



RESEARCH BULLETIN

Exploring REITs Valuation — Is It Time to Buy?

ISSUE No. 2 | Aug. 2022

Many investors have asked us:

Q: How are REITs valued, given the following: (a) the Federal Reserve is raising interest rates, (b) the Consumer Price Index (CPI) is at a 40-year high, and (c) REITs have repriced -18% in the last 8 months?"

A: We look to capitalization and NOI growth rates because we believe REITs may be undervalued relative to historical valuation.

AUTHORS

American Assets Capital Advisers (AACA)

Burl East, CFA - CEO
Creede Murphy - COO
Evan Elig - Analyst
Madeline Reber - Analyst

SECTOR/TOPICS

REIT valuation, Capitalization
Rates, Earnings Growth Rates,
Price/NAV

READ TIME

Under 25 minutes

IN RESPONSE TO RISING INTEREST RATES, INFLATION, AND RENTS.

Politicians and central bankers felt mounting pressure to douse the flames ignited by US CPI reaching a 40-year high and responded by raising short-term rates by 2.25% cumulatively YTD through August, with consensus expectations signaling more to come.¹

Risk assets generally responded poorly. Several equity indices have entered bear market territory while bonds declined, failing to provide diversification to equities during the first two quarters of the year. The Dow Jones US Real Estate Index is also down -17.96% YTD through August 2022.

¹ Source: Bloomberg World Interest Rate Probability

Pricing Commercial Real Estate: Valuation versus Growth

What is a real estate property worth? The capitalization rate (or “cap rate”) is the ratio of net operating income to value (or, in some cases, cost) and is frequently used by real estate investors to calculate the expected initial rate of return on a real estate investment property.

$$\text{Cap Rate} = \frac{\text{Net Operating Income (NOI)}}{\text{Property Asset Value, or cost}}$$

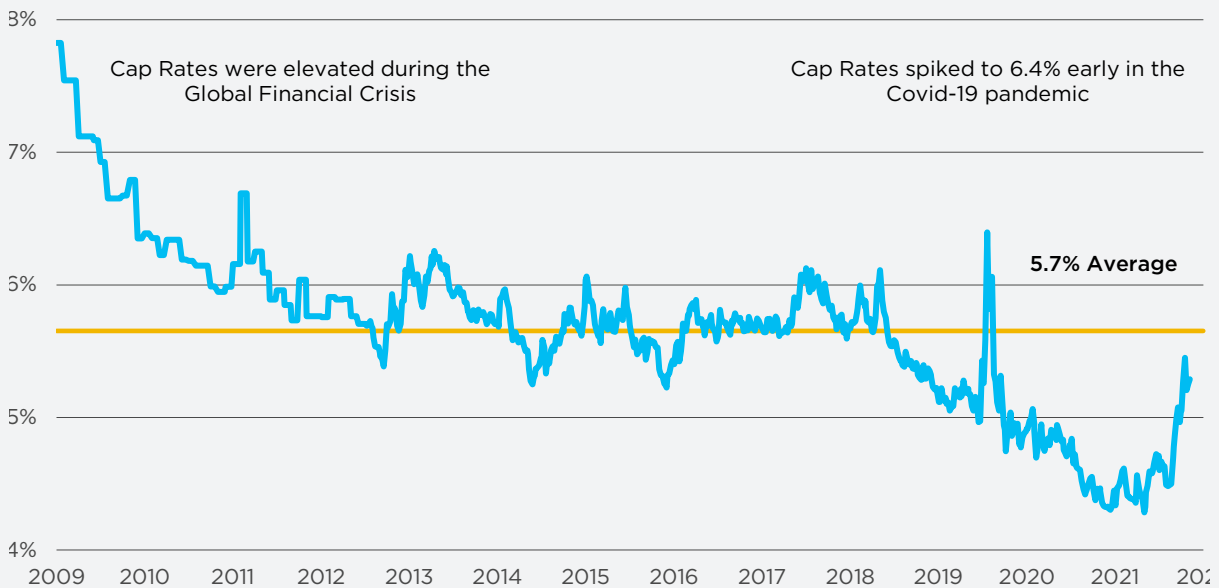
Where NOI = Property Revenue - Operating Expenses

Note to Remember: Cap rate is useful to calculate investment returns over a single year or as a relative valuation tool for similar assets at the time of property purchase, but its limitations become more apparent when trying to evaluate NOI growth that a property can achieve over time.

