ALLIANZ REAL ESTATE RESEARCH VIEWPOINT

Inflation: Spotting the 'real' in prime office yields

Research Viewpoint
September 2021

Since the beginning of the year, inflation readings and inflation expectations have increased in many countries as restrictions are gradually eased. This particularly applies to the US where inflation in June rose to 5.4%. US inflation expectations over a 10-year horizon, as implied by the TIPS (Treasury Inflation-Protected Security) market, recently hit a level of about 2.4%, following a previous high of 2.6% in mid-May.

As market participants are assessing the impact of higher inflation on real estate investments, it is worth recalling that real estate yields – unlike traditional bond yields whose value is eroded by inflation – are real yields. Nominal bond yields are thus a poor benchmark for real estate yields and the comparison becomes more troublesome the more inflation increases. The two main components of real estate yields are the respective real risk-free rate and a risk premium for owning real estate. Historic data in academic research has found this risk premium to be about 350bps.

In addition, recent academic work by Chambers, Spaenjers and Steiner (2021), as well as by Schmelzing (2020), implies a long-term UK commercial real estate risk premium for the 1901-83 period of 334-374bps over the real interest rate. Figure 1 shows the result of our own calculations. Rising inflation levels in an economy will push up all prices, including rents, net operating income and capital values. As a result, real estate yields are unaffected by inflation and have remained fairly stable. This becomes most apparent by looking back several decades, including periods of double-digit inflation levels.

Figure 1. **Commercial real estate risk premium estimate (%)**

	Gross Income Yield Commercial Real Estate 1901-1983	Mean Cost Ratio Commercial Real Estate	Net Income Yield Commercial Real Estate	UK Real Interest Rate, Average 1901-1983	Commercial Real Estate Risk Premium
Mean	5.60	19.4	4.51	0.77	**3.74**
Median	5.10	19.4	4.11	0.77	**3.34**

Source: Calculations made by Allianz Real Estate from Chambers, Spaenjers and Steiner (2021), Schmelzing (2020) data

Prime office yields stable over time, irrespective of inflation

For this purpose, we have looked at office yields, as well as nominal and real interest rates in major global gateway cities such as London, Paris, Frankfurt, New York and Sydney. These have historically provided high levels of liquidity and transparency, and office-yield time-series are available back to the early 1980s.

Ten-year government bond yields of traded nominal and inflation-linked issues were used as risk-free rates. Where traded inflation-linked bond yields were not available, nominal bond yields were converted into real ones by applying an estimate of inflation expectations through the Fisher equation.[1] Past inflation expectations were approximated by the preceding five-year average GDP deflator of respective periods.

The example of London (City) (Figure 2) shows that prime office yields remained in a limited range of 4.0% and 6.75% between Q1 1980 and Q1 2021, despite nominal UK Gilt yields falling from 13.6% in 1980 to 0.9% in 2021. It is remarkable that prime office yields in 2021 were only 25bps lower than in the 1980s, despite elevated levels of inflation occurring over the 40 years in between.

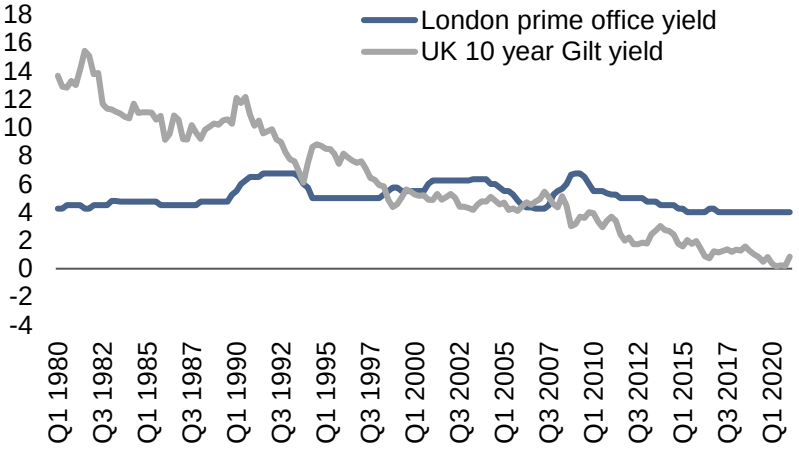
The 'real' nature of real estate yields is underscored by the significant reverse yield gap to nominal Gilt yields in the 1980s and 1990s – a period with particularly high inflation readings. Real Gilt yields, in contrast, remained below London's prime office yield for most of the 40-year period, implying a positive spread of 367bps, on average. The data for the other cities shows a similar picture.

