Wespath
Investment Management

Protecting Investors from Inflation—The Inflation Protection Fund Approach

by Frank Holsteen

Most investors benefit from an allocation of fixed income investments within a portfolio that also includes riskier assets, such as equities. Fixed income offers relatively predictable income, capital preservation and risk diversification. But how should investors judge whether they earned a satisfactory rate of return from their fixed income investments?

Should investors be satisfied with an average annual compounded fixed income rate of return of 3% over five years? It depends. While investors might be satisfied with a 3% return in today's low inflation environment, a 3% return would look decidedly unattractive if inflation was 10% per year during those five years, which is exactly what happened from 1977 through 1981. The Barclays Aggregate Bond Index, which represents the most broadly accepted index for investment-grade fixed income instruments in the U.S., provided a 5-year cumulative return of about 16% (3% annualized), while consumer prices rose a cumulative 62% (10% annualized) during that time. The inflation-adjusted or "real" return of the Aggregate Bond Index averaged minus 6.4% per year, resulting in a cumulative 28% loss of purchasing power!

While inflation is not expected to return to 1970's levels, this dramatic example of the impact of unexpected inflation on fixed income investments can serve as a reminder of potential risks. That's why Wespath offers the Inflation Protection Fund (IPF), which seeks to provide investors with current income while protecting principal from loss of purchasing power due to inflation. Before discussing IPF's investment strategy, let's briefly review some inflation concepts.

Inflation's Effect on Investments

Inflation is a measure of the change in the price level of goods and services in an economy over a period of time. An increase in price reduces the quantity of goods and services that can be purchased with a unit of currency. In the United States, the Bureau of Labor Statistics (BLS) within the Department of Labor tracks pricing for various segments of the U.S. economy and publishes its findings through the Consumer Price Index (CPI). The version of CPI that many economists/investors reference as a proxy for inflation is the *Consumer Price Index for All Urban Consumers*, which statistically captures the purchasing habits of the vast majority of the U.S. population. Inflation is computed by comparing CPI values for different points in time. For example, the CPI measured 76.7 at the end of 1979 and 86.3 at the end of 1980, which means consumer prices increased 12.5% during 1980.

Reduced purchasing power due to inflation can significantly impact an investment's real return. To calculate the real rate of return of an investment (adjusting for inflation), we can use the following formula, where "nominal" return is the actual investment return earned by the asset before adjusting for inflation:

$$\text{Real Return} = \frac{1 + \textit{Nominal Return}}{1 + \textit{Inflation Rate}} - 1$$

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Below, the formula is applied to our 1977–1981 example:

Cumulative Barclays Aggregate Index Return (Nominal):	16.2%
Cumulative Increase in CPI (As Reported by BLS):	61.5%

Cumulative 5 Year Real Return = $\frac{1 + .162}{1 + .615} - 1 = -28.0\%$

Annualizing the Cumulative Real Return:

Annualized 5 Year Real Return = $(1 - .280)^{1/5} - 1 = -6.4\%$

The erosive effect on real returns from inflation is not unique to fixed income investments, but investors in this asset class are especially vulnerable to the loss of purchasing power from inflation. As the name "fixed income" implies, such securities usually pay a fixed rate of interest that is set at the time the security is issued. Investors can benefit from the stability of this promised income stream and the resultant diversification qualities when bonds are used alongside riskier assets, such as equities. However, where an equity security represents an ownership claim on the value of a company's assets and its earnings—both of which can increase with inflation—a typical fixed income security does not have features that benefit from rising prices. Typically, when investors anticipate higher rates of inflation, they will demand higher interest rates on newly issued bonds. Accordingly, the value of existing bonds will decline as yields increase to match yields on newly issued bonds.

Protecting Fixed Income Investments from Unexpected Inflation

Current inflation itself is not so much a problem to a fixed income investor as is an unexpected change in the rate of inflation. Fixed income investors can lock in an adequate yield on a bond at the time of purchase to compensate for future inflation—if they accurately project future inflation. However, unexpected inflation causes relative winners and losers in the lender/borrower relationship. A bond investor (lender) who underestimates future inflation will be repaid by the bond issuer (borrower) with a currency that is less valuable than originally anticipated. An unexpected *increase* in inflation transfers wealth from lender to borrower; the inverse is also true. An unexpected *decrease* in inflation transfers wealth from borrower to lender. Accordingly, one must consider the uncertainty of future inflation as an investment risk, whereas perfectly anticipated inflation would merely be a factor one would consider when assessing the fair value of an asset.