FIGURE 1

Historical REIT Cap Rates

MARKET-CAP WEIGHTED AVERAGE OF ALL REITS (136 REITS) COVERED BY GREEN STREET ADVISORS | SEPTEMBER 1, 2009 - AUGUST 31, 2022



Source: AACA, compiled from Green Street Advisors. Data is unaudited. Past performance is not indicative of future results. See additional disclosures on back page.

Typically, large-scale property owners may enjoy economies of scale and network efficiencies that are inaccessible to smaller property owners, such as an individual renting out a single condo unit. Large-scale property owners may also raise rents faster and suppress property operating expense growth longer, resulting in a higher NOI growth. With US CPI on the rise, we cannot stress the importance of NOI growth enough.

As reflected in **Figure 2**, REITs NOI growth has been at or above inflation over the past five years, excluding 2020. Consensus estimates for NOI growth are +5.1% annual growth for the next five years, a higher rate than even pre-COVID years (2018-19).

NOI growth must be considered when evaluating real estate investments, and the unlevered internal

rate of return (IRR) may support estimates of profitability for potential investments.

IRR is the annualized rate of return of an investment resulting from the present value of all expected cash flows. In practice, IRR calculations are adjusted for dozens of factors that are not considered in this analysis, such as risk, location, tenant credit, capital improvement, maintenance, secular demand, political risk, and other factors. However, we often add NOI growth to the initial cap rate as a rough estimate.

Unlevered IRR = initial cap rate + NOI growth

FIGURE 2

REIT NOI Growth Rates and Inflation

ANNUAL ACTUALS | JANUARY 1, 2018 - DECEMBER 31, 2021
 AACA ESTIMATES | JANUARY 1, 2022 - DECEMBER 31, 2026

	2018	2019	2020	2021	2022	2023	2024	2025	2026	CAGR ¹
NOI Growth ²	3.60%	3.00%	-4.20%	6.10%	8.50%	5.30%	4.20%	3.80%	3.70%	5.08%
Inflation	2.40%	1.80%	1.20%	4.70%	8.30% ³	3.10%	2.40%	2.31%	2.31%	3.66%
Difference	1.20%	1.20%	-5.40%	1.40%	0.20%	2.20%	1.80%	1.49%	1.39%	1.42%

Source: AACA, compiled from Green Street Advisors. ¹CAGR (Compounded Annual Growth Rate) is the 2022-2026 estimated mean annual growth rate of an investment assuming growth takes place at an exponentially compounded rate. ²NOI growth rates for 2022-2026 are forward estimates from Green Street Advisors (as of 8/26/2022) ³Based on Average Monthly CPI from Jan-2022 to Jun-2022. See additional disclosures on back page.

Estimated IRR of REITS Today

Now that we understand how to estimate an investor's expected return (IRR) on commercial real estate, we can use real market data to estimate the unlevered IRR of REITs today.

Then, we can compare to pre-Covid — the most recent year-end before inflation, Covid-disruption, and rising interest rates became frequently cited investor concerns.

	DECEMBER 31, 2019	AUGUST 31, 2022	CHANGE
Inflation ("CPI") ¹	2.30%	8.50%	+6.20%
Fed Funds Rate ²	1.63%	2.50%	+0.87%
REIT Cap Rate ³	5.20%	5.30%	+0.10%
Expected NOI Growth ⁴	3.00%	5.08%	+2.08% (+69%)
Estimated Unlevered IRR (Cap Rate + NOI Growth)	8.20%	10.38%	+1.99% (+27%)

To add leverage, we can make a final adjustment to our unlevered IRR estimate. By borrowing money at their investment grade credit rating, REITs are able to generate an additional return. As of August 31, 2022, the average REIT utilized 42% leverage, and translates to a 12.54% IRR as show below:

	DECEMBER 31, 2019	AUGUST 31, 2022	CHANGE
Unlevered IRR	8.20%	10.38%	+2.18%
Leverage Used ⁵	42%	42%	+0.00%
Cost of Leverage ⁶	3.19%	5.24%	+2.05%
Return on Leverage ((Unlevered IRR-Cost) x Ratio)	2.10%	2.16%	+0.06%
Levered IRR (Unlevered IRR + Return)	10.30%	12.54%	+2.24%

