# REIT P/NAV Discounts Herald Potential Buying Opportunity

## Overview

With the S&P up almost up almost 22% since the start of 2017 (24% including dividends), REITs have disappointed, producing total returns of about 6% over the same time frame, underperforming by roughly 18% cumulatively over the past six quarters[1]. But where do we go from here?

Historically, when REITs appear to trade at discounts to the value of their underlying real estate, our analysis shows that a buy-and-hold strategy for relatively longer term periods tends to have strong return potential relative to both private real estate, as measured by the NCREIF Property Index (NPI), as well as to the S&P 500. This is especially the case when those discounts are in excess of 10%. As of 5/31/2018, the P/NAV for the REIT sector sat at a discount of 7.2%[2].

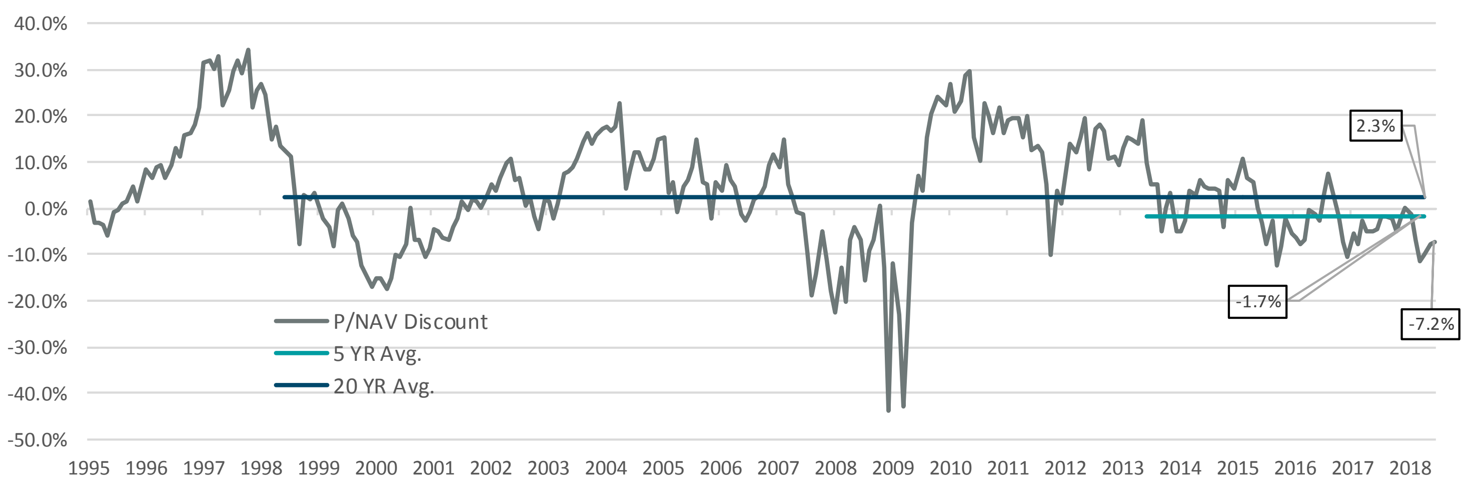
As our analysis that follows shows, these results do not hinge on outsized Funds From Operations (FFO) growth, nor does the outperformance require a strong-than-average economy. Yet despite the positive long-term implications, interest-rate moves could yield shorter-term volatility.

## Historical P/NAV and Future REIT Performance

On a 20-year basis, REITs have traded an average 2.3% premium to NAV, while on a more near-term 5-year basis, REITs have traded at an average 1.7% discount to NAV. Based on the 5/31/18 RMZ pricing at a discount of 7.2%, a simple P/NAV reversion to the 5-year average P/NAV discount would imply 6% upside, while a reversion to the 20-year average premium would imply a 10% gain. (See Figure 1).

To get a sense of average returns over different investment horizons, we analyzed the total return scenarios following outsized discounts to NAV across several time periods. When REITs are trading at discounts to NAV in excess of 5%, the 3- and 5-year returns outperformed by 1.9% and 5.1%, respectively, on average, relative to when REITs traded inside a 5% discount. The results are even more pronounced when the threshold moves to a 10% discount.

