and is calculated more frequently than the NPI we compare the CPPI Index to the FTSE NAREIT All Equity Index as a proxy for unsmoothed private real estate returns. As demonstrated from Exhibits 6 and 7, the CPPI shows favorable long-term risk-adjusted returns compared to public REITs. Interestingly, the relatively low risk of the CPPI demonstrates that private real estate is not as volatile of an asset class as investors might think. Although the CPPI is not a perfect proxy for unsmoothed private real estate returns, these results suggest that even after adjusting for smoothing, private real estate is naturally not that volatile of an asset class and instead, public REITs appear to exaggerate real estate's risk and returns as a function of being traded in the public markets.

Exhibit 6: Moody's/RCA CPPI vs. FTSE NAREIT



Source: Bloomberg

[5] The NCREIF-ODCE is a quarterly index of core open-ended funds.

Exhibit 7: Risk Adjusted Returns

Jan 2001 - Dec 2016	Moody's/RCA CPPI	FTSE NAREIT All Equity REIT
Return	5.0%	11.0%
Stdev	4.0%	21.8%
Sharpe	0.92	0.44

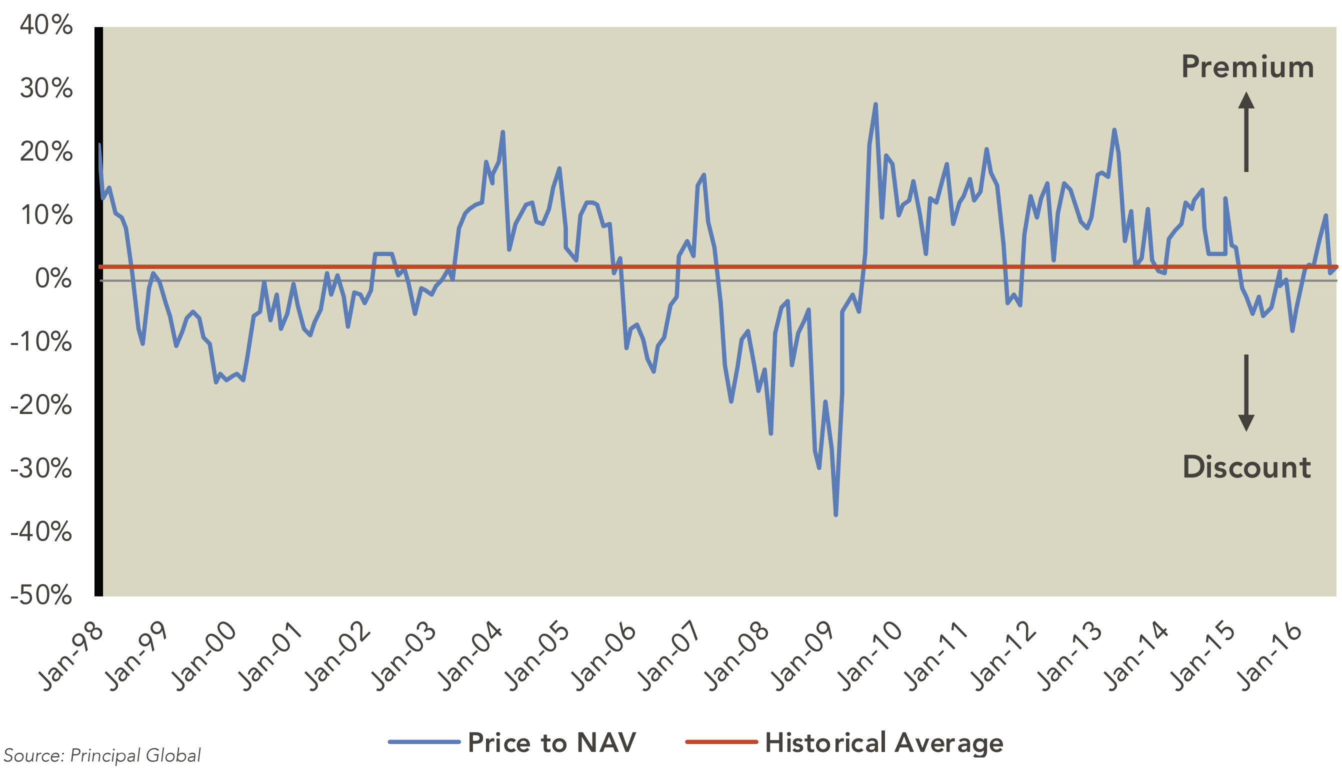
Source: Bloomberg

Valuations:

Since REITs own and operate income producing real estate and are required to distribute at least 90% of their taxable income as dividends to shareholders, the traditional valuation metrics used on publically-traded stocks such as price-to-book ratio are less meaningful. Instead, REITs are better valued by comparing Net Asset Value ("NAV"), just like their private real estate counterparts. The NAV attempts to capture the value of all the underlying holdings (properties) within the publically traded REIT. The challenge with NAV, however, is that the calculations are subjective as NAV-based pricing models differ across the industry.

Despite the difficulty in calculating individual publically traded REIT NAVs, a generally accepted metric to evaluate if a publically listed REIT is trading at a premium or discount is by looking at the stock price-to-NAV ratio. Exhibit 8 demonstrates this by examining a broad universe of publically traded REITs and comparing their current stock price-to-NAV.[6] As illustrated below, stock prices constantly fluctuate above and below (premium / discount) the intrinsic value of the underlying properties unlike private real estate which trades at NAV.

Exhibit 8: REIT Price-to-NAV

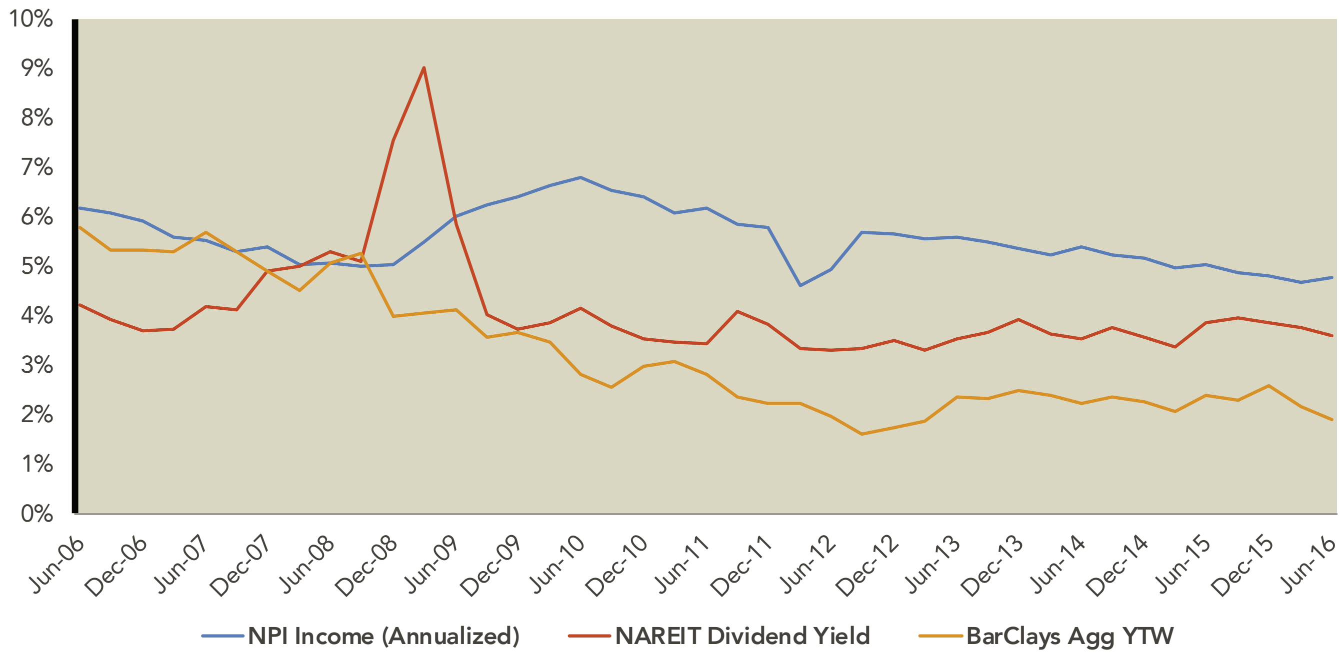


Source: Principal Global

[6] The data on the chart represents the stock price divided by NAV per share of each stock in Principal's U.S. investment universe for REITs and calculated as a weighted average based on market cap. The data uses consensus NAV per share estimates.