Fortunately, fixed income investors have more tools at their disposal now than during the 1970's inflation crisis—most notably a larger market of inflation-linked (protected) securities, otherwise known as "linkers." Linkers are bonds that compensate an investor for actual inflation experienced during the term of the bond. The United Kingdom began issuing linkers in 1981, and the U.S. Treasury introduced Treasury Inflation Protected Securities (TIPS) in 1997.

As of June 30, 2014, linkers represented a $3 trillion market globally, as measured by the Barclays Universal Government Inflation-Linked Bond Index. TIPS are the largest and most liquid segment of the global linkers market, representing approximately $1 trillion of the $3 trillion index. TIPS have become a widely-used proxy for inflation-protected investing due to their high quality and adequate liquidity, combined with their explicit inflation protection. The Wespath Inflation Protection Fund includes TIPS as its core allocation, and the Fund's performance is benchmarked against the Barclays Capital US Government Inflation-Linked Bond Index (Series B).

Let's review how TIPS work and how they protect investors from inflation. Like conventional "nominal" Treasury securities (nominals), TIPS are backed by the full faith and credit of the U.S. Treasury. Also like nominals, TIPS pay a fixed rate of interest semi-annually and principal at maturity. However, unlike nominals, the principal value of TIPS is adjusted up or down daily based on the actual rate of inflation, as measured by the change in the CPI.

The CPI used for the TIPS inflation adjustment lags three months, so a TIPS inflation-adjusted principal value on March 1 is based upon the CPI for the preceding December. Since the semi-annual interest payments are calculated based upon the inflation-adjusted principal, the interest payments increase with inflation and decrease with deflation. The inflation-adjusted principal value of TIPS can decrease below its original issuance principal after a period of deflation but, at maturity, TIPS pay back the greater of inflation-adjusted principal or originally-issued principal.

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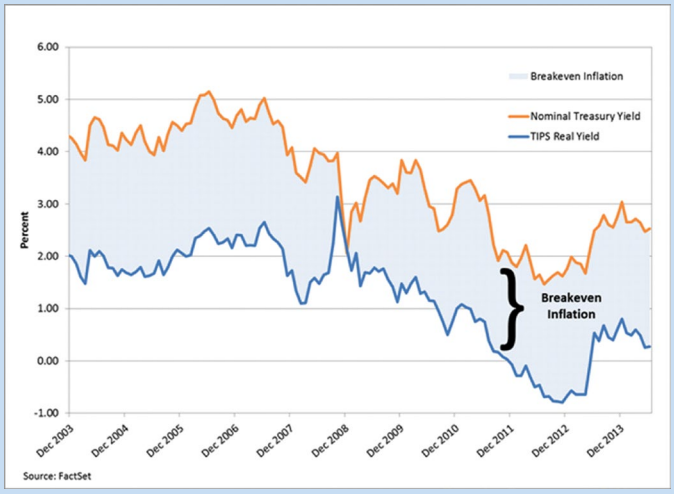
Real Yield vs. Nominal Yield

Fixed income investors rely upon an important valuation measure called “yield to maturity.” Yield to maturity (yield) is the discount rate that equates a security’s forecasted cash flows from interest and principal payments to its current market value. In other words, it forms a basis to predict a rate of return on a security if held to maturity, assuming that the issuer honors all of its obligations to pay interest and return principal when due. Because TIPS compensate investors for actual inflation, the yield to maturity of TIPS is a “real” yield, or yield above inflation. The yield of a conventional Treasury security is a “nominal” yield, which can be thought of as incorporating two components—a real yield plus additional yield to compensate an investor for expected inflation. The difference between the nominal yield of a Treasury security and the real yield of like-maturity TIPS is called the breakeven inflation rate. It’s the expected future inflation rate at which an investor would receive the same inflation-adjusted return by holding either the nominal Treasury or the TIPS to maturity. The following chart tracks the yield to maturity of the 10-year nominal Treasury vs. the 10-year TIPS through time, with the breakeven inflation rate measured in the shaded area.

10-Year Maturity U.S. Treasury Nominal and Real Yields



The TIPS price moves in the opposite direction of its yield, just like it does for a nominal Treasury. However, prices of the two types of securities do not necessarily move in tandem when market yields fluctuate. When nominal yields fluctuate, a portion of the fluctuation may be a change in investors’ inflation expectations, and a portion may be a change in investors’ required real yield. The market value of TIPS is impacted solely by a change in investors’ required real yield.