The calculations above demonstrate an 2.24% increase to 12.24% in the forward-looking levered IRR of REITs relative to the pre-COVID value of 10.30%. The increase in IRR may indicate higher expected returns for REITs looking forward relative to the pre-COVID period, primarily driven by NOI growth. The market implied peak Fed Funds rate is 3.9% in March 2023⁷, after which the market expects the rate to level off at ~3.5% over the following two years.⁸ Although the June CPI was at a 40-year high of 9.1%, the Congressional Budget Office expects inflation to moderate to around 3.1% in 2023.⁹ We are not arguing that higher rates and inflation are beneficial for real estate equities, but rather REITs may have protection from their corrosive effects that other sectors might not have.

Source: AACA, compiled from Green Street Advisors ("G.S.") ¹Inflation ("CPI") year-over-year sourced from U.S. Bureau of Labor Statistics. ²Fed Funds Rate is the upper-bound target overnight interest rate set by the Federal Reserve for commercial banks to borrow and lend excess reserves. ³Market Cap Weighted Average of implied Cap Rate for All REITs (136 REITs) covered by G.S. ⁴Weighted Average NOI Growth for REITs in 2019 was 3.0% and 4.9% in the estimated NOI compounded Annual Growth Rate ("CAGR") for the next 5 years (2022-2026), Source: G.S. ⁵SNL Financial average REIT leverage. ⁶ICE Bank of America BBB US Corporate Index Effective Yield. ⁷Bloomberg World Interest Rate Probability ("WIRP"). ⁸Source: Bloomberg. ⁹Provided by Congressional Budget Office.

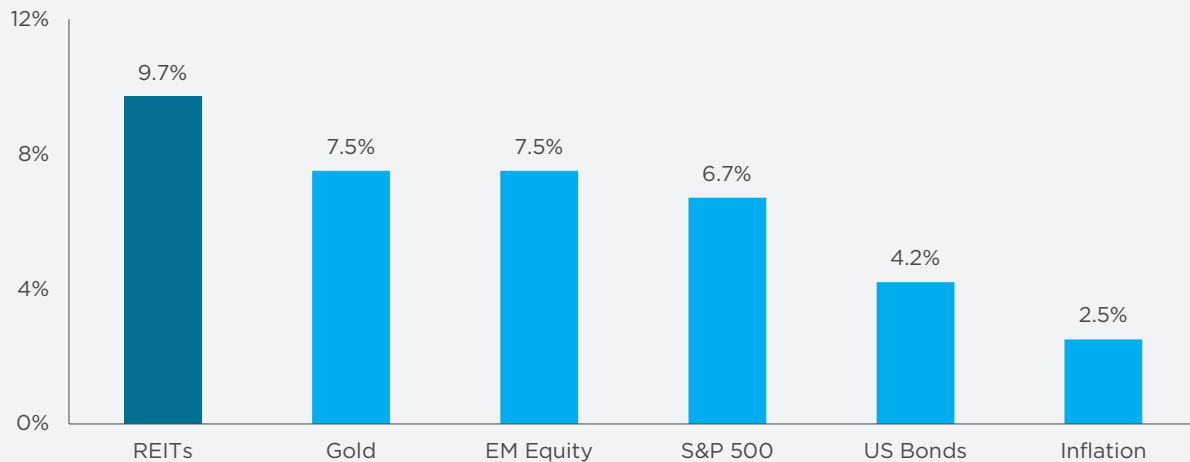
For context, **Figure 3** is a chart of REIT returns over the past 20+ years. You may notice that REITs have historically outperformed most major asset classes as well as inflation. While the 10.3% pre-COVID expected return on REITs (represented by the levered IRR) was slightly higher than the 9.7% historical annualized returns for REITs presented below, the current outlook of 12.54% represents a 29.3% increase over the historical annualized return.

In summary, cap rates and NOI growth suggest that REITs at current market prices may indicate a 21.7% higher expected return (levered IRR) than pre-COVID (12/31/2019). Much of this increase in expected return is a function of higher market implied pricing for NOI growth. Compared to returns in the past 20+ years, REITs appear to be a better value today. In the next section we will explore how REITs are priced compared to fixed income interest rates.

