Better than Gold, Commodities, TIPS, or Stocks

YES, APARTMENTS PROVIDE EXCELLENT INFLATION PROTECTION

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Apartments Prove Themselves Among the Best Assets to Protect Investors Against High Inflation

High inflation hurts. Historical data show that apartments have provided better natural inflation protection than almost any other asset: better than gold, commodities, TIPS, stocks, and most other types of real estate.

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Today's Consumer Price Index showed that inflation over the past 12 months has eaten away 7.5 percent of your standard of living. New cars and trucks cost 12 percent more now than they did a year ago, while used vehicles cost 40 percent more. The price of beef has gone up by 16 percent, and bacon by 16 percent. Want to get away? You'll pay either 40 percent more for gasoline to get there or 29 percent more for your car rental—pick your poison—plus 24 percent more for your hotel.

Can apartment real estate really protect investors from inflation's steady erosion of purchasing power? The evidence-based answer is yes.

As my dissertation advisor Dr. Robert Shiller has pointed out, stories ("narratives") are important to investors. Some of those stories involve ways to protect against inflation: various assets—including real estate, TIPS, commodities, and especially gold—are said to be "natural inflation hedges," preventing investors from suffering hits to their living standards during high-inflation periods. Stories, though, may be fictional, so it's a good idea to check them against actual data. Let's do so.

Assets can protect against inflation in two ways. First, many assets provide a stream of income, which may increase when prices increase. A large share of the returns from apartment real estate, for example, consists of the rents paid by residents. In fact, apartment rents constitute one of the largest components of the CPI—meaning that sometimes inflation is high *because* rents have increased, helping investors remain whole in the process.

Second, asset values may increase with inflation. For equity investments such as real estate and stocks, asset values typically increase with inflation because earnings increase. Gold may increase in value simply because

investors believe it to be a good store of value in inflationary times. (That story is fictional, as we'll see below.) Other commodities, such as petroleum, hedge against inflation in the same way that apartment rents do: inflation increases *because* their prices increase. Most bonds see their asset values *decline* when inflation increases, because their income stream won't change but the value of the income stream is eroded by inflation. Inflation-protected bonds such as TIPS, though, are different: their principal value is tied to the inflation rate, so their asset value automatically goes up with the price level.

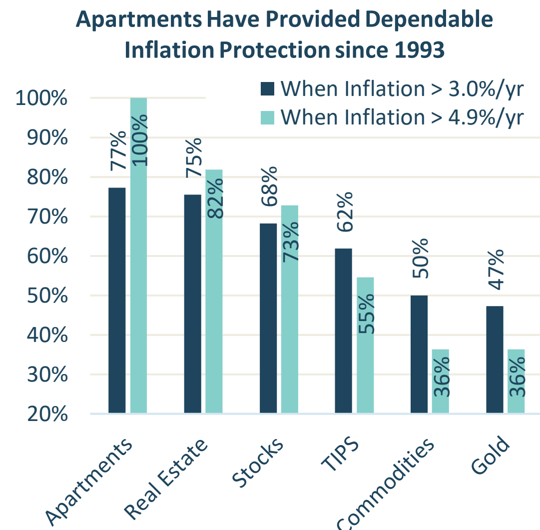
Let's take a look at the historical data to find out how successfully each of those assets has been at protecting investors from high inflation. To do so, first we'll identify periods of high inflation, then we'll ask simply whether the total return from each asset—income (if any) plus change in asset values—at least equaled the inflation rate during that period: if so, then that asset protected against loss of purchasing power.

Investment returns from apartment properties exceeded the inflation rate during **77 percent of high-inflation periods** and 100 percent of very-high-inflation periods.

Our analysis is hampered by the facts that high-quality data has been available for apartment real estate investments only since the end of 1993, and for TIPS only since the end of 1997. Fortunately the investment data specialist Ibbotson developed a series intended to mimic what TIPS returns would have been in earlier periods, so we can go back at least to 1993. (Apartment real estate data actually goes back to 1978, but it's not of high enough quality for most analyses.)

We identify a "high-inflation" period in two ways, both based on total inflation over a six-month period—mimicking the six-month periods that are used to adjust the principal value for TIPS. The first defines a high-inflation period as any six-month period when the annualized inflation rate exceeds 3.0 percent, or 50% greater than the target set by the Federal Open Market Committee (FOMC). Since the end of 1993 only one-third percent of six-month periods would be defined as "high-inflation" under this definition. The second defines a "very-high-inflation" six-month period as any in which the annualized inflation rate exceeds 6.6 percent—a level achieved in only 11 of the 331 six-month periods since the end of 1993, including seven since the beginning of last year.

The available historical data show that, by either definition, apartment properties have proven to be among the best investments available to protect investors against high inflation. Of those six-month periods when inflation exceeded a 3.0 percent rate, the total returns from income-producing real estate in general exceeded inflation during 75 percent of them—and the returns specifically from apartments performed even better, exceeding the inflation rate in 77 percent of those high-inflation periods. The picture was even more dramatic when we look only at the very-high-inflation periods when prices went up by more than 6.6 percent per year: real estate in general protected against inflation during 82 percent of them, but apartment real estate covered the damage from inflation every single time.

