

Reducing the Fear of Inflation with TIPS

The Case for Hedging Inflation

For many investors, the underlying value of a TIPS bond is that the principal grows at the same rate that overall prices rise.

WHY TREASURY INFLATION PROTECTED SECURITIES (TIPS)?

While the runaway inflation the United States saw in the 1970s is not likely to return anytime soon, a lot of investors are beginning to look toward hedging against the potential of rising inflation “just in case¹.” But what asset classes should investors embrace to provide inflation insurance? Gold? Commodities? Real assets? They all have their cheerleaders but for many investors, there continues to be a search for an investment of choice when it comes to combating short-term inflation.

Recently, investors have been using U.S. Treasury Inflation Protected Securities (TIPS) – to hedge against this threat. For some investors, however, that protection has come with an unanticipated expense – the added time, effort, and fees incurred by investors attempting to target the “duration” of their investments to match the risk exposure of their portfolio. Let’s look at how TIPS work and how FlexShares makes them available to interested investors in two unique funds focused on capitalizing on shorter-term duration TIPS while providing investors with funds that target precise durations.

HOW TIPS WORK

The U.S. Treasury has issued TIPS since 1997, providing investors an option that protects against the effects of inflation. TIPS are sold at auction several times a year and, like all marketable U.S. Treasury securities, they are backed by the full faith and credit of the U.S. Government. Interest payments on these bonds are made semi-annually and are linked to the Consumer Price Index for Urban Consumers. This measure examines the changes in the price of a wide range of goods and services purchased by consumers living in the highly populated areas representing close to 90% of the country’s total population.

¹ Waggoner, John. “Inflation hedges: Just in case.” USA Today. April 10, 2015.

The underlying value of a TIPS bond is its principal grows at the same rate that prices rise. When the principal grows, interest payments also grow since interest payments are a fixed percentage of principal. At maturity – TIPS are issued in 5-, 10- and 20-year maturities – if inflation has occurred and increased the value of the underlying security, the U.S. Treasury pays the owner the higher inflation-adjusted principal. If, however, deflation has occurred and decreased the value of the underlying security, the investor still receives the original face value of the security. For this reason, TIPS are often viewed as “risk-free” assets. However, in addition to the interest rate risk all bonds carry, TIPS include a unique and difficult-to-measure component: inflation expectation.

WHY TARGET DURATION?

Duration is a measure of the sensitivity of a fixed income security’s price (or principal value) to a change in interest rates. Duration is expressed as a number of years and allows bonds of different maturities and coupon rates to be directly compared. The higher the duration, the greater the magnitude of price change as interest rates change. In other words, long-term bonds carry greater interest rate risk than shorter-term bonds because the time to receive back principal and a significant percentage of income is longer, negatively affecting a bond’s market price if interest rates indeed rise. Because of their unique inflation-protected structure, however, TIPS require a unique duration metric in order to judge their performance against the market of fixed income securities.

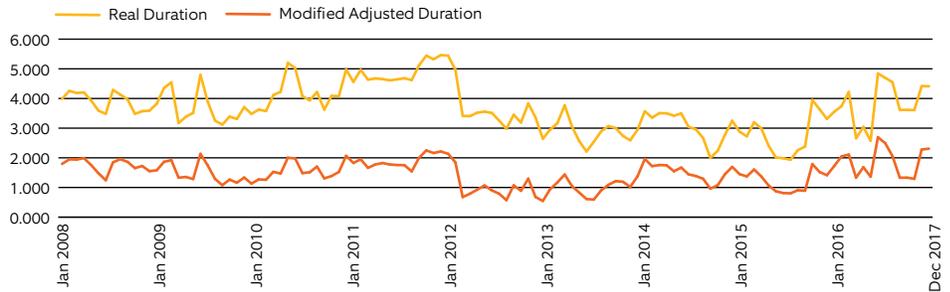
TIPS are issued with fixed coupons that represent the real rate of return. Real duration measures the change in value of a TIPS bond as a result of changes in real interest rates. However, real yield movements explain only one component of the returns on TIPS. Changing inflation expectations also affect their returns, an important distinction from traditional government and corporate bonds.

Modified adjusted duration (MAD) is an estimate of the market duration of a specific TIPS investment. MAD provides a way for investors to compare the interest rate sensitivity of TIPS to other fixed income securities, based on inflation expectations. As the chart below demonstrates, real duration and modified adjusted duration for the same TIPS can differ significantly.

Data from Barclays Capital U.S. TIPS Index, a market capitalization-weighted index of all TIPS issued by the U.S. Treasury, shows that real duration for this market cap-weighted index proxy is quite stable, declining over time (despite lower fixed interest rates on new TIPS issuance over the 10-year period) because of shifts in the U.S. Treasury’s mix of TIPS issuance toward more 10-year and shorter maturities. The modified adjusted duration over the same period, however, shows a much higher degree of variability due to ever-changing inflation expectations.

