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INFLATION-LINKED BONDS: POWERFUL PORTFOLIO DIVERSIFIER

As investors sought protection against rising inflation and poor conditions in other asset markets in 2007 and 2008, inflation-linked bonds have outperformed many other major asset classes. Total inflation-linked bond returns have three distinct components: inflation return, real coupon return, and price or demand-related return. In 2007 and the beginning of 2008, the price return component rose significantly, propelling total returns for this asset class higher. Since August, however, declining inflation and economic expectations have produced a price and return reversal as investors have sought short rather than long-duration U.S. Treasuries. Currently priced as though inflation will drop to about 1.0% for the foreseeable future, inflation-linked bonds continue to be attractive as a choice for a diversified portfolio and as a hedge against rising inflation.



INFLATION-LINKED BONDS' IMPRESSIVE RUN

In the last several months, inflation-linked bonds have reversed the remarkable run-up they experienced before July of this year. In 2007, a broad index of U.S. inflation-linked bonds rose nearly 12% and during the first six months of 2008, climbed nearly 5%, outperforming many other asset classes, including equities and fixed income. Since then, however, inflation-linked bonds have given back their 2008 gains and are down nearly 3% for the year, similar to a broad index of nominal bonds. Nevertheless, their performance contrasts sharply with broad equity indexes, which declined 40% or more by the latter part of October.

- What explains the recent performance of inflation-linked bonds?
- Do they always outperform other bonds and stocks?
- What is the role of inflation-linked bonds in a long-term investment portfolio?

Inflation-linked bonds have likely outperformed other asset classes because, for many investors, they represent a port in the storm of recent turbulence due to rising inflation and the global liquidity crisis.

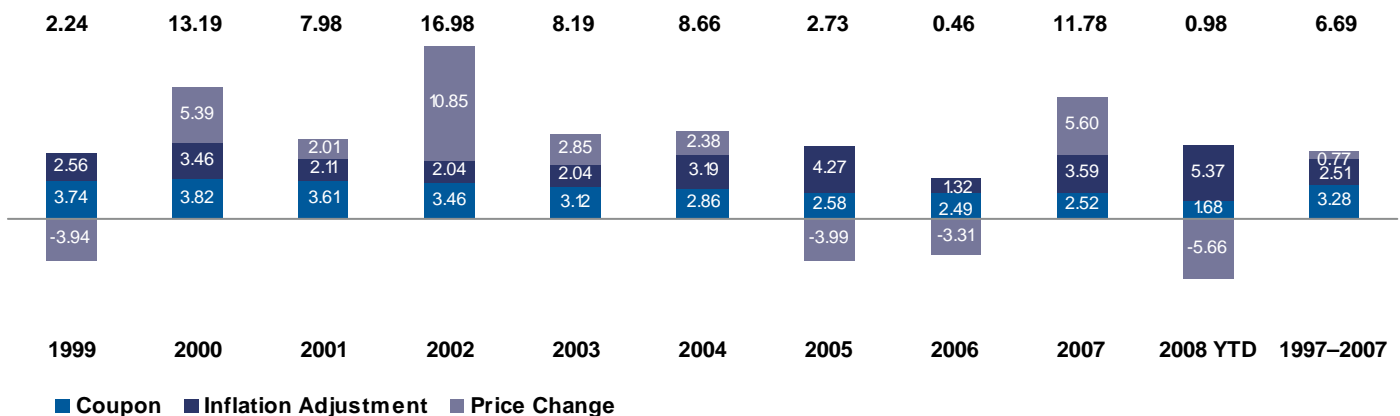
Global inflation took an upturn at the end of 2007 and accelerated in the beginning of 2008. In the United States and in many other developed countries, between 1997 and 2006, inflation rose about 2.5% per year. In 2007, the U.S. Consumer Price Index (CPI) (Urban) jumped over 3.5% and reached an annualized rate of over 5% in 2008 as the price of basic goods and services, such as energy and food, rose throughout the world. Investors, worried about the effects of rising inflation, began to purchase inflation-linked bonds at a greater rate, thus driving up the price of these bonds relative to other securities.

Price pressure on inflation-linked bonds was amplified by the global liquidity crisis and market conditions in which demand and prices fell for many other fixed-income securities, such as mortgage-backed securities and even some corporate bonds, but rose for safer government securities.

We can see these effects in the following chart, which breaks out the real coupon rates, the inflation-adjusted returns and the price returns of a U.S. Treasury Inflation-Protected Securities (TIPS) index from the inception of TIPS in 1997 through the end of 2007.