FIGURE 3

Historical Asset Class Returns

ANNUALIZED RETURNS BY ASSET CLASS | JANUARY 31, 2000 - AUGUST 31, 2022



Data prepared by AACA, compiled from Bloomberg. Past performance is not indicative of future results. The return of an investment is only one measure of performance. Performance should never be the sole consideration when making an investment decision. There is no guarantee that any investment will achieve its objectives, generate profits or avoid losses. Date range based on common period of data availability. The referenced indices are shown for general market comparisons and are not meant to represent any particular investment. An investor cannot invest directly in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented. See additional disclosures on back page.

A Note on Interest Rates

Understandably, many investors are concerned with the current landscape of rising interest rates. However, REITs have historically weathered the storm during periods of rising rates (**Figure 4**).

We do not believe the current climate will result in a recession as severe as the global financial crisis; rather, we believe this is a mild business cycle recession. Additionally, market consensus is for the Fed Funds rate to peak in about 6

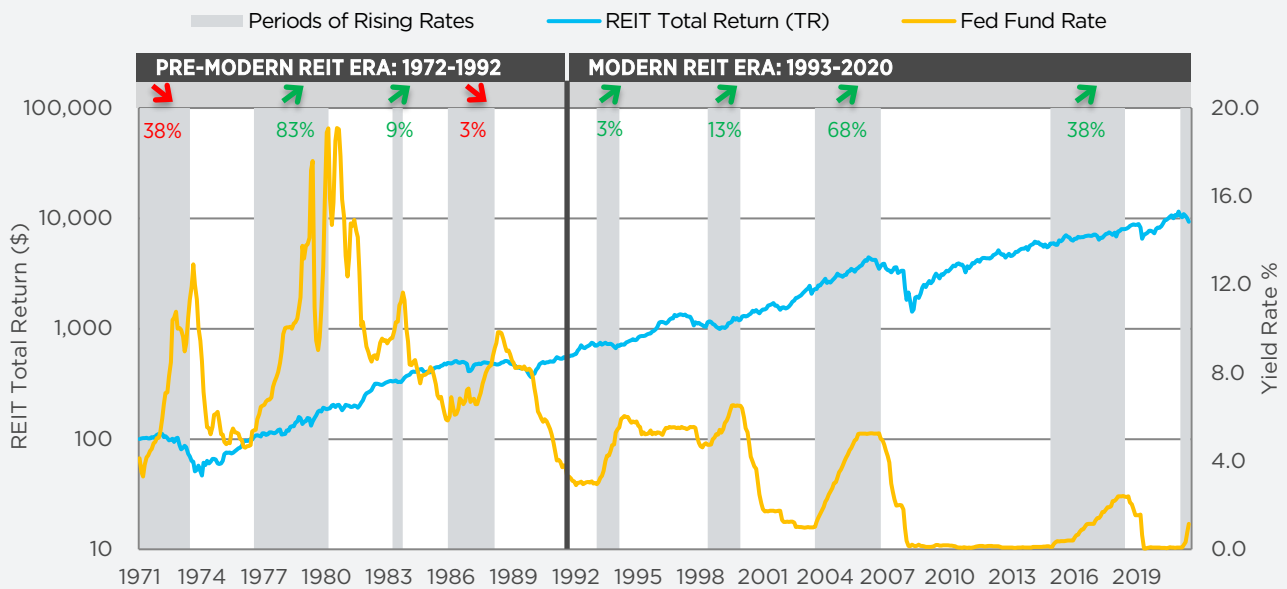
months, so we may be approaching the end of the current Fed Funds interest rate tightening cycle.

The pre-modern REIT era was characterized by non-traded REITs primarily investing in mortgages, while equity REITs with modern governance characterize the modern REIT era. Since 1993, roughly the beginning of modern REIT era, REITs have posted positive returns in every full Fed tightening cycle.