HISTORICAL DURATIONS

BARCLAY'S CAPITAL U.S. TIPS INDEX



Source: Barclays Capital, as of December 29, 2017

TIPS valuations rarely trade in lockstep with coupon Treasuries because market valuations on the inflation component of TIPS fluctuate so much.

TIPS AND TREASURY MARKET BETA

While beta (or volatility) measures are most often associated with equities, TIPS trade with a beta relative to nominal coupon Treasury bonds due to the fact that market valuations on the inflation component of TIPS fluctuate so much. The variable performance of TIPS versus coupon Treasuries over time is the basis for calculating their beta, which will typically be less than or equal to one.

HISTORICAL TIPS BETA



Source: Northern Trust Asset Management and Barclays Capital LIVE, as of January 31, 2018

Historically, TIPS have generally underperformed non-inflation linked coupon Treasuries during falling rate environments, when the threat of inflation is least likely. During periods with rising interest rates, however, TIPS have historically outperformed coupon Treasuries. Rising rate environments are typically associated with economic expansion and the consequent expectation of higher inflation generally motivates investors to own TIPS as a hedge. When inflation expectations are zero or negative, TIPS securities would be expected to trade in synch with coupon Treasuries since there is no expected income benefit from the inflation-linked component of TIPS.

A BETTER TOOL FOR HEDGING INFLATION

Shifting inflation expectations and changing market interest rates complicate portfolio construction and rebalancing decisions. FlexShares iBoxx Target Duration TIPS Index Funds are the first indexed products seeking to effectively remove the variability around duration in a TIPS portfolio. Markit, the index provider, has developed two TIPS indexes that use a transparent, rules-based methodology to

target precise modified adjusted durations. Both are managed to within +/- 5% of the identified MAD targets.

- **The FlexShares iBoxx 3-Year Target Duration TIPS Index Fund (TDTT)** comprises TIPS securities with maturities from one to 10 years and adjusts portfolio weights to reach a modified adjusted duration of approximately three years.
- **The FlexShares iBoxx 5-Year Target Duration TIPS Index Fund (TDTF)** comprises TIPS with maturities from three to 20 years and adjusts portfolio weights to reach a modified adjusted duration of approximately five years.

WHY TDTT AND TDTF?

Both FlexShares TIPS ETFs seek to provide investors with near-constant duration exposures in spite of shifts in inflation expectations and the impacts changing market rates have on TIPS beta. By following a targeted duration approach rather than market capitalization-weighted indexing, these funds provide investors with unique tools designed to hedge inflation and manage interest rate risk.

As the principal value of a specific TIPS is adjusted by fluctuations in the Consumer Price Index for Urban Consumers, these securities deal in an inflation-adjusted, fixed-rate framework highly vulnerable to inflation. To use TIPS effectively, investors must consider duration. We believe targeting the durations of TIPS precisely can help inflation-fearing investors better manage their investment risks by tailoring more effective inflation-hedging strategies for their portfolios.

FIND OUT MORE

The FlexShares approach to index-based investing is, first and foremost, investor-centric and goal oriented. We pride ourselves on our commitment to developing products that are designed to meet real-world objectives for both institutional and individual investors. If you would like to discuss the attributes of any of the ETFs discussed in this report in greater depth or find out more about the index methodology behind them please don't hesitate to call us at 1-855-FlexETF (1-855-353-9383) or visit [www. FlexShares.com](http://www.FlexShares.com).

IMPORTANT RISK DISCLOSURE

Before investing, carefully consider the FlexShares investment objectives, risks, charges and expenses. This and other information is in the prospectus and a summary prospectus, copies of which may be obtained by visiting www.flexshares.com. Read the prospectus carefully before you invest.

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An investment in FlexShares is subject to numerous risks, including possible loss of principal. Fund returns may not match the return of the respective indexes. A full description of risks is in the prospectus.

FlexShares iBoxx[®] 3-Year Target Duration TIPS Fund (TDTT) and the FlexShares iBoxx[®] 5-Year Target Duration TIPS Index Fund (TDTF) may invest in derivative instruments. Changes in the value of the derivative may not correlate with the underlying asset, rate or index and the Funds could lose more than the principal amount invested. The Funds are subject to fluctuation of yield risk, income risk, inflation protected security risk and interest rate/maturity risk. The Funds are non-diversified meaning the Funds' performance may depend on the performance of a small number of issuers because the Funds may invest a large percentage of its assets in securities issued by or representing a small number of issuers.

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