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Inflation Hedges

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Given the large US federal deficit, heavy government spending and accommodative monetary policy, many investors are justifiably worried about the potential for rampant inflation in the future. Inflation hurts our purchasing power and standard of living, with each dollar capable of buying less and less as time passes. Those with fixed incomes are harmed the most, since their receipts stay constant while their costs go up.

Currently, moribund global economies and the eurozone sovereign debt crisis mean that problematic inflation is unlikely to rear its ugly head any time soon. However, the relatively benign inflation picture is far from a permanent state of affairs. As global economies eventually rebound, we will see the return of a higher level of inflation. The only issues are how much higher and how quickly we get there. The price of inflation hedges will rise in advance of resurging inflation, so it is timely to look now at some possible inflation hedges to include in a diversified portfolio. It is like buying cheap winter coats during summer.

We should be clear what type of inflation becomes problematic. Because deflation is arguably worse than inflation, a little inflation is acceptable and even desirable. In fact, one of the Fed's twin mandates is price stability, not zero inflation. Though a little inflation is fine (i.e. in the 2-3% range), excessively high inflation will cause problems.

To deal with the prospect of unduly high inflation down the road, conventional wisdom recommends certain assets as hedges. In statistics parlance, such assets are commonly believed to be *positively correlated* with inflation, meaning their prices (returns) tend to move in the same direction as the inflation rate. So, such hedges are expected to rise in value along with rising inflation. A perfect hedge would move in both the same direction and the same percentage terms as the inflation rate and have a positive correlation of 1.0 with the inflation rate. Any asset with a positive correlation of less than 1.0 with the inflation rate would be considered a *partial*

Thanks for your referrals!

As we conclude our seventeenth year of publishing *Observations*, we would like to take this opportunity to express our gratitude and appreciation to all our clients and friends for their client referrals over the past year. We always welcome the opportunity to be of service to relatives, friends, and acquaintances of our clients. As many of you know, we do not market our services to people with whom we are not acquainted. Our business has grown over the past seventeen years primarily due to satisfied clients adding business and through their referrals. We hope you'll think of us if you come across anyone who would benefit from our services. Thanks again!

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inflation hedge.

In this article, we evaluate whether the commonly recommended inflation hedges do in fact act as effective hedges against inflation and therefore should be considered for addition to a diversified portfolio that is intended, among other things, to address the potential of unduly high future inflation.

Treasury Inflation-Protected Securities (TIPS)

TIPS are inflation-protected bonds issued by the U.S. Treasury and backed by the U.S. government. As such, they have no risk of default (regardless of what Standard and Poor's says!) The principal value of TIPS is indexed to inflation, as measured by the Consumer Price Index (CPI). When the CPI goes up (down), the principal value is adjusted upward (downward) by the same percentage change in CPI, but with a two-month lag.

The coupon (interest) rate of TIPS is fixed at issuance, but each interest payment (paid twice per year) will be increased by inflation because the fixed coupon rate is applied to the higher inflation-adjusted principal resulting from CPI hikes. Further, at maturity TIPS pay back *the higher of* the inflation-adjusted principal or the original par value.

Over time TIPS are a very effective hedge against inflation because of two reasons. First, the amount of periodic interest payments will rise in line with increases in CPI. Second, the payment you get back at maturity also incorporates and is adjusted upwards by any interim CPI hikes. *If held to maturity*, TIPS therefore offer a predictable *real* inflation-adjusted return equal to the *real* yield-to-maturity at purchase, unaffected by increases in inflation. In this way, TIPS held to maturity are fully effective as a hedge against inflation. This has been confirmed by studies such as "***Diversification Benefits of Treasury Inflation Protected Securities: An Empirical Puzzle"*** (Mamun & Visaltanachoti 2006) and "***Asset Allocation with Inflation Protected Bonds***" (Kothari & Shanken 2004).

Cash

While not as effective a hedge as TIPS, cash is an easily overlooked asset class that partially hedges against inflation. The hedging effect arises from the fact that cash yields rise along with short-term rates, which are set and controlled by the Fed. If problematic inflation returns at some point, the Fed will likely raise short-term interest rates to combat the rise in prices. Cash rates will increase after a lag, since it takes time for the Fed to respond to economic data and for its rate decisions to take effect.

To enhance the effectiveness of your cash hedge, it is preferable to stay away from cash in the form of deposits in checking and savings accounts, as such cash rates may rise too little or not at all, or rise only after a considerable lag. Instead, focus on cash-equivalent investments such as money market funds and/or ultra short-term Treasuries (e.g. three-month U.S. Treasury bills).

You should note that cash is not a perfect hedge against inflation. In the August 2011 issue of BlackRock's ***Investment Insights*** (BlackRock Study), it was shown that between 1953 and 2010, the return of cash (as represented by 30-day U.S. Treasury bills) tended to go up by approximately 0.75% for every 1% rise in inflation. So the rise in cash rates did not quite keep up with inflation increases. In "***Inflation Hedg-***

ing for Long-Term Investors" (Attie & Roache 2009 Study), cash rates were found over the long run to move up about 0.8% for each 1% rise in inflation. So, cash returns appeared to do a very good, but not perfect, job keeping up with inflation increases.