FIGURE 4

REITs Historical Performance during Periods of Rising Rates

PRE-MODERN VERUS MODERN REIT ERA | JANUARY 1972 - AUGUST 2022



Past performance is not indicative of future results. There is no guarantee that any investment will achieve its objectives, generate profits, or avoid losses. Returns are represented by benchmark indices for general market comparisons and are not meant to represent any particular Fund. An investor cannot invest directly in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented. REITs with dividends (REIT Total Return) represented by FTSE NAREIT US Real Estate Total Return Index; REITs without dividends (REIT Price Return) represented by FTSE NAREIT US Real Estate Price Return Index. Fed Funds rate is the upper-bound interest rate in which depository institutions lend funds to each other overnight. Fed Funds rate used in this analysis is based on a monthly average. See additional disclosures on back page.

Interest Rate Impacts on the REIT Capital Stack

One method to approximate the premium investors receive for investing in the equity portion of the REIT capital stack is the difference between the return on equity (levered IRR is a useful proxy) and the return on debt for the same real estate portfolio. For REITs, we view the premium as a market forecast of excess return for REIT equity over REIT debt, extrapolated from market prices and expected growth rates.

Institutional real estate investors often use investment grade bonds to approximate the additional return compensation from investing in the equity rather than the debt part of the capital structure. The average credit rating for REIT debt is BBB (S&P, or equivalent from other agencies) and the yield on a BBB equivalent benchmark is subtracted from REIT expected returns (levered IRR) to proxy the additional return received for investing in REIT equity instead of REIT debt.

Our calculations for REIT equity levered IRR for the pre-COVID (12/31/19) and current (8/31/19) periods were 10.3% and 12.5%, respectively, while the rate on the investment grade bond benchmark increased from 3.2% to 5.2% over the same period. Despite the +2.1% increase in the benchmark rate, the premium for investing in REIT equity increased only +0.19% relative to 2019, implying that, all else equal, investors are demanding slightly more return for investing in REIT equity instead of REIT debt relative to 2019.

Our key takeaway is that market pricing is not implying a severe recession that would adversely affect REITs. If it were, we would expect a higher REIT equity premium relative to 2019 via higher cap rates despite (perhaps) slightly lower NOI growth assumptions. With cap rates largely unchanged relative to 2019 despite a +2.1% increase in the cost of debt, we believe continued robust NOI growth is driving the higher return expectations for REITs.

FIGURE 5

REIT Equity Premium

	DECEMBER 31, 2019	AUGUST 31, 2022	CHANGE
REIT Levered IRR	10.30%	12.54%	+2.24%
Investment Grade Debt ("BBB") Interest Rate ¹	3.19%	5.24%	+2.05%
REIT Equity Premium (REIT Levered IRR - BBB Interest Rate)	7.11%	7.30%	+0.19%

Equity Risk Premium predicts how much an investment vehicle will outperform its risk-adjusted bond benchmark; in other words, the difference in equity return and debt return for the same risk level company. ¹Source: Bloomberg ICE Bank of America BBB US Corporate Index Effective Yield.

Dance Partners: Inflation, Interest Rates and NOI Growth in Tango.

Inflation, interest rates, and NOI growth are interconnected. While the Federal Reserve did not begin explicitly targeting inflation with policy rates until 2012, St. Louis Fed President James Bullard has argued that they had an ‘implicit target’ of 2% after 1995.² We do not mean to imply that interest rates are always a function of inflation expectations. Still, we believe that growth and inflation expectations exert much influence over interest rate policy. Today, inflation and interest rates are among the largest perceived risks for real estate investors who fear rising cap rates (remember cap rate = NOI/Price) and declining property values due to higher financing costs. We believe these concerns are partially warranted, but they overlook a crucial input into the valuation equation, NOI growth. We believe NOI growth becomes increasingly important during inflationary periods as short-term leases reset to higher prices and longer-term commercial leases receive contractual CPI increases.

From a cause and effect standpoint, inflation and interest rates can be a ‘chicken and the egg’ type of problem. They tend to ebb and flow together as markets and policy makers exert forces on them. Luckily, we do not have to forecast those to successfully implement our strategy. With that in mind, we believe that now is not the time to batten down the hatches and turn risk-averse for real estate investors; there is plenty of (NOI) growth on the horizon.