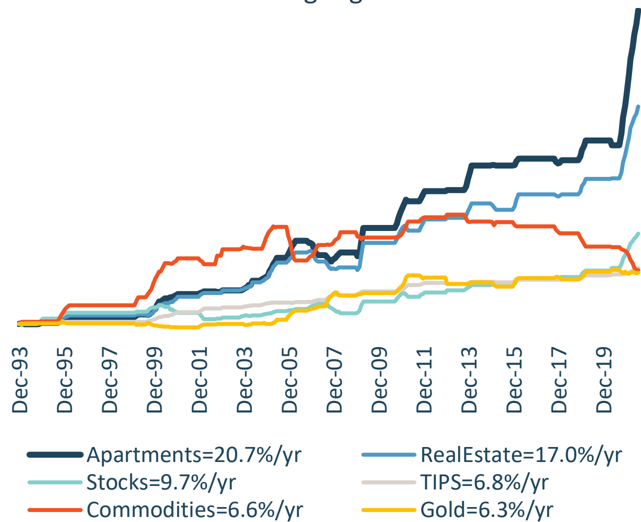


Other assets weren't as dependable in protecting against either moderately high or very high inflation. Perhaps surprisingly, stocks (S&P 500) have actually been more dependable than most of the other assets touted specifically as natural inflation hedges: the total returns from stocks at least equaled the inflation rate during 68 percent of high-inflation periods, and 73 percent of very-high-inflation periods—not as good as real estate (especially apartment real estate), but not entirely bad either.

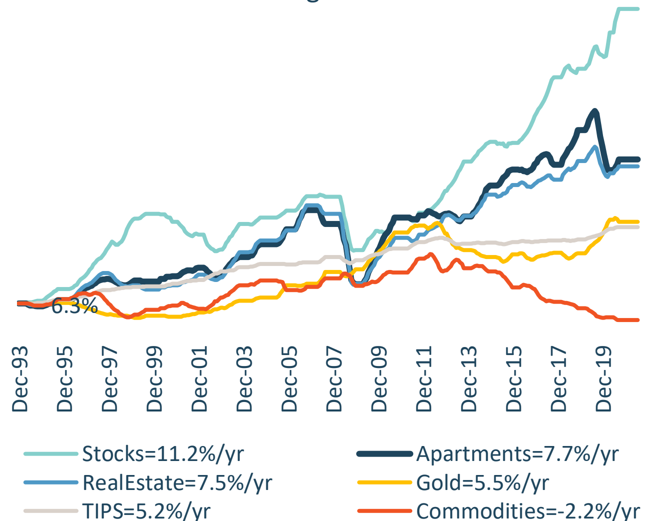
Total returns from apartment properties averaged **21 percent per year during high-inflation periods**—but didn't suffer during low-inflation periods with total returns still averaging 7.5 percent.

The performance of the other assets ranged from disappointing to dismal to indefensible. TIPS were created specifically to provide inflation protection—but their total returns actually made up for price increases in only 62 percent of high-inflation periods and a disappointing 55 percent of very-high-inflation periods. Commodities may be a large component of inflation, but the returns from investing in them have covered the inflation rate during just 50 percent of high-inflation periods and a dismal 36 percent of very-high-inflation periods. And gold…well, I've looked, but I just haven't found any asset that has been *less* likely than gold, over the past 28-plus years, to protect investors against inflation when it was either high or very high: gains from gold investing made up for inflation in only 47 percent of high-inflation periods and a shockingly poor 36 percent of very-high-inflation periods.

There's another way to compare the performance of assets during high-inflation periods, one that can be thought of as the "out of the frying pan into the fire" comparison: that is to compare, for each asset, its average returns during high-inflation periods with its average returns during low-inflation periods. The reason for doing this analysis is simple. You can guess whether inflation over the next six months is going to be especially high, and you can position your investment portfolio accordingly—but what if your inflation prediction turns out to have been wrong? You don't want inflation risk and "prediction risk" to be in conflict: that is, you don't want to choose an asset that's likely to perform well if inflation turns out to be high BUT will perform terribly if inflation turns out to be low.



