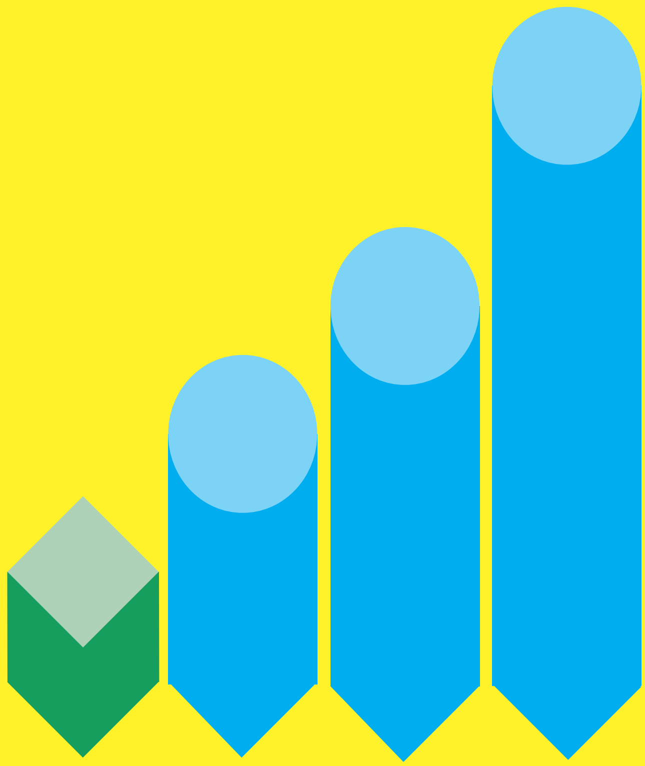
HEDGE TRIMMING



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The rapid rise in consumer prices has rekindled the old debate about whether commercial real estate provides a long-term hedge against inflation (hint: look at multifamily).

The rapid rise in consumer prices has rekindled the old debate about whether commercial real estate provides a long-term hedge against inflation. The answer is: it depends.

To begin answering this question using the latest data, this article explores the dynamics of two key performance indicators for privately owned institutional properties in the United States: market value index (MVI) and net operating income (NOI) relative to consumer price index (CPI) inflation.

To explore these dynamics, we first compare average year-over-year changes in MVI and NOI, relative to inflation, over the entire span of historical data available for both metrics (43 years from Q1 1979 through Q1 2022), as well as periods of above-average inflation (most of which took place in the 1980s).[1] Second, we calculate elasticities of year-over-year changes in MVI and NOI, relative to inflation, while also accounting for economic growth as measured by changes in real gross domestic product (GDP).

Our key finding is that of the four major property types, multifamily (i.e., apartments) was the only one that has provided a long-term hedge against inflation both in terms of market value and property income.

From the perspective of real estate fundamentals, there are two main interrelated reasons for the stronger inflation-adjusted performance of apartments. On the demand side, a relatively short leasing cycle of about a year, compared to over five years in other major property sectors, allows apartments to adjust to market changes more rapidly and efficiently. In addition, inflation and interest rates tend to move together, and higher borrowing costs for home purchases also support rental demand—a factor that is not at play in other sectors. On the supply side, a shorter residential construction cycle allows developers to respond to changing market conditions quickly, keeping price levels close to equilibrium and reducing downside volatility in rents and property revenues. Real estate investors who are concerned about the potential scenario of persistent high inflation might consider this when evaluating their portfolio allocations to different property sectors.

At the same time, it should be recognized that *within* the apartment sector, various product segments and regional markets also vary in terms of their ability to counter inflation. We find, for example, that while garden-style apartments have been a better inflation hedge on the value side, and NOIs at high-rise apartments were more elastic relative to inflation. Furthermore, the inflation hedging potential of apartment values and NOI can vary even more widely geographically and therefore impact market allocations as part of portfolio construction. In summary, while both apartment values and NOIs have indeed shown the ability to keep up with or even exceed inflation over long-term horizons (unlike other sectors), this does not apply equally to any property and location.

