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BRETT HAMMOND
CHIEF INVESTMENT
STRATEGIST

USING INFLATION-LINKED BONDS AS AN INFLATION HEDGE: NOW OR LATER?

SUMMARY

Recently, in opposing opinion columns, two of the nation's most distinguished and visible macroeconomists disagreed about the prospects for inflation and what the government should do to stimulate economic growth and reduce unemployment.

> *"But sooner or later, we will see the Fed, under pressure from Congress, the administration and business, try to prevent interest rates from increasing… That's a big error… For the next few years, they cannot neglect rising inflation."*
>
> Allan Meltzer
> (Carnegie Mellon University),
> *New York Times* 5/4/09.

> *"To break that vicious circle* [of job losses and economic decline], *we basically need more: more stimulus, more decisive action on the banks, more job creation."*
>
> Paul Krugman
> (Princeton University),
> *New York Times* 5/4/09.

Their comments invite the questions:

- What should investors fear more during these turbulent times: weak economic growth or incipient inflation?
- What can investors do to protect their portfolios in inflationary times?

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PROSPECTS FOR INFLATION

To sort through the many statements about inflation versus weak economic growth, it is important to understand the timing of government stimulus and its effects. As we know, inflation happens essentially because there are too many dollars chasing too few goods and services. In other words, an increase in demand unmatched by an increase in production can cause prices to rise faster than wages.

In the current circumstances, rising demand could come from two sources: government spending and an increased money supply.

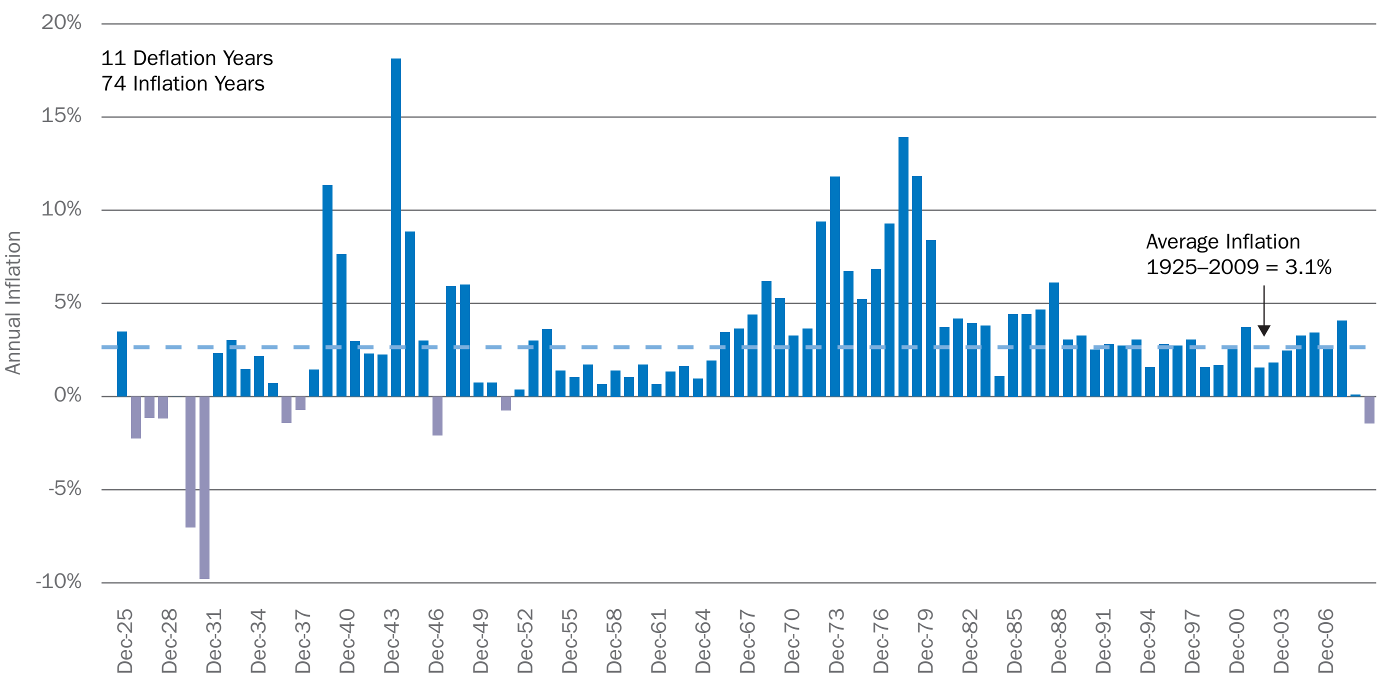
First, public spending in the form of the $790 billion stimulus package and a projected increase of about $1.2 trillion in the 2009 federal budget deficit (partially due to the stimulus package) will indeed enable the federal government to increase its purchases of goods and services as well as provide more money to individuals, businesses, and state and local governments in the form of lower taxes and transfer payments so they can begin to spend more.

