NexSky

CIO ANALYSIS

Understand the Asset: Inflation-Linked Bonds

What they protect against, and what they do not

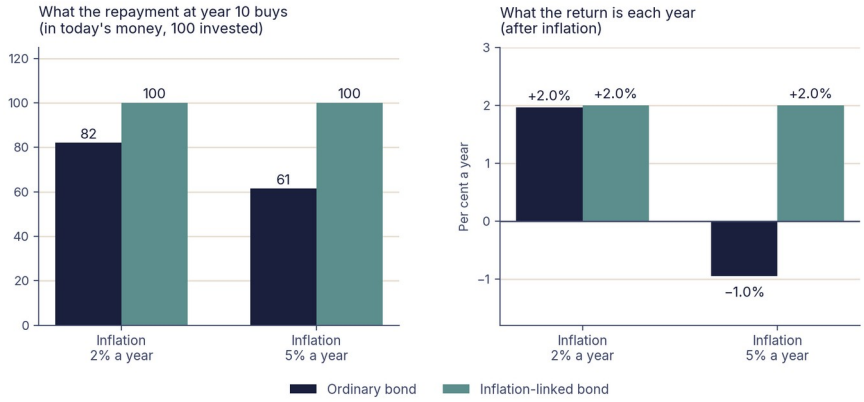
This paper explains what an inflation-linked bond is, what it protects against and what it does not. We start with a simple picture of how it differs from an ordinary bond. We then explain the three numbers that people tend to mix up, with a small example for each. The record of 2022 is the test case, because inflation reached 9 per cent and these bonds lost money anyway. The last part looks at the present, when long yields are rising for reasons that have little to do with inflation, and at what a family should ask before buying one.

Two ideas run through the paper. The first is that an inflation-linked bond protects the buyer against inflation that exceeds what the market expected, and against nothing else. The second is that its price is set by the real yield, so the bond is as exposed to the level of interest rates as any other long bond. Both are explained step by step below.

What the bond is

Start with an ordinary government bond. The buyer lends money to the government. The government pays a fixed amount of interest each year and returns the same amount of money at the end. Everything is fixed in money. If prices rise in the meantime, each unit of money buys less, and the buyer carries that loss.

An inflation-linked bond changes one thing. The amount lent is adjusted for consumer prices. If prices rise 10 per cent, the amount to be repaid rises 10 per cent, and the interest, which is a percentage of that amount, rises with it. In the United States these bonds are called Treasury Inflation-Protected Securities, or TIPS.



Illustrative, hypothetical figures, not market prices. Two bonds are bought for 100 and held for ten years. The ordinary bond pays 4 per cent a year in money and repays 100. The inflation-linked bond pays 2 per cent a year above inflation and repays 122 in money if inflation averages 2 per cent, or 163 if it averages 5 per cent. When inflation runs higher than expected, the ordinary bond buys less and the inflation-linked bond does not.

Two details matter. The adjustment follows the consumer price index with a delay of about three months, so the amount on 1 April follows the price index for January. And at maturity the holder receives the higher of the adjusted amount and the original face value, so a spell of falling prices cannot take the repayment below par.

The consequence is simple. If the bond is held to maturity, the buyer earns the real yield on the day of purchase, whatever inflation turns out to be. The real yield is the return above inflation. A bond that pays 3 per cent when prices rise 2 per cent leaves the buyer about 1 per cent better off in what the money can buy. A ten-year TIPS bought at a real yield of 2.95 per cent, the level on 5 October 2026, locks in a return of 2.95 per cent a year above consumer prices, before tax and costs, at that day's price. That is the whole promise. It is a promise about the return after inflation if the bond is held to the end. It is not a promise about the price on any day before then.

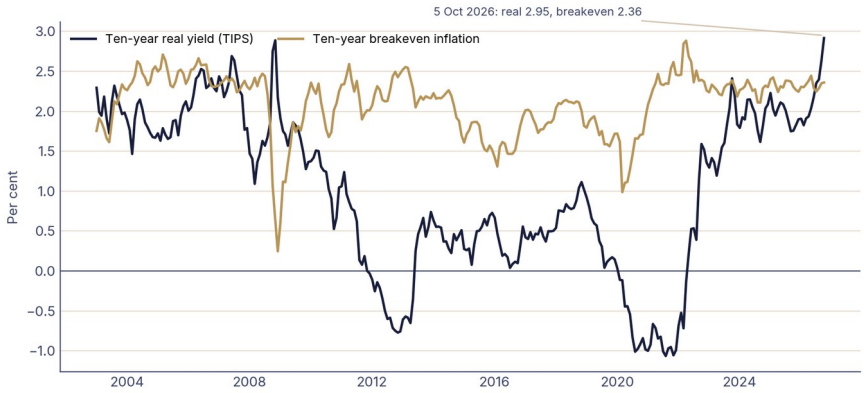
Three numbers, not one

Most of the confusion about these bonds comes from three numbers that sound alike and mean different things.

