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The end of an era:

How the relationship between interest rates and cap rates affects the outlook for CRE equity investments

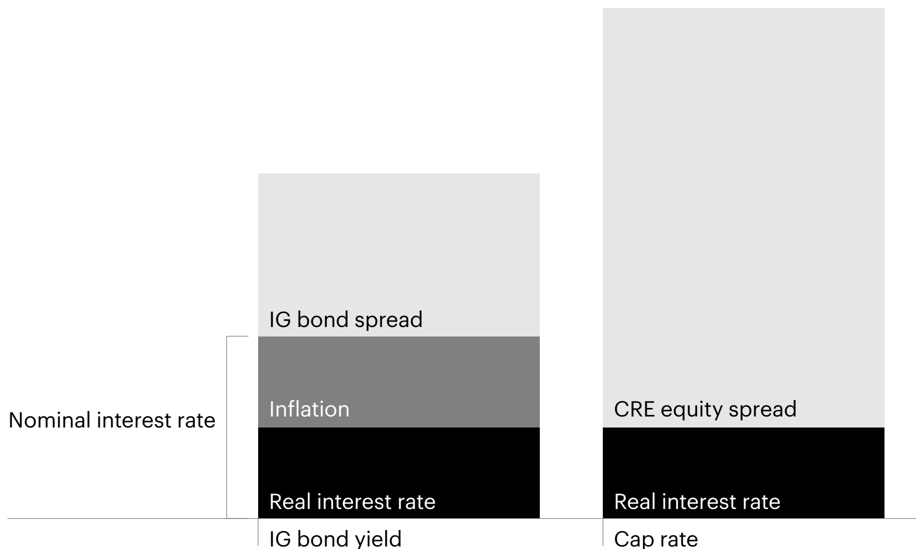
Over the past two decades, interest rates have fallen to historically low levels thanks to a number of structural and cyclical factors. Investors in commercial real estate (CRE) equity have been among the beneficiaries of this trend, as cap rates have declined in concert and boosted property price appreciation. While real estate fundamentals remain strong, CRE equity investors should understand that the structural decline in cap rates may not continue contributing to price growth to the same degree in the future. In this paper we discuss the relationship between cap rates and interest rates, how this relationship has affected performance of the asset class in the past, and what the sources of CRE returns could look like in the future.

Historically low cap rates and real interest rates: How did we get here?

Let's start by defining cap rates. Cap rates are, in the simplest of terms, the owner's yield on a real estate property. Cap rates are calculated as the net operating income (NOI), or rent net of expenses, divided by the value of a property. In this way, a cap rate is similar to the yield on a fixed income security. Rising market yields tend to put downward pressure on the price of a fixed rate bond. Similarly, if market cap rates increase, the value of a property may decrease.

Fixed rate bond yields are typically broken down into a benchmark rate, such as the 10-year U.S. Treasury yield, plus a spread. The benchmark rate is a nominal interest rate, which includes the inflation premium demanded by investors to compensate them for expected price increases. Because the benchmark rate is affected by changes in inflation, bond yields are by extension exposed to inflation risk.

FIGURE 1: HYPOTHETICAL BREAKDOWN OF INVESTMENT GRADE CORPORATE BONDS AND CRE CAP RATES



Source: FS Investments. For illustrative purposes only.

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Real interest rates, on the other hand, equal the nominal rate minus inflation expectations, and represent the true benefit investors receive for lending their capital.

In terms of interest rates, a key difference between a fixed income security and a real estate property is that a bond's yield typically responds to changes in **nominal** interest rates, while cap rates (real estate yields) are more sensitive to **real** interest rates (see figure 1).

Upticks in inflation can put upward pressure on nominal market yields, which can impact bond prices as yields may rise while the bond's coupon is stagnant. Cap rates move more closely with real interest rates, which strip out inflation, because real estate properties may be able to increase rent as inflation rises. Certain property types may be able to adjust rent with inflation more effectively than others, but this is generally why real estate is commonly thought of as an inflation hedge.

To illustrate this, consider an office building with a value of $100,000,000 that generates an annual NOI of $6,000,000. Using these numbers, the cap rate on the property would be 6%. Now let's assume inflation increases by 2%. How would this potentially affect the property value? Assuming the rent amount is indexed to inflation and expenses are negligible, the rent would rise by 2% from $6,000,000 to $6,120,000 for the year. If market cap rates remain stable, the value of the property would also be expected to rise with inflation, from $100,000,000 to $102,000,000.

