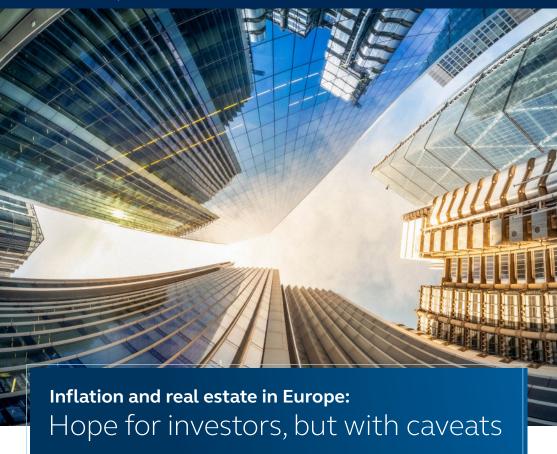
Real Estate



The Decisive Eye

A strategic bulletin on issues and opportunities in European real assets

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Executive summary

European inflation has hit record levels—tracking at levels not seen since the early 1980s—as cost pressures collide with elevated energy prices resulting from the conflict in Ukraine.

Elevated inflation is putting pressure on the European Central Bank (ECB) and Bank of England (BoE) to tighten monetary policies, adding volatility and raising uncertainty for risk assets.

Investors, long used to quiescent inflation, are looking for options to help protect real returns in their portfolios with real estate increasingly viewed as an important asset class to help in that task.

A lack of robust real estate data for the Eurozone hampers the identification of conclusive relationships between investment performance and inflation. However, some encouraging analysis demonstrates that residential and industrial property types are more effective in inflation protection.

Critical for investors going forward is to focus on property types with stronger rent growth and shorter leases that can protect and grow income, which is the key to keeping pace with inflation.

Commercial real estate doesn't offer any magic bullets, but a judicious mix of tenants, assets, and leases should provide income growth helping investors position better to deal with heightened inflation.



Introduction

The world economy is experiencing a level of inflation not seen since the oil price shock of the early 1980s with policymakers dusting off old playbooks to ensure price increases do not become deeply entrenched. Investors, long accustomed to placidly low inflation levels that has enabled unprecedented loose monetary policy, are wondering how to position for the possibility that elevated inflation stays in play for longer. Among the various investment options that have risen to the top from an inflation protection perspective are real assets, particularly commercial property. In this paper, we investigate the relationship between property performance and inflation in Europe to identify any discernible takeaways for investors. The paucity of data limits our analysis of the Eurozone but a richer vein of historical information from the UK offers investors some tantalizing insights into how property investors may fare if inflation remains elevated for a longer period.

Our analysis suggests that real estate holds up reasonably well during periods of higher inflation with the caveat that it needs to be accompanied by economic growth. What matters is the ability to drive net operating income growth, which in turn depends on structure and duration of leases that vary by property type and the inherent drivers behind occupier demand. Structural demand drivers that are less susceptible to the cyclicality of economic growth have generally performed better from a landlord pricing power perspective with the implication that investors who have greater exposure to such "resilient" property types will likely fare better if inflation remains elevated for a prolonged period.

Europe's inflation outlook remains a challenge for policymakers

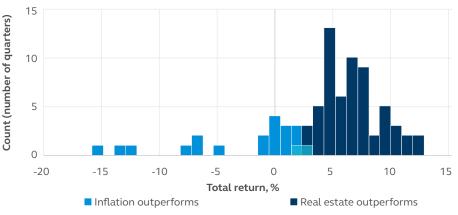
Eurozone inflation rose to a record high of 8.1% in May while it was even higher in the UK at 9.0%, led by energy and food prices.* Current inflationary pressure is driven primarily by cost pressures caused by supply shortages as a result of global supply-chain disruptions. Tight labor markets resulting in higher wage and elevated consumption has also led to upward pressure on inflation. Recent development in energy prices because of the conflict in Ukraine is also creating additional upward pressure on prices and increasing the uncertainty around the timeframe for inflation to revert to pre-COVID levels. For investors accustomed to decades of quiescent inflation and easy monetary policy, there is a sense of urgency in adding asset classes that may provide some inflation protection with real estate receiving considerable scrutiny.

^{*}Record keeping on Eurozone inflation began in 1997.