From an income perspective, private real estate has historically offered higher yields than public REITs as demonstrated in Exhibit 9. Not only have yields on private real estate been higher, they have also been more consistent and less volatile, especially during severe market dislocations, further highlighting a fundamental benefit of owning private real estate over public REITs.

Exhibit 9: Historical Yields

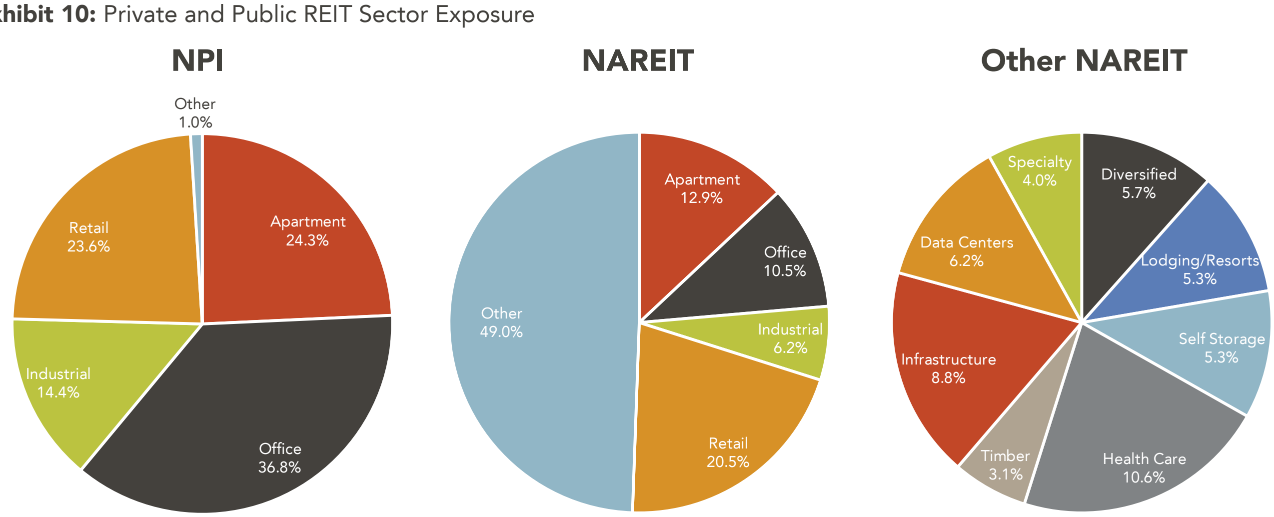


Source: Bloomberg, REIT.com

Sector Breakdown:

Sector breakdown is another area of differentiation when it comes to REITs vs. private real estate. Exhibit 10 shows that not only are the percentage allocations to the four main real estate sectors (industrial, retail, office, and multifamily) different from the NPI, but they also differ by sub-sector. Specifically, REITs have a large exposure to "other" real estate which includes sub-sectors such as self-storage, hotel, healthcare, specialty and diversified. This is an important distinction among REITs because these alternative sub-sectors have their own unique characteristics and are all inherently more volatile as shown by the historical return dispersion in Exhibit 11.

Exhibit 10: Private and Public REIT Sector Exposure



Source: NCREIF, REIT.com

Exhibit 11: Public REIT Sector Calendar Year Performance and Cumulative Standard Deviation