Because real interest rates strip out inflation, they provide a good building block for cap rates, as real estate tends to show less sensitivity to inflation than other fixed income assets for the reasons discussed above. As figure 3 below demonstrates, cap rates and real interest rates have a very strong historical relationship.

FIGURE 2: BOND YIELDS TRACK NOMINAL INTEREST RATES

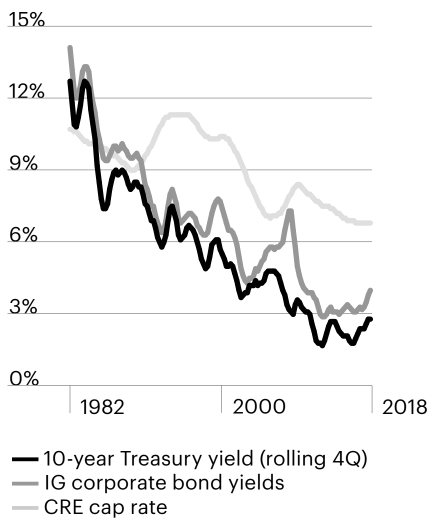


FIGURE 3: CAP RATES MORE CLOSELY TRACK REAL INTEREST RATES

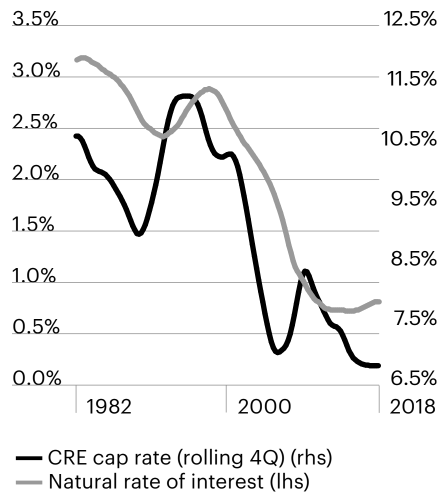


Figure 2: Bloomberg, CoStar, Bank of America Merrill Lynch, as of December 31, 2018. Investment grade corporate bonds represented by the ICE BofAML U.S. Corporate Index. Data are rolling 4-quarter rolling averages.

Figure 3: CoStar, Federal Reserve, as of December 31, 2018. Data are 4-quarter rolling averages.

Note: CRE cap rates are represented by the average of CoStar cap rates for the Office, Multifamily and Retail sectors. Data are rolling 4-quarter rolling averages.

Figure 3 shows a long-term decline in real interest rates, which has had an impact on CRE cap rates. The Fed estimates that the natural rate of interest, which is defined as the real interest rate that supports full employment and economic growth at its equilibrium level, has fallen from 3.17% in 1982 to just 0.81% at the end of 2018.[1] While rates at any given point could be above or below this estimate due to various economic factors, the trend suggests there may be long-term structural changes in the economy that have fundamentally put downward pressure on rates.

1 Federal Reserve, as of December 31, 2018.

There are three key factors that have driven real interest rates lower, resulting in a tectonic shift in the interest rate landscape:

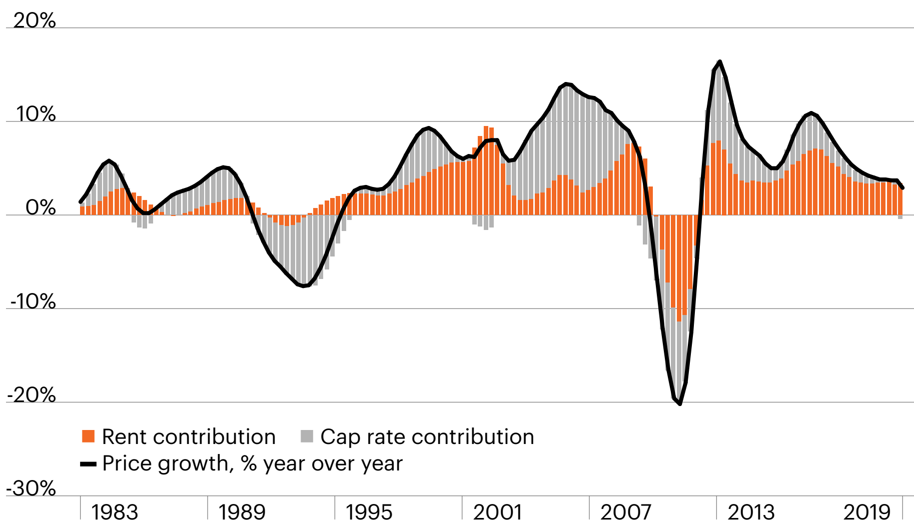
- The aging of the massive baby-boom generation has resulted in a significant uptick in the demand for income-producing investments.
- Slowing population growth and declining productivity gains have caused a structural decline in GDP growth.
- Global central banks' quantitative easing programs (QE) during the current economic expansion have deliberately pumped liquidity into the markets to force long-term rates down.

