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Look past your nose:

Why your short-term view of real estate pricing needs long-term perspective

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One of the hottest questions posed today by real estate investors is, "Where will cap rates[1] eventually settle after they peak?" This question is difficult because it's flawed – cap rates don't settle; they are dynamic, transitioning from one period to the next, quarter after quarter, year after year. While the need to project short-term cap rate movements is necessary to making investment decisions, the dynamic nature of cap rates also calls for a longer-term view of cap rates to provide context for any short-term outlook. With those thoughts in mind, this paper will address:

1. **Why a long-run view is needed:** Demonstrate why we believe the dynamic nature of real estate cap rates calls for a long-run intrinsic value[2] approach to understanding cap rates.
2. **Develop a long-term range:** Present step-by-step assumptions to build a range of future long-term average real estate cap rates.
3. **Compare our long-term view to current cap rates:** Use the long-term average range and current market average cap rates per sector as proxies for comparing potential exit cap rates to potential acquisition cap rates.

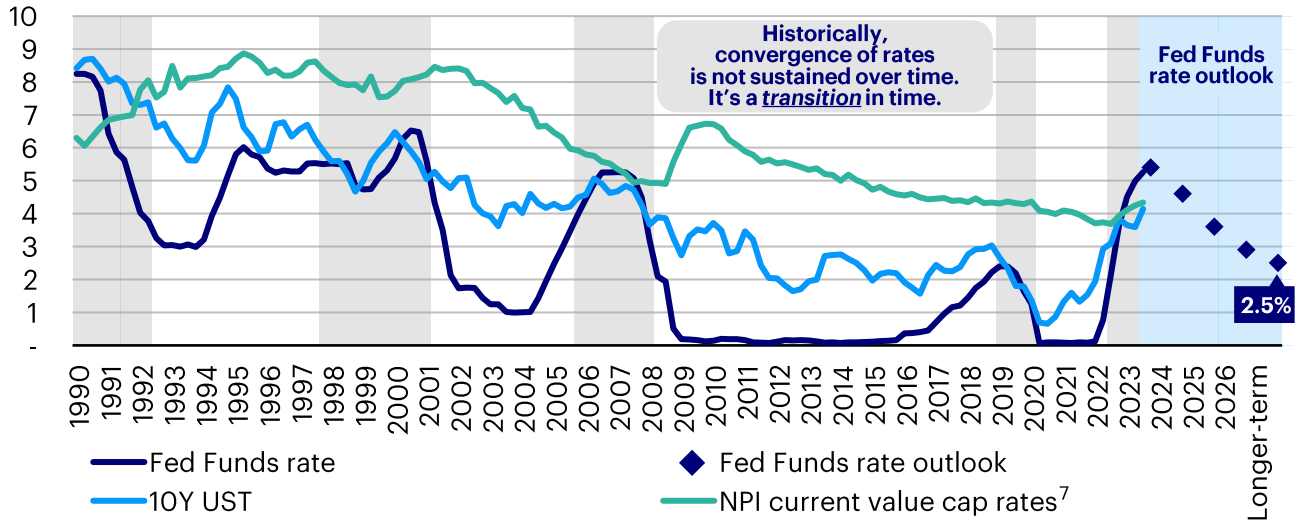
Why a long-term view is needed.

One only needs to look at the dynamic historical movement between cap rates and related base rates to appreciate why we believe a short-term future view about cap rates must be augmented with a long-term outlook. Let's start by looking at the past three decades' interaction of real estate cap rates with a couple of important base interest rates, the Fed Funds rate and the 10-year US Treasury rate[4] (see Figure 1). Risk assets[5] including real estate are typically priced as a spread[6] over a base rate, like a Treasury yield. And the 10-year Treasury yield has historically exceeded the Fed Funds rate on average. The times when spreads among these rates compress tightly or invert are typically associated with weakening economic conditions and value erosion (e.g., the early 1990s prior to financial market restructuring; late 1990's prior to the tech bust; mid-2000's prior to the Global Financial Crisis; late 2010's coincidentally prior to the onset of COVID; and the 2022-present rate response to outsized inflation).

Figure 1: Looking ahead beyond transition periods

If Fed Funds rate moves to 2.5% longer term, where will cap rates go longer term?

Historical rates 1990-2023 and Fed Funds rate outlook year-end 2023 through longer term (%)



Sources: Invesco Real Estate, utilizing data from NCREIF Property Index (NPI), Moody's Analytics, and the Federal Open Market Committee as of January 2024. Past performance is not a guarantee of future results. Forward-looking statements are not guarantees of future results. They involve risks, uncertainties and assumptions, there can be no assurance that actual results will not differ materially from expectations.