MVI AND NOI GROWTH RELATIVE TO INFLATION

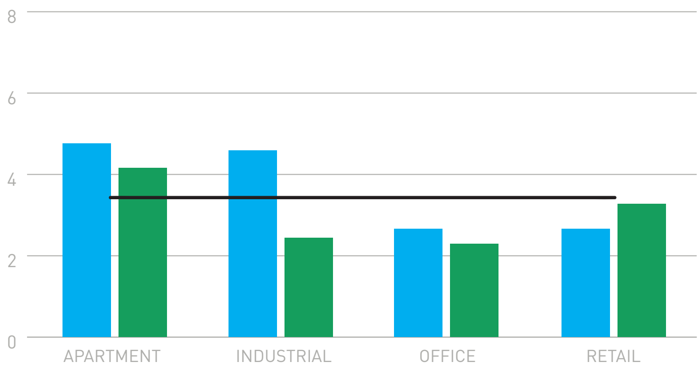
Looking at market value index (MVI), only the apartment and industrial sectors achieved appreciation that exceeded inflation both over the entire span of available history as well as periods of above-average inflation *(Exhibit 1)*. On the NOI side, apartments were the only property sector to handily beat inflation both over the entire history as well as periods of above-average inflation. Retail NOI growth was second-best after apartments, and while it lagged inflation slightly over the entire period, it also exceeded it slightly during periods of above-average inflation.

The results suggest that multifamily is the only real estate sector that served as a real inflation hedge historically, followed by industrial according to market value index.

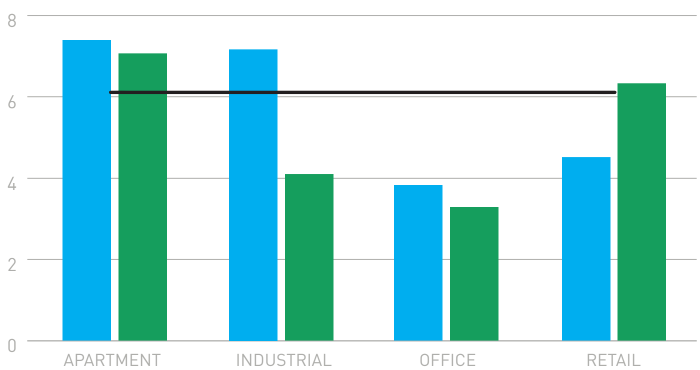
EXHIBIT 1: INFLATION AND ABOVE-AVERAGE INFLATION OBSERVED ACROSS SECTORS

Sources: US Bureau of Labor Statistics; NCREIF; Berkshire Research

Q1 1979–Q1 2022
173 QUARTERS OF OBSERVATION



ABOVE-AVERAGE INFLATION
57 QUARTERS OF OBSERVATION



MARKET VALUE INDEX (MVI) NET OPERATING INCOME (NOI)

CONSUMER PRICE INDEX (INFLATION)

In the case of apartments, the main driver of above-inflation MVI growth is clearly NOI growth. Meanwhile, results for industrial and retail are less obvious: industrial MVI grew above inflation while its NOI has not, but the opposite was true in the case of retail. One potential explanation for this is the impact of investor demand on both sectors, especially over the last few years.

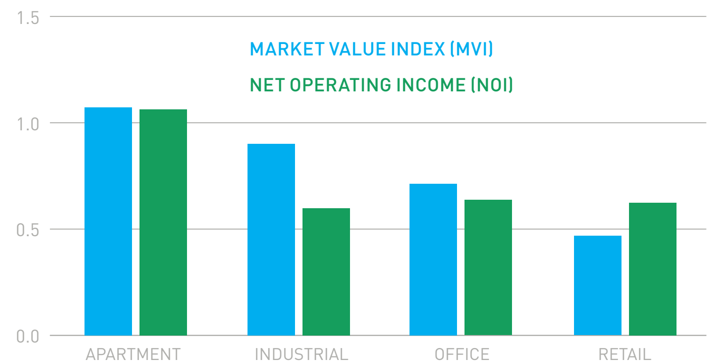
MVI AND NOI GROWTH ELASTICITIES RELATIVE TO INFLATION

While it is helpful to know how MVI and NOI growth compared to inflation historically, answering the long-term hedge question also depends on how well that growth adjusts to the changing inflation. To answer that, we calculate growth elasticities relative to inflation using the entire span of historical data available for both metrics (Q1 1979 through Q1 2022).[2]

Exhibit 2 shows how much MVI and NOI growth change for every 1% increase in inflation. Once again, apartments are the only sector where both metrics have shown a propensity to basically keep up with rising inflation over time. Industrial is the second-best based on how well market values adjust to inflation (0.9% coefficient), followed by office (0.6% coefficient) while retail comes last (0.4% coefficient). At the same time, there are no substantial differences between industrial, office, and retail in terms of how their NOI growth has responded to inflation historically, with coefficients of about 0.6%.