Second, increases in the U.S. money supply and sources of private credit could also fuel rising demand. Over the past year, the Fed lowered short-term interest rates, lent massive amounts of money to banks and other financial institutions and, with the U.S. Treasury, guaranteed private loans and asset-backed securities and generally took steps to unfreeze private credit markets so that money would be easy to come by.

Both of these types of activities—fiscal and monetary—can be inflationary. Exhibit 1 shows annual U.S. inflation since 1925. The two biggest periods of inflation were at the beginning and the end of World War II and the 1970s and early 1980s.

EXHIBIT 1: U.S. DEFLATION AND INFLATION SINCE 1925

Yearly 12-Month CPI-U Ending December, 1925–2008 (12-month CPI-U ending June 2009)



Source: U.S. Bureau of Labor Statistics.

The dip in inflation during World War II was due to government wage and price controls. Otherwise, huge wartime spending programs combined with loans to businesses and U.S. allies helped to fuel an enormous demand for U.S. goods and services, which caused an inflationary spike as price controls were lifted in the mid-1940s. Similarly, in the 1970s, large increases in the money supply, deficit spending on domestic programs as well as the Vietnam War, stimulated demand and rising prices, which were exacerbated by artificially restricted energy supplies.

In contrast, the latter half of the 1920s and 1930s were periods of deflation rather than inflation. Rising farm productivity made food more widely available at lower prices, and falling wages due to the Great Depression pushed down demand across the board. The result was a consumer price decline, or deflation, of about 25%, just between 1929 and 1934.

Recently, the United States experienced a multi-month price decline, beginning near the end of 2008 and continuing into the first half of 2009. The worry now is that, perhaps like the 1940s and the 1970s, government spending and easy money will increase demand and push up prices.

The major forces pushing back on prices right now are slack production capacity accompanied by underemployment and diminished lending. The long-term potential growth rate of the U.S. economy is about 3%. However, during the current recession the economy grew at a clip of only 1% in 2008 and could decline by as much as 3% in 2009. Our growth forecast for 2010 is much improved, but still below the 3% potential growth figure. Increased federal government spending, while massive in dollar terms, will not offset reduced spending by and availability of credit to consumers, businesses, and state and local governments. The result is that our capacity to produce goods and services is much greater than our current output, so an increase in demand could (and, we hope, will) quickly lead to an increase in production of goods and services without putting pressure on prices.

Put another way, about 18% of people who want to work are either unemployed or underemployed (want to work more but can't). With this kind of underutilization of our workforce, workers will find it difficult to demand wage increases or to take on significant amounts of new debt for the foreseeable future. Hence, in aggregate, there is little likelihood that demand will outstrip our ability to supply those demands any time soon.

Over the next 2–3 years, as government deficits, money supply increases and low interest rates persist, economic growth could return and, with it, the potential for price increases. If the U.S. and global economies heat up, we could see rising demand for commodities, labor shortages in certain fields, and other indicators of incipient inflation. While this is not likely to happen until 2012 or beyond, it is quite possible that it will happen eventually. If so, it will be incumbent on fiscal and monetary policymakers to limit the forces of inflation by trimming government spending, raising short-term interest rates, and reigning in the money supply.

Unfortunately, policymakers have historically found it extraordinarily difficult to generate the political will to act in advance of an inflationary crisis. During the 1970s, for example, inflation jumped to over 10% before the Fed took draconian steps (raising interest rates and cutting back on the money supply) that eventually reduced inflation, but had the unfortunate side effect of plunging the country into recession.

AN INFLATION HEDGE IN HARD TIMES

When and if inflation does seem to be a significant risk, there are some things investors can do to protect themselves. One of the easiest of these is to use an inflation hedge, an investment that outpaces inflation. Stock returns can exceed inflation over long periods and during inflationary bouts, and commodity prices and returns can rise faster than inflation, but the surest inflation hedge is inflation-linked bonds or TIPS (U.S. Treasury Inflation-Protected Securities). Through an explicit formula, TIPS principal and interest rise along with the U.S. Consumer Price Index (CPI-U). Therefore, TIPS have the potential for providing protection against inflation.

But the TIPS inflation-hedging story isn't quite that simple. The total return for inflation-linked bonds has three components. The inflation component is straightforward and formulaic. The second component is the real coupon, which is the coupon or interest rate set for the life of the bond when it was first auctioned. Price change is the third return component, and it varies according to demand and supply considerations in the open market for inflation-linked bonds. For example, investors tend to increase their demand for TIPS when inflation fears increase, thus driving up their price and total returns. When inflation expectations decline, demand for TIPS can fall, thus reducing their price on the open market. In contrast, nominal government bonds are not indexed to inflation and can perform poorly when consumer prices rise, so investors tend to decrease their demand for nominal bonds when inflation appears to be on the horizon.

