

What are PIMCO's views on TIPS as an asset class?

We view TIPS as an important diversifier, both within an overall fixed income portfolio, as well as one that includes equities. Given the contractual link of TIPS principal to the U.S. Consumer Price Index (CPI-U), TIPS have the potential to outperform many different asset classes in periods of elevated or rising inflation. The best environment for TIPS is one where economic growth is low or falling and inflation is high or rising. In this “stagflationary” scenario, TIPS may outperform other asset classes, particularly equities and nominal Treasury bonds. Conversely, the worst environment for TIPS would likely be a period of moderate-to-high economic growth coupled with low or falling inflation.

How do I determine which section of the TIPS curve to invest in?

The investor should consider three main factors when deciding where to invest across the TIPS curve.

- First, investors should consider the level of volatility they are willing to tolerate in their investment. Shorter maturity TIPS are less volatile than longer maturity TIPS (or a broad TIPS index), because they have less price sensitivity to changes in real yields (duration). For investors who want to hold less volatile investments, or who want TIPS linkage to inflation to be a more prominent part of their total return potential, short maturity TIPS may be attractive.
- Second, investors should assess the level of real yields that are offered across the TIPS curve. For long-term investors, the level of real yield may be a key driver of TIPS return potential above future inflation.
- Third, investors should consider the likelihood of changes in the level of real yields. Changes in real yields cause price changes in TIPS, which can be the dominant driver of return potential over shorter time periods. Short maturity TIPS may be preferable when real yields rise, since longer maturity, longer duration TIPS will experience a greater price loss. The reverse is true should real yields fall. Factors that can cause real interest rates to rise include Fed hikes of short-term interest rates, strengthening economic growth or increased perceived credit risk on the part of the lender (the U.S. government).

The correlation of the broad TIPS index to changes in CPI is lower than I thought it would be, why?

All TIPS returns are linked to the CPI and therefore provide the same potential inflation protection. However, TIPS returns are also affected by changes in real yields. Because the broad TIPS index has a high weighted average maturity, its returns in any short term period can be heavily influenced by its higher price sensitivity to changes in real yields (duration). This is particularly true when the level of inflation is fairly low, at which times the inflation accrual does not contribute as much to TIPS total return. As a result, the correlation of TIPS to inflation will appear low because the linkage to CPI is “masked” by the duration impact. However, this correlation will appear higher if investors hold their TIPS for longer time horizons (since real yield volatility may net out over time), if they hold their TIPS in a higher inflation environment (since the contribution of CPI to total returns will be higher), or if investors focus on shorter maturity TIPS (which have less duration than the broad index).

Does PIMCO believe indexing makes more sense in TIPS?

While some investors prefer indexing, PIMCO believes that our actively managed TIPS strategies can outperform index returns. Separate from the active versus index decision, some investors may have a vehicle preference for ETFs over mutual funds or other vehicles, in general due to an ETF's intra-day liquidity and daily transparency portfolio holdings. As discussed in question 2, index investors may benefit from the ability to position holdings at the shorter or longer end of the TIPS curve, and PIMCO's ETF offerings provide this flexibility. The ETF vehicle may also benefit from intra-day trading as it may avoid price impacts in the TIPS market on transactions occurring at the market close. As a multi-vehicle manager, we aim to put the right strategy in the right vehicle. PIMCO has the investment flexibility to offer both index and active strategies, and the vehicle flexibility to offer a broad range of solutions for varying investor preferences.

How does the liquidity in the TIPS market affect the liquidity of an ETF?

While certain TIPS issues are more liquid than others, the TIPS market has sufficient size and trading volume such that the liquidity of an ETF should not be materially affected under normal market conditions. Generally speaking, the bid/ask spreads in the securities underlying an ETF portfolio can be transmitted to the bid/ask spread on the ETF shares themselves. In some cases, the trading volume in an ETF is large enough that the ETF spreads become lower than those of the underlying securities.

Would a laddered TIPS portfolio make more sense for me?

A TIPS index which covers the entire maturity spectrum is effectively a laddered portfolio, so whether the investor buys the broad index, the shorter maturities or the longer maturities, he is effectively buying a TIPS ladder in that particular maturity spectrum. The capital required to assemble a laddered portfolio of TIPS bonds may be substantial if investors desire the execution levels afforded by buying in a 'round lot' (the typical trade size) of approximately \$5,000 in a given TIPS issuance.

What about the "hole" in the TIPS curve?

Historical U.S. TIPS issuance has been such that there are currently no TIPS issues maturing between the years 2019 and 2025, while there are many TIPS issues that mature both before and after that particular "gap". We fully expect the U.S. Treasury to continue regular TIPS auctions, which will fill in this gap over the coming years. Currently, the U.S. Treasury has regular auctions of TIPS with 5, 10 and 20 years to maturity.

Are TIPS the best way to hedge against inflation?

TIPS are the only securities issued by the U.S. government that are contractually linked to the published rate of inflation, as measured by CPI-U. For that reason, they are generally considered the most direct hedge to inflation. However, over short and intermediate holding periods their correlation to inflation can vary based on changes in real yields, which is particularly true for longer maturity TIPS as described earlier. There are other asset classes that can serve as more indirect hedges to inflation. For example, because the food and energy components of the CPI drive much of the near-term volatility of inflation, commodities typically exhibit positive correlation with inflation and with changes in the rate of

inflation, but typically with higher return volatility than TIPS. Other asset classes such as equities and nominal Treasury bonds tend to underperform in periods of high inflation, and therefore have historically provided a poor hedge to inflationary risks.