EXHIBIT 2: EFFECT ON GROWTH OF A 1% INCREASE IN INFLATION (%)

Sources: US Bureau of Labor Statistics; NCREIF; Berkshire Research



The results suggest that multifamily is the only real estate sector that served as a real inflation hedge historically, followed by industrial according to market value index.

The results suggest that multifamily is the only real estate sector that served as a real inflation hedge historically, followed by industrial (at least when it comes to market values). It is important to note, however, that different types of apartments do vary in terms of how their values and NOIs respond to inflation.

For example, available data only allow us to repeat the above analysis for garden-style and high-rise segments over the last 30 years rather than 43 years, thus missing the period of very high inflation observed in the early 1980s. This more limited analysis does show however that garden-style apartments have been a better inflation hedge on the value side, while high-rise properties were able to better keep up with inflation in terms of their NOI growth.

One potential explanation for this is that high-rise apartments tend to focus more on more affluent renters who are better able to absorb rent increases in a rising inflationary environment. At the same time, market values for garden apartments benefit more from stronger investor demand, even though their NOIs may not keep up with inflation as well as in the high-rise segment. We find similar variation across markets, with some being better inflation hedges on the value side while others adjusting better in terms of NOI.

It helps to know that apartment properties have a track record of being an inflation hedge, but the other key parameter, even more important than inflation itself, is broader economic and employment growth. Real estate can still deliver good investment returns when high inflation is accompanied by a strong economy and labor market. At the same time, when high inflation takes place during very weak or negative economic growth, and so-called "stagflation" sets in, no sector is immune to potentially stagnant or even declining property values and NOIs, after factoring for inflation. While this is not the baseline scenario for now, investors should carefully evaluate such downside risk as the global economy and capital markets deal with multiple uncertainties stemming from Russia's war on Ukraine as well as the ongoing public health situation.

On the upside, the apartment sector is entering this uncertain period amid a record housing supply shortage that is likely to keep upward pressure on rents until inflationary pressures eventually subside. Rental housing (including apartments) has a unique distinction within real estate of being both a form of investment as well as providing "shelter," a service that accounts for more than 30% of the broader inflation measurement. The increasing real estate portfolio allocations towards rental housing that was observed last year could be reflecting a growing recognition by investors of its relative advantages in the current environment.

ABOUT THE AUTHOR

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NOTES

[1] This material is for informational purposes only and is not intended to, and does not constitute financial advice, investment management services, an offer of financial products or to enter into any contract or investment agreement.

Berkshire provides investment management services to advisory clients that invest in the residential housing sector. In respect of its investment management services, Berkshire may receive performance-based compensation from such advisory clients. Accordingly, Berkshire may financially benefit from the appreciation of residential housing units.

[2] Our analysis follows the same approach as discussed in: Greg MacKinnon, "What Would Higher Inflation Mean for Real Estate?", *PREA Quarterly,* updated Fall 2021.

REVIEWER RESPONSE

This article takes a timely look at the age-old question of whether real estate is actually an effective hedge against inflation. While the conclusion is likely intuitive to most readers—that "it depends" and that multifamily is more effective than other property types—the exploration of why that's the case, and if it can be expected to continue, raises some interesting points.

The author does a nice job making the case for investments in apartments being a proven inflation hedge, citing the ability to reset rents more frequently, and also notes an important correlation to economic and labor growth. However, for this link to continue, renters must be able to afford to pay higher asking rental rates and absorb future rent increases at a rate at least in line with inflation. Current rent-to-income ratios call this into question.

For context, US Census Bureau data and Moody's Analytics estimates through December 2021, over the last decade, show that apartment rents have increased 71%, while incomes grew just 37%. Said another way, rental rates have increased nearly twice as much as income levels during the same period, driving rent-to-income ratios from 17% to 21%, nationally. For apartments to continue to provide a hedge against inflation, we will need to see wage growth more in-line with inflation, which has not been the case historically.

Turning to the industrial sector, the author notes that appreciation has outpaced inflation, even as growth in NOI lagged, thereby creating a hedge. The appreciation in industrial is irrefutable, but the question to ask is what has driven that appreciation and whether the correlation to inflation will continue. The rise of e-commerce and the secular shift of distribution supply chains is another well-accepted explanation of the phenomenal escalation in industrial market values; one that is uncorrelated to inflation.

So, can we reasonably expect past correlations with inflation to continue similarly into the future? I am not so sure. In particular, inflation is being driven at least in part by exogenous factors not tied to the business cycle; the Fed is curbing growth with significant rate hikes; and apartment rent levels are already stretching incomes.

– Amy Price
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Member, Summit Journal Editorial Board

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