When TIPS Reduce Performance

During 2013, the U.S. Federal Reserve announced that it would began reducing the monetary stimulus of its Quantitative Easing program, and the 10-year nominal Treasury yield rose from 1.78% to 3.04% during the year. The yield increase did not reflect investor expectations of higher inflation; in fact, inflation expectations decreased as measured by the TIPS breakeven rate. The nominal 10-year Treasury yield rose by 1.26% and the 10-year TIPS real yield rose by 1.47%, meaning that the 10-year breakeven inflation rate had actually declined by 0.21%. Rather than expecting a rise in inflation, the market seemed to be expecting lower inflation and requiring higher real yields.

Rising real yields and declining inflation expectations are a challenging combination for TIPS performance. The Barclays TIPS Index recorded annual performance of -9.26% in 2013, which was its worst annual performance since its inception in 1997. However, it’s important to note that 2013’s poor TIPS performance followed four years of strong performance driven by declining real yields. Despite the negative return in 2013, the compound annualized five-year TIPS Index return through 2013 was +5.44%.

Benefits of Diversification

With the benefit of a U.S. government guaranteed inflation-adjusted return for TIPS if held to maturity, why wouldn't the Inflation Protection Fund utilize TIPS alone to protect against inflation? The IPF approach applies a "core" investment strategy supplemented by multiple diversifying strategies to seek reduced volatility, higher income and better risk-adjusted returns. The core strategy is the U.S. TIPS allocation and represents the largest single allocation within the Fund. The diversifying strategies are blended in smaller proportions. The overall composition is summarized in the following table:

Allocations by Manager Mandate as of June 30, 2014	Target Range	Actual
U.S. Treasury Inflation-Protected Securities (TIPS)	30% – 40%	36.0%
Global Inflation-Linked Bonds (Developed)	28% – 32%	30.4%
Emerging Market Inflation-Linked Bonds	8% – 12%	10.6%
Commodities	8% – 12%	10.4%
Senior Secured Loans (Floating Rate)	8% – 12%	9.5%
Real Assets and Alternative Investments	0% – 10%	2.7%
Cash	0% – 5%	0.5%

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Each of the IPF's investment strategies has qualities that can provide protection against rising inflation, but for different reasons. These diverse strategies can be grouped into three primary categories:

Inflation-linked bonds

- ***U.S. Treasury Inflation-Protected Securities (TIPS)***— U.S. TIPS represent the largest and most liquid inflation-linked bond market. They also represent the largest/core investment strategy within IPF with a target allocation of 35%.
- ***Global inflation-linked bonds (developed country)***— IPF also invests globally in government-issued inflation-linked securities. Global linkers can be broadly categorized into developed country and developing country (emerging market), with developed country linkers being the larger and more liquid market. The United States and United Kingdom combined represent more than 70% of the outstanding developed country linkers market, with the euro zone countries collectively representing most of the remainder. Global inflation rates tend to be correlated, but global real yields can diverge significantly in the short term, so securities linked to foreign inflation can offer a form of diversified inflation protection to U.S. investors. For example, when TIPS real yields rose dramatically in 2013, real yields in other developed countries rose only moderately. Additionally, a global strategy provides opportunity for an asset manager to add value through active country allocation decisions. Global linkers also introduce currency diversification into the portfolio because global linkers are denominated in the local currencies of the issuing governments. Currency hedging decisions become an opportunity for adding value. IPF currently targets a 30% allocation to developed country inflation-linked securities.

- ***Emerging market inflation-linked bond***s—Developing country (emerging market) inflation-linked securities are issued by governments of developing countries, with Brazil as the largest single issuer. Developing countries tend to have more volatile inflation histories with periods of severe currency fluctuations. Developing country linkers also introduce additional credit and currency risk into IPF. However, with additional volatility and risk comes the potential for increased risk-adjusted return when incorporated into a diversified portfolio. Both elements of nominal long-term linker returns—real yield and inflation compensation—tend to be significantly higher for developing than for developed countries. The Barclays Emerging Market Tradable Government Inflation-Linked Bond Index reported a real yield of 2.74% as of June 30, 2014, where IPF's Barclays TIPS benchmark index reported a real yield of 0.33%. Additionally, the basket of goods included in the reference inflation index for developing country linkers tends to be more heavily weighted toward food and commodities, which in some circumstances can offer more timely response to global consumer inflation pressures. IPF currently targets a 10% allocation to developing country inflation-linked securities.

