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 UK, 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.

**WHAT IS THE IMPACT OF INFLATION ON AN INVESTMENT PORTFOLIO?**

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.

Global inflation has been falling since the early 1990s. Over the last decade in the UK, the Consumer Prices Index (CPI) has been between two and three percent, which is broadly in line with the Bank of England’s inflation target. Yet even at a relatively low rate of 2.5%, a basket of goods and services that cost £100 ten years ago would cost £128 today. This illustrates how inflation erodes purchasing power over time.

**UK CONSUMER PRICES INDEX (% CHANGE)**

The effect of inflation on investment returns can be just as destructive. Assume a hypothetical 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 GBP money market fund, 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.

**WHAT ARE INFLATION-LINKED BONDS, OR ILBS?**

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 Retail Price Index (RPI) in the UK, the European Harmonised Index of Consumer Prices (HICP) ex-tobacco in Europe, and the Consumer Price Index (CPI) in the U.S.

**GROWTH OF UNIVERSAL ILB MARKET**

As of 31 March 2016

Source: Components of Barclays Universal Government Inflation-Linked All Maturities Bond Index
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 1960s. In the 1980s, the UK was the first major developed market 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. 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.

**HOW DO ILBS WORK?**

An ILB’s explicit link to a nationally-recognized inflation measure means that any increase in price levels directly translates into higher principal values. As a hypothetical 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.

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.

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.
WHAT FACTORS AFFECT THE PERFORMANCE AND RISKS 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.

HOW DO I DETERMINE THE RELATIVE VALUE OF ILBs?

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 breakeven inflation rate. The differential 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 breakeven 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 10-year nominal UK gilt is yielding 2.5% and a 10-year UK inflation-linked bond is yielding 0.25%, then the breakeven inflation rate is 2.25%. If an investor believes the UK inflation rate will be above 2.25% for the next 10 years, then a then an Inflation-Linked Bond would be a more attractive investment.

WHAT ARE THE RISKS?

As with other investments, the price of ILBs can fluctuate, and if real yields rise, the market value of an ILB will fall. Real yields can rise due to an increase in inflation, without a corresponding increase in nominal yields. If held to maturity however, the market value fluctuations are irrelevant and an investor receives the par amount. In theory, a period of deflation could reduce this par amount. However, in practice most ILBs are issued with a deflation floor to mitigate this risk.

GLOSSARY

**Bonds:** An instrument of debt issued by a corporation or government to raise capital. Bonds are interest bearing and promise to pay the holder a specified sum of money at its maturity plus interest at given intervals.

**Breakeven inflation rate:** The difference between real yields and nominal yields.

**Commodities:** A commodity is food, metal, or another fixed physical substance that investors buy or sell, usually via futures contracts.

**Correlation:** A statistical measure of how two securities, such as equities, bonds, commodities, move in relation to each other.

**Diversification:** A risk management technique that mixes a wide variety of investments within a portfolio. The rationale behind this technique contends that a portfolio of different kinds of investments will, on average, yield higher returns and pose a lower risk than any individual investment found within the portfolio.

**Equities:** Ownership or proprietary rights and interests in a company – synonymous with equities.

**Maturity:** The date on which a loan, bond, mortgage or other debt security becomes due and is to be paid off.

**Nominal yields:** The rate listed on the face of a bond; the coupon rate.

**Real yields:** The nominal yield, or rate listed on the face of a bond, minus the rate of inflation.

**Risk-adjusted returns:** The return your investment has made relative to the amount of risk the investment has taken over a given period of time.
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Past performance is not a guarantee or a reliable indicator of future results.

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