Mechanics of TIPS and TIPS ETFs

iShares TIPS ETFs

XSTP iShares 0-5 Year TIPS Bond Index ETF

XSTP.U iShares 0-5 Year TIPS Bond Index ETF- USD Units

XSTH iShares 0-5 Year TIPS Bond Index ETF (CAD-Hedged)

Types of marketable U.S. government debt

Type of Treasury bond	Total market value (US$ bn)	% of total
Floating Rate Notes	$586	2.36%
T-Bills (<1 year)	$ 4,465	17.96%
Notes (1-10 years)	$13,718	55.17%
Bonds (10+ years)	$4,163	16.74%
TIPS (Inflation-protected)	$1,933	7.77%
Federal Financing Bank	–	0.00%
Total Debt	$24,865	100.00%

Source: U.S. Treasury as of June 30, 2023. Totals on marketable securities are provided by the U.S. Treasury in the Monthly Statement of the Public Debt as of June 30, 2023.

What are TIPS?

The market for U.S. Treasury Inflation-Protected Securities (TIPS) has grown steadily since their introduction in 1997. TIPS are government bonds with principals that are adjusted with changes in inflation. The U.S. Treasury has issued over $1.5 trillion of TIPS outstanding as of June 30, 2023.

How do TIPS work?

TIPS are designed to protect investors from the risk of higher-than-expected inflation. TIPS will adjust their principal based on changes in the U.S. Consumer Price Index (CPI) and pay out a fixed coupon rate on the principal. As the size of the principal is adjusted, the coupon will also change, increasing and decreasing with changes in the CPI.

Principal amounts

Like a nominal U.S. Treasury, TIPS are issued with an original face value of $1,000. To measure inflation, the Treasury uses the CPI-U (Non-Seasonally Adjusted CPI Index for All Urban Consumers) to adjust the principal up or down. At maturity, an investor will receive the greater of the bond's original principal or the inflation-adjusted principal value.

Coupons

TIPS will pay out a fixed percentage of the principal as its coupon semi-annually until maturity. As the principal is adjusted up or down, the dollar amount of the coupon paid out will vary. When TIPS are issued, their initial coupons are set at the prevailing real interest rate, which is the nominal rate of a similar duration Treasury, adjusted for market assumptions of future inflation. TIPS coupons generally yield less than Treasuries.

Key differences between TIPS and TIPS ETFs	TIPS ETFs	Individual TIPS Bonds
Diversified	Yes	No
Inflation adjustment	Paid monthly	Paid at maturity
Frequency of income payments	Monthly	Semi-annually
Exchange-traded / intra-day prices	Yes	No, OTC
Set maturity date	No	Yes
Phantom income	No, paid in cash (see below)	Yes

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Understanding TIPS ETF income distributions

TIPS ETFs pay out the earned income of the portfolio which includes the accrued coupon income plus the inflation adjustment less fund expenses (e.g. management fee). This inflation adjustment is based on two months' prior CPI applied to the fund's underlying securities.

For tax purposes, the principal adjustment is classified as Treasury income and is distributed as cash by the fund even though it is not distributed to individual TIPS holders as cash (known as phantom income for holders of TIPS). If there is deflation, the TIPS ETF might omit or not pay a monthly distribution.

Timing of inflation adjustment and ETF income distribution

January	**February**	**March**	**April**
January 1-31 CPI measuring period	February 20 January CPI released	March 1-31 Daily rate applied	April 1 ETF distribution paid

TIPS glossary

Inflation adjustments
The principal amount of TIPS are adjusted by changes in the CPI-U. This measures the changes in prices paid on a representative basket of goods and services. This metric is published monthly by the Bureau of Labour Statistics.

Breakeven inflation

The difference between the yield of a nominal bond and an inflation-linked bond of the same maturity. This can be thought of as a market-based measure of inflation expectations, or the level of inflation required for investors to be indifferent (i.e. 'break even') between holding the nominal bond and an inflation-linked bond.

Real yields
Yield of a nominal bond minus the rate of inflation.

Real Yield = Nominal Yield – Expected Inflation

Phantom income
When TIPS principal values are adjusted upwards, this change in value is viewed by tax authorities as income paid to the investor and is thus taxable. However, investors do not receive the cash flow from this income until the maturity of the bond, hence the term 'phantom income'. The ETF pays out the inflation adjustment in monthly income, which provides the cash flow to match the tax consequences.

Date of publication: September 30, 2023

021RIS064 (09-2023)_MECHANICS-TIPS-EN-V2 ACC 09/25/2023
EIIIH0822C/S-2315831
EIIiH1023C/S-3132695-2/2