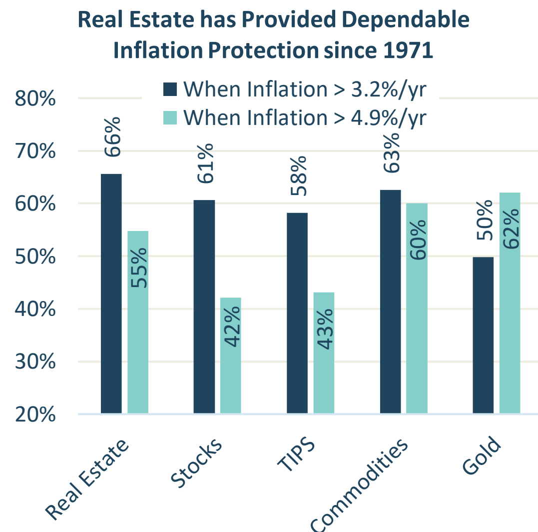
This is where investing in apartment real estate really shines. Over the last 28-plus years, the total returns on apartments during the one-third of periods when inflation was high (that is, higher than 3.0 percent per year) averaged a solid 21 percent per year. That was substantially higher than for income-producing real estate as a whole at 17 percent per year, stocks at 10 percent per year, TIPS at a disappointing 6.8 percent per year, commodities at a dismal 6.6 percent per year, or gold at an indefensible 6.3 percent per year. During the remaining two-thirds of periods when inflation was low, apartment real estate didn't lead the pack—but it didn't perform too badly, either: the total return on apartment investments averaged 7.7 percent per year, less than stocks at 11 percent per year but better than income-producing real estate generally at 7.5 percent per year, gold (yay!) at 5.5 percent per year, TIPS at 5.2 percent per year, or commodities at -2.2 percent per year.



That commodities result is what I mean by "out of the frying pan, into the fire": if you shift your investment portfolio into commodities because you think inflation is going to be high—but instead it remains normal or even low—you've shifted your wealth into the worst possible

asset, one that has lost money pretty aggressively during low-inflation periods.

There are several ways you can use this analysis. One is to try to extend it further back to encompass the truly high inflation rates of the 1970s and early 1980s. As mentioned, we can't extend the data back specifically for apartment real estate, but we do have high-quality data for income-producing real estate as a whole going back to the end of 1971. We'll use almost the same definitions, except that "high-inflation" periods will be those during which inflation exceeded 3.2 percent per year (the median during the longer period) rather than 3.0 percent per year (the two-thirds mark of the shorter period).



The key result doesn't change: real estate was still the most dependable asset in terms of providing total returns that equaled or exceeded the inflation rate during high-inflation periods, with a 66 percent "batting average." Commodities were almost as good at 63 percent, stocks hit 61 percent, and TIPS (remember, this is a synthetic data series developed by Ibbotson) were pretty good at 58 percent. It's kind of amazing that, even going back to the historical period that made gold's reputation as an inflation fighter, gold returns actually succeeded at protecting investors against inflation during only half of high-inflation periods—the worst performance of any asset class considered. Gold's reputation is based entirely on the very-high-inflation periods of the 1970s, when it kept investors whole with a 62 percent success rate, with commodities and real estate on its heels at 60 percent and 55 percent respectively. Too bad things have dropped off so badly for gold in the last 28 years.

Another way to extend this analysis is to try different measures for each asset class's returns. To measure commodity returns, for example, for this analysis we use the GSCI index—which has the longest history of any commodities index that I've seen, but which is more dominated by energy commodities (petroleum and the like) than other indices of commodity returns. There are different available indices of gold returns, too: I use the series provided by the World Gold Council, mainly because it made gold look quite a bit better than the XAU gold spot price series. And one could apply any of a multitude of stock indices, including indices focused on commodity-linked stocks such as energy producers or gold producers.

The final way to extend this analysis is to adjust how much leverage you're willing to apply to your apartment (or other) real estate investments. This analysis assumes that you apply leverage of around 30 percent, simply because that is the amount of leverage that many institutional investors have been comfortable applying, whether they invest in real estate through core or core-plus funds or through listed equity REITs

(my data come from the FTSE Nareit All Equity index). If you want to increase the probability that the total return on your equity investment will exceed the inflation rate even during high-inflation periods, you can simply apply greater leverage, along the lines of a value-add or opportunistic strategy. Of course that would increase the volatility of your returns, but you may be fine with that tradeoff: as with the "out of the frying pan into the fire" question, it's simply a matter of balancing the conflicting goals of protecting against inflation risk and protecting against volatility.

Nobody likes high inflation. For investors in apartment real estate, though, inflation is a risk that they've learned they can manage. We've seen that both apartment rents (the income from an investment in apartments) and apartment property values (the capital appreciation) have typically responded to high inflation by increasing to maintain investors' purchasing power. It's not a guarantee—there are no useful guarantees in investing—but apartment real estate has proven to be more than a match for even very-high-inflation periods in the historical record.

The data presented in this report are gathered from multiple sources that have been cited. Note that even historical data may change in subsequent reports. Although every effort is made to ensure the accuracy, timeliness, and completeness of the information provided in this publication, the information is provided "AS IS" and Middleburg Communities does not guarantee, warrant, represent, or undertake that the information provided is correct, accurate, current, or complete. This paper makes a number of predictions. These predictions of the future environment for the multifamily industry address matters that are uncertain and may turn out to be materially different than as expressed in this paper. The information provided in this paper is not a substitute for legal and other professional advice. If any reader requires legal advice or other professional assistance, each such reader should consult his or her own legal or other professional advisor and discuss the specific facts and circumstances that apply to the reader. Middleburg Communities is not liable for any loss, claim, or demand arising directly or indirectly from any use or reliance upon the information contained herein.