While real interest rates can be viewed as the base rate for cap rates, CRE investors also demand a spread on top of the real interest rate that compensates them for the inherent risk in owning real estate. Spreads can shift based on the level of perceived risk in owning real estate properties, which can fluctuate due to changes in CRE fundamentals and macroeconomic conditions as well as supply/demand factors. Cap rates may shift based on both real interest rates and market spreads.

The changing landscape of commercial real estate returns

The structural decline in real rates has resulted in a boon for CRE property prices by pulling cap rates downward, thereby boosting CRE prices. In addition, strong performance has incentivized significant investor capital to flow into the CRE space, and heightened demand has helped to further drive down cap rates. Given the current state of the markets, it is uncertain whether this source of price return will continue to support overall real estate equity returns going forward.

FIGURE 4: CRE PRICE GROWTH CONTRIBUTION, CAP RATES VS. RENT GROWTH



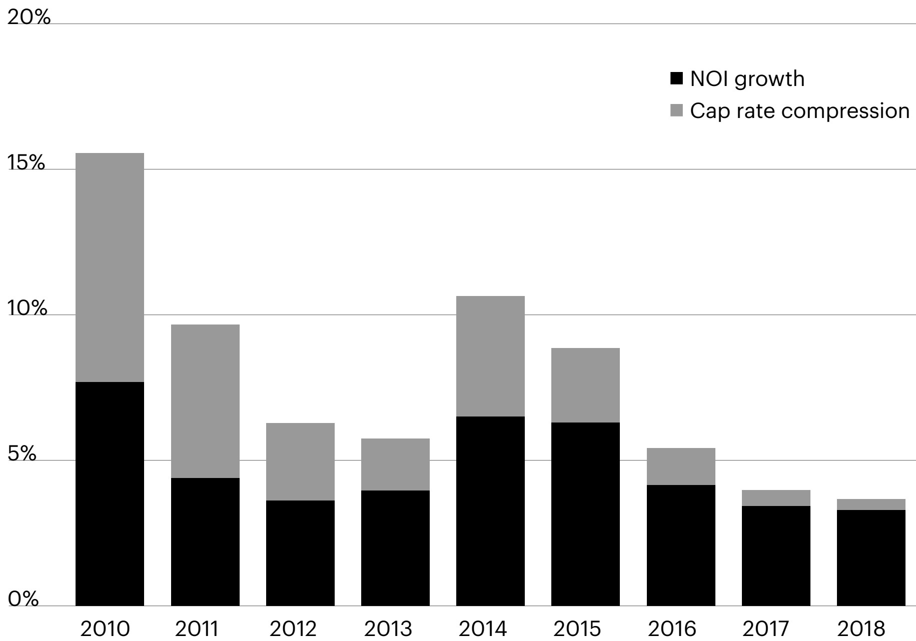
Source: CoStar, as of December 31, 2018.

The trend of declining real interest rates and cap rates has resulted in outsized property value gains over the past few decades, and especially since the Great Recession. Real estate valuation increases are primarily driven by two factors: decreases in cap rates (i.e., changes in market yields) and increases in NOI. Consider this: Since 2000, more than half of the price gains in commercial real estate have come from cap rate compression, not rent growth.[2] Compare that to the period from 1985–1999, when NOI growth contributed all of the price gains, and cap rate shifts actually detracted from performance.[2] Figure 4 shows the contribution to CRE returns and illustrates the impact that cap rate compression has had on CRE prices, especially since 2000.

2 CoStar.

Looking closely at more recent history, the first five years of the current expansion (2010–2014) enhanced the post-2000 trend. As the Fed and other central banks aggressively implemented QE, real interest rates continued to fall and brought cap rates down with them. During this period, CRE price growth was a robust 9.5% annualized, with about half of the gains contributed by cap rate compression.[2] While some of the compression was likely driven by natural spread tightening following the financial crisis, falling real interest rates continued to act as a tailwind for prices.

