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PIMCO ETFs

Investment Basics

Inflation-Linked Bonds

Inflation-linked bonds, or ILBs, are securities designed to help protect investors from inflation. Primarily issued by sovereign governments, such as the U.S. and the U.K., ILBs are indexed to inflation so that the principal and interest payments rise and fall with the rate of inflation.

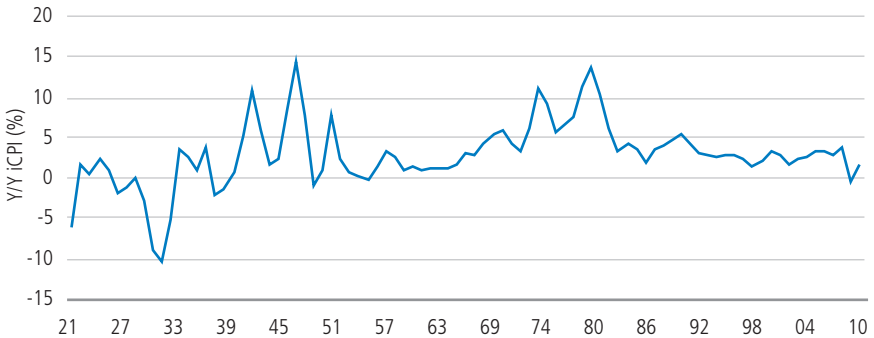
Inflation can significantly erode investors' purchasing power, and ILBs can potentially provide protection from inflation's effects. ILBs may also offer additional benefits in a broader portfolio context.

Inflation: The first hurdle to overcome

Inflation is an economic term that describes the general rise in prices of consumer goods and services. As prices rise, a dollar saved buys less goods and services, or in other words, investors lose purchasing power of their dollar. To account for the effects of inflation, investors should focus on "real" return – the amount earned after adjusting for inflation. Investments that target returns above the rate of inflation can protect and potentially increase investors' future purchasing power.

Inflation has been low for many years around the world. Over the decade through 2010, U.S. inflation, for example, averaged 2.5% annually, based on year-over-year changes in the U.S. Consumer Price Index (CPI) – see the chart. However, even at this relatively low annual rate of 2.5%, inflation diminishes purchasing power: Goods and services that cost $100 a decade ago would cost $128 today.

Figure 1: U.S. inflation (Year-over-year, 1921-2010)



Source: U.S. Bureau of Labor Statistics

The effect of inflation on investment returns can be just as destructive. Assume an equity portfolio return of 4% per year and an inflation rate of 2.5%. The real return of this portfolio, or the return minus the rate of inflation, would be 1.5%. So, in this case, an investment in equities would increase investors' purchasing power by only 1.5% a year. An investment in a money market account, savings account or any other investment returning less than the 2.5% rate of inflation would effectively erode purchasing power, defeating even the most conservative goal of maintaining quality of life.

ILBs: Inflation-linked bonds

Inflation-linked bonds are designed to help protect investors from the negative impact of inflation by contractually linking the bonds' principal and interest payments to a nationally recognized inflation measure such as the Consumer Price Index in the U.S. and the Retail Prices Index in the U.K.

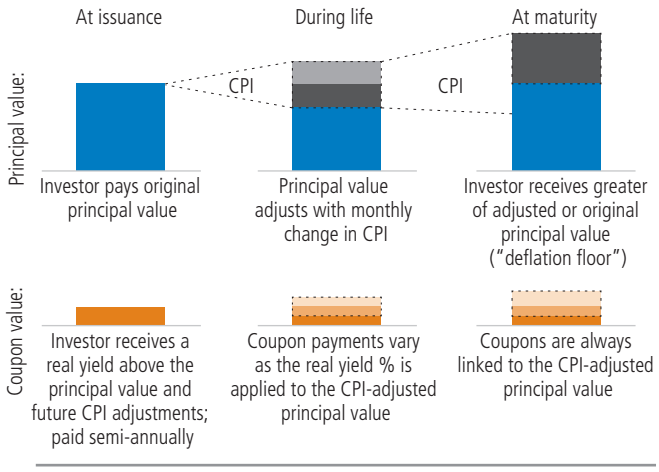
The earliest recorded inflation-indexed bonds were issued by the Commonwealth of Massachusetts in 1780 during the Revolutionary War. Much later, emerging market countries began issuing ILBs in the 1950s. In the 1980s, the U.K. was the first developed country to introduce "linkers" to the market. Several other countries followed, including Australia, Canada, Mexico and Sweden. In January 1997, the U.S. began issuing Treasury Inflation-Protected Securities (TIPS), now the largest component of the global ILB market. Since then, the market has grown dramatically.

Today inflation-linked bonds are typically sold by governments in an effort to reduce borrowing costs and broaden their investor base. Corporations have occasionally issued inflation-linked bonds for the same reasons, but the total amount has been relatively small.