The first is the **real yield**, which is the yield on the inflation-linked bond. It is the return above inflation, as in the example above. The second is the nominal yield on an ordinary government bond of the same length. It is the return in money, with no adjustment. The third is the **breakeven rate**, which is the gap between the two.

A small example shows how the breakeven works. Suppose an ordinary bond pays 5 per cent a year and an inflation-linked bond pays 2.5 per cent above inflation. If inflation averages 2.5 per cent, the two end in the same place. If inflation runs higher, the inflation-linked bond does better. If it runs lower, the ordinary bond does better. The 2.5 per cent is the breakeven. Buying the inflation-linked bond is therefore a bet that inflation will run above the breakeven, and buying the ordinary bond is a bet that it will run below.

On 5 October 2026 the real yield was 2.95 per cent and the nominal yield was 5.31 per cent, so the breakeven was 2.36 per cent.



Ten-year real yield and breakeven inflation, monthly averages, January 2003 to October 2026. The real yield has moved across a range of four percentage points. The breakeven has stayed between about 1 and 3 per cent for nearly all of the period.

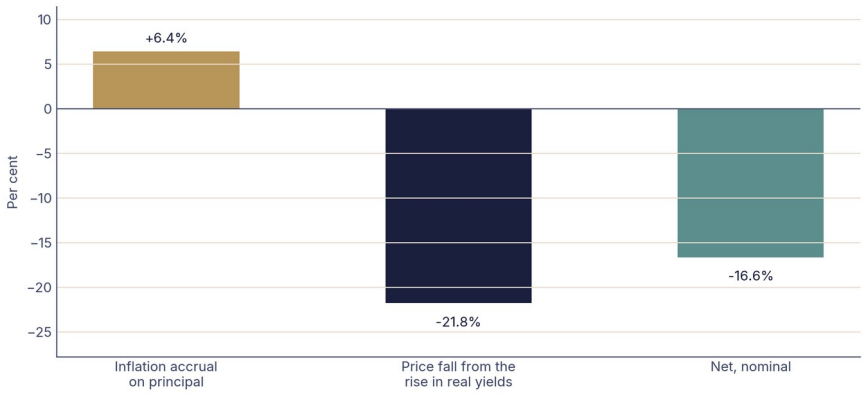
The chart shows which of the two numbers does the moving. The breakeven rate has stayed in a narrow band for twenty years. The real yield has swung from below minus 1 per cent in 2021 to 2.95 per cent now, its highest level since 2008. The price of an inflation-linked bond follows the real yield, and not the breakeven.

Why the real yield? Because of duration. Duration is a measure of how far a bond's price moves when its yield moves. As a rule of thumb, a bond with a duration of eight years loses about 8 per cent of its price if its yield rises by one percentage point, and gains about the same if the yield falls. Think of a lever. The longer the bond, the longer the lever, and the more a small change in yield moves the price. For an inflation-linked bond the yield is the real yield, so the real yield is what moves the price.

The breakeven is also not a forecast. It contains an allowance for the risk that inflation surprises, and for the lower liquidity of the inflation-linked market, which means these bonds are harder to trade than ordinary ones. In December 2008 the monthly average of the ten-year breakeven fell to about a quarter of one per cent, which would have meant almost no inflation for a decade. Few people believed that forecast. It was a market price in a month of forced selling. The breakeven measures what bonds cost on a given day as much as what inflation will be.

What the record shows

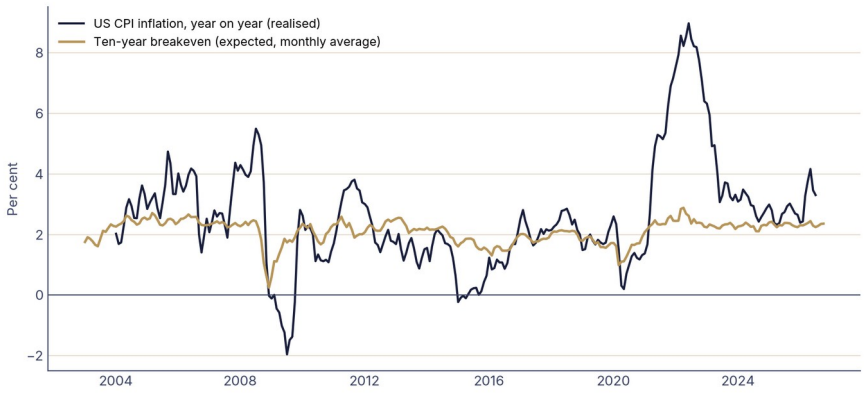
The test of the name is the year when inflation arrived. The consumer price index rose 6.4 per cent between December 2021 and December 2022 on the series we use, and the twelve-month rate touched 9.0 per cent in June 2022. Inflation-linked bonds did what the contract said: the principal rose with prices. They lost money all the same.