Historically, these periods of convergence and inversion have represented breaks from the norm. Convergence and inversion don't tend to be sustained over time; rather, they represent a transition in time. The factors that lead to convergence or inversion eventually get resolved, and positive spreads between the rates are eventually restored for several years, until the next break from the norm. Also, the time between one convergence period to another has varied, driven by the unique factors at play during each period.

The dynamic nature of rates and spreads, and the time variability of when spreads widen or contract, complicates the task of forecasting the short-term movement of cap rates. Yet, such forecasts are used to form exit price assumptions for real estate transactions and valuations of held assets.

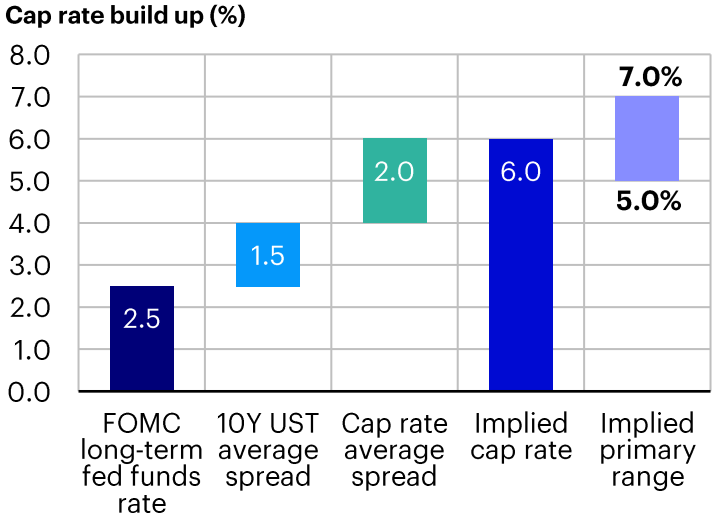
The inherent challenges with near-term period-by-period forecasts could benefit enormously from a long-term perspective. So, we start with base rates. Over the long run, the Federal Open Market Committee's (FOMC) median projection for the Fed Funds rate[8] is 2.5%. Starting with this long-run Fed Funds rate assumption, we can develop a long-run view about Treasury yields and real estate exit cap rates.

Building up a long-term range

Our thinking about long-term exit cap rates starts with a long-term view about Fed rate policy and applies historical average spreads to that base (see Figure 2):

Figure 2: Where might valuation cap rates settle over the long-term?

A simple long-term average framework based on historical relationships



FOMC outlook for long-term fed funds rate: published on December 13, 2023	**2.5%**
Avg spread between 10Y UST and fed funds rate: 1990-2023	**+ 150 Basis Points (bps)[9]**
Avg spread between NPI cap rate and 10Y UST: 1990-2023	**+ 200 bps**
Implied cap rate	**= 6.0%**
Implied primary range of cap rates: +/- 100 bps average standard deviation[10] 2020-2023	**= 5.0% to 7.0%**

Sources: Invesco Real Estate utilizing data from NCREIF, Moody's Analytics, and the Federal Open Market Committee as of January 2024. Past performance is not a guarantee of future results. Forward-looking statements are not guarantees of future results. They involve risks, uncertainties and assumptions, there can be no assurance that actual results will not differ materially from expectations.

- As stated, the FOMC median forecast for the longer-run Fed Funds rate is 2.5%.[11]
- The long-term average spread between the Fed Funds rate and the 10-year US Treasury yield has been roughly 150 basis points since 1990.
- The long-term average spread between the 10-year Treasury yield and institutional real estate valuation cap rates has been about 200 basis points since 1990.[12]
  - The range of the spread between average cap rates and the 10-year Treasury yield since 1990 typically has been +/- 130 basis points. That typical range has narrowed over time since 2000 to +/- 100 basis points.
- Taken together, these inputs solve to an assumed exit cap rate of 6.0% on a long-term average basis.
  - Applying a 100-basis-point spread to either side of the long-term average results in a long-term primary range of 5.0% (during times of stronger capital flow momentum) to 7.0% (during times of weaker capital flows).

Based on these assumptions, we can estimate long-term exit cap rates for commercial real estate to average about 6.0%, and for that average expected long-term cap rate to move mostly between 5.0% to 7.0%, depending on prevailing market conditions.

So, where are the potential flaws with this build-up approach for a long-term cap rate assumption? For starters, maybe the Fed Funds rate will average higher than 2.5% over the long run; or it could average lower. Maybe the spread relationship between the Fed Funds rate and the 10-year Treasury yield could change. Maybe the spread relationship between the Treasury yield and cap rates could change if long-term capital flows accelerate or decelerate. Each of these points is worth consideration. And the simplicity of this build-up approach easily allows for using alternative assumptions to consider a range of outcomes.