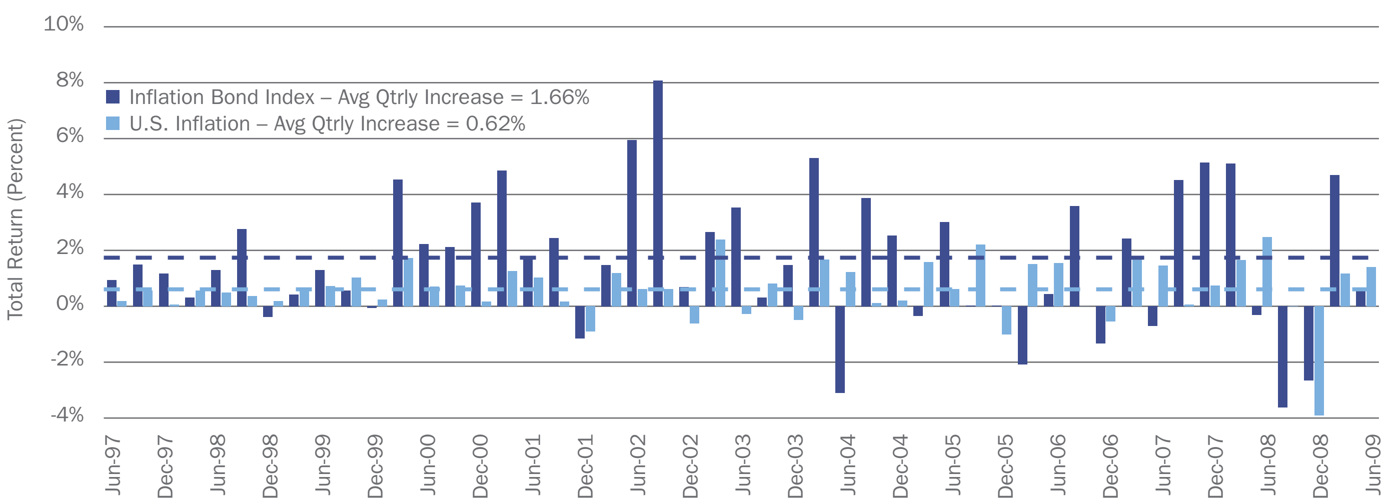
Exhibit 2 shows the relationship between the total return on a TIPS index and inflation by quarter since 1997, when TIPS were first issued by the U.S. Treasury. Over the entire period, the TIPS return comfortably beat inflation by more than 1% per quarter (almost 4.5% per year). In fact, the TIPS return exceeded broad U.S. equity returns during an unusually difficult period for stocks.

Nevertheless, TIPS should be thought of as an inflation hedge for the long run. Although the TIPS return outpaced inflation from 1997 to 2009, it failed to do so during 17 of the 49 quarters in this period (about a third of the time). And when measured on an annual basis, the index also underperformed inflation twice in 13 years.

One recent illustration of TIPS performance was 2008–2009, when the inflation rate declined and prices fell for several months in a row. In 2008, TIPS were the only broad government security index to finish the year in negative territory; the Barclays Capital TIPS index declined more than 2%. At the same time, the Barclays government securities index, which is dominated by nominal bonds, rose over 12%. In 2009, this trend completely reversed. Through June, the TIPS index was up over 6% and the government securities index was down over 3%. So a partial and compelling interpretation of this reversal of fortune is that, from 2008 to 2009, investors went from anticipating significant price deflation to fearing the onset of inflation, neither of which had yet appeared.[1]

EXHIBIT 2: INFLATION BONDS HAVE OFTEN, BUT NOT ALWAYS, BEAT INFLATION

Quarterly Returns—June 1997 to June 2009



Source: Barclays Capital and U.S. Bureau of Labor Statistics.

[1] A more complete explanation is that, in addition to deflation fears, in 2008 investors shunned equities, corporate bonds, and most other asset classes in favor of the safety of nominal government bonds, thus driving up their returns. As investors' appetite for risk returned along with some inflation fears, particularly in the second quarter of 2009, they began to sell nominal government bonds in favor of equities, corporate bonds and TIPS.

Consequently, TIPS should be thought of as part of a diversified portfolio rather than a stand-alone investment vehicle. Over the long run, expected returns on TIPS are likely to be modest compared to equities, high-yield bonds, real estate and some other types of investments. Moreover, TIPS generally outperform when inflation expectations soar and underperform when deflation is more likely, so a portfolio composed entirely of TIPS could underperform a more diversified portfolio during certain periods.

Rather than looking just at returns, however, the inflation protection feature of TIPS has given them low historical correlations with equities, other equity-like asset classes, and even nominal fixed-income asset classes. Especially during periods of anticipated deflation or rising inflation expectations, TIPS correlations with other asset classes have ranged from less than 0.5 to negative. For example, in 2008–2009, TIPS and nominal bond returns moved in opposite directions.

So the right role for TIPS in a portfolio is both as a long-term fixed-income diversifier and as a short-term inflation hedge. For either of these purposes, the right mix of TIPS in a portfolio is a matter of careful analysis geared to an individual investor's needs and outlook. The best way to determine this is in consultation with a trusted investment advisor.

Brett Hammond is available to comment on economic data. If you wish to speak with him, please contact Chad Peterson, Media Relations, 212 916-4808 or e-mail cpeterson@tiaa-cref.org.

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