² Source: <https://www.stlouisfed.org/open-vault/2019/january/fed-inflation-target-2-percent>

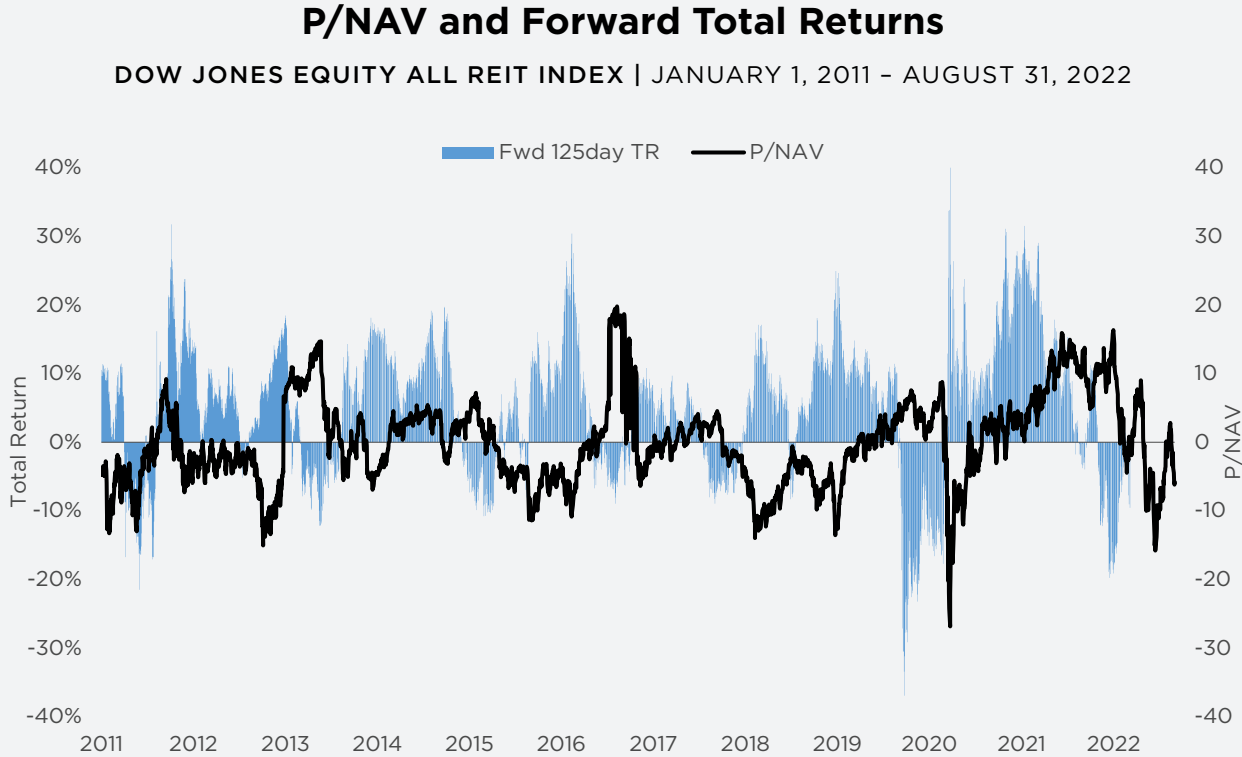
Historical REIT Drawdowns

REIT prices and future returns tend to be inversely correlated. Historically, when REIT prices go down, future returns generally go up, and vice-versa.

Figure 6 demonstrates that, historically, when REIT prices fall and trade at a discounted price to their Net Asset Value (“P/NAV”), future returns on REITs (125-day Forward returns) are higher.

Intuitively, this makes sense – “buy low” – but often that is when fear is at its highest. At a current discount value of approximately -7% to NAV, REITs may be undervalued.

FIGURE 6



Past performance is not indicative of future results. There is no guarantee that any investment will achieve its objectives, generate profits, or avoid losses. Source: AACA, compiled from S&P Global Market Intelligence; Dow Jones Equity All REITs Index (for dates on and after 12/24/2012), SNL U.S. REIT Equity Index (for dates prior to 12/24/2012). Price to Net Asset Value (P/NAV) calculates the ratio of current market price to estimated NAV (net asset value) if it were to be liquidated into the current market, using current market values in valuation of real estate and real estate companies.