Is there 'phantom income' in PIMCO TIPS ETFs associated with CPI adjustments which do not generate cash? If so, how will I meet my tax obligations?

Month-on-month changes to CPI-U (unadjusted, headline US consumer price index) accrue directly to TIPS principal with a 3-month lag. During an inflationary period, TIPS principal is adjusted upwards. Likewise, in a deflationary period there will be a downward adjustment. For the positive accrual case, these increases in investment value are taxable in the year which they occur, even though a holder of the TIPS does not actually receive this accrual income until the bond matures and the principal value is fully realized. Because the investor does not receive the income for which they are taxed, it is often referred to as "Phantom Income".

The adverse tax consequences of phantom income are generally mitigated in a mutual fund or ETF because the funds generally pay out all investment income, which includes both the semiannual coupon and the CPI adjustment to the principal, on a calendar year basis. These payments will be made to investors either from cash currently available in the fund, or that which was generated by selling securities if such transactions are necessary.

Can you provide an example of "phantom income"?

As an example, start with a TIPS principal of \$100 on day 1, with a coupon of 3.0%. At time of the first semi-annual coupon payment in 6 months, suppose the aggregate change in CPI index is a positive 1%. The coupon payment would be $\$100 * (1.00 + 0.01) * 3.0\% / 2 = \1.52 . However, total income includes not only the \$1.52 coupon payment, but also the \$1.00 that accrued to the TIPS principal, so the total income = $\$1.52 + \$1.00 \approx \$2.52$. In absolute terms, the "phantom income" is \$1.00, or approximately 40% of total taxable income in this example.

What happens in the case of deflation, when CPI adjustments are negative?

PIMCO's policy with TIPS ETFs is to distribute income at the level generated by the fund. During periods of negative CPI adjustments (deflation), TIPS bonds recognize a negative contribution to income from a reduction to principal. As such, the level of income is reduced below the coupon level, and may actually go to zero or even negative in certain periods. During periods of zero or negative income generation, PIMCO TIPS ETFs may not distribute income. We state this policy as we feel it is to the benefit of our investors to promote transparency in distribution policies, a pertinent factor for ETFs. The goal of this policy is to reduce the potential for a Return of Capital.

If at the end of a tax period, the distributed income exceeds the level of income generated by the fund, the fund may be required to recharacterize income distributions made to investors as Return of Capital distributions. A Return of Capital distribution is a nontaxable distribution. This could potentially happen in a year where CPI accruals were positive for most of the financial year followed by one or more significantly negative CPI accruals at or near the end of the financial year.

The aforementioned "phantom income" associated with TIPS is potentially less of an issue in a period with negative CPI accruals, as the coupon payment is potentially higher than total net income, once the negative CPI accruals are taken into account.

How do TIPS behave in a hyper-inflationary environment?

As TIPS were first issued in 1997, they have never been "tested" in a hyper-inflationary environment. However, in theory TIPS should outperform most asset classes in a period of high and rising inflation, particularly when accompanied by low or declining real growth rates. In this type of economic environment, mainstream asset classes such as equities and nominal treasuries would likely face significant return headwinds. In the case of nominal treasuries, one could reasonably argue that treasury yields would rise significantly in order to compensate investors for the inflation risk they are assuming. In the case of intermediate-to-longer maturity treasuries, this effect would be more pronounced. Since TIPS principal directly accrues changes in inflation (as measured by the consumer price index), this effectively "strips out" the inflation risk associated with nominal treasury

bonds. Therefore, the gap between real yields and nominal yields, also known as "breakeven inflation" would have to widen significantly to compensate nominal treasury investors for their added inflationary risk, as nominal treasury yields would rise more quickly than real yields in this scenario. If such events were to occur, TIPS would almost certainly outperform treasuries, as well as other asset classes such as equities that typically respond poorly to elevated inflation levels.

How do TIPS behave in a deflationary environment?

In a period of extended deflation, TIPS returns would likely be mixed relative to other asset classes, depending partially on whether this deflation is accompanied by low economic growth. However, given that inflationary expectations would decline or become outright negative in this scenario, breakeven inflation levels would likely have to narrow to reflect market expectations of deflation. Therefore, it is reasonable to expect that nominal yields will decline to levels beneath real yields, or said another way; breakeven inflation would likely be negative across much of the yield curve. TIPS cash flows are generated by a fixed coupon on a floating principal (TIPS principal adjusts upward or downward with the US consumer price index), so while coupon payments remain positive, they would decline due to the negative adjustments to the TIPS principal. It's important to note that if an individual TIPS principal has declined to less than par value in a deflationary environment, the US Treasury will redeem the holder of the TIPS at par when the bond is held to maturity. This "deflation floor" is a unique feature of TIPS and provides some downside protection in a deflationary environment.

For more information, visit www.pimcoeffs.com

Investors should consider the investment objectives, risks, charges and expenses of the funds carefully before investing. This and other information are contained in the fund's prospectus, which may be obtained by contacting your PIMCO representative. Please read the prospectus carefully before you invest or send money.

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