[1] Fisher equation formula here: $(1 + i) = (1 + r) \times (1 + \pi)$ where i is the nominal interest rate, r is the real interest rate and π is expected inflation.

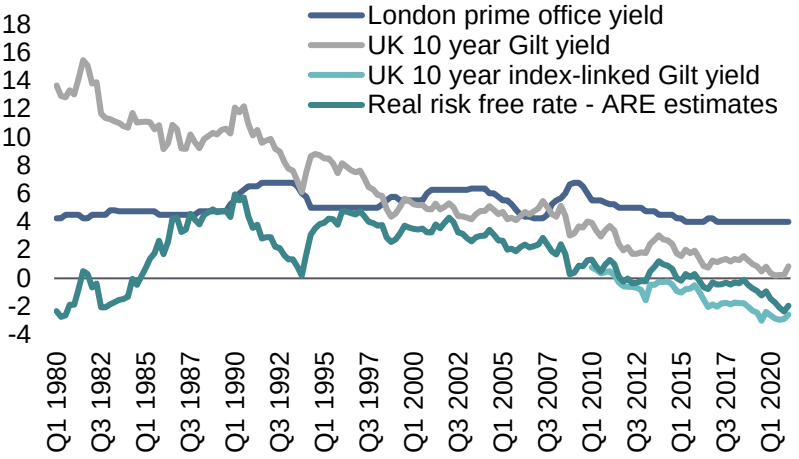
Source: Oxford Economics (May 2021), Refinitiv (June 2021), CBRE (May 2021); Allianz Real Estate estimates for real risk-free rates are calculated using Fisher equation. Expected inflation estimated as average actual inflation over preceding five years (GDP deflator used as inflation measure). Spread to index-linked Gilt yield starting from Q1 2010.

Figure 2. **Prime office yields versus bond yields for London (City) and the UK (%)**

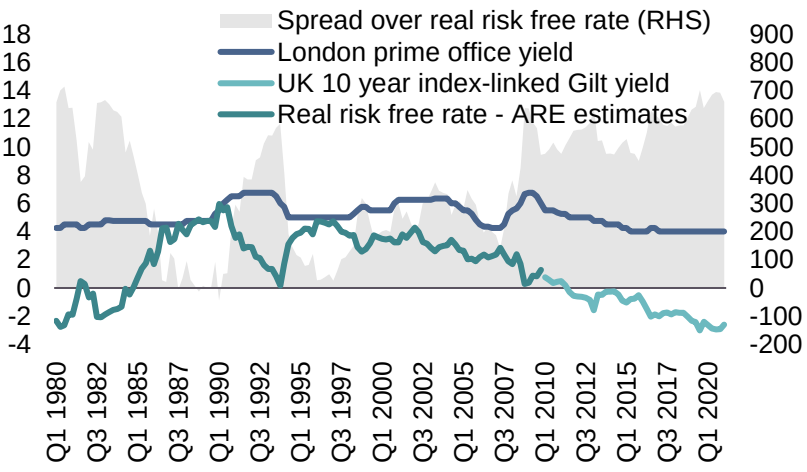
Prime office yield versus nominal interest rates



Prime office yield versus real interest/risk-free rate



Prime office yield spread versus real risk-free rate



Real office yield spread wider than long-term average

Figure 3 provides an overview of current office yield spreads over respective real risk-free rates for all five global markets. Overall, our data and calculations show an average long-term spread of about 340bps over real government bond yields across the five cities. Current real yield spreads of about 510bps, on average, are significantly wider than this long-term average.

In conclusion, real government bond yields are a key benchmark for real estate yields, particularly during elevated inflation levels. Currently, some market participants are concerned about rising real bond yields as a response to potential tapering of asset purchases by central banks as the world's economies emerge from the pandemic.

Nevertheless, our data show that the spread of real estate yields over real government-bond yields is above its long-term average, such that real bond yields have room to rise without putting upwards pressure on real estate yields.

Figure 3. **Real office yield spreads (bps)**

	Time series start	Long-term average spread	Latest spread
London (City)	Q1 1980	367	659
Paris	Q4 1980	259	417
New York	Q1 1982	497	596
Sydney	Q4 1979	347	426
Frankfurt	Q2 1985	237	444
Average		**338**	**508**

Source: Calculations made by Allianz Real Estate from CBRE (May 2021), Costar (May 2021), JLL (May 2021), Refinitiv (June 2021) data; prime-grade for all cities except New York which is all-grade (Costar All star definition).

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