COMPOSITION OF U.S. TIPS RETURN

Percentages based on monthly returns from 3/97 thru 9/08



Source: Barclays Capital

Over the entire period, this index enjoyed an average annual return of about 6.7%. This total return can be thought of as the sum of three basic components: inflation, the real coupon, and the price change. TIPS are directly tied to inflation through the U.S. CPI. TIPS are designed to provide a return that reflects changes in the CPI with a two-month lag. So an increase in consumer prices in any year means that investors with a direct investment in TIPS will see a similar increase in their dividend payout from the U.S. Treasury. Since 1997, the inflation adjustment has been worth about 2.5% per year to investors.

In addition to the inflation component, TIPS investors receive a dividend that reflects the real coupon or interest rate, which is set at the initial auction of these bonds by the Treasury. The real coupon reflects what investors believe will be the underlying real interest rate during the life of the inflation-linked bond, stripped of inflation. This represents a step forward in understanding real interest rates, since the coupon payments of nominal bonds combine what investors think inflation will be with what they think real interest rates will be. Since 1997, real coupon returns of TIPS have averaged a little over 3.25%.

Price change is the third major component of the TIPS index total return and, even more than inflation, is the source of the total return experience of TIPS in recent years. In contrast to the inflation return, which is set by

changes in the CPI, and the coupon return, which is fixed at the initial TIPS auction, TIPS prices are affected by demand on the open market where investors can buy and sell these securities on a daily basis. From 1997 through 2007, the price return averaged a relatively modest 0.77% per year.

But notice the variation in the price return from year to year. The bar chart shows that in 2007, the price return was about 5.6%, a little less than half of TIPS total return. In contrast, in 2006, price return was negative, nearly wiping out the positive effects of the steadier inflation and coupon returns. And we can see how this pattern of fluctuating price returns continues throughout the period, in some years negative, in others modestly positive, and in still others (2000, 2002, 2007) notably positive.

The lesson from these figures is that investors' interest in inflation-linked bonds waxes and wanes, thus affecting not only the price but the bonds' total return during any period. In turn, investors' interest in TIPS is affected by economic and market conditions. For example, in the most recent period, investor sentiment was driven by concerns about liquidity and future economic growth. Both of these influences can be illustrated by the following table, which shows the general direction of bond prices due to several possible types of effects. (Note that rising bond prices will be accompanied by rising total returns as well as falling nominal interest rates.)

EFFECT ON EXISTING BOND PRICES OF CHANGES IN...

	GDP GROWTH RATE		REAL INTEREST RATES		INFLATION EXPECTATIONS		CASH FLOWS	
	Rise	Fall	Rise	Fall	Rise	Fall	Rise	Fall
Inflation Bond	-	+	-	+	+	-	+	-
Nominal Bond	-	+	-	+	-	+	+	-

Source: Author's estimates.

For the most part, both nominal and inflation-linked bond prices move in the same direction no matter what the driving force. When GDP is expected to fall, bond prices tend to rise, as do they in response to falling real interest rates and rising cash flows (i.e., an across-the-board or "exogenous" increase in demand for government bonds such as when there are liquidity concerns).

The one place where price effects differ is in response to inflation expectations. Since nominal bond coupons are composed of what investors believe or expect inflation will be over the life of the bond, a rise in inflation expectations (such as an inflationary surprise) will tend to depress the price of nominal bonds held by investors (and increase the coupon or interest rates on new bonds issued by the U.S. Treasury).

In contrast, an inflation surprise will tend to increase the price of inflation-linked bonds, since investors know that the bonds' coupon payments will rise to reflect that increase. The reverse is true of a decline in inflation expectations (e.g., an unexpected drop in inflation). Nominal bond prices will tend to rise and inflation-linked bond prices will tend to fall.

The upshot of all this is that long-term investors should not be fooled by short-term swings in the inflation-linked bond returns, which can be large or small. Instead, they should

see that, because they tend to perform quite differently from nominal bonds and stocks, inflation-linked bonds play a unique role in a long-term portfolio. Not only can they provide long-term inflation protection, they can also provide returns that have low-to-negative correlations with other asset classes. Therefore, as they have in the past couple of years, inflation-linked bonds can provide a possible buffer for a portfolio when other asset class returns are low or declining. This is the classic attraction of a fully diversified portfolio, i.e., one that mitigates the ups and downs of the stock market with assets that rise and fall differently than stocks.

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