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Stdev
Healthcare +2.1%	Self-Storage +5.0%	Hotel +67.2%	Residential +46.0%	Self-Storage +35.2%	Industrial: +31.3%	Hotel +27.2%	Residential +40.0%	Self-Storage +40.6%	Industrial: +30.7%	Self-Storage 24%
Industrial: +0.4%	Healthcare -12.0%	Office: +35.5%	Hotel +42.8%	Residential +15.4%	Retail: +26.7%	Self-Storage +9.5%	Healthcare +33.3%	Residential +17.1%	Hotel +24.3%	Residential 25%
Retail: -15.8%	Residential -24.9%	Residential +30.8%	Retail: +33.4%	Healthcare +13.6%	Healthcare +20.4%	Industrial: +7.4%	Hotel +32.5%	Retail: +4.6%	Office: +13.7%	Healthcare 26%
Office: -19.0%	Diversified -28.2%	Retail: +27.2%	Self-Storage +29.3%	Retail: +12.2%	Self-Storage +19.9%	Office: +5.6%	Self-Storage +31.4%	Industrial: +2.6%	Diversified +10.3%	Office: 27%
Diversified -22.3%	Office: -41.1%	Healthcare +24.6%	Diversified +23.8%	Diversified +2.8%	Office: +14.2%	Diversified +4.3%	Retail: +27.6%	Office: +0.3%	Healthcare +6.4%	Diversified 28%
Hotel -22.4%	Retail: -48.4%	Diversified +17.0%	Healthcare +19.2%	Office: -0.8%	Hotel +12.5%	Retail: +1.9%	Diversified +27.2%	Diversified -0.5%	Residential +4.5%	Retail: 30%
Self-Storage -24.8%	Hotel -59.7%	Industrial: +12.2%	Industrial: +18.9%	Industrial: -5.2%	Diversified +12.2%	Residential -5.4%	Office: +25.9%	Healthcare -7.2%	Retail: +1.0%	Hotel 39%
Residential -25.2%	Industrial: -67.5%	Self-Storage +8.4%	Office: +18.4%	Hotel -14.3%	Residential +6.9%	Healthcare -7.1%	Industrial: +21.0%	Hotel -24.4%	Self-Storage -8.1%	Industrial: 43%

Source: Bloomberg, NCREIF

Correlations:

The market capitalization of public REITs is consistent with small-cap stocks, as are correlations, which is not surprising as they are often included in small-cap strategies (see following for more detail). Predictably, REITs are not especially beneficial for diversification benefits when paired with an equity-heavy portfolio. Instead, as Exhibit 12 illustrates, private real estate (NPI and NFI ODCE entries in the table) are far more beneficial for diversification benefits when paired with equities.

Exhibit 12: Correlations (1997-2016)

20-Year Correlations (1997 - 2016)

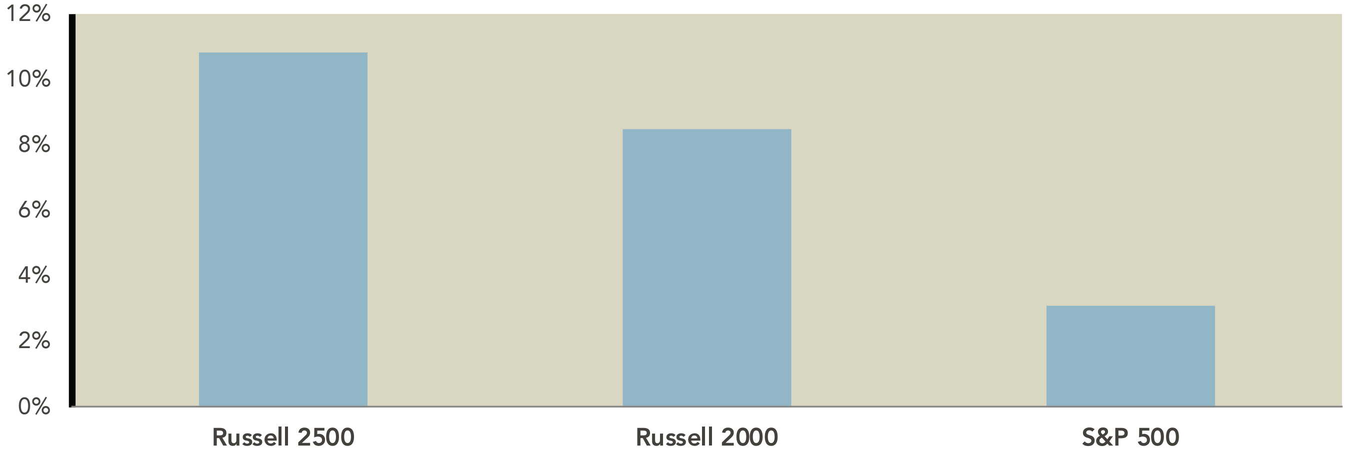
	NPI	NFI ODCE	BarCap Agg	NAREIT	S&P	EAFE	R2000
NPI	1						
NFI ODCE	0.98	1					
BarCap Agg	-0.08	-0.11	1				
NAREIT	0.22	0.18	0.03	1			
S&P 500	0.21	0.18	-0.35	0.58	1		
EAFE	0.15	0.11	-0.28	0.54	0.87	1	
R2000	0.14	0.12	-0.37	0.68	0.90	0.83	1

