Has Real Estate been a good Hedge against Inflation?
Will it be in the future?

How good a hedge against inflation has Real Estate Been historically? To answer this question we examined the NCRIEF national data for each of the four property types: office, industrial, apartments and retail centers. Like many researchers these days we reconfigured the data so that capital expenses are subtracted from income and not appreciation. With this data we calculated a property "value" series, and a property "net income" series quarterly from 1978:1 through 2016:4. This is then compared to the US cumulative CPI index. At the bottom of this blog are 4 graphs making this comparison for each category of property. In the table below we calculate the elasticity between property income and property value and the US CPI. The statistically estimated elasticities describe how each real estate variable moves in percentage terms with a percentage change in the CPI.[i]

Real Estate CPI Elasticities

Property type	**Income**	**Value**
Retail	1.02	1.07
Industrial	.70	.91
Apartment	.56	.98
Office	.18	.74

The first observation is that only Retail property income keeps up with inflation (1.02). Industrial (.70) and Apartment (.56) income provide a partial hedge for the CPI, while Office property income provides virtually no inflation hedge (.18). It should be clear that this poor performance has nothing to do with the capex reconfiguration, which reduces the level of property income but not its trend. Instead, I prefer to rely on the recent work of Bokhari/Geltner[ii] (2015) which demonstrates that individual properties simply loose income over time as they become functionally, and physically obsolete – in spite of generous capex.

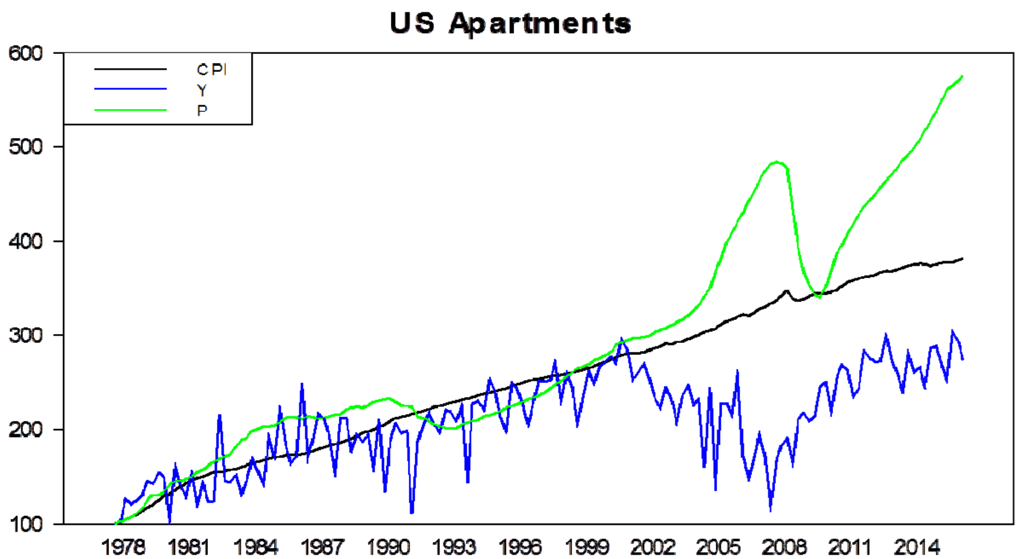
Property value, on the other hand does better historically. Retail and Apartment properties are complete inflation hedges (1.07, .98), with industrial pretty close (.91). Office again is worst, but at least it partially keeps up with the CPI (.74). In each category, it is clear that value grows more than income over time.

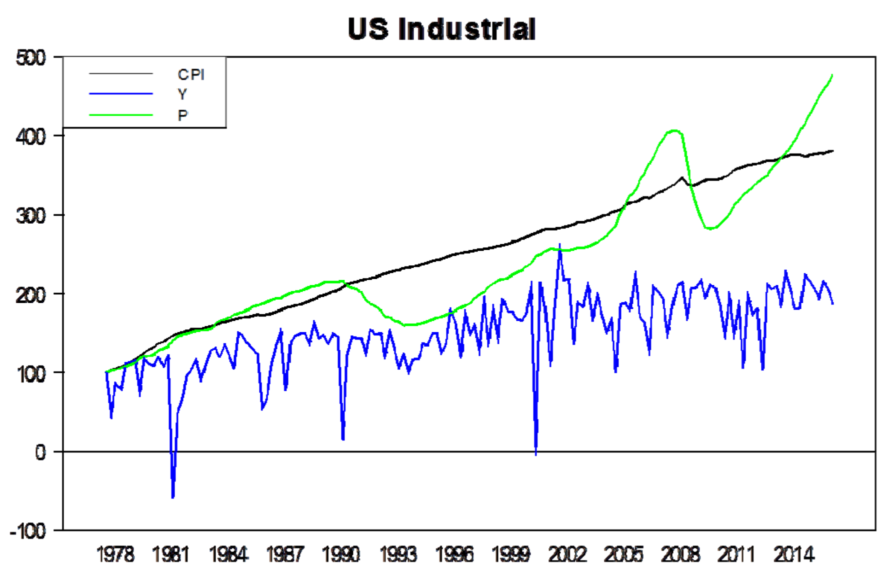
The explanation for these different growth rates of course is the long secular trend downward in real estate cap rates over the last 30 years. These have at least partially matched the widely recognized secular decline in government interest rates - both in nominal and real terms. With this decline, values have pretty much kept up with inflation – despite the fact that income has not. The result has been that the total return for real estate investors has consistently exceeded current yield – by an average of 3-4% annually!