Illustrative: one stylised ten-year bond, not an index return. The bond carries a 0.125 per cent coupon, is bought on 31 December 2021 at the real yield of minus 1.04 per cent and is valued on 30 December 2022 at the real yield of 1.58 per cent. Inflation accrual from the US consumer price index, seasonally adjusted, December to December.

The reason is the real yield. It rose from minus 1.04 per cent to 1.58 per cent over the year, a rise of 2.62 percentage points. A bond with nine years left falls in price by about a fifth when its yield rises that far. On our illustrative arithmetic, which models one stylised ten-year bond and is not an index return, the bond lost 21.8 per cent of its price. The inflation accrual added 6.4 per cent. The net result was a loss of about 16.6 per cent.

The breakeven tells why the protection was small. It stood at 2.56 per cent at the end of 2021 and at 2.30 per cent at the end of 2022. The market did not pay for the inflation that was already happening, because it expected that inflation to fade. The bond compensated the holder for inflation above the expectation. Inflation did exceed the 2.56 per cent that had been priced, but the central bank's reaction to it lifted the real yield by far more than the bond gained from the accrual.



US consumer price inflation, year on year, against the ten-year breakeven rate, 2003 to 2026. The consumer price series ends in July 2026 and the breakeven in October 2026.

The third chart puts the point in one picture. Realised inflation swings between minus 2 and 9 per cent. The breakeven sits close to 2 per cent throughout. The bond gains when realised inflation runs above the breakeven, and 2022 was the largest gap of the period. Even so, the gain was smaller than the price effect of the central bank's response. When inflation is the reason rates rise, the protection and the loss come in the same package, and the loss was larger.

What they protect against, and what they do not

The record gives a short list.

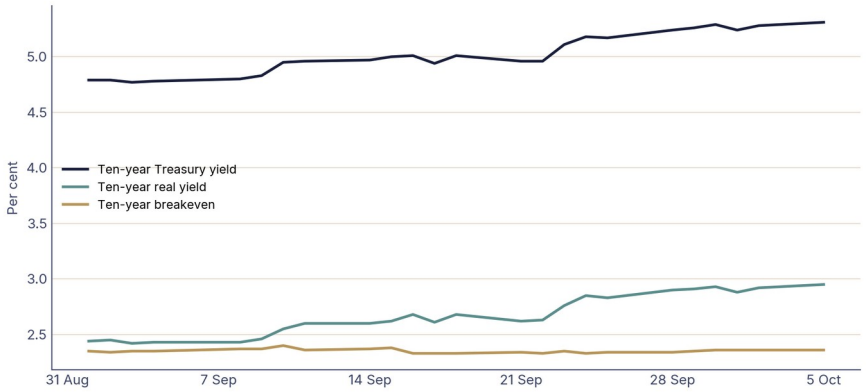
They protect against inflation higher than the breakeven rate at purchase, over the holding period, if the bond is held to maturity. They protect against the slow erosion of a fixed coupon, which is the risk an ordinary bond leaves with its buyer.

They do not protect against a rise in the real yield, which is the main driver of the price. They do not protect against a change in the way the index is measured, or against a basket of prices that differs from the family's own spending. And they do not protect against inflation that has already been priced, which is most of it by the time it appears in the data.

So the useful question about an inflation-linked bond is not whether inflation will rise. It is whether inflation will exceed what the market expects, and for how long the buyer can wait if the real yield rises first.

Where we are now

The present is a clean example of a rising real yield with no change in inflation expectations. The ten-year Treasury yield stood at 4.79 per cent on 1 September 2026 and 5.31 per cent on 5 October, a rise of 52 basis points. A basis point is one hundredth of a percentage point, so 52 basis points is just over half a point. Over the same period the ten-year real yield rose from 2.44 to 2.95 per cent, a rise of 51 basis points. The breakeven moved from 2.35 to 2.36 per cent.



Ten-year Treasury yield, real yield and breakeven, 1 September to 5 October 2026. Breakeven calculated as the nominal yield less the real yield. Source: Federal Reserve H.15 via FRED.