FIGURE 5: COMMERCIAL REAL ESTATE PRICE GROWTH ATTRIBUTION SINCE THE FINANCIAL CRISIS



Source: CoStar, as of December 31, 2018.

Since 2014, however, there has been a shift. Rent growth has remained fairly steady, but real interest rates have largely gone sideways, causing cap rates to follow suit. From 2015–2018, CRE price gains were a more modest 5.4% annualized, nearly 80% of which was driven by rent growth (see figure 5). Despite fundamentals and rent growth remaining solid, steady real interest rates have stripped CRE equity of a key contributor to price growth.

Where will returns come from going forward?

With real interest rates below 1% and cap rates near all-time lows, investors should consider how these trends could impact CRE returns going forward. In the downside scenario, cap rates could rise and put downward pressure on CRE property valuations. At least two factors could cause cap rates to expand:

- Real interest rates could rise.
- CRE spreads could widen due to myriad factors, such as an economic downturn or a market oversupply.

While the future is uncertain, we can look at history to glean insight into how valuations are impacted during periods of rising cap rates. There have been two periods of extended cap rate expansion since 1982: the early 1990s and the Great Recession. Figure 6 shows property price performance for the Office, Multifamily and Retail sectors during these periods.

2 CoStar.

FIGURE 6: PRICE PERFORMANCE DURING PERIODS OF RISING CAP RATES

	DEC. 1989–DEC. 1993			JUNE 2007–SEP. 2009		
	OFFICE	MULTIFAMILY	RETAIL	OFFICE	MULTIFAMILY	RETAIL
Trough cap rate	9.4%	8.4%	9.3%	6.9%	6.8%	7.3%
Peak cap rate	11.1%	10.6%	11.4%	8.9%	8.2%	8.6%
Cap rate change	1.7%	2.2%	2.1%	2.0%	1.4%	1.3%
Price change	-22.0%	-14.9%	-15.9%	-28.8%	-30.1%	-23.3%

Source: CoStar.

These time periods show environments of cap rate expansion caused primarily by different factors. In the first half of the 1990s, the economy was coming out of a mild recession that ended in 1991. During this time period, CRE spreads widened modestly, but an increase in real interest rates also forced cap rates upward, and the result was significant property price declines. Relatively steady rent growth in the Multifamily and Retail sectors helped buffer further losses.

During the financial crisis of 2007–2009, cap rate expansion was driven primarily by a significant widening in spreads, which more than offset continuously declining real rates, which fell by more than 80 bps. During this period, faltering economic conditions, the drying up of the debt markets and general risk aversion among investors caused CRE cap rate expansion and the related price declines. Rent growth also fell across property sectors, exacerbating losses. These time periods demonstrate the risk to CRE equity investors should cap rates increase, whether that increase is driven by shifts in real interest rates, spread widening or a combination of the two.

Even if we anticipate cap rates will hold steady at their current historic lows, we find ourselves in an environment similar to the pre-2000 period where rent growth is driving most of the price growth. From 1985 through 2000, the Fed's estimate of the natural rate of interest fell only 0.28%, and valuations were not aided by a precipitous drop in cap rates. Indeed, CRE cap rates were largely flat over this period, with NOI driving the vast majority of price increases. A return to a similar atmosphere would likely mean lower total returns than CRE equity investors have grown accustomed to over the past two decades.

Summary

What does this all mean for CRE equity investors? We believe there are a few key takeaways.

Real estate fundamentals remain sound. A robust labor market, a solid economy and healthier debt coverage are all tailwinds for commercial real estate going forward. A continued benign environment could hypothetically drive cap rates lower in the short term.

Significant declines in real interest rates are unlikely to drive further price growth. Real interest rates, which we consider the base rate or lower bound for cap rates, have fallen by 2% over the past 18 years. The message is not that cap rates are bound to expand, but that investors should seriously question whether declining real interest rates will continue boosting CRE property appreciation in the future.

Income may comprise a larger portion of total return. With cap rate compression likely to continue moderating, NOI growth should drive a higher percentage of returns going forward. Heightened focus on NOI could force owners to seek out methods of improving properties and increasing rent, opening up potential for interesting investment opportunities across the capital structure.

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