Source: Bloomberg, NCREIF

Exposure to Equity Allocations:

Investors with allocations to U.S. equity investments, particularly U.S. small and smid-cap equities, as demonstrated from Exhibit 13, may already have exposure to REITs within their portfolios. Before receiving their own individual GICS sector, REITs fell under the financials GICS sector and many investment managers, both active and passive, maintain exposures to REITs within their portfolios. Since the GICs created a dedicated real estate sector, both active and passive managers are likely to increase their exposure to REITs in order to be current with the new benchmark weightings. Consequently, a dedicated investment to REITs may not be necessary since many U.S. equity allocations may already feature an allocation to the asset class.

Exhibit 13: Real Estate's Weight in Major Equity Indices



Source: Bloomberg. Data as of 8/31/2016

REITs and Defined Contribution Plans:

Since private real estate investments are less liquid than publicly listed real estate and are typically limited to qualified investors, private real estate does not have a significant presence in the defined contribution ("DC") market, particularly in 401K plans which have stricter liquidity requirements. As a result of this, public REIT mutual funds are widely used as standalone investment options within 401K and other DC-like plans. While it is clear from the data presented in this newsletter that public REITs are different from private real estate investments, REITs still provide a level of diversification within a portfolio and may act as a good option within a DC plan or for investors who do not meet the requirements for private real estate investments.

As the DC market continues to evolve and grow in size, we have seen progression towards incorporating private real estate exposure within DC plans. While private real estate investments do not work well as a standalone option within a DC fund lineup, they have, however, found a place within customized solutions. Due to the valuation and liquidity requirements within DC plans, private real estate solutions tend to feature large exposures to public REITs for liquidity needs. Ultimately, we expect this trend (use of private real estate investments) to continue and new solutions to enter the market as demand for alternatives within the DC world progresses.

Conclusion:

In this newsletter we discussed some of the distinctive characteristics of public REITs compared to private real estate investments. From a performance perspective, REITs have shown to outperform private real estate during various short-term periods, but at the cost of higher volatility. Additionally, yields on public REITs have historically been lower than those of private real estate. Because of their systematic market exposure and daily liquidity, REITs tend to react more quickly and to a greater degree and as a result exhibit higher max drawdowns. From a market cap perspective, REITs are similar to small-cap U.S. equity stocks and therefore are highly correlated to the broader equity market. Sector exposure varies from private real estate in that public REITs have exposure to alternative real estate sub-sectors which have unique risk and return characteristics and are more volatile than the core sectors. Valuations of public REITs based on price-to-NAV have historically experienced major swings from intrinsic value while private real estate always trades at NAV.

Public REIT Advantages:

- Access to real estate with minimum requirements
- Daily liquidity
- Flexibility to strategically overweight desired subsectors
- Viable DC solution

Public REIT Disadvantages:

- Systematic risk to equity markets
- Lower yields vs. private real estate
- High correlation to public equities, particularly small-cap equities
- Greater volatility and as a result, enhanced potential for greater losses (max drawdown)
- Exposure to alternative real estate sectors which may be more volatile

The use of a public REIT allocation may be considered if an investor is unable to invest in a private vehicle. Public REITs are the dominant vehicle choice in DC plans and are likely to continue gaining market share with the creation of the new real estate GICS sector. However, based on the overall advantages and disadvantages, we recommend private real estate investments for investors who can meet the minimum requirements and want exposure without systematic equity market risk.

PREPARED BY MARQUETTE ASSOCIATES

180 North LaSalle St, Ste 3500, Chicago, Illinois 60601
CHICAGO I BALTIMORE I PHILADELPHIA I ST. LOUIS

PHONE 312-527-5500
WEB marquetteassociates.com

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