Figure 1: REIT P/NAV Historically




Sources: Green Street (NAV Prem/Disc.); as of June 2018.
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[1]Bloomberg (RMS and S&P Total Returns), data as of 5/31/18
[2]Green Street, data as of 5/31/18

Figure 2: Monthly P/NAV Discounts and Average RMS Returns in Following Periods

| Total Return P/NAV Prem. | 1Y After | # of Occurences | 3Y After | # of Occurences | 5Y After | # of Occurences |
|---|---|---|---|---|---|---|
| > -5% | 14.1% | 214 | 10.6% | 201 | 9.7% | 179 |
| < -5% | 8.0% | 56 | 12.4% | 45 | 14.7% | 43 |
| Difference | -6.1% | | 1.9% | | 5.1% | |
| > -10% | 12.9% | 243 | 10.6% | 221 | 10.0% | 197 |
| < -10% | 11.8% | 27 | 13.4% | 25 | 15.5% | 25 |
| Difference | -1.1% | | 2.8% | | 5.5% | |

Sources: Bloomberg (RMS Returns), Green Street (NAV discounts); as of 6/18. The underlying assumptions and these views are subject to change without notice. Past performance is not a reliable indicator of future returns.

Looking at quarters in which REITs traded at discounts in excess of 10%, we can make several observations. Over the subsequent five-year period:

- The RMS outperformed private real estate's proxy, the NCREIF Property Index (NPI), every time with the exception of December 1994.
- On average, the RMS outperformed the NPI by 7.8%.
- Relative to the S&P 500, the RMS outperformed by 6.1% annually on average. However, the relationship was not always in favor of the RMS, with the S&P outperforming in three of the nine observations.
- Outsized discounts tended not to last. In fact, over the past 27 years, discounts of more than 10% have persisted for only two quarters, on average. In the most recent observation when P/NAV breached the 10% mark (3/1/2018), the discount only lasted two months.

Figure 3: REIT NAV Discount > 10% and Index Performance in the 5 years that followed

| | | 5 YR CAGR | | |
|---|---|---|---|---|
| | REIT P/NAV | RMS | NPI | S&P 500 |
| 12/31/1994 | -10.2% | 8.1% | 11.8% | 28.7% |
| 9/30/1999 | -12.6% | 18.1% | 9.5% | -1.3% |
| 12/31/1999 | -15.1% | 21.7% | 9.9% | -2.3% |
| 3/31/2000 | -15.0% | 19.2% | 10.1% | -3.2% |
| 12/31/2007 | -22.7% | 5.6% | 2.1% | 1.7% |
| 6/30/2008 | -15.7% | 7.6% | 2.8% | 7.0% |
| 12/31/2008 | -11.9% | 16.7% | 5.7% | 17.9% |
| 3/31/2009 | -24.5% | 28.8% | 7.9% | 21.2% |
| 9/30/2011 | -10.2% | 15.8% | 11.2% | 16.4% |
| Average | -15.3% | 15.7% | 7.9% | 9.6% |

Sources: NCREIF (NPI total returns); NAREIT (REIT total returns); Green Street (NAV Prem/Disc.); as of June 2018. The underlying assumptions and these views are subject to change without notice. Past performance is not a reliable indicator of future returns.

## FFO Growth not necessarily the driver of outperformance

One might suspect that strong REIT returns following periods of steep discounts could be the result of cyclically improving fundamentals. However, this does not appear to be the case. In fact, whereas FFO growth has averaged 4.6% annually over the past 20 years, it has averaged little more than 3% in post-10% discount five-year periods. Moving that threshold to a 5% discount, FFO growth averaged 2.7%.

Figure 4: REIT NAV Discount > 10% and Average FFO Growth in the 5 years that followed

| | REIT P/NAV | Next 5 YR Avg. FFO Growth | RMS 5 YR CAGR |
|---|---|---|---|
| 12/31/1994 | -10.2% | NA | **8.1%** |
| 9/30/1999 | -12.6% | 3.6% | **18.1%** |
| 12/31/1999 | -15.1% | 3.3% | **21.7%** |
| 3/31/2000 | -15.0% | 3.4% | **19.2%** |
| 12/31/2007 | -22.7% | 1.0% | **5.6%** |
| 6/30/2008 | -15.7% | 1.7% | **7.6%** |
| 12/31/2008 | -11.9% | 2.3% | **16.7%** |
| 3/31/2009 | -24.5% | 2.5% | **28.8%** |
| 9/30/2011 | -10.2% | 6.4% | **15.8%** |
| Average | -15.3% | 3.0% | **15.7%** |
| Avg. since 4Q97 | 3.1% | 4.6% | 7.4% |
| Avg. since 4Q07 | 2.9% | 3.2% | 9.3% |

Sources: SNL (REIT FFO Growth); Green Street (NAV Premium/Discount); as of June 2018. The underlying assumptions and these views are subject to change without notice. Past performance is not a reliable indicator of future returns.

## Average GDP growth below historical norms following large NAV discounts

While FFO growth might not be an overall driver of total returns following periods of substantial P/NAV discounts, we note that outsized GDP growth is not a firm requirement either. GDP growth averaged 1.9% and 1.8% in the five years following 10% and 5% P/NAV discounts, respectively, compared with an average of 2.3% over the past 20 years.