The -18% drop in REIT prices this year has received a lot of attention, but it is important to view it in context. If we look at the last 31 years (since the Dow Jones US Real Estate Total Return Index “DJUSRET” inception), the DJUSRET index has experienced average intra-year drops of 17.1%, so in our view a -18% drop is

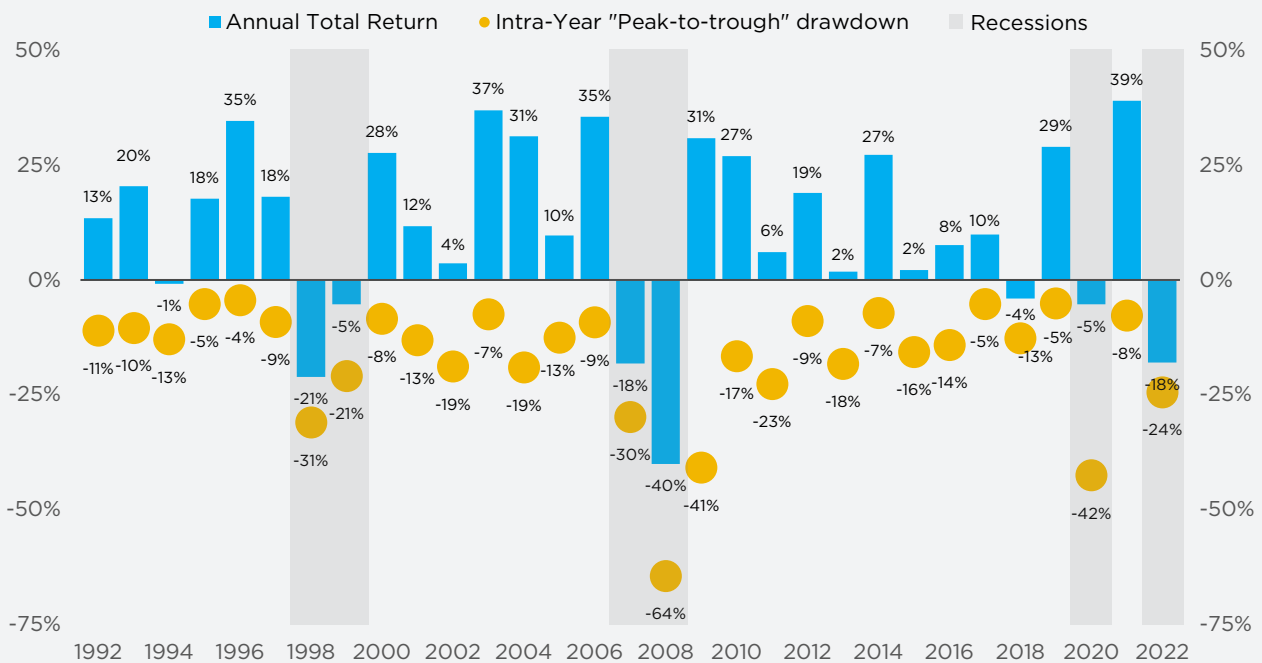
not uncommon. It is also worth noting that REITs typically have positive calendar year returns (excluding recessions) and that after a down year, returns in following years are frequently robust, as reflected in **Figure 7** below. We believe the outlook on REIT returns from here is much better than it was six months ago.

FIGURE 7

Calendar Year Returns and Intra-year Declines

DOW JONES U.S. REAL ESTATE TOTAL RETURN INDEX | JANUARY 1992 - AUGUST 2022

Despite average intra-year drops of 17.1% (including recessions), annual returns were positive in 23 of the past 31 calendar years and returned 11.2% per year on average.



Past performance is not indicative of future results. There is no guarantee that any investment will achieve its objectives, generate profits, or avoid losses. The referenced index is shown for general market comparisons and is not meant to represent any particular Fund. An investor cannot invest directly in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented. Source: AACA, compiled from Bloomberg. See additional disclosures on back page.

RISKS AND OTHER IMPORTANT CONSIDERATIONS

This content is provided for informational purposes only. The authors' assessments do not constitute investment research and the views expressed are not intended to be and should not be relied upon as investment advice. This document and the statements contained herein do not constitute an invitation, recommendation, solicitation or offer to subscribe for, sell or purchase any securities, investments, products or services. The opinions are subject to change without notice. No obligation is undertaken to update any information, data or material contained herein. The reader should not assume that any securities or sectors identified and discussed were or will be profitable.

