

TIPS: Treasury Inflation Protected Securities

Brian Therien, CFA • Senior Fixed-Income Analyst



Since 1997, the U.S. Treasury has issued Treasury Inflation Protected Securities (TIPS), which are meant to help protect purchasing power from unexpected increases in inflation. TIPS address two of the primary risks associated with bond investing: credit quality risk and purchasing power risk.

Credit quality risk is the possibility that your bond will fail to make timely payments of interest and principal. Since TIPS are backed by the full faith and credit of the U.S. government, they are considered to possess very high credit quality.

Purchasing power risk refers to the amount of goods and services you can buy with your money. Over time, inflation can reduce your purchasing power. That's particularly difficult if you're on a fixed income because your expenses rise with inflation, but your income doesn't.

This also applies to income you may receive from fixed-income investments. Inflation influences the rates offered on bonds. In fact, part of the interest payments are supposed to compensate for expected inflation during the life of the bond.

With fixed-income investments, if inflation rises more than expected, your purchasing power can decline. TIPS address this risk by offering principal and interest adjustments that align with the inflation rate.

Principal adjustment examples

Inflation environment — If inflation averages 2.5% over the 10-year life of the TIPS, the initial principal value of \$1,000 is adjusted accordingly, making the value at maturity about \$1,280. You receive the adjusted value when the TIPS mature.

Deflation environment — If deflation sets in and the Consumer Price Index (CPI) decreases 1% from its level when the TIPS were issued, the amount of interest due will decrease based on the principal amount. So, if you sell the bonds prior to maturity, you could receive more or less than the original principal or face value (\$1,000). However, if you hold the TIPS to maturity, you receive the full original face value at maturity.

How TIPS work

TIPS function similarly to bonds but have some distinct features.

Maturities — The U.S. Treasury currently offers new issues of TIPS with maturities of five, 10 and 30 years. Like most other U.S. Treasury bonds, TIPS can't be called prior to maturity.

Principal — Similar to other bonds, the original principal amount (or face value) of each TIPS is \$1,000. However, the principal is adjusted based on the U.S. CPI inflation measure, with a three-month lag.

During periods of inflation, when consumer prices are rising, the principal amount will increase with changes in the CPI. You'll receive this increased amount of principal when the TIPS mature.

In contrast, during periods of deflation and falling consumer prices, the principal amount and interest payment amounts will decrease in line with the CPI. However, you will always receive at least the original \$1,000 principal

value at maturity. If TIPS are sold prior to maturity, the sale price is based on the inflation-adjusted principal value. However, the actual price you receive could be higher or lower than that value, depending on market conditions.

Interest payments — TIPS pay interest twice per year. The percentage of interest paid is a fixed rate; however, since the principal value changes with the CPI, the amount of interest paid increases or decreases as well.

Quoted interest rates — The quoted (or published) interest rate for TIPS may look similar to that of a traditional bond, but it represents different returns (e.g., a 2% TIPS is different from a 2% bond). For traditional bonds, the amount of future interest and principal payments is known, so the quoted rate is in terms of yield to maturity or yield to call. Because the TIPS' future interest and principal fluctuate with the CPI, their quoted rate is in terms of the "real" (or after-inflation) rate. The actual yield to maturity is not known until after the TIPS mature.

Traditional Treasury bond vs. TIPS	4% 10-year Treasury bond	2% 10-year TIPS			
Average 10-year inflation rate	N/A	-1%	0%	2%	3%
Interest income	\$400	\$190	\$200	\$222	\$234
Principal value at maturity	\$1,000	\$1,000	\$1,000	\$1,219	\$1,344
Total principal and interest	\$1,400	\$1,190	\$1,200	\$1,441	\$1,578

Source: Edward Jones. Hypothetical example for illustrative purposes only.

Interest payment example

Let's assume that a TIPS issue has a 2% annual fixed rate. During the year, you'll receive two payments of 1% based on the TIPS' principal value.