Commodities

Commodities, as real assets, are widely viewed as effective hedges against inflation. This commonly held view has been *generally* confirmed by multiple studies, but there are some wrinkles and contra-evidence. For example, the Attie & Roache 2009 Study showed that commodities start losing their hedging benefits in the longer run when inflation reaches the point that hinders economic activity and demand for commodities. In the January 2010 issue of ***Goldman Sachs Investment Strategy Group Insight*** (Goldman Study), the authors concluded that commodities do not offer a consistent and reliable inflation hedge.

The BlackRock Study is notable because while it confirmed the effectiveness of commodities as an inflation hedge, it found that the price of commodities move much more than inflation rate changes. In fact, the study found during 1995-2010 that for each 1% rise in inflation, the GSCI Total Return Index (a commodities index) rose 22.6%! But the converse is also true; the Index dropped 22.6% when inflation fell 1%.

Why are the above findings significant? Because they point to the fact that while commodities are likely to serve you well in times of inflation, they lead to severe losses during deflationary periods. Moreover, investors in commodities should be prepared for heightened volatility, as commodity prices can gyrate intensely, driven by supply/demand dynamics wholly independent of inflationary trends.

It is for these reasons that we typically prefer TIPS over commodities as an inflation hedge, because the downside is more limited if deflation, rather than inflation, materializes. Recall that at maturity, TIPS will pay you back at least the original par value even in the face of deflation, which will cause potentially huge losses for commodities. While your interim interest payments from TIPS will drop along with deflation, the amount you get back at maturity cannot be lower than par value, offering you some downside protection.

Equities

Unlike investments that pay a fixed income amount (e.g. bonds), *some* equities offer at least a partial hedge against inflation. Companies whose equities are the most likely to offer partially effective hedges include those that can pass along some or all of their increased costs onto customers, and those that can grow their sales, margins, profits etc. independent of inflationary developments and their impact on final goods prices (i.e. so-called growth stocks). This is because such equities offer the potential for capital price appreciation and/or growing dividends that can at least in part keep up with inflation increases.

However, many equities are poor inflation hedges. Those with commodity-type businesses, the need for high fixed capital investments, and/or no pricing power will see their business operations and stock prices hurt by inflation.

Gold

Until the recent swoon, gold has been all the rage as an investment. Perhaps there is no more widely

held conventional wisdom than the belief that gold is an effective inflation hedge. You might therefore be surprised to learn the BlackRock Study found that gold has not been a consistently effective inflation hedge, a conclusion shared by the Goldman Study with respect to the short and intermediate time periods.

In fact, per the BlackRock Study gold may be more effective as a ***crisis*** hedge or a hedge against a declining U.S. dollar. Many people see gold as the ultimate store of value and consider it a safe asset to own during uncertain times. There is some aspect of self-fulfilling prophecy at work. But you should keep in mind that gold has no intrinsic value, involves storage costs and generates no income.

Commercial Real Estate/Real Estate Investment Trusts

Commercial real estate, as a real asset, is another popular choice for an inflation hedge. It is widely believed that commercial real estate provides some protection against inflation because property prices tend to rise with general price levels, as landlords pass inflated costs through via higher rents, though with a lag as rents can only be raised when leases expire. However, the hedge is not perfect. As inflation causes interest rates to rise, at some point the rate increase would begin to hurt economic activity and pressure the ability to raise rents.

Commercial real estate's inflation-hedging effectiveness has been studied extensively, but the results have been mixed and controversial. The BlackRock Study, for example, found that over the past 40 years, no statistically significant relationship exists between commercial real estate returns and inflation. On the other hand, ***"The Inflation Hedging Characteristics of US and UK Investments: A Multi-Factor Error Correction Approach,"*** (Hoesli, Lizieri & MacGregor 2006) found commercial real estate to be a partial inflation hedge over the long run.

The evidence on the hedging effectiveness of securitized real estate interests such as real estate investment trusts (REITs) is also controversial and inconclusive. In fact, Hong & Lee found in "***Are Real Estate Investment Trusts (REITs) An Inflation Hedge?" (2011)*** that REIT returns and inflation from 1972-2010 were actually *negatively* correlated (i.e. REIT returns went down when inflation rose).

When it comes to financial markets/issues, conventional wisdom is often incorrect. The research cited in this article overall shows that TIPS, cash, commodities and *some types of* equities have demonstrated varying degrees of hedging effectiveness, but gold, commercial real estate, and REITs have *at best* a very mixed hedging record. It is always possible inflation will not become as serious a problem as you might anticipate. It is therefore advisable to maintain a diversified portfolio with some assets that hedge against inflation, and other assets that have positive attributes regardless of whether they are effective inflation hedges.

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