Calculating ILB values and payments

An ILB's explicit link to a nationally-recognized inflation measure means that any increase in price levels directly translates into higher principal values. For example, consider a $1,000 20-year U.S. TIPS with a 2.5% coupon (1.25% on semiannual basis), and an inflation rate of 4%. The principal on the TIPS note will adjust upward on a daily basis to account for the 4% inflation rate. At maturity, the principal value will be $2,208 (4% per year, compounded semiannually). Additionally, while the coupon rate remains fixed at 2.5%, the dollar value of each interest payment will rise, as the coupon will be paid on the inflation-adjusted principal value. The first semiannual coupon of 1.25% paid on the inflation-adjusted principal of $1,020 is $12.75, while the final semiannual interest payment will be 1.25% of $2,208, which is $27.60.

Figure 2: ILB principal and coupon values, from issuance to maturity



Sample for illustrative purposes only.

While the exact mechanism for calculating payments can differ across specific issuers, all ILBs are designed to provide investors with returns contractually linked to inflation that may be used as a tool to hedge against rising price levels. Monthly ILB returns have historically had a positive correlation to monthly changes in inflation, while several other major asset classes, including equities, nominal government bonds and corporate bonds, have had no or negative correlation to inflation over an extended period of time.

The inflation hedge offered by ILBs is important because every investor and consumer is exposed to inflation, and should consider having some measure of inflation protection in their portfolio. Since traditional asset classes such as stocks and bonds – which tend to dominate many portfolios – can be adversely affected by periods of persistent inflation, ILBs, with their explicit link to changes in inflation, are an effective way to incorporate explicit real returns into a portfolio.

Factors that affect performance and risk of ILBs

Together with inflation accrual and coupon payments, the third driver of ILBs' total return comes from the price fluctuation due to changes in real yields. If the bond is held to maturity, the price change component becomes irrelevant; however, prior to expiration, the market value of the bond moves higher or lower than its par amount. Just like nominal bonds, whose prices move in response to nominal interest rate changes, ILB prices will increase as real yields decline and decrease as real yields rise.

Should an economy undergo a period of deflation – a sustained decline in price levels – during the life of an ILB, the inflation-adjusted principal could decline below its par value. Subsequently, coupon payments would be based on this deflation-adjusted amount. However, many ILB-issuing countries, such as the U.S., Australia, France and Germany, offer deflation floors at maturity: If deflation drives the principal amount below par, an investor would still receive the full par amount at maturity. So, while coupon payments are paid on a principal adjusted for inflation or deflation, an investor receives the greater of the inflation-adjusted principal or the initial par amount at maturity.

It's not just about inflation: Other potential benefits of ILBs in a portfolio

Including ILBs in a portfolio of stocks and traditional bonds may provide investors with enhanced diversification and lower volatility. ILBs may exhibit unique responses to various economic environments and have historically shown low correlations with equities, commodities and several other asset classes, thus enhancing diversification in a broader portfolio context, reducing the portfolio's volatility and potentially improving overall risk-adjusted returns. And while diversification does not protect against losses, it can sometimes favorably shift the trade-off between risk and return.

Gauging the relative value of ILBs: The break-even inflation rate

To compare ILBs with nominal government bonds and determine their relative value, investors can look at the difference between nominal yields and real yields, called the break-even inflation rate. The difference indicates the inflation expectations priced into the market; it is the rate differential at which the expected returns of ILBs and nominal bonds are equal. If the actual inflation rate over the life of the bond is higher than the break-even inflation rate, investors would earn a higher return holding ILBs while having lower inflation risk. If the actual inflation rate is lower than expectations, the nominal bond of the same maturity would garner a higher return, though with a higher inflation risk.

For example, if a 20-year nominal Canadian Government bond is yielding 3.6% and a 10-year Canadian real return bond is yielding 0.9%, then the break-even inflation rate is 2.7%. If an investor believes Canadian inflation rate will be above 2.7% for the next 20 years, then a Canadian real return bond would be a more attractive investment.

Conclusion

Everyone who has savings or consumes goods and services has exposure to inflation and may benefit from including an allocation to ILBs in their portfolios. Furthermore, because ILBs exhibit distinctive responses to various economic conditions, they may offer diversifying benefits when included in a broader portfolio context.

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A word about risk: Past performance is not a guarantee or a reliable indicator of future results. Investing in the bond market is subject to certain risks including market, interest-rate, issuer, credit, and inflation risk; investments may be worth more or less than the original cost when redeemed. Investing in foreign denominated and/or domiciled securities may involve heightened risk due to currency fluctuations, and economic and political risks, which may be enhanced in emerging markets. Mortgage and asset-backed securities may be sensitive to changes in interest rates, subject to early repayment risk, and their value may fluctuate in response to the market's perception of issuer creditworthiness; while generally supported by some form of government or private guarantee there is no assurance that private guarantors will meet their obligations. High-yield, lower-rated, securities involve greater risk than higher-rated securities; portfolios that invest in them may be subject to greater levels of credit and liquidity risk than portfolios that do not. Diversification does not ensure against a loss.

The correlation of various securities against one another or against inflation is based upon data over a certain time period. These correlations may vary substantially in the future or over different time periods that can result in greater volatility.

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