If the CPI rises by 1% during the first six months, the principal value is adjusted to \$1,005. That means your first interest payment will be \$10.05 per TIPS (1% of \$1,005).

If the CPI rises by 1% during the next six months, the principal value is adjusted to \$1,010.03, and your second interest payment will be \$10.10 per TIPS (1% of \$1,010.03).

Interest payments and principal adjust with inflation.

Understanding the risks of TIPS

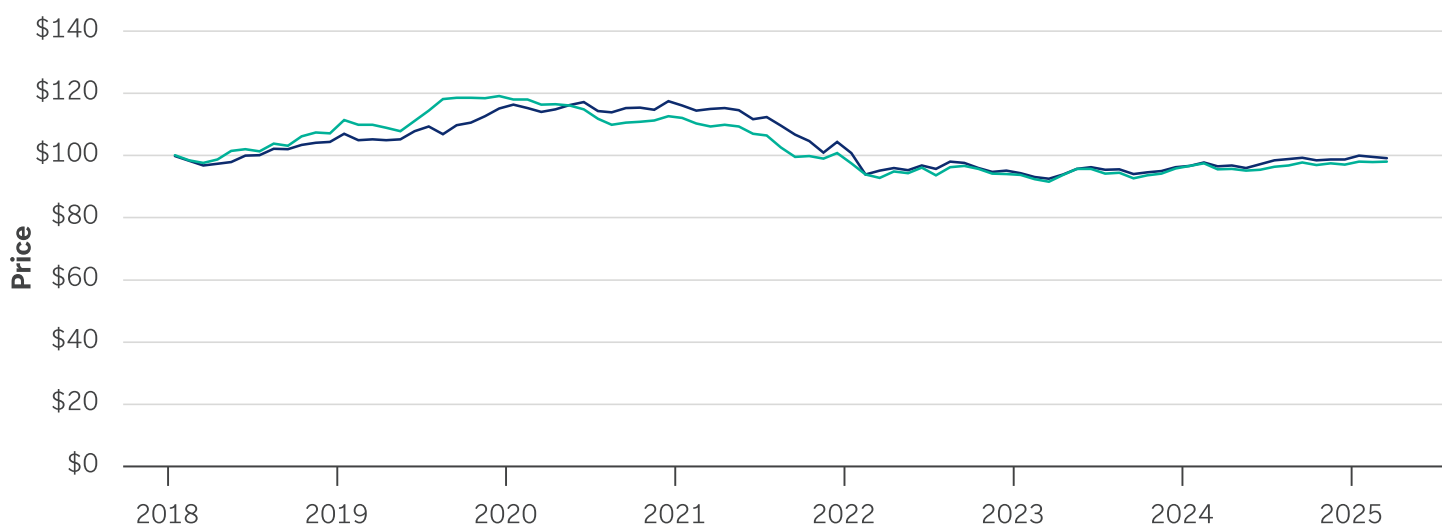
With TIPS, just as with any other investment, it's important to understand the risks.

Hedging inflation — There is no such thing as a perfect hedge against inflation because your personal inflation rate can be different depending on your expenses and spending patterns. But including TIPS in your portfolio may help offset the risk of rising prices.

Price fluctuation — Despite its inflation protection, the market price of TIPS can decline significantly if interest rates rise. Because of the price sensitivity of TIPS to real interest rate changes, at times they can be even more volatile in price than some conventional bonds. If TIPS are held to maturity, however, you'll get back at least the original par value (\$1,000). As the chart on Page 4 indicates, historically, the price of TIPS moves similarly to Treasury bonds, with a few variations.

TIPS 0.75% due July 2028 vs. U.S. Treasury 2.875% due August 2028

■ TIPS ■ U.S. Treasury



Sources: Bloomberg, Edward Jones.

Tax treatment — TIPS are subject to federal income taxes but are generally exempt from state and local taxes. For federal tax purposes, the semiannual interest payments and any increase in the principal value are taxed as regular income each year. This is true even though you don't

actually receive the principal until it matures. If TIPS are purchased in a retirement account in which taxes can be deferred, this negative tax treatment isn't an issue. We believe a retirement account may be a good place to own TIPS.