What about the future? If income grows as it has in the past (generally less than inflation) and rising interest rates push cap rates up rather than down, then its quite possible there will be little or no future appreciation in real estate assets. In this case total return will approximately only equal yield (which now is near to record lows).

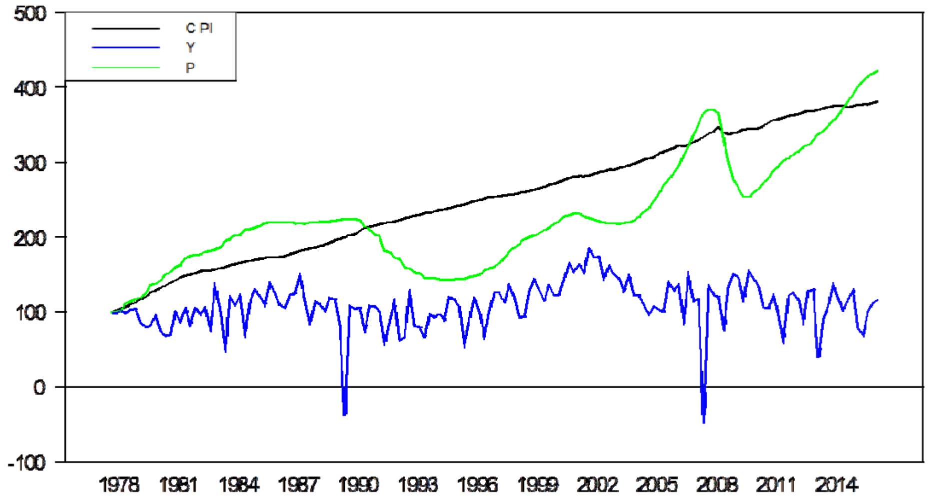
What's an owner/investor to do? The best way to help boost return that I can think of is to revamp how commercial real estate is managed so as to achieve greater growth in net income. This could at least partially offset the inevitable property depreciation likely to occur from rising rates. Several ideas come to mind:

- Reintroduce rental lease CPI indexation. Such clauses were quite common in rental leases during the 1970s and 1980s. Then as inflation came down they tended to disappear.
- Shift both market and inflation risk to tenants by introducing periodic rent-reviews such as occur with most leases in the UK. This is particularly important with longer term leases.
- Where possible, shift operating costs to tenants. While this may require some drop in gross rent levels, to the extent that operating costs rise faster than CPI inflation, the growth rate of net rental income should increase.

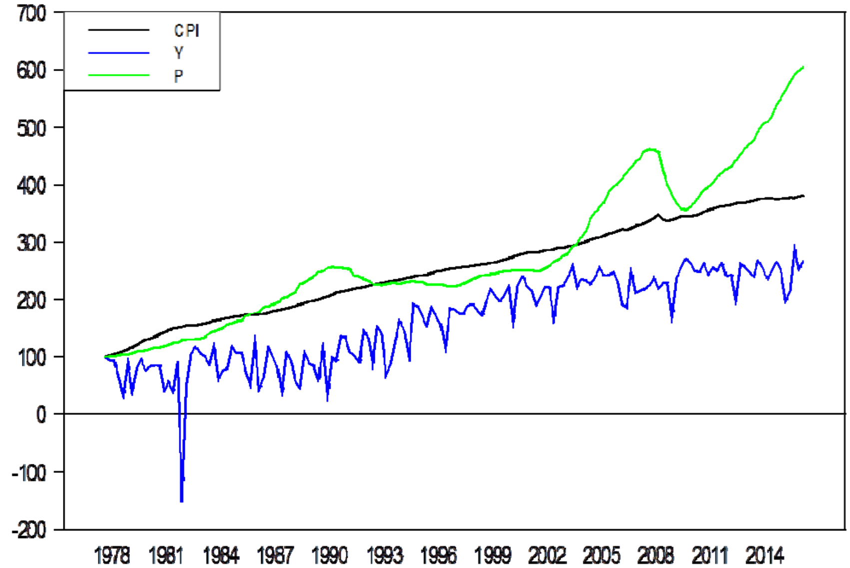




US Office



US Retail



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[i] Elasticities estimated with an Error Correction Model using quarterly data.
[ii] Bokhari/Geltner: “Characteristics of Depreciation in Commercial and Multi-family Property” (2014, MIT Center for Real Estate)