Empirical evidence on the historical relationship between property and inflation is mixed

A historical examination of the relationship between inflation (as measured by CPI) and property performance in Europe is limited by a lack of more sufficient data. All data available on commercial property for the Eurozone starts from 2001, which precludes the high inflationary period of the 1980s. However, the data we do have shows that property performance has outperformed inflation 61 out of 81 quarters we have analysed— a result consistent with similar analysis for the U.S. and UK markets. The quarters where property has underperformed inflation has been following European recessions that have resulted in loss in real estate values.

EXHIBIT 1: Eurozone real estate performance vs. inflation **Distribution of annual total returns relative to inflation** | All property types since 2001



Source: Moody's, INREV Quarterly Index, Principal Real Estate, March 2022

The lack of material inflation between 2000-2020 is not particularly helpful in illuminating the relationship between inflation and property performance in the Eurozone. In fact, correlation analysis between CPI and property performance shows a modest relationship since 2001 with the residential sector demonstrating the strongest link, a result that is not entirely surprising given the residential sector's short lease duration and its explicit link to inflation.

EXHIBIT 2: European property performance correlation with inflation, lagged by one year

Property type	Correlation
Hotel	-44%
Office	6%
Industrial	5%
Retail	2%
Residential	20%

Source: Moody's Analytics, MSCI-IPD, Eurostat, Q4 2021.

¹ An analysis of the U.S. private real estate market shows that total returns have outperformed inflation in 147 periods out of 168 dating back to 1980. All periods of commercial real estate underperformance correspond directly to the S&L Crisis of the late 1980's and early 1990s or the period directly following the Global Financial Crisis.

An analysis of the UK property data from 1986 shows more robust and statistically significant relationships between inflation and property returns over the 1986 to 2020 period across all sectors. Once again, we observe the strongest relationship in the residential property type, but we also find a significant correlation with inflation in both the industrial and hotel sectors.

EXHIBIT 3: UK property performance and CPI-monthly correlations 1986-2022

Lag	All	Hotel*	Industrial	Office	Residential**	Retail
0-m	38%	36%	45%	32%	42%	30%
1-m	35%	41%	41%	31%	44%	27%
2-m	30%	45%	36%	28%	45%	23%
3-m	26%	46%	32%	25%	47%	18%
6-m	13%	42%	20%	15%	41%	4%

Source: Moody's Analytics, MSCI-IPD, Eurostat, Q4 2021.

What can explain the strong relationship between inflation and the residential and industrial property types in particular? In the residential sector, shorter lease length is probably the most important factor with the caveat that institutional ownership in this sector has been historically low until recently. However, we do also get a strong, positive relationship between the owner-occupied UK residential market and inflation, particularly during the high-inflation period of the 1970s and 1980s (Exhibit 4). We can surmise that residential demand exhibits less elasticity to prices given the essential nature of shelter. The strong positive correlation between the industrial property type and inflation perhaps points to the shorter duration of leases in the UK which have allowed landlords to push rents upon renewal.

EXHIBIT 4: UK residential correlation with inflation compared with other asset classes

Correlation with UK CPI. Monthly data (YoY%) 1970-2021

EAFE*	-7%
EU-19 bond index	-35%
UK avg home price	20%

Source: Eurostat, Bloomberg, MSCIIPD, UK Office for National Statistics (ONS), Moody's Analytics, Principal Real Estate, March 2022.

^{*}Hotel data starts Aug 2008.

^{**}Residential data starts Apr 2014.

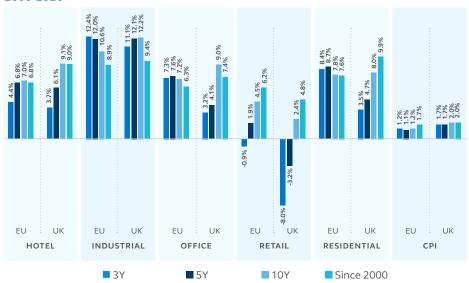
^{*}Europe, Australasia, and the Far East.



Property type selection matters for inflation protection

As the UK data reveals, owning the right properties which can grow rents in excess of inflation may fundamentally offer investors good inflation protection. While this would seem to be an anachronism, it does highlight the importance of property selection as a means of preserving income. For example, investors with an overweight to retail would have been less likely to outperform inflation as effectively as industrial or residential (Exhibit 5).