Real assets that tend to appreciate with inflation

- ***Commodities***—Commodities, such as petroleum, metals and agricultural products, have a strong relationship with inflation. The basket of consumer goods used to compute the CPI includes food, clothing, housing, automobiles, gasoline, etc. The investable commodities sectors include many of the material inputs used in the production of these goods, so to the extent that inflation is driven by material input costs, commodity investments provide direct participation in rising prices. Commodities have effective inflation-protection qualities through their market price fluctuation, but a drawback is that they do not generate income for the investor during the holding period. Commodity prices can also be volatile and are subject to the supply and demand effects of weather and the business cycle. Commodities futures contracts are a liquid source of commodity price exposure, and IPF currently targets a 10% allocation to commodities through commodities futures contracts. This managed commodities strategy is benchmarked to the Bloomberg Commodity Index.

- Timberland—The cost of housing is the largest component of the CPI, but lumber is a significant home construction input that is not included in the Bloomberg Commodity Index. Rising home prices increase the quantity of lumber demanded by builders to construct new houses and remodel existing ones. This demand for lumber (and other forest products) impacts the value of raw timber, and one approach to capture this impact is by investing in timberland. Timberland is a long term, illiquid investment. It provides income from timber harvests during the holding period and offers longer term capital appreciation from rising timber market prices, as well as increasing values of standing timber as it grows. IPF currently targets a 2.5% allocation to timberland by investing through a globally diversified private timberland fund. IPF's actual timberland allocation will increase toward its 2.5% target as capital already committed is called for investment by the manager. This strategy is included in IPF's real assets allocation. You can read more about Wespath's timberland investing at **www.wespath.com/assets/1/7/4704.pdf**.

Floating-rate instruments with relatively high yield but minimal interest rate duration

- **Floating-rate instruments**—Inflation rates and interest rates are interrelated and trend together. The U.S. Federal Reserve's mandate to promote price stability elicits a policy response to raise interest rates if inflation exceeds targets. Additionally, inflation expectations impact the yield required to attract bond investors to purchase securities; rising inflation pushes up yields and pushes down prices of fixed income investments. However, floating-rate instruments offer interest payments (coupons) that periodically reset based upon a spread to a reference rate, such as the 3-month LIBOR. Rising interest rates cause the coupon rate to adjust higher, compensating the investor with additional yield without a decrease in price. IPF incorporates two dedicated allocations to floating-rate instruments, both of which seek additional yield by investing in below-investment grade instruments.

- ***Senior secured loans***—senior secured loans are floating-rate, privately-negotiated loans to corporate borrowers that are arranged by banks and sold to investors. As the name "senior secured" implies, they occupy a senior position in the borrower's capital structure and are typically secured by substantially all the assets of the borrower. Senior secured loans represent a 10% target allocation within IPF.
- ***Asset Backed Securities***—IPF's 2.5% target allocation to High Yield Asset Backed Securities (ABS) invests in securitized cash flows from loan portfolios, most notably in the non-traditional segments of the ABS market. The securities represent segments such as aircraft leases, student and small business loans and commercial real estate obligations. They are mostly floating-rate securities with quality ratings below investment grade. "Non-traditional, below-investment grade" is a relatively illiquid and inefficient segment of the ABS market, which allows talented asset managers to capture additional return opportunities. This strategy is included in IPF's alternative investments allocation.

Wespath is continually evaluating additional diversifying strategies for inclusion within IPF. We will continue to add those strategies that we believe will help IPF meet its objectives of providing investors with current income and protecting principal from loss of purchasing power due to inflation. You can learn more about IPF and review its long term performance results at **www.wespath.com/funds_services/our_funds/investment_performance/ipf/**.

Wespath provides UMC-affiliated institutional investors with access to well-managed investment programs that historically have delivered competitive performance while honoring United Methodist Social Principles. Wespath is the investments division of the General Board of Pension and Health Benefits of The United Methodist Church, a century-old institution with a well-regarded reputation for delivering returns aligned with values.

Wespath is an established investment manager with approximately $20 billion in assets under management.

Our name honors John Wesley, the founder of Methodism and a leader in establishing social principles that outline the tenets of sustainable business practices. Wespath reflects this heritage, along with the idea of putting clients on the right path to financial growth with a commitment to values-driven investing.

Wespath

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