Almost the whole rise in long yields over the past five weeks is a rise in the real yield. The market has not raised its inflation expectation. It is asking for more return after inflation to lend to the government for ten years, which is what a higher term premium and heavier supply look like in the data. The term premium is the extra return lenders ask for locking their money up for a long time. An inflation-linked bond bought in early September is worth less today, not because inflation disappointed, but because the price of the real return moved. The bond did what the contract said, and the price still fell.

The same fact gives the other side of the case. At a real yield of 2.95 per cent, a holder who buys now and keeps the bond to maturity locks in a return after inflation, before tax and costs, at that day's price, that was available only briefly since 2008. It is a higher starting point than at any time in the 2010s, when the real yield averaged about 0.4 per cent and never rose above 1.7 per cent. The price can still fall before it recovers, and a family should ask whether it can wait.

The ways a family can own it

The table lists the main forms, from the simplest to the most complex.

Form	What it is	What it costs	What it gives up
Individual bonds held to maturity	A specific TIPS or equivalent, bought at a known real yield	Dealer spread and custody	Liquidity before maturity. The price moves in the meantime
Exchange-traded fund or index fund	A basket of inflation-linked bonds with a constant maturity profile	An annual expense ratio, usually modest	The maturity date. A fund never matures, so the locked-in real return is lost
Short-maturity inflation-linked funds	A basket of bonds close to maturity	An annual expense ratio	Most of the real yield and most of the price risk. Closer to cash with an inflation adjustment
Savings bonds and retail inflation-linked products	Government retail products, where available by country	Usually none	Size and tradability. Annual limits apply
Inflation swaps and derivatives	A contract paying realised inflation against a fixed rate	Dealer margin and counterparty risk	Simplicity. These are trading instruments
Inflation-linked notes from banks	Structured notes referencing an index	Not always itemised	Clarity about what is being bought. The embedded margin can be a significant part of the cost

The pattern is the one found in every part of the market. The simpler the instrument, the more of the return the buyer keeps. The fund format is convenient and gives up the one property that makes the bond a liability match, which is a maturity date. A buyer who wants the locked-in return can only get it from the individual bond. A buyer who wants a diversified exposure to the real yield accepts that the price moves with it.

The NexSky read

An inflation-linked bond is a bond with a real return attached and a long duration to pay for it. It protects the holder against inflation above what the market expected, and only if the bond is held to the end. Its price answers to the real yield, which is the number that moved by 262 basis points in 2022 and by 51 basis points in the last five weeks. The breakeven rate is a market price, not a forecast, and it stayed close to 2 per cent while realised inflation went from minus 2 to 9.

So we treat the asset as a way to fix the real return on a part of a family's wealth at a known level, rather than as a hedge that pays when inflation rises. Whatever the purpose, we would want it stated before the purchase, because a family that buys for the second reason and is surprised by the first is the pattern that 2022 produced. The maturity matters at least as much as the amount.

The questions to put to any provider

1. Is the holding a specific bond with a maturity date, or a fund with a constant maturity? If a fund, what is its duration?
2. Which inflation index does the bond use, and does it match the currency and the spending of the family? What is the indexation lag?
3. What is the real yield at purchase, and what is the breakeven rate against the ordinary bond of the same maturity?

4. What is the all-in annual cost, including the expense ratio, custody and platform charges, and the spread on purchase and sale?
5. Does the bond carry a deflation floor, and does the floor apply to the principal only or to the coupons as well?
6. How is the inflation adjustment taxed in the relevant jurisdiction, and is tax due on the accrual before it is received in cash?
7. If the price of the holding falls by a fifth, as the stylised bond did in 2022, what would the family do, and is that answer compatible with the purpose of the holding?

Sources. Ten-year Treasury Inflation-Indexed Constant Maturity yield (DFII10) and ten-year Treasury Constant Maturity yield (DGS10), Federal Reserve H.15 via the Federal Reserve Bank of St. Louis (FRED), daily, 2 January 2003 to 5 October 2026. Consumer prices, US CPI-U seasonally adjusted (CPIAUCSL), US Bureau of Labor Statistics via FRED, monthly, to July 2026. Breakeven calculated as the nominal yield less the real yield. TIPS mechanics, the reference index and the three-month lag, and the par floor at maturity, US Treasury, TreasuryDirect, TIPS information and Ref CPI and Index Ratios notices. The bond itself is indexed to the non-seasonally adjusted CPI-U, while the charts use the seasonally adjusted series. The price illustration in the 2022 chart is NexSky arithmetic on one stylised bond and is not an index return. The first chart uses hypothetical figures to show the mechanism and is not based on market prices.

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