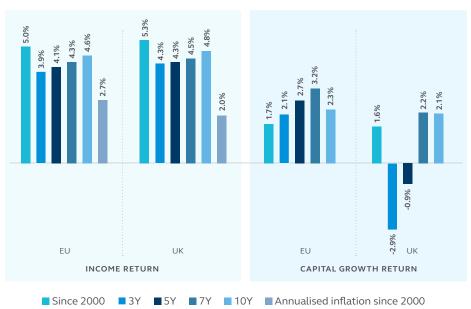
EXHIBIT 5: Property performance versus inflation 2000-2020



Source: Moody's, MSCI, UK Office for National Statistics (ONS), Principal Real Estate, March 2022

In fact, income growth is a key attribute of real estate which makes it an attractive asset class for investors. Income has by far been the most important contributor to total returns in Europe, accounting for over 75% of total returns since 2001 (Exhibit 6).

EXHIBIT 6: Property performance by income and capital appreciation UK and Europe | Returns breakdown, 2001-2021



Source: Moody's, MSCI, UK Office for National Statistics (ONS), Principal Real Estate, March 2022

Inflation proofing portfolios means adding property types that are structurally demand resilient

The world is witnessing inflation last seen four decades ago and investor playbooks are pivoting towards real assets including real estate in their desire to protect real investment performance. Europe, with its high energy dependency on Russia is most vulnerable to energy-induced inflation shocks driven by the conflict in Ukraine. While European data on property performance and inflation does suggest a modest and positive correlation, it precludes the period of high inflation. Evidence from a longer data set in the UK does provide some support to a stronger relationship between property performance and inflation particularly in the residential sector. We believe this is an important observation since it suggests that properties that have occupier demand driven by structural growth are better positioned to generate future rent growth in an above-average inflation environment. Cyclically sensitive demand drivers are likely to come under pressure if the economy reacts negatively to a prolonged high-inflation environment. In our opinion, mixing a blend of structurally resilient property types with leases that reset more frequently may allow investors the ability to tailor a portfolio of commercial property that could generate rent growth that keeps pace and even exceeds inflation in the coming years. Exhibit 7 is a snapshot of a matrix investors could consider in building a portfolio with property types that may provide some inflation protection.

EXHIBIT 7: Inflation and real estate

Some considerations for investors

Property type	Structural demand	Cyclical demand	Lease duration	CPI linkage	Investor demand
Industrial			Short/mid	Strong	Strong
Office			Mid/long	Weak	Varied
Retail			Long	Weak	Varied
Apartments			Short	Strong	Strong
Non-traditional property types			Mid	Strong	Strong

Source: Principal Real Estate, June 2022.



CONCLUSION:

No silver bullet, but the right mix of commercial properties may offer some inflation protection for investors

Our analysis of inflation in the European context indicates that property selection, lease duration, and structure are inherently important factors that determine the extent real estate can provide some real protection to investment performance. The Eurozone's diverse economies and growth drivers suggest that investors should be able to find an appropriate mix of property types and leases to help add some inflation protection capabilities to their portfolios. Commercial real estate doesn't offer any magic bullets, but a judicious mix of tenants, assets, and leases should leave investors well-positioned to deal with periods of heightened inflation.

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Top 10

global real estate manager²

\$106.2 billion

in real estate assets under management³ More than

60 years

of real estate experience4

Risk Considerations

Past performance does not guarantee future results. Investing involves risk, including possible loss of principal. Potential investors should be aware of the risks inherent to owning and investing in real estate, including: value fluctuations, capital market pricing volatility, liquidity risks, leverage, credit risk, occupancy risk and legal risk. All these risks can lead to a decline in the value of the real estate, a decline in the income produced by the real estate and declines in the value or total loss in value of securities derived from investments in real estate.

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² Managers ranked by total worldwide assets (net of leverage, including contributions committed or received, but not yet invested, REIT securities are excluded), as of 30 June 2021. "The Largest Real Estate Investment Managers," Pensions & Investments, 4 October 2021.

³ As of 31 March 2022. Includes clients of, and assets managed by, Principal Real Estate Europe Limited and its affiliates.

⁴ Experience includes investment activities beginning in the real estate investment area of Principal Life Insurance Company and continuing through the firm to present.

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