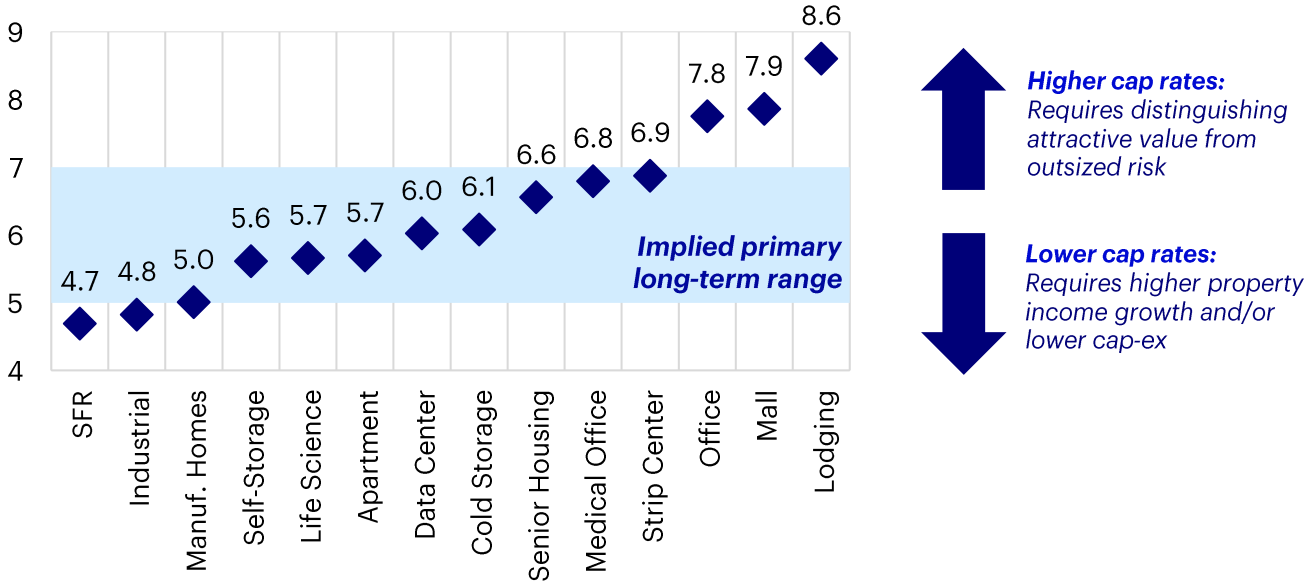
For purposes of this note, we'll use the 6.0% average assumption and the 5.0%-7.0% range as a baseline long-term outlook to compare against current cap rates.

Long-term potential exit vs. current potential transactions[3]

Our build-up approach for long-run for exit cap rates gives us context for considering current market cap rates per sector (see Figure 3).

Figure 3: Where are market cap rates today compared to a long-term value scenario? Sectors range widely depending on expected income and capital value growth

Green Street nominal market cap rates (%) in January 2024 versus implied primary long-term value scenario



Sources: Invesco Real Estate, utilizing data from Green Street, NCREIF, Moody's Analytics, and the Federal Open Market Committee as of January 2024

Let's consider some interpretative rules-of-thumb and some observations:

Rules of thumb:

- Sectors that post current cap rates on the lower end or below the primary long-term range would need to provide outsized growth of property incomes to justify a lower cap rate.
- Sectors that post current cap rates on the upper end or above the primary long-term range would need to be analyzed to determine whether the higher cap rate represents attractive relative value or instead reflects a higher level of risk.

Observations:

- **Overall:** Of the 14 sectors shown on the chart, 9 sectors currently post cap rates within our assumed long-term primary range for all real estate, and cap rates for the other 5 sectors are outside the primary range.
- **Sectors within the range:** Of those 9 sectors, 4 currently post cap rates below the 6.0% assumed long-term multi-sector average exit cap rate; 5 sectors currently post cap rates at or above the 6.0% long-term average.
- **Sectors above the range:** Of the three sectors with cap rates above the primary long-term range, lodging has a volatile pattern of historical returns, and both malls and office are facing threats to long-run demand.

- **Sectors below the range:** The two sectors with cap rates below the primary long-term range – industrial and single-family rentals – would need to provide outsized growth of property income to deliver returns that compete with or exceed the returns of sectors that are priced closer to the 6% multi-sector long-term average.