Alternative ways to own TIPS

You can own TIPS individually, purchase mutual funds that invest primarily in TIPS or buy exchange-traded funds (ETFs) that attempt to mirror the performance of a TIPS index. If you choose to own mutual funds or ETFs, there are several factors to consider:

No maturity date — Because a TIPS fund or an ETF has no maturity date, you may not get the original principal value back at a specific time. And unlike with individual TIPS, the principal value is not protected.

Tax treatment of interest and principal increases — Mutual funds are required by law to distribute interest income and principal increases to investors in the form of cash dividends or reinvested shares. These distributions are subject to taxation. In addition,

if a fund's distributions are greater than the income earned by its holdings, a return of capital could result in tax consequences. Therefore, the way a mutual fund is structured could prevent your initial investment from keeping pace with inflation should there be a return of capital.

Possibility of no dividend — In a deflationary environment, it's possible that a TIPS fund or an ETF could provide no monthly dividend income at times. TIPS mutual funds also typically have the flexibility to invest in other securities. As a result, TIPS funds may not always closely track returns of TIPS indexes.

Another alternative to individual TIPS are TIPS ETFs, which attempt to deliver the performance of an index based on the TIPS market.¹

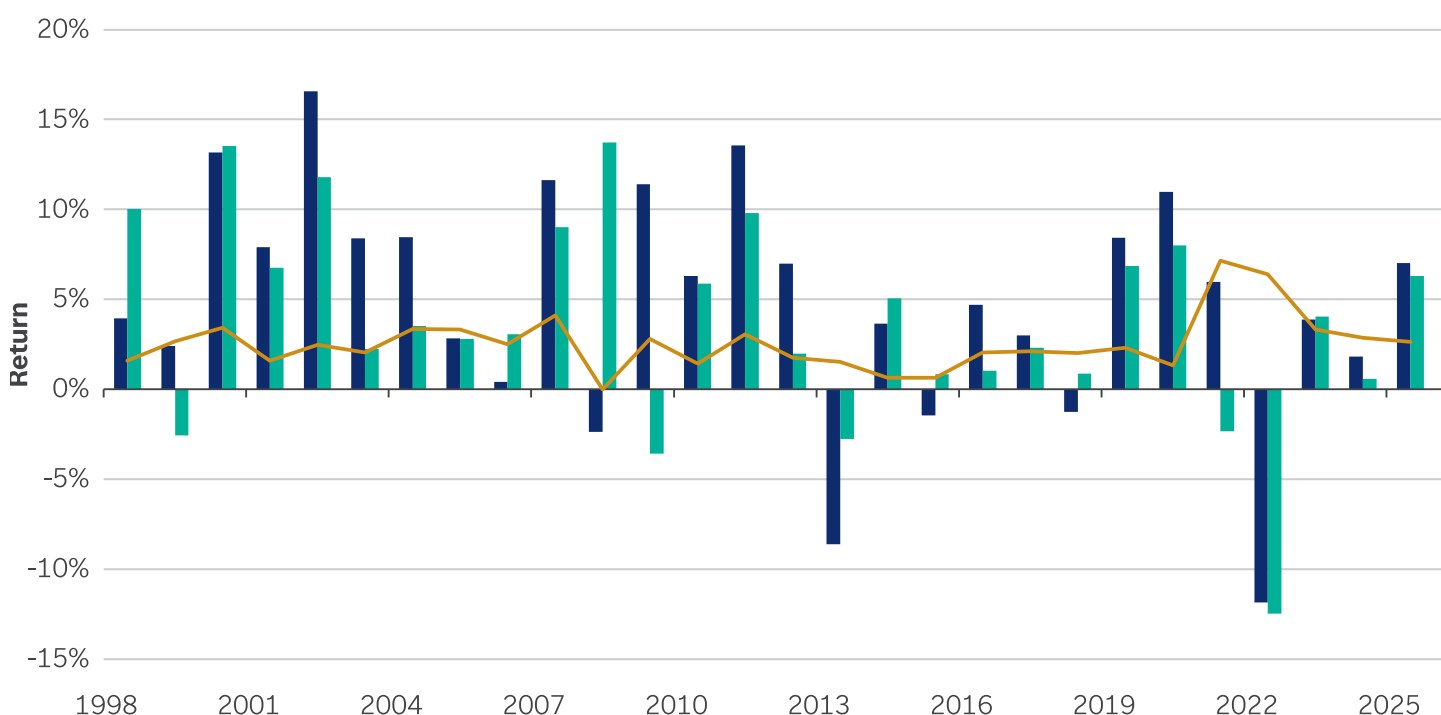
TIPS as part of a total portfolio strategy

