

What are TIPS?

Treasury Inflation-Protected Securities (TIPS) are Treasury bonds that are issued by the US government.

They are indexed to inflation in order to protect investors from potential declines in their money's purchasing power. They do this by adjusting the principal of the bonds relative to changes in the Consumer Price Index (CPI).

When the bonds mature, investors receive the greater amount of either the adjusted principal or the original principal (investors never receive less than their originally invested principal). TIPS pay out a fixed coupon rate, which is calculated based on the new principal amounts, so, like the principal, interest payments rise with inflation and fall with deflation.

Key terms

- Inflation adjustment: The principal amount of TIPS is adjusted by changes in the CPI. This inflation adjustment is based on two months prior CPI being applied to the fund's underlying securities.
- Phantom income: Increases in TIPS' principal amounts due to upward inflation adjustments are considered taxable income, in the year they occur, even though those increases are not realized until the TIPS are sold or mature. This differs from a TIPS ETF or mutual fund, which pay out both coupon income and the income from principal adjustments to investors.
- Real yields: The difference between nominal yield and expected inflation.
- Break-even inflation rate: The inflation level required for investors to be indifferent between holding a nominal bond or an inflation-linked bond; it's calculated as the difference between the yield of a nominal bond and an inflation-linked bond of the same maturity.

Benefits

- Inflation protection: TIPS will maintain purchasing power as they are indexed to inflation;
- Real return: The principal is adjusted for inflation;
- Potential diversification: TIPS may reduce overall portfolio volatility due to low correlation with other asset classes;
- · Guaranteed principal: Investors will never receive less than the original face value of the bond at maturity, even in a deflationary environment.



Key differences between TIPS ETFs and TIPS bonds

	TIPS ETFs	Individual TIPS bonds
Diversified	Yes	No
Phantom income	No*	Yes
Inflation adjustment	Paid monthly	Paid at maturity
Income distribution frequency	Monthly	Semi-annually
Income reinvestment ability	Yes	No
Intraday prices/trading venue	Yes, exchange traded	No, over-the-counter
Transaction fees	Bid-ask spreads	Potential commissions
Income Reinvestment	Yes	No

^{*}Different from individual TIPS securities, TIPS ETFs aim to distribute inflation adjustments throughout the year. However, ETFs may still distribute phantom income at the end of the year due to potential cash flow changes.

Understanding TIPS ETF income distributions

TIPS ETFs distributions consist of accrued coupon income and the principal inflation adjustment. Unlike individual TIPS bonds, TIPS ETFs distribute any upward adjustment in principal due to inflation as interest income in the year it occurs.

- Coupon payment = (real coupon rate/2) x (principal + inflation)
- Principal inflation adjustment = (((principal x current reference CPI) / initial reference CPI) principal). This inflation adjustment is based on two months' prior CPI applied to the fund's underlying securities.

For tax purposes, both coupon payments and principal adjustment are classified as interest income and are distributed by the ETF trust.

The advantages of investing in the Mackenzie US TIPS Index ETF (QTIP)

Key reasons	Insights
Low price	The management fee is low, 0.15%
Canadian TIPS exposure	Is one of the only Canadian domiciled ETFs that provides investors with exposure to Treasury Inflation-Protected Securities (TIPS).
No currency risk	100% hedged back to the Canadian dollar
No withholding tax	QTIP is a Canadian-domiciled product and therefore not subject to withholding tax, which is a significant advantage over TIPS ETFs offered by US-domiciled companies (as Canadian investors must reclaim such qualified interest income).
No term constraints	QTIP is an index product that has exposure across most/all maturities
Good liquidity	Offers underlying liquidity of the TIPS market



What economic environment benefits TIPS

Key determining factors are growth and inflation

Growth expectations

Low/falling High/rising High/ Core bonding holdings Core bonding holdings rising Nominal Inflation-linked Nominal Inflation-linked · Policy rates likely to remain steady · Policy rates increases are likely nflation expectations Expect TIPS to outperfom as principal and interest Expect TIPS to strongly outperfom but the payments adjust higher with inflation duration impact is likely negative for both TIPS and nominal bonds Low/ Core bonding holdings Core bonding holdings falling Nominal Inflation-linked **Nominal** Inflation-linked Policy rates could fall Policy rates likely to remain steady • Expect TIPS to underperform in part due to their · Expect significant underperformance from TIPS due lower coupon to lower coupon; duration impact is likely negative for both TIPS and nominal bonds

To find out more, please contact your financial advisor or Mackenzie's Sales Team. mackenzieinvestments.com/ETFs

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