Conclusion

While a long-run view about real estate cap rates provides useful context for observing current cap rates, it's clear that additional information is required to make a holistic judgment about the appropriateness of current pricing per sector relative to long-term average values. Each sector must be evaluated for how tenant demand and future space supply are likely to influence property income growth. And sector cap rates must be adjusted to account for differences in capital expenditures.

That said, a long-run view about real estate cap rates provides the needed context for interpreting how current pricing, expected fundamentals, and capital spending relate to future investment returns. Like all investments, real estate investment decisions must consider multiple factors, and a long-run view about cap rates provides a foundation upon which to build all other investment assumptions.

Investment risks

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested. Property and land can be difficult to sell, so investors may not be able to sell such investments when they want to. The value of property is generally a matter of an independent valuer's opinion and may not be realised.

Generally, real estate assets are illiquid in nature. Although certain kinds of investments are expected to generate current income, the return of capital and the realization of gains, if any, from an investment will often occur upon the partial or complete disposition of such investment.

Investing in real estate typically involves a moderate to high degree of risk. The possibility of partial or total loss of capital will exist.

Important information

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Data as of December 2023, unless otherwise stated.

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Defined Terms and Notes

1. Capitalization rates (cap rates) is the quotient of a property's net operating income divided by the property's estimate value.
2. Intrinsic Value is a the perceived or "true value" of an investment, which may or may not equal the current market price due to over- or under-valuation by the market. Intrinsic value is commonly used in fundamental analysis but does not have a universal methodology for calculation. One firm's Intrinsic Value calculation of an investment may be different from another.
3. The proxy used for "current market average cap rates" is Green Street's sector average nominal cap rate. This cap rate represents the expected unleveraged first-year average yield that property buyers expect to realize on their investments. A nominal cap rate is calculated as: Nominal Net Operating Income (NOI) / Property Value.
4. The Federal funds rate is the rate at which depository institutions lend to each other. 10-year US Treasury rate is the rate paid by the US government as interest for borrowing money by selling a US Treasury bond with a 10-year maturity. An investment cannot be made directly into an index.
5. Risk Assets is any asset that is subject to the possibility of price and/or value fluctuation. In an absolute sense, there is no such thing as a risk-free asset. But in practice, debt obligations issued by the U.S. Department of the Treasury (bonds, notes, and especially Treasury bills) are widely considered to be risk-free because these debt obligations are backed by the U.S. government.
6. Spread is the difference between two financial rates. This paper includes discussion about the difference, or spread, between real estate market cap rates and the 10-year US Treasury rate. Since the 10-year US Treasury rate is widely considered to be a risk-free rate, the spread between real estate market cap rates and the US Treasury rate reflects the risk premium perceived in the real estate market.
7. NCREIF Property Index (the "NPI") is the broadest measure of private real estate index returns. The NPI is published by the National Council of Real Estate Investment Fiduciaries (NCREIF) and is a quarterly, composite total return (based on appraisal values) for private commercial real estate properties held for investment purposes including fund expenses but excluding leverage and management and advisory fees. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors and held in a fiduciary environment. NCREIF data reflects the returns of a blended portfolio of institutional quality real estate and does not reflect the use of leverage or the impact of management and advisory fees.
8. The median forecast for the longer-run Fed Funds rate by the Federal Open Market Committee (FOMC) is represents each committee participant's assessment where the rate "would be expected to converge, over time, under appropriate monetary policy and in the absence of further shocks to the economy". (Source: FOMC Summary of Economic Projections, December 13, 2023)
9. Basis Point (bps) is a unit that is equal to one one-hundredth of a percent.
10. Standard Deviation is a statistic that measures the dispersion of a dataset relative to its mean.
11. The St. Louis Fed defines the FOMC "longer run" projections as follows: "The longer-run projections are the rates of growth, inflation, unemployment, and federal funds rate to which a policymaker expects the economy to converge over time in the absence of further shocks and under appropriate monetary policy. Because appropriate monetary policy, by definition, is aimed at achieving the Federal Reserve's dual mandate of maximum employment and price stability in the longer run, policymakers' longer-run projections for economic growth and unemployment may be interpreted, respectively, as estimates of the economy's longer-run potential growth rate and the longer-run normal rate of unemployment; similarly, the longer-run projection of inflation is the rate of inflation which the FOMC judges to be most consistent with its dual mandate in the longer-term." Per the September 20, 2023 FOMC projections, their "longer run" projections start after December 31, 2026.
12. Source: NCREIF (National Council of Real Estate Investment Fiduciaries). Data used is NCREIF's market-weighted current value cap rate from Q1-1990 to Q3-2023.

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