Figure 5: REIT NAV Discount > 10% and Average GDP Growth in the 5 years that followed

| | REIT P/NAV | Next 5 YR Avg. GDP Growth | RMS 5 YR CAGR |
|---|---|---|---|
| 12/31/1994 | -10.2% | 4.0% | **8.1%** |
| 9/30/1999 | -12.6% | 2.5% | **18.1%** |
| 12/31/1999 | -15.1% | 2.3% | **21.7%** |
| 3/31/2000 | -15.0% | 2.1% | **19.2%** |
| 12/31/2007 | -22.7% | 0.7% | **5.6%** |
| 6/30/2008 | -15.7% | 0.7% | **7.6%** |
| 12/31/2008 | -11.9% | 1.1% | **16.7%** |
| 3/31/2009 | -24.5% | 1.3% | **28.8%** |
| 9/30/2011 | -10.2% | 2.2% | **15.8%** |
| Average | -15.3% | 1.9% | **15.7%** |
| Avg. since 4Q97 | 3.1% | 2.3% | 7.4% |
| Avg. since 4Q07 | 2.9% | 1.4% | 9.3% |

Sources: SNL (REIT FFO Growth); Green Street (NAV Premium/Discount); as of June 2018

## Interest rate environment may buck trend

Despite the evidence supporting REITs' total return potential when trading at elevated discounts to NAV, interest rates may alter this historical relationship. In each of the nine observations when NAV discounts edged outside of 10%, 10-year Treasury yields declined in the subsequent five years, with the exception of the most recent period (September 2011 discount of 10.2% while rates were roughly flat). It is conceivable that an extended period of rising interest rates could negate some of the benefits of buying real estate at a discount to NAV, in absolute if not in relative terms.

## Summary of GDP, FFO, and 10y Treasury

Figure 6: Monthly P/NAV Discounts and Average RMS Returns, with FFO, GDP and 10y Treasury environments 5 years out

| | REIT P/NAV | RMS 5 YR CAGR | Above Average FFO Growth | Above Average GDP Growth | Declining 10Y Treasury |
|---|---|---|---|---|---|
| 12/31/1994 | -10.2% | **8.1%** | NA | ✓ | ✓ |
| 9/30/1999 | -12.6% | **18.1%** | | ✓ | ✓ |
| 12/31/1999 | -15.1% | **21.7%** | | ✓ | ✓ |
| 3/31/2000 | -15.0% | **19.2%** | | ☐ | ✓ |
| 12/31/2007 | -22.7% | **5.6%** | | | ✓ |
| 6/30/2008 | -15.7% | **7.6%** | | | ✓ |
| 12/31/2008 | -11.9% | **16.7%** | | | ✓ |
| 3/31/2009 | -24.5% | **28.8%** | | ☐ | ✓ |
| 9/30/2011 | -10.2% | **15.8%** | ✓ | ☐ | |

Sources: NAREIT (REIT total returns); Green Street (NAV Premium/Discount), SNL (FFO Growth), Moody's (10y Treasury and GDP Growth); as of June 2018. Past performance is not a reliable indicator of future returns.

## Conclusions

While the fundamental drivers behind REITs often follow a cyclical pattern, dislocations in the public markets occasionally produce outsized P/NAV discounts and premiums. REITs often become the short-term punching bag when expectations of interest-rate hikes precipitate a broader move in the market to divert fund flows from the asset class. Yet our analysis shows that in most cases, the subsequent long-term performance tends to be strong, often materially exceeding the relative performance of the S&P 500 and private real estate. We believe the primary catalyst behind this is a re-valuation of REITs rather than underlying FFO growth or overly-favorable economic conditions. Though we believe near-term performance could be volatile, particularly in a rising interest rate environment, P/NAV dislocations tend not to last, creating attractive opportunities for long-term returns when they arise.

# GLOSSARY

**Funds from operations (FFO)** refers to the figure used by real estate investment trusts (REITs) to define the cash flow from their operations. FFO is calculated by adding depreciation and amortization to earnings and then subtracting any gains on sales. It is sometimes quoted on a per-share basis.

**MSCI US REIT Index (RMZ)** is a free float-adjusted market capitalization weighted index that is comprised of equity Real Estate Investment Trusts (REITs).

**The NCREIF Property Index** is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only.

P/NAV - Market volatility allows share prices of publically traded REITs to deviate from their underlying net asset value. Thus, REIT shares typically trade at either a premium or discount price to net assets value (P/NAV).

**Real Estate Investment Trusts (REITs)** are companies, mostly listed, that own and often operate various types of real estate. They are obliged to pay out a minimum of 90% of earnings

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