Past performance is not indicative of future results. The analysis herein is based on numerous assumptions and past market conditions. Different benchmarks, market conditions, and other assumptions could result in materially different outcomes. There is no guarantee that any forecasts made will come to pass. Due to various risks and uncertainties, actual events, results or performance may differ materially from those reflected or contemplated in any forward-looking statements. There can be no assurance that any investment product or strategy will achieve its objectives, generate profits or avoid losses.

All investments carry a certain degree of risk, including the possible loss of principal. Complex or alternative strategies may not be suitable for everyone and the value of any portfolio will fluctuate based on the value of the underlying securities. Equity securities are subject to the risk of decline due to adverse company or industry news or general economic decline. REITs are affected by the market conditions in the real estate sector, changes in property value, and interest rate risk. Bonds are subject to risk of default, credit risk, and interest rate risk; when interest rates rise, bond prices typically fall.

INDEX DESCRIPTIONS

An investor cannot invest directly in an index. Moreover, indices do not reflect commissions or fees that may be charged to an investment product based on the index, which may materially affect the performance data presented.

US Stocks: S&P 500 TR Index. The S&P 500 Total Return Index is the total return version of S&P 500 Index. The S&P 500 Index is unmanaged and is generally representative of certain portions of the U.S. equity markets. For the S&P 500 Total Return Index, dividends are reinvested on a daily basis and the base date for the index is January 4, 1988. All regular cash dividends are assumed reinvested in the S&P 500 index on the ex-date. Special cash dividends trigger a price adjustment in the price return index.

EM Equity: MSCI Emerging Markets Index.

The MSCI Emerging Markets Index captures large and mid cap representation across 26 Emerging Markets (EM) countries.

US Bonds: Barclays US Aggregate Bond Index.

The Barclays Capital US Aggregate Bond Index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis. These specific indices include the Government/Credit Index, Government Index, Treasury Index, Agency Index, and Credit Index.

Dow Jones US Real Estate Total Return (TR)

Index. The total return version of the Dow Jones US Real Estate Index, calculated with gross dividends reinvested. The base date for the index is December 31, 1991 with a base value of 100.

Dow Jones Equity All REITs Index. The Dow Jones Equity All REITs Index tracks publicly traded REIT values in the United States. This index is calculated with gross dividends reinvested. The base date for the index is December 31, 1991 with a base value of 100. P/NAV data for this index prior to 12/24/2012 is from the predecessor index, SNL U.S. REIT Equity Index, which was discontinued by S&P Global Market Intelligence after it acquired SNL Financial.

SNL U.S. REIT Equity Index. The SNL U.S. REIT Equity Index tracks publicly traded REIT values in the United States. The Index began on December 1, 2000 and was discontinued in December of 2012.

REITs (excluding dividends): The FTSE NAREIT US Real Estate Price Return Index includes the price of US REITs (equity, mortgage, and hybrid) and publicly-traded real estate companies. The Index began on December 31, 1971 with a base value of 100. is designed to present investors with a comprehensive family of REIT performance indexes that spans the commercial real estate space in the US economy. The index series provides investors with exposure to all investment and property sectors.

REITs (including dividends): The FTSE NAREIT US Real Estate Total Return Index includes both price and income returns of US REITs (equity, mortgage, and hybrid) and publicly-traded real estate companies. The Index began on December 31, 1971 with a base value of 100.

ICE Bank of America BBB US Corporate Index Effective Yield. This data represents the effective yield of the ICE Bank of America BBB US Corporate Index, tracking the performance of US dollar denominated investment grade rated corporate debt publicly issued in the US domestic market. This index includes all securities with a given investment grade rating BBB.

US CPI Urban Consumers YoY NSA Index.

The US CPI Urban Consumers YoY NSA Index uses the CPURNSA Index for $((\text{Current Month} - \text{Prior value for same month last year}) / \text{Prior value for same month last year}) * 100$. Then the value is rounded to 1 decimal place. This CPI (Consumer Price Index) represents changes in prices of all goods and services purchased for consumption by urban households. User fees (such as water and sewer service) and sales and excise taxes paid by the consumer are also included. The Index began in January of 1914. In general, the CPI is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.