Including TIPS in your portfolio can help offset the risk of rising prices. But here's the trade-off: TIPS provide less current income than conventional bonds, so they may not do as well in meeting current income needs. When inflation rises more than expected, TIPS likely will provide better returns than regular Treasury bonds. On the other hand, during periods of decreasing inflation or deflation, regular Treasury bonds tend to give you better returns.

As TIPS can sometimes behave differently from conventional bonds, they can be a complementary investment in a diversified fixed-income portfolio. The chart below shows the difference in returns between Treasury bonds and TIPS over time, along with the rate of inflation as measured by the CPI.

TIPS vs. Treasury returns

■ TIPS ■ Treasuries ■ CPI



Source: Bloomberg Index Services Limited, U.S. Federal Reserve, Edward Jones. Data based on the Bloomberg U.S. TIPS Index and the Bloomberg U.S. Treasury Index. Past performance does not guarantee future results.

The difference between rates of regular Treasury bonds and TIPS tells us the rate of inflation the market is expecting that period. It also represents the “break-even inflation rate,” in which TIPS and conventional bonds would give you the same return

over a specific period. Historically, the average break-even rate for the 10-year TIPS has been about 2%. However, whether TIPS end up providing better returns than regular Treasury bonds ultimately will depend on the actual inflation rate.

We believe a strategy to earn investment returns to outpace inflation should include owning stocks or stock mutual funds. Stocks can do well during inflationary periods, especially for companies that can pass along higher costs to customers by raising prices without a significant impact on sales and profits, otherwise known as pricing power. A company's pricing power depends on several factors, including industry structure, competitive environment, switching costs for customers, scale, brand strength and product innovation. Stocks with the potential for rising income through higher dividends can also help investors maintain purchasing power.

In addition, diversifying into different types of fixed-income investments in different industries or sectors, as well as laddering bond maturities, can help hedge against inflation because all these investments tend to behave a little differently.²

While it isn't necessary for everyone to own TIPS as part of a well-diversified portfolio, TIPS can help to hedge against inflation risk. TIPS can be particularly useful in supplementing the inflation protection of portfolios heavily weighted with income-producing investments.

For diversification purposes, TIPS should be considered part of a fixed-income portfolio's government bond holdings, along with Treasury bonds, government-sponsored enterprises (GSEs), mortgage-backed securities (MBS) and GSE bonds. TIPS shouldn't be viewed as a short-term market opportunity but rather as part of a long-term solution to the threat of inflation on the purchasing power of your fixed-income investments.



Contact your Edward Jones financial advisor to discuss how TIPS may fit into your portfolio.

1 ETFs are publicly traded and fluctuate with the overall bond market. In addition, your investment return and principal value will fluctuate with mutual funds and ETFs. You may receive more or less than your original investment when you sell your shares. Keep in mind that annual fees and expenses for mutual funds and ETFs that contain TIPS may reduce your return. Mutual funds and ETFs are not government-guaranteed and may contain foreign investments.

2 Past performance does not guarantee future results. The S&P 500 Index is an unmanaged index and is not available for direct investment. Diversification does not guarantee a profit or protect against loss. Edward Jones, its employees and financial advisors are not estate planners and cannot provide tax or legal advice. Please consult your attorney or qualified tax advisor regarding your situation.